

#### **PUBLIC MEETING AGENDA**

#### **Transportation Commission**

#### **MEETING DATE**

Tuesday, March 14, 2017 7:30 a.m.

#### **MEETING LOCATION**

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

AGENDA ITEM	PRESENTER	ACTION or INFORMATION
1. Public Appearances The Transportation Commission welcomes public comment for items listed on this agenda. There is a three-minute time limit per citizen.	Don Cassano, Commission Chair	Information
2. Approval of Meeting Minutes The Commission will be asked to review and approve meeting minutes from the February 14, 2017 meeting.	Don Cassano, Commission Chair	ACTION
<b>3. Streetcar</b> Staff will present an update on the Tempe Streetcar Project.	Eric Iwersen, Public Works	Information and Possible Action
<b>4. Capital Improvements Program Update</b> Staff will provide an update on Transportation's Capital Improvements Program.	Shelly Seyler, Public Works	Information
5. Speed Limits Staff will provide the Commission with the City's process for setting speed limits and to inform the Commission of proposed study locations.	Julian Dresang, Public Works	Information and Possible Action
6. Highline Canal Multi-use Path Project Staff will present an update on the Highline Canal Multi-use Path Project including refined design concepts.	Robert Yabes, Public Works	Information and Possible Action
7. Department & Regional Transportation Updates Staff will provide updates and current issues being discussed at regional transit agencies.	Public Works Staff	Information
8. Future Agenda Items Commission may request future agenda items.	Don Cassano, Commission Chair	Information and Possible Action

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# Minutes City of Tempe Transportation Commission February 14, 2017

Minutes of the Tempe Transportation Commission held on Tuesday, February 14, 2017, 7:30 a.m., at the Tempe Transportation Center, Don Cassano Community Room, 200 E. Fifth Street, Tempe, Arizona.

#### (MEMBERS) Present:

Ryan Guzy
Don Cassano (Chair)
Susan Conklu
Brian Fellows
Shereen Lerner
Charles Redman
Kevin Olson
Jeremy Browning
Cyndi Streid
Nigel A.L. Brooks
Shana Ellis

#### (MEMBERS) Absent:

Charles Huellmantel Bonnie Gerepka

#### **City Staff Present:**

Shelly Seyler, Deputy Public Works Director

Sue Taaffe, Public Works Supervisor

Laura Kajfez, Neighborhoods Services Specialist

Mile Neurona Transit Manager

Eric Iwersen, Principal Planner Mike Nevarez, Transit Manager

Shauna Warner, Neighborhood Program Manager Mackenzie Keller, Public Information Officer

#### **Guests Present:**

Betsey Griffin, Lavidge

JC Porter, Arizona State University

Joey Palomera, ASU Student

Sydney Gates, ASU Student

John Berlrebile, ASU Student

Commission Chair Cassano called the meeting to order at 7:33 a.m.

#### Agenda Item 1 – Public Appearances

David Rice spoke about the bus pullout decision matrix agenda topic. Specifically, he commented that bus pullouts can make the system less efficient.

#### Agenda Item 2 – Minutes

Chair Cassano introduced the minutes of the January 10, 2017 meeting and asked for a motion. A motion was made to approve the minutes.

**Motion:** Commissioner Ryan Guzy **Second:** Commissioner Shereen Lerner

**Decision:** Approved

#### Agenda Item 3 – Commission Business

Chair Cassano asked the Commissioners if they would like to continue to receive in the mail paper copies of all meeting materials, hard copies of only the memos in the mail or materials electronically. The consensus was for each Commissioner to let staff know if they would like a paper copy with all the materials. Otherwise, only an electronic copy of the meeting materials will be sent.

#### Agenda Item 4 – FY 2017/2018 Media Plan

Betsey Griffin with Lavidge presented the FY 2017/18 paid media plan. Key messages, as outlined in the marketing plan, include promoting:

- walking, biking, riding the bus (Orbit, Express and fixed route) and taking light rail
- bike events, bike registration, promotions and public meetings
- youth transit pass and ASU U-Pass programs
- Adopt-A-Path, Alley and Street programs
- bike safety education
- street restrictions and bus detours
- biking, walking and taking transit as part of Tempe's upbeat, forward-thinking culture
- GRID (bike share)
- Bike Hero
- Orbit Saturn

#### Key audiences include:

- ASU & high school students
- Tempe residents and professionals

#### Proposed paid mediums include:

- Tempe Opportunities Parks and Recreation publication
- ASU Off Campus Housing Guide
- GO Digital/Tegna Programmatic Digital Buying
- Light pole and Mill Avenue banners
- High school online ads (McClintock, Corona del Sol, Marcos de Niza and Tempe high schools)
- Mall kiosks at Tempe Marketplace
- Gas pump tops gas stations
- Facebook ads
- Pandora Music Streaming Service
- Spotify Music Streaming Service
- East Valley Cox Cable TV
- MNI Digital Programmatic Digital Video Advertising ("Pre-Roll")
- ASU newsrack ads
- Theater ads (Harkins and AMC)

The paid media budget for FY 17/18 is \$\$153,348 and the media vehicles would create over 27.8 million impressions. Media vehicles proposed include:

_	2% Print	\$ 3,600
_	20% Digital	\$ 30,832
_	11% Outdoor	\$ 17,000
_	12% Cinema	\$ 18,276
_	30% Streaming Radio	\$ 45,430
_	25% TV/Video	\$ 38.210

The Commission asked the following questions, and staff responded as follows:

- What other outdoor media vehicles have been added to the plan? Betsey Griffin said that gas station pump toppers were added to the plan this year.
- Did the agency select the gas station pump toppers because they were they only ones available? Betsey Griffin said yes.
- What was the paid media budget for last year? Betsey Griffin said \$150,000.
- Have we done an assessment as to what is the most popular way to reach our target? Staff said that the
  biennial transportation survey indicated that outdoor and cinema slides are the top two sources for hearing
  about the program.
- According to the survey, streaming radio was not one of the top sources for hearing about the program. Do
  you create the media plan using this data? Betsey Griffin said yes and also with what provides the most
  impressions at the best price. She also said that all the mediums work together to reach a variety of people.
  Streaming radio may not have been listed first when the person was asked the question, that doesn't mean
  that they didn't hear the streaming radio ads at some point in time.
- For streaming radio, does the station track when people listen? Betsey Griffin said yes because we purchase based on impressions.
- According to the phone survey there are fewer new users. Does anything in the plan address this? Betsey
  Griffin said that new media vehicles like gas station pump toppers were added to the plan. Staff added that
  one goal of the paid media program is to maintain a positive general awareness of the program. New
  messaging will need to be developed to address the popularity of Uber and Lyft and the lower gas prices.
- How is it determined that a particular media vehicle is performing well? Betsey Griffin said that she provides
   Tempe staff with monthly performance reports. In addition, the messaging has to be correct for the target.
- Will ads for bike share be included in the plan? Staff responded yes.

#### Agenda Item 5 – Bus Pullout Decision Matrix

Mike Nevarez provided an update on the bus pullout decision matrix. The overview included:

- Factors Considered in Creating Decision Matrix
- Telephone Survey Findings
- Other Considerations
- Top 14 Ranked Locations Recommended For Design

On February 16, staff will ask the City Council for feedback on methodology used to create bus pullout decision matrix.

The Commission asked the following questions, and staff responded as follows:

- Why are bus pullouts not operationally favorable? Staff responded that bus pullouts can cause delays for passengers and make the system less efficient. However, other factors (like crashes) must be weighed when making a decision to include a bus pullout.
- Has staff investigated other ways to mitigate the issue like adding queue jumpers? Staff said that there are areas in Tempe with queue jumpers.
- Does the City need to purchase right-of-way in order to build the 14 recommended locations? Staff stated in some cases right-of-way will need to be purchased.
- What does a bus pullout cost? Staff responded that a bus pullout can cost between \$20,000 and \$100,000.

#### Agenda Item 6 - Fifth Street Streetscape Project

Eric Iwersen provided an overview and update of the Fifth Street Streetscape Project including:

- Project Limits
- Design Goals

- Preliminary Concepts
- Stakeholder Input
- Design Treatment Examples
- Next Steps

The Commission made the following statements and asked the following guestions:

- How many pedestrian and vehicle crashes occur along Fifth Street? Staff said that there is a low volume of accidents along the corridor.
- Has staff thought about alternative shade structures including solar panel structures? Staff responded that it
  will be considered along with working with developers to provide shade.
- Will there be parallel parking? Staff said that it will be reverse back in angled parking.
- Will there be a textured or stamped treatment for the bike lanes? Staff said no, but green thermo treatment proposed
- Will the green pain be continuous in the bike lanes? Staff said it will be in intervals.
- Will this project increase the traffic on University Drive? Staff does not anticipate additional traffic on University Drive because of this project.
- How does raising the street near City Hall affect water harvesting? Staff responded that the goal is to capture 100 percent of the water possible and direct drainage away from the raised section.
- While on street parking is popular, in the long term this is a poor use of public space. Is there a long term solution? Staff said that ultimately, if the parking is built correctly, it can easily be converted to outdoor patios or pedestrian space.
- Will any of the parking revenue help with the maintenance of this project? Staff responded yes.
- How will we inform the public how to reverse park? Staff said that videos and collateral materials along with signage could be produced.
- Why are you proposing reverse parking? Staff stated that reverse parking requires the driver to pay more attention and that studies have shown it increases safety particularly for bicyclists
- If the desire is to make the area more pedestrian friendly, then why not make the street one lane at the intersections? Staff said that according to traffic data, the dedicated left hand turns are currently highly utilized. In addition, the intersection will be narrowed which will help pedestrians.
- Will the street look as wide as College Avenue where ASU raised the street? Staff stated that because the middle turn lane on Fifth Street will be removed it will make it feel narrower.
- Is there a budget to build the project? Staff said that the street is scheduled for repaving and that DTA may be able to use some of the parking funds for construction. Staff also plans to work developers or build the project in phases.

A motion was made to support the current design of the project.

**Motion:** Commissioner Kevin Olson **Second:** Commissioner Lloyd Thomas

**Decision:** Approved

#### Agenda Item 7 – Department & Regional Transportation Updates

None

#### Agenda Item 8 - Future Agenda Items

The following future agenda items have been previously identified by the Commission or staff: March 14

Streetcar

- Speed Limits
- City CIP Update
- Highline Canal MUP

#### April 11

- Country Club Way Bike/Ped Project
- Road Construction Traffic Mitigation
- ASU Bike Registry Outreach Efforts
- Maintenance of MUPs
- McClintock @ Rio Salado MUP Underpass

#### May 9

- Streetcar
- DTA Update
- Tempe Involving the Public Plan
- MAG Design Grant Applications
- Plan for Expansion of Bicycle/Pedestrian Paths

#### June 13

- Leading vs. Lagging Left Turn Signals
- Highline Canal MUP Final Design
- Bus Security Program
- Western Canal Expansion MUP Final Design
- Autonomous Vehicles

#### July 11

August 8

#### September 12

- Annual Report
- North/South Railroad Spur MUP

#### October 10

- Annual Report
- Alameda Drive

November 12

December 12

TBD: Bicycle/Pedestrian Signal Activate Operations Update

TBD: Small Area Transportation Study

TBD: Prop 500

A Commissioner requested that the following item be added to future agenda items:

Bike Share Update

The next meeting is scheduled for March 14, 2017.

The meeting was adjourned at 8:54 a.m.

Prepared by: Sue Taaffe

Reviewed by: Shelly Seyler and Eric Iwersen

## CITY OF TEMPE TRANSPORTATION COMMISSION



#### **STAFF REPORT**

**AGENDA ITEM 3** 

#### DATE

March 1, 2017

#### **SUBJECT**

Tempe Streetcar Update

#### **PURPOSE**

The purpose of this memo and PowerPoint is to provide an update on the status of the Tempe Streetcar Project and introduce upcoming efforts and critical decisions related to project development.

#### **BACKGROUND & PROJECT STATUS**

The Tempe Streetcar Project is a 3 mile urban circulator rail transportation technology with 14 stops, six vehicles and two connections to light rail. The project will connect Tempe Town Lake and the development along Rio Salado Parkway, through the downtown core, linking ASU and Tempe's oldest neighborhoods.



#### Small Starts Grant Agreement & Correspondence with the Federal Transit Administration

The SSGA is the next required step to secure the \$75 million Smalls Starts Grant request from the Federal Transit Administration to fully fund the project. A final signed SSGA is anticipated in November 2017. Staff

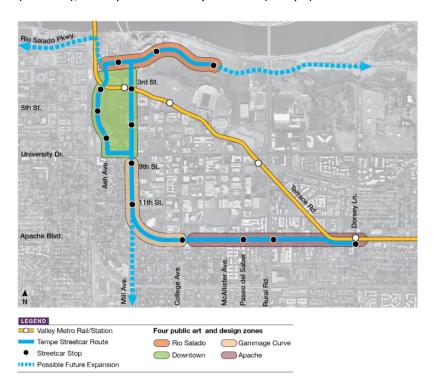
continues to coordinate directly with the FTA and Valley Metro to meet all milestones required for the grant. The Tempe lobbyist outreach efforts also are ongoing, including working with other cities requesting FTA funds and with the Arizona elected delegation to be aware of the Streetcar project. In addition to quarterly meetings with representatives from FTA, staff continues to meet with the monthly Project Management Oversight Consultant (PMOC) hired by FTA to review status of the project.

#### **Project Design**

Local firm Stantec, has been contracted as of December 2016 and has begun design for all 14 stop locations, track alignment and landscaping related to the project. Stantec is working closely with Valley Metro and Tempe staff, with 30 percent construction documents expected at the end of March; final plans for the project will be complete by the end of 2017. Staff expects that the Tempe City Council, stakeholders and community will be engaged and most interested in the stop aesthetics, art, landscaping and architecture for the Streetcar.

#### **Public Art**

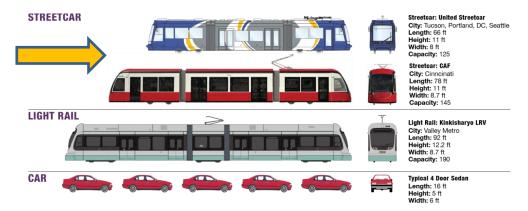
Public art elements will be developed for each of the 14 stops, with five public artists assigned to the four design zones along the streetcar route. The installations will be critical to capturing sense of place, creating unique system identity and garnering community support for the project. The Regional Rail Advisory Committee, Tempe and Valley Metro staff will oversee the public art process. In October 2016, four community stakeholder teams selected an artist(s) for each zone of the alignment, and the selected artists were approved by the Valley Metro Rail Board in November 2016. Public meetings with project artists were conducted in December 2016. The budget for each stop is set at \$52,500. The artists will be working closely with Stantec to integrate artwork into the stop designs. Project artists are as follows: Rio Salado – Koryn Rolstad (Seattle); Downtown – Simon Donovan and Ben Olmstead (Tucson); Gammage Curve – Mary Lucking (Phoenix); and Apache – Bobby Zokaites (Tempe).



#### **Vehicle Procurement & Wire/Wireless Segment Analysis**

Procurement of the streetcar vehicles continues to advance as a preferred vendor has been selected through the competitive RFP process with review by city and Valley Metro staff, as well as technical review by the consultant team, CTE (Center for Transportation and the Environment). The preferred vendor identified has

specified a 69-foot vehicle, which fulfills the City Council request to purchase the smallest scale vehicles among rail fleets and integrate well with the pedestrian scale of Downtown Tempe.



Additionally, the vehicles will be battery hybrid capable. Based on Council direction at the December 15, 2016, and February 16, 2017, Issue Review Sessions, four options are being reviewed for possible wireless segment integration. The review of wireless options and the battery capabilities is being conducted by Tempe, Valley Metro, the preferred vehicle vendor and CTE. Results of the analysis are expected to be presented to the Council for direction on April 6, and the vehicle vendor is expected to be approved by the Valley Metro Board later in April. A determination of wireless extent must ensure: reliable operations of the Streetcar, battery lifespans and capabilities, CTE and vehicle vendor confidence and Valley Metro operational needs. Final wireless segments will be incorporated into the streetcar construction documents. The four options are identified below:



#### **Design Issues**

• Rio Salado Parkway Trackway: The project design team is evaluating a southside track alignment option as a strategy for improving traffic flow and streetcar operations. This option would also improve operations for events, such as Ironman and Pat's Run, as well as reducing utility conflicts. City staff are working with Hayden Flour Mill developers and ASU, as well as coordinating with Historic Preservation

- and Salt River Pima Maricopa Indian Community representatives on issues related to the Hayden Butte/Preserve.
- 1<sup>st</sup> Street/Rio Salado Parkway/Ash Avenue Intersection: As a separate project, staff and the design team have been working on concepts for possible intersection realignment, which would facilitate east-west travel, improve event operations and reduce utility conflicts. Staff are conducting one-onone outreach with area stakeholders, as well as holding a neighborhood meeting to gather public input on proposed options.

#### **Public Outreach & Next Steps**

Efforts to inform and include the public in project updates continue to expand as staff meets with stakeholders, including character area neighborhood meetups, DTA merchants, Marina Heights, Hayden Ferry Lakeside, ASU and other property owners. A public meeting will be held April 19, to share stop design and public art concepts, track alignment and vehicle status and next steps for the project

#### RECOMMENDATION

This item is for information and possible action.

#### **CONTACT**

Eric Iwersen, Principal Planner eric iwersen@tempe.gov
480-350-8810

#### **ATTACHMENTS**

Powerpoint





# Tempe Streetcar Update

## **Transportation Commission**

March 14, 2017







## **Quick Facts:**

- 3 miles
- 14 stops
- 6 vehicles
- 2 LRT connections

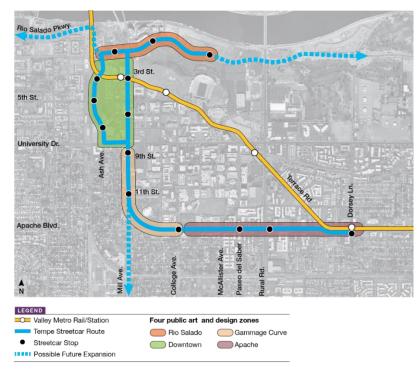




## **Streetcar Project Status**

### **Design & Construction Coordination**

- Public Art 5 artists (4 zones)
  - Integrated @ every stop
- Stops, Track, Landscape Stantec
  - Rio Salado track configuration
  - Stop aesthetics
- Construction Stacy & Witbeck, Inc.
- Integrate into streetscape of Tempe
- Design complete end of 2017







## Streetcar Vehicle Status & Process

#### May 2016

RFP for 6 vehicles released

#### Fall 2016 - Feb 2017

- RFP responses received; Valley Metro, Tempe, CTE review
- Preferred vendor selected

#### December 15, 2016 & February 16, 2017

Issue Review Session (project update, vehicle selection update)

#### April 6, 2017

City Council final recommendation on wireless segments/scenario

#### April 20, 2017

Valley Metro Board approval of vehicle vendor

#### **April 2017 - Spring 2020**

- Manufacturing vehicles
- First Vehicle: September 2019
- Testing: fall 2019 summer 2020



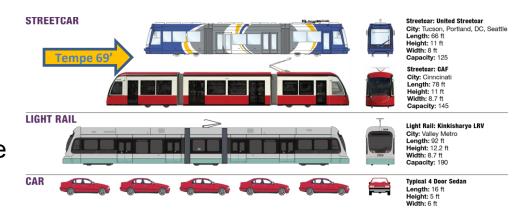






## Streetcar Vehicles & Propulsion Council Direction Fulfilled

- ✓ RFP included wireless option
- Independent propulsion consultant (CTE)
- ✓ Shorter vehicle option selected
- Hybrid/battery propulsion capable
- Wireless segments (range being determined)



# Wireless Scenarios Being Reviewed





Scenario 1
Mill Ave



Scenario 2
Mill & Ash



Scenario 3
Mill & Intersections



Only HFL – MH on wire

## **Fare & System Branding**





- Streetcar fares
  - Currently assuming a fare will be charged
  - Evaluating fare options and interoperability with region
- System branding
  - Valley Metro Rail system branding study underway
    - Tempe Streetcar branding and naming are a part of this study
- Both items will receive local/regional input

## 1st St / Ash Ave / Rio Salado





## Concepts for possible intersection re-align

- Allows east/west direct travel
- Options include "No-Build"
- Public Meeting Spring 2017

## Rio Salado Trackway

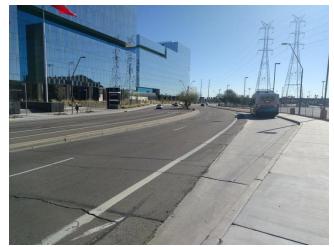




## Southside track alignment option

- Improves traffic & streetcar ops
- Improves event and utility conflicts
- Work w/ Hayden Flour Mill, ASU & Butte/Preserve







## **FTA Activities & Approvals**

- Project submitted to FTA for inclusion in FY18 President's budget
- Continuing coordination with FTA and Project Management Oversight Consultant (PMOC)
  - Monthly meetings with PMOC
  - Quarterly meetings with FTA Region IX office



## **Upcoming Activities**

City Council IRS - April 6

- Off-wire segments
- Stop and track design concepts
  - Aesthetics & Rio Salado track configuration
- Next Steps

Public Meeting – April 19 6 to 8 p.m. Tempe Transportation Center Don Cassano Community Room

Valley Metro Board – April 20

Vehicle vendor approval

## CITY OF TEMPE TRANSPORTATION COMMISSION



#### **STAFF REPORT**

**AGENDA ITEM 4** 

#### DATE

February 23, 2017

#### **SUBJECT**

Capital Improvements Program Update

#### **PURPOSE**

Staff will discuss the Capital Improvements Program (CIP) projects related to transportation.

#### **BACKGROUND**

The attached documents contain all transportation related project requests submitted by Public Works for the 5-year CIP from FY 2017-18 through FY 2021-22. The CIP budget includes a requested re-appropriation of previously-budgeted amounts that have not been spent and are anticipated to be spent in FY 2017-18, along with the requests for new appropriations.

#### **FISCAL IMPACT**

**TBD** 

#### **CONTACT**

Shelly Seyler
Deputy Public works Director - Transportation
480-350-8854
shelly\_seyler@tempe.gov

#### **ATTACHMENTS**

- PowerPoint
- Transit CIP projects
- Transportation and ROW CIP projects
- Traffic Signals and Street Lighting CIP projects



# FY 2017/18 Presentation of CIP Requests



Tempe City Council Work Study Session February 16, 2017

## Budget Development Public Meetings

CA	D	T	
CA			4L

## **OPERATING**

Proposed Projects	Feb 16	Updated Long-Range Forecas
Public Forum	Feb 22	Public Forum
Recommended Projects	Mar 2	
Budget Review Session	Apr 27	Budget Review Session
Tentative Adoption	May 25	Tentative Adoption
Public Hearing/Final Adoption	Jun 8	Public Hearing/Final Adoption



## SECONDARY

Public health and safety Asset preservation

Grant or other funding Impact of deferring project Level of public use Legal/contractual obligation Operating budget impact Prior project approval Strategic Priority alignment

Long-range **Financial** Forecast and General Direction from City Council

**Updated** City Council Long-range Review of **Financial** Capital and Forecast Operating **Priorities** & CIP Intro.

Review of City Mgr.'s Recom.

Budget

**APR** 

Budget Adoption

JUN

**MAY** 

**NOV DEC JAN FEB MAR OCT** 

Base Budget Departments' Development

Capital Project **Proposals** 

Departments' Supplemental Budget Requests

Public & **Employee** Budget Forum(s)

## **PROJECTS**

- 1st St./Rio Salado/Ash Ave. Intersection Alignment
- 5<sup>th</sup> Street Streetscape
- 8<sup>th</sup> Street Streetscape
- Alameda Drive Ped. Bridge @ I-10 & Streetscape Projects
- Bike Boulevard
- Bus Stop Capital Maintenance Improvements
- Bus Pullout Project
- Country Club Way Streetscape Project
- EVBOM Maintenance
- Highline MUP
- North/South Railroad MUP

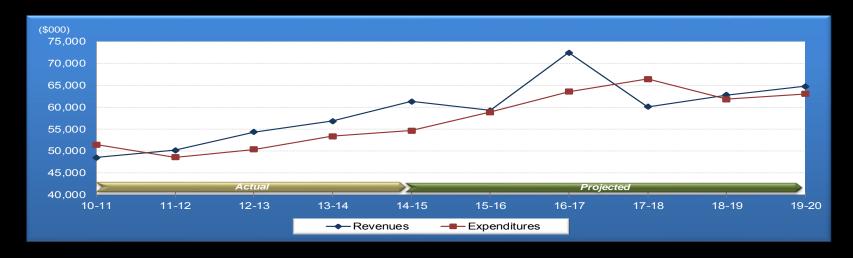
## **PROJECTS**

- Pathway Maintenance
- Rio Salado North Bank MUP
- Rio Salado Underpasses at Priest & McClintock
- Tempe/Mesa High Capacity Transit Study
- Bike Share
- Streetcar
- Transportation Center Maintenance
- Unaccounted Federal Grants
- Western Canal Extension MUP
- ADA Improvements

## **PROJECTS**

- Elliot and Kyrene Railroad Crossing Safety Improvements
- McClintock Drive Streetscape Alternative
- Neighborhood Traffic Calming
- Roundabouts at College & McKellips and Grove Parkway & Drive
- Rural & Southern Intersection Improvements
- Rural & University Intersection Improvements
- University Drive Streetscape
- Fiber Optic
- ITS Improvements
- Streetlights
- Traffic Signals

## TRANSIT FUND OUTLOOK



Net Operating Surplus/(Deficit)	(2,936)	1,565	3,986	3,451	6,676	392	8,843	(6,377)	978	1,689
Transfer from Transit Capital Fund				-	-	4,000	-	-	-	-
Unassigned Fund Balance	86,341	72,956	27,571	31,070	37,770	42,162	51,006	44,629	45,607	47,295
Unassigned Fund Balance as a % of Revenue	•		51%	55%	62%	71%	70%	74%	73%	73%
Fund Balance Assigned for Debt Retirement				8,500	8,500	8,500	8,500	8,500	-	-

## TRANSPORTATION (HURF) FUND OUTLOOK



Total Revenues										
Total Expenditures										
Net Operating Surplus/(Deficit)	690	(952)	2,302	(32)	(771)	911	462	386	410	534
graph and graph and		( )	,	(- )	, ,					
Accrual Basis Adjustments				-	(1)					
Ending Fund Balance	4,521	6,747	8,120	8,088	7,317	8,229	8,690	9,076	9,486	10,020
Fund Balance as a % of Revenue			77%	81%	64%	73%	78%	81%	82%	84%



## Transit Program 2017-18 CIP Project Requests and Descriptions

		Downson	Canital Budget	New 2017-18	2017-18 Total		Additional Pro	iactad Naads		Total 5-Year
Page #	Project Name	Proposed Funding Source(s)	Capital Budget Re-appropriations	Appropriation Request	Requested Appropriation	2018-19	2019-20	2020-21	2021-22	Program
32	1st/Rio Salado Pkwy & Ash Ave Intersection Realignment	Transit Tax	-	206,000	206,000	1,255,000	-	-	-	1,461,000
33	5th Street Streetscape (Farmer to									
00	College Avenues)	Transit Tax	-	387,000	387,000	-	-	-	-	387,000
		Highway User Revenue Funds	-	500,000	500,000	-	-	-	-	500,000
		General Obligation Bonds	-	2,000,000	2,000,000	-	-	-	-	2,000,000
		Project Total	-	2,887,000	2,887,000	-	-	-	-	2,887,000
34	8th Street Multi-Use Path (Creamery									
04	Branch Rail Path)	Transit Tax	236,857	100,000	336,857	-	-	-	-	336,857
		Federal Grant - CMAQ	1,379,021	-	1,379,021	-	-	-	-	1,379,021
		Capital Projects Fund Balance	101,000	-	101,000	-	-	-	-	101,000
		Project Total	1,716,878	100,000	1,816,878	-	-	-	-	1,816,878
35	Alameda Drive & I-10 Bicycle / Pedestrian Bridge	Transit Tax	103,000	400,000	503,000	-	-	-	-	503,000
36	Alameda Drive Bicycle/Pedestrian/Streetscape	Transit Tax	-	412,000	412,000	89,760	-	-		501,760
		Federal Grant - CMAQ		-		1,542,240	-			1,542,240
		Project Total	-	412,000	412,000	1,632,000	-	-	-	2,044,000
37	Bicycle Boulevard	Transit Tax	200,000	-	200,000	200,000	200,000	200,000	-	800,000
38	Bus Stop Capital Maintenance/Improvements	Transit Tax	1,817,518	270,000	2,087,518	250,000	250,000	250,000	250,000	3,087,518
39	City of Tempe Bus Pullout Project	Transit Tax	1,598,321	490,034	2,088,355	502,000	502,000	502,000	502,000	4,096,355
		Development Impact Fees	-	11,966	11,966	TBD	TBD	TBD	TBD	11,966
		Project Total	1,598,321	502,000	2,100,321	502,000	502,000	502,000	502,000	4,108,321
40	Country Club Way Bike and Pedestrian									
40	Improvements Project	Transit Tax	-	-	-	463,000	-	-	228,969	691,969
		Federal Grant	-	-	-				3,788,031	3,788,031
		Project Total	-	-	-	463,000	-	-	4,017,000	4,480,000
41	EVBOM - Facility Asset Maintenance (East Valley Bus Ops/Maint Facility)	Transit Tax	1,099,473	1,000,000	2,099,473	950,000	1,450,000	1,500,000	1,050,000	7,049,473
42	Highline Canal Path (Baseline - Knox									
	Road)	Transit Tax	1,283,050	607,290	1,890,340	-	-	-		1,890,340
		Federal Grant - CMAQ	1,366,661	1,866,956	3,233,617	-	-	-	-	3,233,617
		Development Impact Fees	-	36,754	36,754	-	-	-	-	36,754
		Project Total	2,649,711	2,511,000	5,160,711	-	-	-	-	5,160,711



## Transit Program 2017-18 CIP Project Requests and Descriptions

				New 2017-18	2017-18 Total		A dditional Dua	in a to al Manada		
Page #	Project Name	Proposed	Capital Budget Re-appropriations	Appropriation Request	Requested Appropriation	2018-19	Additional Pro	2020-21	2021-22	Total 5-Year Program
raye #	Froject Name	Funding Source(s)	Re-appropriations	Request	Арргорпацоп	2010-19	2019-20	2020-21	2021-22	Frogram
43	North South Rail Spur Path	Transit Tax	507,000	-	507,000	129,088	-	-	-	636,088
		Federal Grant - CMAQ	-	-	-	2,363,158	-	-	-	2,363,158
		Development Impact Fees	-	-	-	36,754	-	-	-	36,754
		Project Total	507,000	-	507,000	2,529,000	-	-	-	3,036,000
44	Pathway Capital Maintenance	Transit Tax	2,313,944	1,340,000	3,653,944	870,000	1,370,000	1,070,000	520,000	7,483,944
	Rio Salado North Bank Multi-Use Path									
45	(Indian Bend Wash - McClintock Dr)	Transit Tax	-	400,000	400,000	-	-	-	-	400,000
46	Rio Salado S. Bank Path Underpass @									
	McClintock Dr.	Transit Tax	438,291	595,122	1,033,413	-	-	-	-	1,033,413
		Federal Grant - CMAQ	-	1,457,878	1,457,878	-	-	-	-	1,457,878
		Project Total	438,291	2,053,000	2,491,291	-	-	-	-	2,491,291
47	Rio Salado Southbank Path Underpass									
	@ Priest Drive	Transit Tax	540,400	-	540,400	-	-	-		540,400
		Federal Grant - CMAQ	1,402,146	-	1,402,146	-	-	-	-	1,402,146
		Project Total	1,942,546	-	1,942,546	-	-	-	-	1,942,546
40	Tempe/Mesa High Capacity Transit	Transit Tax		200 000	200 000					200 000
48	Feasibility Study	Transit Tax	-	300,000	300,000	-	-	-	-	300,000
49	Tempe/Phoenix Bike Share Program	Transit Tax	46,376	-	46,376	-	-	150,000	150,000	346,376
		Federal Grant - CMAQ	828,636	-	828,636	-	-	-	-	828,636
		Project Total	875,012	-	875,012	-	-	150,000	150,000	1,175,012
50	Tempe Streetcar - Local Funding	Public Transportation Funds	1,283,216	1,158,061	2,441,277	656,191	695,691	347,846	-	4,141,005
		Special District - Bond Funding	-	-	-	4,250,000	7,500,000	1,250,000	-	13,000,000
		Transit Tax	-	-	-	100,000	100,000	-	-	200,000
		Federal Grant TOD	250,000	-	250,000	-	-	-	-	250,000
		Project Total	1,533,216	1,158,061	2,691,277	5,006,191	8,295,691	1,597,846	-	17,591,005
51	TTO Facility Asset Maintenance									
0.	TTC - Facility Asset Maintenance (Transportation Center)	Transit Tax	660,799	400,000	1,060,799	200.000	1.000.000	350,000	350.000	2,960,799
			223,700	,000	1,222,100	,	.,,.	,0	,	_,,_
52	Unaccounted Federal Grants									
	Contingency	Transit Tax	-	500,000	500,000	-	-	-		500,000
		Federal Grant - CMAQ	-	2,500,000	2,500,000	-	-	-	-	2,500,000
		Project Total	-	3,000,000	3,000,000	-	-	-	-	3,000,000



## Transit Program 2017-18 CIP Project Requests and Descriptions

		Proposed	Capital Budget	New 2017-18 Appropriation	2017-18 Total Requested		Additional Pro	jected Needs		Total 5-Year
Page #	Project Name	Funding Source(s)	Re-appropriations	Request	Appropriation	2018-19	2019-20	2020-21	2021-22	Program
53	Western Canal-Highline Multi-Use Path -									
33	Path Link	Transit Tax	334,257	-	334,257	51,920	-	-	-	386,177
		Federal Grant - CMAQ	-	-	-	892,080	-	-	-	892,080
		Project Total	334,257	-	334,257	944,000	-	-	-	1,278,257
	Transit Program Total		17,789,966	16,939,061	34,729,027	14,801,191	13,067,691	5,619,846	6,839,000	75,056,755

The table above lists the individual projects that comprise the Transit Program and the associated five-year funding requests. The detailed project descriptions and justifications are provided on the pages that follow.

Project No.	6008409	1st/Rio Salado Pkwy & Ash Ave Intersection Realignment (Streetcar CNPA)							
Department:	Public Works	Project Location: 1st Street/Rio Salado Pkwy & Ash Avenue							
Est. Start Date:	01/01/19	Est. Completion Date: 06/30/20							

#### Project Description, Purpose and Need:

This project involves the reconstruction and realignment of the 1st Street/Rio Salado Parkway and Ash Avenue intersection to reopen the intersection for through traffic continuing westbound. The scope of work includes traffic signal relocations, sidewalk, bike lane, driveway and street reconstruction to align the roadway for travel in all directions, much like a traditional intersection. The work may involve some right of way purchase and would be coordinated with the Tempe Streetcar project construction as a "Concurrent Non-Project Activity" (CNPA). The project concept designs were completed with a study conducted in 2009. The project has been identified as a need for new development that is occurring west of the intersection, west of downtown Tempe. More detailed cost estimates are not available at this time. The purpose and need of for this project is to provide access for all directions where it is currently not provided today. With recent development of the area west of downtown Tempe there is increased pressure to provide full access through this intersection, which would alleviate some of the traffic pressure on the limited streets that do connect downtown with areas to the west. This project would provide more travel options and routes for the adjacent neighborhoods, businesses and other users.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

#### Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$206,000.

	2017-18		Estimated Fu	uture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	206,000					
New Appropriation Request	-					
Total Estimated Project Costs	206,000	1,255,000	-	-	-	1,461,000
Project Funding Sources Transit Tax	206,000	1,255,000		-	-	1,461,000
	None	,,				-, 101,0

Project No. TBD 5th Street Streetscape (Farmer to College Avenues)

Department: Public Works Project Location: 5th Street (Farmer to College)

Est. Start Date: 07/01/18 Est. Completion Date: 06/30/19

#### Project Description, Purpose and Need:

The 5th Street Streetscape is a re-design an re-construction of a Tempe collector street that links established neighborhoods to Arizona State University, downtown Tempe and the City Hall Complex. The project is intended to create a street with greater multi-modal access for all users and will include retention of vehicle capacity, expanded landscaping and shade, enhanced bicycle, transit and pedestrian facilities and ADA upgrades. The project may include gateway treatments, additional crosswalks, on-street parking, and medians. The project will also explore integration of low impact development and sustainable practices like water harvesting and permeable pavement/pavers. The project is intended to continue providing the high level of service 5th Street provides for the community for all types of travel, while giving the street flexibility to serve major events like ASU game days, Arts Festival and more. This project is a joint funding and effort with the Downtown Tempe Authority. Project construction funding is anticipated to come from a variety of sources including HURF, Transit Tax and GO Bonds. Final construction estimates are expected to be complete in Summer 2017.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the adopted FY 2016-17 five year CIP.

·	2017-18		Estimated Fu	uture Costs		·
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	2,887,000					
Total Estimated Project Costs	2,887,000	-	-	-	-	2,887,000
Project Funding Sources						
Transit Tax	387,000	-	-	-	-	387,000
Highway User Revenue Fund	500,000	-	-	-	-	500,000
General Obligation Bonds	2,000,000	-	-	-	-	2,000,000
Total Sources	2,887,000	-	-	-	-	2,887,000
New Operating Budget Impacts	None					

Project No. 6007130 8th Street Multi Use Path (Creamery Branch Rail Path)

Department: Public Works Project Location: 8th Street (Rural - McClintock) - rail line

Est. Start Date: 07/01/15 Est. Completion Date: 06/30/18

### Project Description, Purpose and Need:

This project is the construction of a pathway along the Creamery Branch Rail Spur and streetscape improvements along 8th Street. The project path would include landscaping and lighting along the non-operational rail track next to 8th Street (between Rural and McClintock) adjacent to ASU and near downtown Tempe. The streetscape improvements are adjacent to and integrated in with the rail path and would include street trees, enhanced sidewalks and improved bicycle lanes. The project area includes two historic Tempe neighborhoods (Borden Homes & University Heights), a connection to a light rail station, and a strong neighborhood commercial center that includes the 4 Peaks Brewing Company. A public process and stakeholder committee was established in 2010 and completed an approved concept plan in September 2010. This project would enhance a well traveled collector street and place a pathway along a rail spur to accommodate a stronger bicycle and pedestrian environment that will promote the city's mission of increasing transit, bike and pedestrian travel. The project will add landscaping and better integration with historic structures while encouraging appropriate redevelopment on vacant lots or deteriorating structures. The project will better connect the adjacent neighborhoods, but limit cut-through traffic. The project concept has been supported by the neighbors, property owners and stakeholders in the area and would be a revitalization to an important part of Tempe.

Old 8th Street Interpretive Elements- (\$100k requested for FY16-17 General Gov fund Balance) Design, fabrication, and installation of interpretive elements identifying the prehistory and history of 8th Street between Rural and McClintock. Old 8th Street spans a significant prehistoric archaeological site and was the location of the Bankhead Highway. In addition, the Borden Creamery Complex (Four Peaks), the Elias-Rodriguez House, Marlatt's Garage, and the Kirkland-McKinney Ditch are all located along 8th Street. While 8th Street is slated for a beautification project and may be the location of significant private investment over the coming year, branding / placemaking opportunities involving the identification and dissemination of the street's rich prehistory and history remain unaddressed. Interpretive signage and historically-appropriate vegetation will help to complete the revitalization of 8th Street, thereby firming its authenticity and sense of place. Both authenticity and sense of place are identified as being desirable cultural heritage tourism and economic development draws. \$23,000 in recurring operating budget impacts were appropriated in FY2016-17 for this project.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

## **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$1,756,790.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	1,716,878					
New Appropriation Request	100,000					
Total Estimated Project Costs	1,816,878	-	-	-	-	1,816,878
Project Funding Sources						
Transit Tax	336,857	-	-	-	-	336,857
Federal Grant - CMAQ	1,379,021	-	-	-	-	1,379,021
Capital Projects Fund Balance	101,000	-	-	-	-	101,000
Total Sources	1,816,878	-	-	-	-	1,816,878
New Operating Budget Impacts						
Supplies and Services	4,500	4,500	4,635	4,774	4,917	

Project No. 6007769 Alameda Drive & I-10 Bicycle / Pedestrian Bridge

Department: Public Works Project Location: Alameda Drive & I-10

Est. Start Date: 07/01/13 Est. Completion Date: 06/30/20

# Project Description, Purpose and Need:

This project is a bicycle and pedestrian bridge along the Alameda Drive alignment at the I-10 freeway. The project includes lighting, safety features and public art. The project would be an elevated crossing of the I-10 connection to a Tempe's Fountainhead Business Park (east side) to Tempe Diablo Stadium (west side). The project would link several Tempe neighborhoods and bikeways, particularly the bike route along Alameda Drive to major employment centers, the stadium and a city of Phoenix bike route on Roeser Road. The project is identified in MAG, ADOT, and local transportation plans. The project would be constructed with the I-10 Improvements Project. ADOT to design and construct project @ estimated cost of \$9.1m in FY18-19. Cost of project is budgeted in ADOTs five year Transportation Facilities Construction Program. Tempe's costs will provide for art elements & aesthetic treatments. The project would remove a gap in the Tempe and Phoenix bikeway system. Currently Alameda Drive (Roeser St. in Phoenix) is a more than 20 mile bike route that has linkages to downtown Phoenix and Tempe, but is cut in half at the I-10 crossing. This project would facilitate a freeway crossing like the College Avenue and Country Club Way bike/ped bridges over the US60. The project is supported by MAG, Phoenix and Tempe and is identified in several plans. The project would further demonstrate Tempe's commitment to multi-modal travel, decrease traffic congestion and help improve air quality. ADOT completed a design concept and feasibility study of the project in 2005.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$103,000.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	103,000					
<b>New Appropriation Request</b>	400,000					
<b>Total Estimated Project Costs</b>	503,000	-	-	-	-	503,000
Project Funding Sources						
Transit Tax	503,000	-	-	-	-	503,000
New Operating Budget Impacts						
Supplies and Services	-	6,500	6,695	6,896	7,103	

Project No.	TBD	Alameda Drive Bicycle/Pedestrian/Streetscape					
Department:	Public Works	Project Location: Alameda Drive (48th St - Rural Road)					
Est. Start Date:	07/01/16	Est. Completion Date: 06/30/19					

Design bicycle and pedestrian facility improvements on three miles of a collector street that will include improved street crossings, road diets, medians, buffered or protected bike lanes, landscaping, lighting, enhanced sidewalks and pedestrian amenities and upgrades to meet all Americans with Disabilities Act design requirements. The project links to the Phoenix border on a street with bike lanes and to older Tempe neighborhoods, employment centers, redeveloping and higher density residential areas, Tempe Diablo stadium, other major regional bikeways and connects across the Union Pacific Railroad and to a 2017 funded bicycle/pedestrian bridge over Interstate 10. The project will transform an automobile oriented corridor into a premier walking and bicycling facility in accordance with the Maricopa Association of Governments Pedestrian Design Guidelines and Tempe's Transportation Master Plan and Bicycle Boulevard Plan. The project received regional design funding in 2014 and has had two large public meetings to establish a preferred concept plan. \$1.54 million in CMAQ federal funds are anticipated. The project is a critical bicycle and pedestrian linkage for major residential and employment areas. The project will refresh an aging corridor and create a more multi-modal street for all users.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

# **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations; however, it was included in the FY 2016-17 CIP in FYs 2017-18 through FY 2018-19.

	2017-18		Estimated Fu	ture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	412,000					
Total Estimated Project Costs	412,000	1,632,000	-	-	-	2,044,000
Project Funding Sources						
Transit Tax	412,000	89,760	-	-	-	501,760
Federal Grant - CMAQ	-	1,542,240	-	-	-	1,542,240
Total Sources	412,000	1,632,000	-	-	-	2,044,000
New Operating Budget Impacts						
Supplies and Services	-	15,000	15,450	15,914	16,391	•

 Project No.
 600779
 Name:
 Bicycle Boulevard

 Department:
 Public Works
 Project Location:
 Citywide

 Est. Start Date:
 07/01/17
 Est. Completion Date:
 06/30/21

#### Project Description, Purpose and Need:

This project involves a variety of city-wide bicycle related improvements on nine designated bicycle corridors along paths and local and collector streets in Tempe. The specific improvements include bike lanes, protected and buffered bike lanes, signal enhancements and upgrades, bicycle parking, signage, intersection improvements and more. Materials that would be funded through this item include paint, bollards, bicycle parking devices, landscaping, concrete/asphalt and other depending on the specific improvement. Designated bike boulevards and specific improvements are included in the Transportation Master Plan and as a part of the plans public outreach process. The bicycle boulevard system was adopted in the Transportation Plan in early 2015 and will contribute to achieving the goal of a higher bicycle friendly community rating for Tempe. The upcoming year improvements for bike boulevards include partnering with existing CIP projects to integrate in the boulevard system. Those projects are the 8th Street Streetscape (Sprocket Bike Boulevard), the Western Canal Path Link (Brake Bike Boulevard) and the Alameda Drive Streetscape (Wheel Bike Boulevard).

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Public Health and Safety Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$200,000.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	200,000					
<b>New Appropriation Request</b>	-					
Total Estimated Project Costs	200,000	200,000	200,000	200,000	-	800,00
Project Funding Sources Transit Tax	200.000	200,000	200,000	200,000		800,00

Project No.	6005239	Name:	Bus Stop Capital Maintenance/Improvements				
Department:	Public Works		Project Location: Citywide				
Est. Start Date:	Ongoing		Est. Completion Date: Ongoing				

This project will repair, rehabilitate and or replace bus stop infrastructure that has or will surpass its useful life during the project year or due to excessive or adverse environmental exposures (e.g., sun, irrigation, high use). City-wide bus stops number 814 with sizes and amenities varying widely based on transit system demand. The bus stop infrastructure consists of bus shelters (297), benches (648), bike racks (969), trash receptacles (775), lighting (173), concrete pads (tbd), schedule holders (1,100), and bus stop signs (817). In general, these assets were purchased and installed between 1994 and 2008. This project will provide approx. \$220,000 annually from FY16-21 to fund repairs and upgrades required to meet ADA for all Tempe bus stops. This project will also fund the reconstruction of failing curb and gutters at Tempe bus stops. The purpose of the project is to maintain the city's bus stop infrastructure in a state of good repair, safe for use, and instrumental in promoting transit use. The bus stop represents the "lobby" to the transit system and must provide a safe, secure, and comfortable waiting area with adequate sun and weather protection for transit passengers. All Tempe bus stops must meet or exceed federal ADA requirements.

Install passenger shelters and related amenities (benches, trash receptacles, bike hoops, schedule holders and blue bus stop signs) at 10 bus stops across the city in FY 2017-18 with 5 installations in each of the subsequent 5 fiscal years. Locations identified as suitable for installation of a bus stop shelter and associated amenities include stops that meet the following criteria: previous locations where a shelter was damaged and removed; existing locations where shelters need to be replaced due to deterioration and safety concerns, locations served by at least one bus route with productivity at or above 2.0 boardings per mile; and immediate physical environment offers no weather/sun protection or seating.

The bus stop represents the "lobby" to the transit system and must provide a safe, secure, and comfortable waiting area with adequate sun and weather protection for transit passengers. Adding additional bus shelters remains a top priority for Tempe and valley transit passengers as reported in public opinion research as the valley's high sun and heat are significant barriers to more Tempe residents choosing transit as an viable alternative to auto-use.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "very satisfied" or "satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$2,228,906.

	2017-18		Estimated Fu	uture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	1,817,518					
<b>New Appropriation Request</b>	270,000					
Total Estimated Project Costs	2,087,518	250,000	250,000	250,000	250,000	3,087,518
Project Funding Sources						
Transit Tax	2,087,518	250,000	250,000	250,000	250,000	3,087,518
New Operating Budget Impacts	None					

Project No.	6764	Name:	City of Tempe Bus Pullout P	roject
Department:	Public Works		Project Location: C	itywide
Est. Start Date:	Ongoing		Est. Completion Date: O	ngoing

Staff has identified 35 bus pullout priority locations in the city. The project will install 3 to 5 new bus pullouts during FY 2016-17 with passenger amenities at various bus stops in the city. The project will also replace deteriorated existing bus pullouts. The locations for the next series of pull-outs will be based on industry standards which include sufficient right of way, changes in bus service levels, ridership, traffic volumes, and intersection safety considerations across the city. The project will install 5 bus pullouts (approx \$100k per pull-out) per year in subsequent years based on location priority established by the ongoing Bus Pullout Study. From 2016 to 2021, staff is estimating that 15 pullouts of the 35 identified locations will be completed. The remaining 20 will be completed between the years 2021-2025. Bus pull-outs provide safer layover areas, improve passenger safety and comfort by increasing distance from traffic flow, improve traffic flow along major streets, and improve intersection safety by reducing traffic back-ups behind buses.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$1,611,097.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	1,598,321					
New Appropriation Request	502,000					
Total Estimated Project Costs	2,100,321	502,000	502,000	502,000	502,000	4,108,321
Project Funding Sources						
Transit Tax	2,088,355	502,000	502,000	502,000	502,000	4,096,355
Development Impact Fees	11,966	TBD	TBD	TBD	TBD	11,966
Total Sources	2,100,321	502,000	502,000	502,000	502,000	4,108,321
New Operating Budget Impacts	None					

Project No. TBD Name: Country Club Way Bike and Pedestrian Improvements Project

Country Club Way (Rio Salado Path -

**Department:** Public Works **Project Location:** ASU Research Park)

Est. Start Date: 07/01/18 Est. Completion Date: 03/15/22

# Project Description, Purpose and Need:

In May 2016, the Transportation Commission provided consensus with submitting this project for a Maricopa Association of Governments grant. This project has received a \$82,500 design assistance grant from MAG to develop a preliminary design for this bike/ped facility that will provide bike ped facilities connecting North/South through the community. The Country Club Way Pedestrian Improvements and Bicycle Boulevard extends 7 miles connecting ASU Research Park along Country Club Way to Tempe Town Lake and the regional Rio Salado Path system. The project will link local and regional facilities, five schools, three existing canal paths, two bicycle/pedestrian bridges, four bicycle boulevards, travel across eight major arterials, connect to one light rail station at Smith-Martin and across the Union Pacific south of Apache Boulevard. The project connects to several regional multi-use paths, bicycle pedestrian corridors, schools, parks, and major destinations, as well as to light rail and other major transit. It would include public art, enhanced sidewalks, shared use path and bike lanes, signalized street intersections & mid-block crossings, raised medians, railroad crossing, and landscaping. This new facility will reduce vehicle-ped conflicts, introduce bike lanes and a path, landscaping and art features while remaining ADA/MUTCD/AASHTO compliant.

This project is listed in the Transportation Master Plan and Tempe General Plan 2040. This project implements the general plan goal of achieving the "20-minute city, providing safe and convenient access between neighborhoods and schools, parks, shopping, transit, employment, and other destinations". The improvements to this well traveled collector street will encourage an increase in public health by increasing the area of tree canopy and shade while providing safety improvements and traffic calming elements; catering to a stronger bike and pedestrian environment.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the FY 2016-17 five year CIP.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	-					
Total Estimated Project Costs	-	463,000	-	-	4,017,000	4,480,000
Project Funding Sources						
Transit Tax	-	463,000	-	-	228,969	691,969
Federal Grant	-	-	-	-	3,788,031	3,788,031
Total Sources	-	463,000	-	-	4,017,000	4,480,000
New Operating Budget Impacts						
Supplies and Services	-	-	-	-	40,000	

Project No. 6006089 Name: EVBOM - Facility Asset Maintenance (East Valley Bus Ops/Maint Facility)

Department: Public Works Project Location: 2050 E. Rio Salado

Est. Start Date: Ongoing Est. Completion Date: Ongoing

#### Project Description, Purpose and Need:

This project conducts repairs and replacement of major systems, sub-systems and equipment at the East Valley Bus Operations and Maintenance (EVBOM) facility as well as completes construction and expansion of the original facility design. The asset management plan for the facility and the specific projects stemming from it for FY 2017 thru FY 2021 is fluid, and is continuously updated as needed. The asset management plan for the facility also addresses the repair and replacement of building systems and equipment that are vital to the operation of the facility and ensure the safety and wellbeing of personnel and visitors to the facility: Improvements to the Maintenance Building 2nd floor HVAC systems and original chiller \$200,000 FY17-18; Add more parking and rehabilitate existing asphalt pavement in the north and south employee parking lots \$250,000 FY17-18; Rehabilitate the Maintenance Building concrete floor sealer and markings \$250,000 FY17-18; Purchase an articulated boom lift to safely access high mounted equipment throughout the facility \$100,000 FY17-18; Improve the Administration Building operator's lounge kitchen area so that the ice and water fill stations are sanitary, more durable, and easier to maintenance and clean \$50,000 FY17-18; Replace all exterior joint sealant \$100,000 FY18-19; Repaint exterior \$500,000 FY18-19; Replace fabric shade canopies \$100,000 FY18-19; Upgrade the existing Maintenance Building product distribution system by adding valved manifolds \$150,000 FY18-19; Replace maintenance bay exhaust hose reeks \$250,000, chassis wash bay improvements \$100,000; FY19-20; Replace Maintenance Building evaporative coolers and water treatment system \$500,000 FY19-20; Upgrade lighting to LED to reduce energy usage and maintenance costs \$1,500,000; FY19-20, added Maintenance Building foam roof repairs, \$100,000 FY19-20, added replacement of Maintenance Building maintenance bays heating system, \$500,000; FY19-20, added repairs to asphalt parking lot, driveways, and access road, \$100,000; FY20-21; Install a methane vapor recovery system on the LCNG plant \$300,000 FY21-22; Pave remaining section of bus parking yard \$250,000 FY21-22; Rebuild automatic bus wash bays \$500,000 FY21-22 FY21-22, added rebuilding automatic bus wash bay systems and re-epoxy walls, \$500,000 FY22-23, added build new bus paint booth, \$750,000.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Asset Preservation

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "very satisfied" or "satisfied" with the "Quality of the City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

# **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$2,545,932.

	2017-18		Estimated Fu	ture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	1,099,473					
New Appropriation Request	1,000,000					
Total Estimated Project Costs	2,099,473	950,000	1,450,000	1,500,000	1,050,000	7,049,473
Project Funding Sources						
Transit Tax	2,099,473	950,000	1,450,000	1,500,000	1,050,000	7,049,473
New Operating Budget Impacts	None					

Project No. 6006070 Name: Highline Canal Path (Baseline-Knox Rd)

Department: Public Works Project Location: Highline Canal Path (Baseline - Knox Road)

Est. Start Date: 07/01/16 Est. Completion Date: 06/30/18

#### Project Description, Purpose and Need:

This project is the design and construction of a 3.5 mile pathway along the Highline Canal in west central Tempe. The Salt River Project canal runs north and south from Baseline Road on the north to Knox Road on the south and is one of the last remaining canal banks in Tempe without a dedicated path for public use. This path has been awarded federal funding in the Fall of 2013. This project would integrate with and connect to planned and funded portions of pathway along the Highline Canal in the Town of Guadalupe and the City of Phoenix. The project will continue to solicit public input. The path would include street crossing treatments, fencing (where needed), landscaping, lighting and a paved path that meets all ADA and national transportation design standards. This project is part of the City's Transportation Master Plan and is in concert with the Tempe General Plan. It continues Tempe's commitment to building facilities that support increasing the numbers of people utilizing non-motorized forms of transportation to assist in reducing air pollution and traffic congestion. The project will serve many Tempe neighborhoods and link to Guadalupe and Phoenix. It will create an improved aesthetic in an area now neglected (canal banks) and enhance the quality of life for area residents.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$2,777,989.

	2017-18		Estimated Fu	ture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	2,649,711					
New Appropriation Request	2,511,000					
Total Estimated Project Costs	5,160,711	-	-	-	-	5,160,711
Project Funding Sources						
Transit Tax	1,890,340	-	-	-	-	1,890,340
Federal Grant	3,233,617	-	-	-	-	3,233,617
Development Impact Fees	36,754	-	-	-	-	36,754
Total Sources	5,160,711	-	-	-	-	5,160,711
New Operating Budget Impacts						
Supplies and Services	-	40,000	41,200	42,436	43,709	

Project No.	6007080	Name:	North South Rail Spur Path	
Department:	Public Works		Project Location: UPRR from University Drive to Baseline Road	
Est Start Date:	07/01/14		Fst Completion Date: 06/30/19	

This project involves the design and construction of 3 miles of a shared-use path adjacent to the existing freight rail line travelling north and south in Tempe, from University Drive to Baseline Road. The project involves constructing a 10-foot minimum path with lighting and landscaping, street crossing treatments and other amenities. The project was started with a \$65,000 MAG grant for 8-mile concept design from Tempe Beach Park to Knox Road along the UPRR spur line. This proposed shared-use path project is the first phase implementation of the design concept developed with the MAG Design grant. The project will include a public outreach component. This project is identified in the Tempe General Plan 2040 and Transportation Master Plan. It is part of the expansion of transportation alternatives to decrease dependency on the private automobile. The project has been requested by several businesses and neighborhoods and has already had some portions built through agreements with private business. The project would complement existing transportation systems.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

## **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$507,000.

	2017-18		Estimated Fu	ture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	507,000					
New Appropriation Request	-					
<b>Total Estimated Project Costs</b>	507,000	2,529,000	-			3,036,000
Project Funding Sources						
Transit Tax	507,000	129,088	-	-	-	636,088
Federal Grant - CMAQ	-	2,363,158	-	-	-	2,363,158
Development Impact Fees	-	36,754	-	-	-	36,754
Total Sources	507,000	2,529,000	-	-	-	3,036,000
New Operating Budget Impacts						
Supplies and Services	-	-	20,000	20,600	21,218	•

 Project No.
 6005249
 Name:
 Pathway Capital Maintenance

 Department:
 Public Works
 Project Location:
 Citywide

 Est. Start Date:
 Ongoing
 Est. Completion Date:
 Ongoing

#### Project Description, Purpose and Need:

This project will repair, rehabilitate or replace multi-use pathway (MUP) infrastructure that will surpass its useful life during the project period or due to excessive or adverse environmental exposures (e.g., sun, irrigation, high use, damage, theft). There are currently 23 miles of MUPs in Tempe. This project has multiple elements such as: o Inspect, repair, clean, and repaint the College Avenue Pedestrian Bridge \$500,000 FY 17-18; Inspect, repair, clean, and repair the Country Club Way Pedestrian Bridge \$500,000 FY 17-18; College Ave Streetscape irrigation Repair \$300,000 FY17-18; Re-stain concrete along Cross Cut Canal and Western Canal MUP's \$250,000 FY18-19; Improve lighting and landscaping at the Lakeshore Drive nodes along the Western Canal MUP \$250,000 FY18-19; Improve the storm water runoff management along the Western Canal \$150,000 FY18-19; Rehabilitation of the concrete path, landscaping, irrigation, along the El Paso Gasoline MUP between McClintock Drive and Price Road \$350,000 FY19-20; Rehabilitation of the concrete path, lighting, landscaping, and irrigation along the Grove Parkway MUP \$750,000 FY19-20; Replacement of the golf course netting and repainting of the net support structures along the Western Canal and Kyrene Canal MUP's adjacent the Ken McDonald Golf Course \$250,000 FY19-20; Improvements to the concrete path, lighting, landscaping, and irrigation along the Indian Bend Wash MUP \$750,000 FY20-21; Improvements to the concrete path, lighting, landscaping, and irrigation of the Cross Cut Canal MUP \$300,000 FY20-21; Upgrading of all remaining non-LED path lighting along the Sierra Tempe, Highline Canal, Alisanos, and 8th Street/Terrace Road MUP's \$500,000 FY21-22.

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Council Strategic Priority Alignment: Development Project Priority Type: Asset Preservation

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$2,526,247.

. ,		. ,	•			
	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	2,313,944					
New Appropriation Request	1,340,000					
Total Estimated Project Costs	3,653,944	870,000	1,370,000	1,070,000	520,000	7,483,944
Project Funding Sources						
Transit Tax	3,653,944	870,000	1,370,000	1,070,000	520,000	7,483,944
New Operating Budget Impacts	None					

Project No. 6007209 Name: Rio Salado North Bank Multi-use Path (Indian Bend Wash - McClintock Drive)

Department: Public Works Project Location: Rio Salado Northbank (IBW - McClintock)

Est. Start Date: 07/01/17 Est. Completion Date: 12/31/19

#### Project Description, Purpose and Need:

This project is a more than half mile extension of the Rio Salado Path system to link existing paths along the north bank of the Rio Salado (east of Rural Road) from the Indian Bend Wash east to McClintock Drive. This portion of pathway is the final path for the entire Rio Salado Path system and will provide another critical link for non-motorized travel in the Rio Salado, downtown Tempe and north Tempe areas. This project directly links to Tempe Marketplace, path travel to Scottsdale and future development along the Rio Salado area. This project will include a paved path, landscaping and lighting and is further investment in sustainable mobility options for all. The project is a partnership with the Army Corps of Engineers and their efforts to enhance this regional waterway. This funding request is allocated to the lighting component of the pathway.

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Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

# **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the FY 2016-17 five year CIP.

	2017-18		Estimated Fu	uture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	400,000					
Total Estimated Project Costs	400,000	-	-	-	-	400,000
Project Funding Sources Transit Tax	400,000					400,000
New Operating Budget Impacts						,
Supplies and Services	1,500	1,500	1,500	1,500	1,500	

Project No. 6007180 Name: Rio Salado S. Bank Path Underpass @ McClintock Dr.

**Department:** Public Works **Project Location:** Rio Salado S. Bank - McClintock

**Est. Start Date:** 07/01/14 **Est. Completion Date:** 06/30/19

#### Project Description, Purpose and Need:

This project is the construction of a bicycle/pedestrian path underpass at McClintock Drive along the south bank of the Rio Salado. The project will connect to an existing path on the west side of McClintock and to another path on the east side that is currently under construction managed by ADOT (101/202 underpass). The project will be concrete and lit and meet all ADA requirements and will provide emergency vehicle access. Design Team preliminary budget estimate for design and construction cost was reduced from \$3,703,000 to \$2,362,000. Estimated Transit Tax share was reduced from \$2,203,000 to \$904,122. his project provides an accessible and safe crossing under McClintock Drive for the Rio Salado Path users, where today none exists. The project will link a more than 5 mile system of paths along the Rio Salado and Town Lake area.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$467,896.

	2017-18		Estimated Fu	uture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	438,291					
New Appropriation Request	2,053,000					
<b>Total Estimated Project Costs</b>	2,491,291	-	-	-	-	2,491,291
Project Funding Sources						
Transit Tax	1,033,413	-	-	-	-	1,033,413
Federal Grant - CMAQ	1,457,878	-	-	-	-	1,457,878
Total Sources	2,491,291	-	-	-	-	2,491,291
New Operating Budget Impacts						
Supplies and Services	-	1,250	1,288	1,326	1,366	

Project No. 6007180 Name: Rio Salado Southbank Path Underpass @ Priest Drive

Department: Public Works Project Location: Rio Salado S. Bank - Priest

Est. Start Date: 07/01/14 Est. Completion Date: 06/30/18

#### Project Description, Purpose and Need:

This project is the construction of a bicycle/pedestrian path underpass at Priest Drive along the south bank of the Rio Salado. The project will connect to an existing path on the east side of Priest and to another path on the west side that will be constructed in 2013. The project will be concrete and lit and meet all ADA requirements and will provide emergency vehicle access. This project provides an accessible and safe crossing under Priest Drive for the Rio Salado Path users, where today none exists. The project will link a more than 5 miles system of paths along the Rio Salado and Town Lake area.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### Prior Fiscal Year Funding:

This project received FY 2016-17 appropriations in the amount of \$1,970,525.

	2017-18		Estimated Fu	ture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	1,942,546					
<b>New Appropriation Request</b>	-					
Total Estimated Project Costs	1,942,546	-	-	-	-	1,942,546
Project Funding Sources						
Transit Tax	540,400	-	-	-	-	540,400
Federal Grant - CMAQ	1,402,146	-	-	-	-	1,402,146
Total Sources	1,942,546	-	-	-	-	1,942,546
New Operating Budget Impacts						
Supplies and Services	1,250	1,250	1,288	1,326	1,366	

Project No. TBD Name: Tempe/Mesa High Capacity Transit Feasibility Study

**Department:** Public Works **Project Location:** Tempe (Priest - Mesa limits, Rio Salado to Baseline)

Est. Start Date: 07/01/17 Est. Completion Date: 12/31/18

#### Project Description, Purpose and Need:

This transit service feasibility study would be in partnership with the city of Mesa to explore future possible high capacity transit corridors in the Mesa and Tempe region of the East Valley. Specifically this study would look at how the existing light rail, programmed Streetcar, and the Mesa light rail extensions can further link the two cities and their major destinations. The two cities would look at corridors to connect both downtown Mesa and Tempe, Mesa Community College and Arizona State University, Tempe Marketplace and Mesa Riverview, Cubs Stadium and Sun Devil Stadium, and more. This feasibility study would examine most appropriate corridors for servicing the highest population centers, growth corridors, and activity and employment areas. The study would be utilized in determinations for the anticipated Proposition 500 regional transportation effort. Total Feasibility Study Estimated Cost \$600k, with \$300k to be contributed by City of Mesa.

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Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the FY 2016-17 five year CIP.

	2017-18	Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
<b>New Appropriation Request</b>	300,000					
Total Estimated Project Costs	300,000	-	-	-	-	300,000
Project Funding Sources						
Transit Tax	300,000	-	-	-	-	300,000
New Operating Budget Impacts	None					

Project No.	6007199	Name:	Tempe/Phoenix Bike Share Program	
Department:	Public Works		Project Location: Citywide	
Est. Start Date:	07/01/16		Est. Completion Date: 06/30/16	

The Regional Bike Share program will include multiple cities and Valley Metro and will provide 20 or more locations in Tempe for rental of bicycles at automated bicycle rack kiosks. The kiosks will be in City right-of-way and in high activity areas like downtown Tempe, Tempe Town Lake, the Tempe Public Library, and the Tempe Center for the Arts. The capital funds for the project are through a federal grant and the annual operations are estimated to be \$100k. The project is modelled after other cities and is similar to the nationwide Zipcar program, which also operates in Tempe, where the public has ease of access to renting a car. The project will include a public process to identify best locations for racks and bikes and will be a partnership with Valley Metro and other cities. The bike share project is intended to provide additional sustainable transportation opportunities in Tempe and the region. It will provide enhanced bicycle service access that will link directly to transit options. Bike share is a successful program in other cities nationwide and is a logical extension of the Tempe system. It will enable visitors, students, residents and others to obtain a bike easily in most activity areas around Tempe and further improve Tempe's menu of alternative mode options. Replacement bikes beginning FY2021 Qty 100 @\$1,500.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$1,492,176.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	875,012					
New Appropriation Request	-					
<b>Total Estimated Project Costs</b>	875,012	-	-	150,000	150,000	1,175,012
Project Funding Sources						
Transit Tax	46,376	-	-	150,000	150,000	346,376
Federal Grant - CMAQ	828,636	-	-	-	-	828,636
Total Sources	875,012	-	-	150,000	150,000	1,175,012
New Operating Budget Impacts						
Supplies and Services	100,000	100,000	100,000	100,000	100,000	
New Revenue Offsets	(50,000)	(50,000)	(50,000)	(50,000)	(50,000)	
Total Fiscal Impact	50,000	50,000	50,000	50,000	50,000	

Project No.	TBD	Name: Tempe Streetcar - Local funding	
Department:	Public Works	Project Location: Apache/Mill	
Est. Start Date:	07/01/16	Est. Completion Date: 08/01/20	

Tempe Streetcar project is a 3 mile fixed guideway - located on Rio Salado Pkwy at Marina Heights going west to Mill, south to Apache Blvd and East to Dorsey Lane. The segment will also include the downtown one-way loop running North on Mill and South on Ash Ave. The total capital cost of the project is an estimated \$176.6m, excluding finance costs. Funding Sources for the project are estimated as follows: FTA 5309 federal funds \$75.0m, CMAQ Federal funds \$32.1m, PTF revenue funds \$46.5m and Tempe Local Funds \$23.0m A new special revenue assessment district will be established to issue \$13m in revenue bonds to partially fund the City's \$23m local contribution to Streetcar capital costs. Bond proceeds will be transferred to Tempe Transit for disbursement to Valley Metro Rail during construction of project in FY16-17 and FY17-18 at \$6.5m per year or as requested. Debt service of the \$13m bond issue will be administered by the special revenue assessment district, i.e. collect assessments and retire the debt.

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Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

#### Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured in the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project was included in the FY 2016-17 CIP in FYs 2017-18 through FY 2018-19. This project did not receive FY 2016-17 budget appropriation at the time of budget adoption; however, appropriation was subsequently transferred from Transit CIP contingency.

	2017-18		Estimated Fu	uture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	1,533,216					
<b>New Appropriation Request</b>	1,158,061					
Total Estimated Project Costs	2,691,277	5,006,191	8,295,691	1,597,846	-	17,591,005
Project Funding Sources						
Public Transportation Funds (PTF)	2,441,277	656,191	695,691	347,846	-	4,141,005
Special District- Bond Funding	-	4,250,000	7,500,000	1,250,000	-	13,000,000
Transit Tax	-	100,000	100,000	-	-	200,000
Federal Grant - TOD	250,000	-	-	-	-	250,000
Total Sources	2,691,277	5,006,191	8,295,691	1,597,846	-	17,591,005
New Operating Budget Impacts						
Supplies and Services	-	-	-	4,300,000	4,429,000	
New Revenue Offsets	-	-	-	(430,000)	(442,900)	
Total Fiscal Impact	-	-	-	3,870,000	3,986,100	

Project No. 6006099 Name: TTC - Facility Asset Maintenance (Transportation Center)

Department: Public Works Project Location: 200 E. 5th Street

Est. Start Date: 07/01/13 Est. Completion Date: Ongoing

#### Project Description, Purpose and Need:

This project conducts major repair, refurbishment, or replacement of major equipment, infrastructure, and sub-systems at the Tempe Transportation Center. The facility was completed in 2008 and acts as a major multi-modal transit center served by 12 bus routes which include Orbit circulators, Fixed Route Service and METRO light rail. The transit center and plaza area includes passenger amenities such as benches, shelters, landscape, a transit store and public restrooms. Due to its proximity to downtown Tempe and ASU activity centers, the center experiences heavy use during City or University related special events and during moderate climate seasons. Maintaining the building and transit plaza in a state of good repair, provides good working conditions for staff and tenants while ensuring the site is safe and functional for transit operations and public use: Replace the plaza driveway trench drains and sidewalk ramps \$200,000 FY 16-17; Rehabilitate the storm and gray water reuse systems \$100,000 FY16-17; Clean and seal the pedestrian plaza pavers \$100,000 FY 17-18; Replace the pedestrian plaza terrazzo \$100,000 FY17-18; Upgrade the security camera systems \$150,000 FY17-18; Replace the carpet \$100,000 FY18-19; Upgrade facility HVAC and lighting automation controls \$100,000 FY18-19; Upgrade lighting to LED to reduce energy usage and maintenance costs \$1,00,000 FY19-20; Extend the back up power generator away from PD sally port and TTC fresh air intakes \$50,000 FY20-21; Replace all exterior joint sealant \$100,000 FY20-21; Repaint exterior \$200,000 FY20-21; Rebuild elevator cars and controls \$250,000 FY21-22.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Asset Preservation Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$827,639.

	2017-18	017-18 Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	660,799					
New Appropriation Request	400,000					
Total Estimated Project Costs	1,060,799	200,000	1,000,000	350,000	350,000	2,960,799
Project Funding Sources						
Transit Tax	1,060,799	200,000	1,000,000	350,000	350,000	2,960,799
Total Sources	1,060,799	200,000	1,000,000	350,000	350,000	2,960,799
New Operating Budget Impacts	None					

 Project No.
 5239
 Name:
 Unaccounted Federal Grants & Project Contingency

 Department:
 Public Works
 Project Location:
 TBD

 Est. Start Date:
 Ongoing
 Est. Completion Date:
 Ongoing

#### Project Description, Purpose and Need:

This Project will create additional spending authority for federal grants that may be available during FY2017-18. The City must account for potential federal grants that could be secured and that need to be spent within 2017-2018. Potential grant funded projects include: a) Transit Facility additions or improvements; b) Multi-Use Paths & Pedestrian Street Improvements; c) Passenger Facility Rehabilitation; and d) Bus Stop Improvements. Provide contingent budget appropriation for mid-year grant awards and project increases.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Asset Preservation

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$3,000,000.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	3,000,000					
Total Estimated Project Costs	3,000,000	-	-	-	-	3,000,000
Project Funding Sources						
Transit Tax/Federal Grants	3,000,000	-	-	-	-	3,000,000
New Operating Budget Impacts	None					

Project No. 6008419 Name: Western Canal-Highline MUP - Path Link

Department: Public Works Project Location: Western Canal & Mineral Drive

Est. Start Date: 01/01/16 Est. Completion Date: 01/01/19

#### Project Description, Purpose and Need:

The Western Canal / Missing Link project is proposed to be a 10' wide concrete shared-use path and on-street facility running .5 miles connecting the Highline and Western Canal pathways. The project will link local and regional facilities, other canal paths, a bicycle boulevard (the "Brake" route in Tempe's BIKEiT system), the Tempe North South Rail Spur Path and run through a public golf course, a Salt River Project facility and across a major arterial. The newly formed connection is currently used illegally by travelers and this new facility will reduce vehicle-ped-bike conflicts, introduce lighting, landscaping, and art features; while remaining ADA/MUTCD/AASHTO compliant. The project is in the Transportation Plan and has been awarded regional design funding. \$900,000 in federal funds are anticipated. The project will connect two Tempe and regional canal pathways across a golf course, canal bridge and major arterial street (Kyrene Road). Currently users illegally traverse the area, climbing fences and trespassing in order to make this important bicycle and pedestrian link in the city.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Systems Expansions

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 6: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Overall Satisfaction with Transit System in Tempe" greater than or equal to 80% as measured by the City of Tempe Transit Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$363,709.

	2017-18		Estimated Fu	ture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	334,257					
New Appropriation Request	-					
Total Estimated Project Costs	334,257	944,000	-	-	-	1,278,257
Project Funding Sources						
Transit Tax	334,257	51,920	-	-	-	386,177
Federal Grant - CMAQ	-	892,080	-	-	-	892,080
Total Sources	334,257	944,000	-	-	-	1,278,257
New Operating Budget Impacts						
Supplies and Services	-	2,500	2,575	2,652	2,732	



# Transportation and R.O.W. Program 2017-18 CIP Project Requests and Descriptions

				New 2017-18	2017-18 Total					
		Proposed	Capital Budget	Appropriation	Requested		Additional Pro	•		Total 5-Year
Page #	•	Funding Source(s)	Re-appropriations	Request	Appropriation	2018-19	2019-20	2020-21	2021-22	Program
400	5th Street Right-of-Way Improvements -	Highway User Revenue Fund				405.000	F70 000			075 000
180	Price to Evergreen	Highway Oser Revenue Fund	-	-	-	105,000	570,000	-	-	675,000
181	ADA Improvements - Right-of-Way	General Obligation Bonds	500,000	570,864	1,070,864	677,670	635,375	600,000	600,000	3,583,909
182										
102	Arterial Resurfacing	Highway User Revenue Fund	-	1,500,000	1,500,000	1,500,000	1,500,000	2,500,000	2,500,000	9,500,000
		General Obligation Bonds	1,392,146	5,073,101	6,465,247	4,630,426	5,243,465	4,917,800	5,659,593	26,916,531
		Project Total	1,392,146	6,573,101	7,965,247	6,130,426	6,743,465	7,417,800	8,159,593	36,416,531
183	Bridge Maintenance	General Obligation Bonds	499,291	1,019,209	1,518,500	300,000	300,000	300,000	300,000	2,718,500
184	City Facility Parking Lots	General Obligation Bonds	10,092	51,500	61,592	53,045	54,636	56,275	57,963	283,511
185	Contractual Project Participation	Developer Contribution	290,000	300,000	590,000	-	-	-	-	590,000
186	Elliot & Kyrene Railroad Crossing									
100	Intersection Safety Improvement	General Obligation Bonds	50,000	-	50,000	370,000	-	-	-	420,000
		Federal Grant - Section 130	1,000	-	1,000	2,195,000	-	-	-	2,196,000
		Project Total	51,000	-	51,000	2,565,000	-	-	-	2,616,000
	McClintock Dr Streetscape Alternative									
187	<u>Implementation</u>	Highway User Revenue Fund	-	1,150,000	1,150,000	-	-	-	-	1,150,000
188	Minor Concrete Improvements	General Obligation Bonds	16,429	222,046	238,475	228,708	235,569	242,636	249,915	1,195,303
189	Neighborhood Traffic Calming	Highway User Revenue Fund	-	100,000	100,000	100,000	100,000	100,000	100,000	500,000
190	Right of Way (ROW) Landscape Replacement and Revitalization	Highway User Revenue Fund	300,000	400,000	700,000	500,000	500,000	600,000	600,000	2,900,000
191	Roundabout at College Ave & McKellips Rd	Highway User Revenue Fund	-	115,000	115,000	-	464,000	-	-	579,000
192	Roundabout at Priest Dr & Grove Pkwy	Highway User Revenue Fund	-	115,000	115,000	686,000	-	-	-	801,000
193	Rural Rd & Southern Ave									
	Intersection Improvements	General Obligation Bonds	188,150	1,944,766	2,132,916	-	-	-	-	2,132,916
		Federal Safety Grant	-	645,324	645,324	-	-	-	-	645,324
		Transit Tax	-	134,676	134,676	-	-	-	-	134,676
		Development Impact Fees	-	55,234	55,234	-	-	-	-	55,234
		Project Total	188,150	2,780,000	2,968,150	-	-	-	-	2,968,150



# Transportation and R.O.W. Program 2017-18 CIP Project Requests and Descriptions

		Proposed	Capital Budget	New 2017-18 Appropriation	2017-18 Total Requested		Additional Pro	ojected Needs		Total 5-Year
Page #	Project Name	Funding Source(s)	Re-appropriations	Request	Appropriation	2018-19	2019-20	2020-21	2021-22	Program
194	Rural Rd & University Dr									
134	Intersection Improvements	General Obligation Bonds	-	610,000	610,000		-	5,000,000	-	5,610,000
		Development Impact Fees	-	-	-		-	TBD	-	TBD
		Project Total	-	610,000	610,000	-	-	5,000,000	-	5,610,000
195	Street Grant Contingency	Grants/Other	-	1,000,000	1,000,000	-	-	-	-	1,000,000
		Highway User Revenue Fund	-	1,500,000	1,500,000	-	-	-	-	1,500,000
		Project Total	-	2,500,000	2,500,000	-	-	-	-	2,500,000
	University Drive Streetscape - Colle	ege to								
196	Veterans Way	Highway User Revenue Fund	-	452,000	452,000	-	-	-	-	452,000
		ASU Participation	-	500,000	500,000	-	-	-	-	500,000
		Project Total	-	952,000	952,000	-	-	-	-	952,000
	Transportation and R.O.W. Program	n Total	3,247,108	17,458,720	20,705,828	11,345,849	9,603,045	14,316,711	10,067,471	66,038,904

The table above lists the individual projects that comprise the Transportation and R.O.W. Program and the associated five-year funding requests. The detailed project descriptions and justifications are provided on the pages that follow.

Project No.	TBD	Name: 5th Street Right-of-Way Improvements - Price to Evergreen	5th Street Right-of-Way Improvements - Price to Evergreen				
Department:	Public Works	Project Location: 5th Street					
Est. Start Date:	07/01/18	Est. Completion Date: 12/31/20					

The City of Tempe's Transportation Division is tasked with providing residents and visitors with a safe and efficient transportation system. As part of a continuing transportation maintenance and asset management program, Transportation Maintenance staff proactively identifies potential locations within the City that could benefit from infrastructure improvements. Nearly all streets in the City have been improved with curbing and drainage. 5th Street is a local collector that connects Price and Evergreen Roads east of Loop 101. The north side of the street is fully improved with vertical curb and six foot sidewalks. The south side of the street is not improved and consists only of an earthen shoulder. The pavement width does not meet minimum standards at only 24 feet and the street is often further narrowed by parked vehicles. The earthen shoulder continues to be a maintenance concern due to poor drainage, illegal dumping, and unauthorized vehicle use. The Transportation Division regularly receives complaints from residents regarding this portion of 5th Street. This project will pave the earthen shoulder and accommodate drainage. There may be opportunity to use sustainable drainage techniques like water-catching basins or bioswales.

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Council Strategic Priority Alignment: Development Project Priority Type: Asset Preservation

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the adopted FY 2016-17 five year CIP.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	-					
Total Estimated Project Costs	-	105,000	570,000	-	-	675,000
Project Funding Sources						
Highway User Revenue Fund	-	105,000	570,000	-	-	675,00
New Operating Budget Impacts	None					

Project No.	5408021	Name:	ADA Improvements - Right-of-Way		
Department:	Public Works		Project Location: Citywide		
Est. Start Date:	Ongoing		Est. Completion Date: Ongoing		

This project involves updating infrastructure not constructed to current ADA specifications and improving overall accessibility using the 2016 ADA Accessibility survey to identify and prioritize needed improvements and to establish a long term plan for making the city more accessible.

The first phase of the ADA survey covered the downtown area and evaluated access routes and rights-of-ways including sidewalks, path of travel, street crossings, crosswalks, curb ramps, blended transitions, detectable warning surfaces, lifts and ramps, bus boarding a alighting areas, on-street parking and passenger loading zones, signs, pedestrian signals, push-button signals, round-abouts, traffic stop bars, street furniture, flange way gaps at rail crossings, speedbumps and signalized intersections, physical conditions, slopes, cross-slopes, level changes and other related elements.

Phase 1 of the survey identified needed corrections valued at \$10.2 million. A majority of the corrections (\$8.7 million) involve sidewalks that cross commercial driveways. Additional discussion will be started in order to determine policy direction for making these corrections and then future funding can be programmed.

The remaining corrections (\$1.5 million) that do not involve commercial property have been phased into years 1-3 based on the prioritization and scoring in the ADA survey report. In addition, 20% is added to each year to address ADA requests that come in throughout the year:

- Year 1: Corridors with non-commercial sidewalks ranked High Priority (\$570,864)
- Year 2: All traffic signal corrections, plus corridors with non-commercial sidewalks ranked Medium Priority (\$677,670)
- Year 3: Corridors with non-commercial sidewalks ranked Low Priority (\$635,376)

Council Strategic Priority Alignment: Quality of Life Project Priority Type: Public Health and Safety Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 14: Achieve accessible sidewalks, curb ramps, and crosswalks in all city right-of-ways as outlined in the Tempe ADA Transition Plan.

# **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$500,000.

	2017-18	Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	500,000					
New Appropriation Request	570,864					
Total Estimated Project Costs	1,070,864	677,670	635,375	600,000	600,000	3,583,909
Project Funding Sources						
General Obligation Bonds	1,070,864	677,670	635,375	600,000	600,000	3,583,909
New Operating Budget Impacts	None					

Project No.	5499741	Name:	Arterial Resurfacing (formerly titled Arterial, Collector, and Residential Street Asset Preservation)
Department:	Public Works		Project Location: Citywide
Est. Start Date:	ongoing		Est. Completion Date: ongoing

This project provides for the reconstruction, resurfacing, and rehabilitation of arterial, collector and residential streets that have exceeded their design life or are in need of maintenance as part of the pavement asset management program. Improvements are necessary to ensure accessibility and safety for residents and businesses on Tempe's streets and to accommodate all modes of traffic including pedestrians, bicyclists, and vehicular traffic. Depending on the condition of the pavement structure, different maintenance treatments are available which can be used to extend the life of the system. These include (in order of cost): crack seal, seal coat, slurry seal, chip seal, Mill and Overlay and the most expensive is a reconstruction. Reconstructing, resurfacing and rehabilitating arterial/collector/residential streets increases the strength and the durability of the roadway, while decreasing maintenance costs. This project is an important component of our strategic plan to maintain/preserve the 1241 lanes miles of asphalt roadways (447 Arterial Lane Miles, 107 Collector Lane Miles, 72 Industrial Lane Miles, and 615 Local Lane Miles) in good condition. To account for the unpredictable nature of oil prices an additional 10% was added to the outlying fiscal years. If funded, the street segments selected by staff with the help of RoadMatrix will be maintained according to their PQI.

**Council Strategic Priority Alignment:** Safe & Secure Communities **Project Priority Type:** Asset Preservation **Project advances the following Council Strategic Priorities performance measure(s):** 

Performance Measure 22: Achieve adopted standards for Pavement Quality Index equal to a citywide average rating of 70 or higher with no arterial or collector-street below a rating of 40.

# **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$7,964,293.

	2017-18		Estimated Future Costs			
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	1,392,146					
New Appropriation Request	6,573,101					
Total Estimated Project Costs	7,965,247	6,130,426	6,743,465	7,417,800	8,159,593	36,416,531
Project Funding Sources						
Highway User Revenue Fund	1,500,000	1,500,000	1,500,000	2,500,000	2,500,000	9,500,000
General Obligation Bonds	6,465,247	4,630,426	5,243,465	4,917,800	5,659,593	26,916,531
Total Sources	7,965,247	6,130,426	6,743,465	7,417,800	8,159,593	36,416,531
New Operating Budget Impacts	None					

 Project No.
 5499899
 Name:
 Bridge Maintenance

 Department:
 Public Works
 Project Location:
 Various

 Est. Start Date:
 07/01/17
 Est. Completion Date:
 Ongoing

#### Project Description, Purpose and Need:

Under federal law the National Bridge Inspection Program mandates the inspection of all bridges in the country at least once every two years. ADOT has been administering these inspections for the City of Tempe's bridges for many years and subsequently submitting a report to the City defining required repairs and maintenance. Currently ADOT inspects 32 bridges for the City, all of which are at least twenty years old. Repairs are prioritized based upon the sufficiency rating produced by ADOT which varies for each inspection year. The City of Tempe has completed the repairs required from the last report performed in 2015; however one outstanding task involving a long term settlement study on the Center Parkway Bridge has just been completed. The extent of the required bridge repairs revealed by this study is not fully known, but based upon study findings the repairs will require design, construction, and permanent monitoring. These repairs will be substantial. An "order of magnitude" estimate has been made by our repair design team and is based upon the study findings and bridge design experience. Until design is completed and construction commences, a precise estimate will not be available. A bridge consultant is in the process of being procured and design will begin as soon as approval is given. Repair will follow immediately as funding becomes available. The next ADOT bridge study must also be requested and funded, and required repairs must be designed in the 2017/2018 fiscal year.

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Council Strategic Priority Alignment: Development Project Priority Type: Public Health and Safety

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$728,821.

	2017-18		Estimated Fu	ture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	499,291					
New Appropriation Request	1,019,209					
Total Estimated Project Costs	1,518,500	300,000	300,000	300,000	300,000	2,718,500
Project Funding Sources						
General Obligation Bonds	1,518,500	300,000	300,000	300,000	300,000	2,718,500
New Operating Budget Impacts	None					

Project No.	5407791	Name:	<b>City Facility Parking Lots</b>	
Department:	Public Works		Project Location:	Citywide
Est. Start Date:	Ongoing		Est. Completion Date:	Ongoing

Over time, the condition of the 74 city's parking lots has continued to deteriorate. As with the street system, the deferred maintenance of this asset will continue to increase costs necessary to maintain the lots at a safe and acceptable level. Staff worked with a consultant to analyze the condition of the assets. Similar to the PQI levels identified for the streets, the information on the condition of the parking lots will then be used to prioritize the maintenance over a period of time. Appropriate levels of maintenance will also be identified including sealing, resurfacing and reconstruction. With these funds, 4 per year of the 24 City parking lots that are under a 59 PQI will be treated.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Asset Preservation

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$150,000.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	10,092					
New Appropriation Request	51,500					
Total Estimated Project Costs	61,592	53,045	54,636	56,275	57,963	283,511
Project Funding Sources						
General Obligation Bonds	61,592	53,045	54,636	56,275	57,963	283,511
New Operating Budget Impacts	None					

Project No.	5408031	Name:	Contractual Project Participation
Department:	Public Works		Project Location: Various
Est. Start Date:	Ongoing		Est. Completion Date: Ongoing

This project will allow the city to carry out transportation and right-of-way contractual requirements identified and agreed upon in the development process or through other contractual means. Projects may include, but are not limited to: ADA improvements, pedestrian traffic signals, railroad crossing improvements, streetscapes, landscaping, and multi-use paths. Specifically, as part of the agreement for development of Lake Country Village, the city was provided with \$125,000 to offset the cost of installing landscape improvements and for maintenance near to the development. A portion of that has been set aside for improvements, while the remaining will be used for ongoing maintenance. The city also expects to receive \$500,000 from Alberta/Forum Development Partners for reimbursement of future railroad safety improvements at the crossing of UPRR and University Drive, as required by development agreements.

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Council Strategic Priority Alignment: Development Project Priority Type: Asset Preservation

#### Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$315,000.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	290,000					
<b>New Appropriation Request</b>	300,000					
<b>Total Estimated Project Costs</b>	590,000	-	-	-	-	590,000
Project Funding Sources						
Developer Contribution	590,000	-	-	-	-	590,000
New Operating Budget Impacts	None					

Project No. 5408041 Name: Elliot & Kyrene Railroad Crossing Intersection Safety Improvement

Department: Public Works Project Location: Elliot Rd. & Kyrene Rd.

Est. Start Date: 07/01/18 Est. Completion Date: 12/31/19

### Project Description, Purpose and Need:

This project will construct safety improvements to upgrade the railroad crossing at the intersection of Elliot and Kyrene roads. Improvements will include construction of new railroad crossing signal equipment, crossing gates, extended and widened raised medians, relocation of sidewalks, lane reconfiguration, new striping and improved transit stops. The project will be funded significantly with a Section 130 grant from the federal government. This capital project would upgrade the railroad crossing to meet safety standards as required by the Arizona Corporation Commission and the Federal Railroad Administration. The project would also eliminate the most costly improvement for extending the quiet zone along the six mile Union Pacific Railroad industrial spur line which begins at the 13th Street railroad crossing immediately east of Farmer Avenue, traveling south to the Warner Road crossing approximately one quarter mile west of Kyrene Road. Like the existing quiet zone, if the city pursues this quiet zone extension, it would require approvals by the Arizona Corporation Commission, Union Pacific Railroad and Federal Railroad Administration.

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Council Strategic Priority Alignment: Development Project Priority Type: Public Health and Safety

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$51,000.

. ,		. ,				
	2017-18	8 Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	51,000					
<b>New Appropriation Request</b>	-					
Total Estimated Project Costs	51,000	2,565,000	-	-	-	2,616,000
Project Funding Sources						
General Obligation Bonds	50,000	370,000	-	-	-	420,000
Federal Grant - Section 130	1,000	2,195,000	-	-	-	2,196,000
Total Sources	51,000	2,565,000	-	-	-	2,616,000
New Operating Budget Impacts	None					

 Project No.
 TBD
 Name:
 McClintock Dr Streetscape Alternative Implementation

 Department:
 Public Works
 Project Location:
 McClintock Dr

 Est. Start Date:
 11/01/17
 Est. Completion Date:
 06/30/18

# Project Description, Purpose and Need:

In July 2015, McClintock Drive between Broadway and Guadalupe roads was repaved as part of Tempe's ongoing Asset Management Capital Maintenance Program. As part of this repaving project, McClintock Drive was reconfigured to include bike lanes on each side of the street, which required the removal of at least one vehicle lane on McClintock Drive. More recently, discussions regarding the configuration of McClintock have continued and staff is in the process of working with a consultant and the community to explore opportunities to develop concepts to achieve Council's goal of improving traffic flow and decreasing congestion while continuing to include bike lanes along the corridor. Recognizing the budget approval process for fiscal year 17/18 will be nearing completion prior to council reviewing design alternatives, staff has submitted this CIP for potential funding pending the results of the discussion expected to take place in the Spring of 2017. This would allow, with Council consensus, the ability for staff to begin working with the consultant to complete construction drawings in the Fall of 2017 followed by beginning construction in Winter of 2018. The following phases are anticipated: Phase 1 (FY16/17) - Alternatives development and outreach; Phase 2 (FY17/18 and FY18/19) - Prepare construction documents and begin construction in Winter 2018.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the adopted FY 2016-17 five year CIP

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	1,150,000					
Total Estimated Project Costs	1,150,000	-	-	-	-	1,150,00
Project Funding Sources Highway User Revenue Fund	1,150,000		-	-	-	1,150,0
New Operating Budget Impacts	None					

Project No.	5401417	Name:	Minor Concrete Improvements
Department:	Public Works		Project Location: Citywide
Est. Start Date:	Ongoing		Est. Completion Date: Ongoing

This project supplements the City's concrete program and the strategy of utilizing city forces (two employees) to handle smaller less complex jobs. This project will provide for peak demands and emergency replacement of broken curbs, gutters, and sidewalks throughout the city. Other uses of the project include the construction of curbs, gutters, sidewalks and ADA accessible ramps to improve the continuity of the infrastructure and to improve accessibility and mobility for pedestrians in various areas. This project is also used in emergency call out situations as needed. Funds for the project will allow for approximately 18,000 square feet of minor concrete repair per year.

This CIP provides a cost effective way of quickly repairing concrete damages of the estimated 5.0 million lineal feet of curb, gutter and sidewalk. Funding this project is crucial to the citizens by providing safe and easily traversable pedestrian access throughout the city.

Council Strategic Priority Alignment: Quality of Life Project Priority Type: Public Health and Safety Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 14: Achieve accessible sidewalks, curb ramps, and crosswalks in all city right-of-ways as outlined in the Tempe ADA Transition Plan.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$215,579.

Request	2018-19	2019-20	2020-21	2021-22	Total
16,429					
222,046					
238,475	228,708	235,569	242,636	249,915	1,195,303
238,475	228,708	235,569	242,636	249,915	1,195,303
	16,429 222,046 238,475	16,429 222,046 238,475 228,708	16,429 222,046 238,475 228,708 235,569	16,429 222,046 238,475 228,708 235,569 242,636	16,429 222,046 238,475 228,708 235,569 242,636 249,915

Project No.	5408051	Name:	Neighborhood Traffic Calm	ing
Department:	Public Works		Project Location:	Various
Est. Start Date:	Ongoing		Est. Completion Date:	Ongoing

This project will provide the Transportation Division with resources to strengthen its ability to address neighborhood traffic concerns, such as the installation of traffic calming devices like speed humps/cushions. Staff continue to receive requests from residents to install devices to help in addressing neighborhood quality of life issues related to speeding and cut-through. The cost of speed humps/cushions depends on the total number of installations, but average about \$3,000 apiece. The number of speed humps/cushions varies by the length of the street, with most projects including three or four speed humps/cushions. A funding level of \$100,000 per year would allow transportation to address neighborhood traffic concerns on approximately 10 streets per year. The speed hump/cushion program went unfunded for many years. While on hold, Transportation staff compiled a waiting list of 53 requests. A traditional speed hump is continuous from curb to curb, while a speed cushion is divided into segments in order to accommodate the wheelbase of emergency vehicles.

Council Strategic Priority Alignment: Safe & Secure Communities Project Priority Type: Public Health and Safety Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Feeling of Safety in the City" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$100,000.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	100,000					
Total Estimated Project Costs	100,000	100,000	100,000	100,000	100,000	500,000
Project Funding Sources						
Highway User Revenue Fund	100,000	100,000	100,000	100,000	100,000	500,000
New Operating Budget Impacts	None					

 Project No.
 5406149
 Name:
 Right of Way (ROW) Landscape Replacement and Revitalization

 Department:
 Public Works
 Project Location:
 Citywide

 Est. Start Date:
 Ongoing
 Est. Completion Date:
 Ongoing

#### Project Description, Purpose and Need:

For 2017/18, the following areas will undergo improvements; Priest from Rio Salado to University (\$110,000), Guadalupe from Hardy to Rural (\$100,000), McClintock from Elliot to Warner (\$150,000). As part of this effort, recognition towards maintaining the new plants including trimming within the first 3-5 years needs to be considered. Additional funding was included in 2015/16 to begin implementation of the Urban Forest Master Plan and will continue to be used for this effort once the master plan is completed in the spring of 2016. In order to re-vegetate and recondition significant landscape segments of arterial ROW, it was anticipated that \$9,700,000 would need to be reinvested and it would take over 32 years to accomplish this at the proposed funding level. Recognizing this significant timeframe, an increase has been shown over the next 5 years and going forward in order to address a greater percentage of the city's landscape assets.

The City of Tempe's right of way and median landscape consists of an eclectic mix of trees and shrubs covering over 6.5 million square feet of landscape maintained. There is an inventory of over 7,000 City street trees valued at over \$16 million which also serves to support clean air and clean water goals. There is a mixture of public, home-owner association, and commercial development properties that blend together along with City arterials. In many areas the ROW landscaping is showing incredible signs of decline, including plant stress and decimation. Recent construction and revitalization projects for both buildings and streets have also taken their toll on the landscaping. This request would support the replacement and regeneration of the ROW landscape areas.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Asset Preservation

Project advances the following Council Strategic Priorities performance measure(s):

Proposed Performance Measure: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of landscape maintenance along streets/sidewalks" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$700,000.

	2017-18		Estimated Fu	ture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	300,000					
New Appropriation Request	400,000					
Total Estimated Project Costs	700,000	500,000	500,000	600,000	600,000	2,900,000
Project Funding Sources						
Highway User Revenue Fund	700,000	500,000	500,000	600,000	600,000	2,900,000
New Operating Budget Impacts	None					

Project No. TBD Name: Roundabout at College Ave & McKellips Rd

Department: Public Works Project Location: College Ave & McKellips Rd

Est. Start Date: 07/01/17 Est. Completion Date: 12/31/20

# Project Description, Purpose and Need:

The City of Tempe's Transportation Division is tasked with providing residents and visitors with a safe and efficient transportation system. As part of a continuing transportation safety program, Traffic Engineering staff proactively identifies potential locations within the City that could benefit from the implementation of traffic safety measures. The intersection of College Avenue and McKellips Road is currently controlled by a traffic signal. Traffic Engineering staff recently met with local neighborhoods and received feedback from residents requesting traffic calming on College Avenue. Traffic Engineering staff is recommending the construction of a modern roundabout as an alternative to the existing traffic signal. Roundabouts are being constructed nationwide and have proven safety benefits and reduced maintenance costs when compared to traffic signals. Roundabouts also have sustainability benefits since they have no need for electricity and don't require replacement of aging equipment.

Council Strategic Priority Alignment: Safe & Secure Communities Project Priority Type: Public Health and Safety Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 8: Maintain the number of traffic accidents in relationship to traffic volume less than or equal to the Valley benchmark cities' average.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the adopted FY 2016-17 five year CIP.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	115,000					
Total Estimated Project Costs	115,000	-	464,000	-	-	579,0
Project Funding Sources						
Highway User Revenue Fund	115,000	-	464,000	-	-	579,0
New Operating Budget Impacts	None					

Project No. TBD Name: Roundabout at Priest Dr & Grove Pkwy

**Department:** Public Works **Project Location:** Priest Dr & Grove Pkwy

Est. Start Date: 07/01/17 Est. Completion Date: 12/31/19

# Project Description, Purpose and Need:

The City of Tempe's Transportation Division is tasked with providing residents and visitors with a safe and efficient transportation system. As part of a continuing transportation safety program, Traffic Engineering staff proactively identifies potential locations within the City that could benefit from the implementation of traffic safety measures. The intersection of Priest Drive and Grove Parkways has recently been identified as a location in need of improved traffic control. Historically the City has used traffic signals as the preferred traffic control measure at intersections. This location is unique due to the geometric curvature of both Grove Parkway and Priest Drive. Traffic Engineering staff has concerns about potential visibility of a new signal due to this geometric curvature and is recommending the construction of a modern roundabout as an alternative to a traffic signal. Roundabouts are being constructed nationwide and have proven safety benefits and reduced maintenance costs when compared to traffic signals. Roundabouts also have sustainability benefits since they have no need for electricity and don't require replacement of aging equipment.

Council Strategic Priority Alignment: Safe & Secure Communities Project Priority Type: Public Health and Safety Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 8: Maintain the number of traffic accidents in relationship to traffic volume less than or equal to the Valley benchmark cities' average.

#### Prior Fiscal Year Funding:

This project did not receive FY 2016-17 appropriations, and was not included in the adopted FY 2016-17 five year CIP

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	115,000					
Total Estimated Project Costs	115,000	686,000	-	-	-	801,00
Project Funding Sources Highway User Revenue Fund	115,000	686,000			-	801,0

 Project No.
 5407821
 Name:
 Rural Rd & Southern Ave Intersection Improvements

 Department:
 Public Works
 Project Location:
 Rural Rd & Southern Ave

 Est. Start Date:
 07/01/17
 Est. Completion Date:
 12/31/18

### Project Description, Purpose and Need:

The City of Tempe's Transportation Division is tasked with providing residents and visitors with a safe and efficient transportation system. As part of a continuing transportation safety program, Traffic Engineering staff proactively identifies potential locations within the City that could benefit from the implementation of traffic safety measures. In addition, through review of traffic counts, staff monitors traffic volumes on arterial roadways. This project will construct safety and capacity improvements at the intersection of Rural Road and Southern Avenue. Improvements will include construction of additional left-turn lanes and improvements to the traffic signal, sidewalks (including ADA), lighting, striping, and transit stops. The intersection of Rural Rd and Southern Avenue continues to show up in our safety program as a potential location for safety improvements. It has recently ranked as high as #2 in the City of Tempe's "Top 20 High Crash Intersections" and as high as #1 in the Maricopa Association of Governments' (MAG) "Top 100 Intersection Crashes" in the MAG Region. Additionally, in 2011 this intersection was identified by the Arizona Department of Transportation (ADOT) in the statewide "Top 5% Intersection Safety Transparency Report." Based on the findings of a Road Safety Assessment in 2013 and a recently completed Project Assessment, staff has identified intersection improvements that will help to mitigate safety issues, improve capacity at this intersection, and enhance transit operations.

Council Strategic Priority Alignment: Safe & Secure Communities Project Priority Type: Public Health and Safety Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 8: Maintain the number of traffic accidents in relationship to traffic volumes less than or equal to the Valley benchmark cities' average.

# **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$298,000.

	2017-18 Estimated Future Costs					-
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	188,150					
New Appropriation Request	2,780,000					
Total Estimated Project Costs	2,968,150	-	-	-	-	2,968,150
Project Funding Sources						
General Obligation Bonds	2,132,916	-	-	-	-	2,132,916
Federal Safety Grant (HSIP)	645,324	-	-	-	-	645,324
Transit Tax	134,676	-	-	-	-	134,676
Development Impact Fees	55,234	-	-	-	-	55,234
Total Sources	2,968,150	-	-	-	-	2,968,150
New Operating Budget Impacts	None					

Project No. TBD Name: Rural Rd & University Drive Intersection Improvements

Department: Public Works Project Location: Rural & University

Est. Start Date: 07/01/17 Est. Completion Date: 12/31/21

#### Project Description, Purpose and Need:

The City of Tempe's Transportation Division is tasked with providing residents and visitors with a safe and efficient transportation system. As part of a continuing transportation safety program, Traffic Engineering staff proactively identifies potential locations within the City that could benefit from the implementation of traffic safety measures. In addition, through review of traffic counts, staff monitors traffic volumes on arterial roadways. This project will construct safety and capacity improvements at the intersection of Rural Road and University Drive. Improvements will include construction of additional turn lanes and improvements to the traffic signal, sidewalks (including ADA), lighting, striping, and transit stops. The intersection of Rural Rd and University Drive continues to show up in our safety program as a potential location for safety improvements. It consistently ranks as #1 or #2 in the City of Tempe's "Top 20 High Crash Intersections" and is currently #20 in the Maricopa Association of Governments' (MAG) "Top 100 Intersection Crashes" in the MAG Region. Additionally, this intersection accomodates the highest volume of traffic in the City with over 75,000 entering vehicles per day. Based on the findings of a Road Safety Assessment completed in 2013 and the current ASU/Tempe Small Area Transportation Study, staff has identified intersection improvements that will help to mitigate safety issues, improve capacity, and enhance transit operations. ASU is a potential funding partner.

Council Strategic Priority Alignment: Safe & Secure Communities Project Priority Type: Public Health and Safety Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 8: Maintain the number of traffic accidents in relationship to traffic volume less than or equal to the Valley benchmark cities' average.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations; however, it was included in the FY 2016-17 CIP in FYs 2017-18 through FY 2018-19.

	2017-18		Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total	
Prior Funding to Re-appropriate	-						
New Appropriation Request	610,000						
Total Estimated Project Costs	610,000	-	-	5,000,000	-	5,610,000	
Project Funding Sources							
General Obligation Bonds	610,000	-	-	5,000,000	-	5,610,000	
Development Impact Fees	-	-	-	TBD	-	TBD	
Total Sources	610,000	-	-	5,000,000	-	5,610,000	
New Operating Budget Impacts	None						

 Project No.
 9854
 Name:
 Street Grant Contingency

 Department:
 Public Works
 Project Location:
 Citywide

 Est. Start Date:
 Ongoing
 Est. Completion Date:
 Ongoing

#### Project Description, Purpose and Need:

This project will create additional spending authority for grants and other funding that may become available during FY2017-18. The City must account for potential federal grants that could be secured and that need to be spent within 2017-2018. This CIP provided contingent budget appropriation for mid-year grants and other funding. In 2017-18, up to \$1.5 million of the contingency may be used for the McClintock Drive project, with HURF as the source of funds.

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Council Strategic Priority Alignment: Development Project Priority Type: Asset Preservation

#### Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$1,000,000.

		. ,	•				
	2017-18		Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total	
Prior Funding to Re-appropriate	-						
New Appropriation Request	2,500,000						
<b>Total Estimated Project Costs</b>	2,500,000	-	-	-	-	2,500,000	
Project Funding Sources							
Grants/Other	1,000,000	-	-	-	-	1,000,000	
Highway User Revenue Fund	1,500,000	-	-	-	-	1,500,000	
Total Sources	2,500,000	-	-	-	-	2,500,000	
New Operating Budget Impacts	None						

Project No. TBD Name: University Drive Streetscape - College to Veterans Way

Department: Public Works Project Location: University Drive

Est. Start Date: 07/01/17 Est. Completion Date: 12/31/18

#### Project Description, Purpose and Need:

The University Drive Streetscape Project is an approximately 0.75 mile segment of University Drive between College Avenue and Veterans Way. Work to be performed will include design and construction of a variety of streetscape elements which could include: ADA improvements, enhanced crosswalks, medians, landscaping, enhanced bike lanes, and shade. This project will be closely coordinated with Arizona State University and act as an extension of the improvements that were recently completed on University Drive between Priest Drive and Farmer Avenue. The goal of the project is to enhance travel options for people of all ages and non-motorized users including: school children, seniors, professionals and college students accessing commercial centers, local parks, downtown Tempe, and ASU. The project will involve public outreach with ASU and local businesses. This project will be coordinated with the City's pavement management program which has funding to repave University Drive from Mill Avenue to McClintock Drive during the Summer of 2018. A streetscape project on this portion of University Drive is identified in the Transportation Master Plan. Staff is continuing to work with ASU to identify opportunities for partnership in funding the design and construction.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the adopted FY 2016-17 five year CIP.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
<b>New Appropriation Request</b>	952,000					
<b>Total Estimated Project Costs</b>	952,000	-	-	-	-	952,00
Project Funding Sources						
Highway User Revenue Fund	452,000		-	-	-	452,0
ASU Participation	500,000		-	-	-	500,0
Total Sources	952,000	-	-	-	-	952,0
	952,000 None	-	-	-	-	



# Traffic Signals and Street Lighting Program 2017-18 CIP Project Requests and Descriptions

		Drawand	Canital Budget	New 2017-18	2017-18 Total		∆dditional Pro	piected Needs		Total E Voor
Page #	Project Name	Proposed Funding Source(s)	Capital Budget Re-appropriations	Appropriation Request	Requested Appropriation	2018-19	2019-20	2020-21	2021-22	Total 5-Year Program
	F" 0 - 1' - 1 1 - 1 1 - 1	<u> </u>	•••	•						
199	Fiber Optic Installation and ITS Improv: Broadway/I-10 and Rio Salado/L101	General Obligation Bonds	17 204		17 204					17 204
	Broadway/i-10 and Rio Salado/L101	Federal Grant - CMAQ	17,394	-	17,394	-	-	-	-	17,394
			195,000	-	195,000	-	-	-	-	195,000
		Development Impact Fees	TBD	-	TBD	-	-	-	-	TBD
		Project Total	212,394	-	212,394	-	-	-	-	212,394
200	Fiber Optic Installation & ITS Improv:									
_00	Elliot, Guadalupe and Warner	General Obligation Bonds	177,860	-	177,860	-	-	-	-	177,860
		Federal Grant - CMAQ	277,118	-	277,118	-	-	-	-	277,118
		Development Impact Fees	TBD	-	TBD	-	-	-	-	TBD
		Project Total	454,978	-	454,978	-	-	-	-	454,978
201	Fiber Optic Installation: Rural Road	Capital Project Fund Balance	82,331		82,331	_	-	_	_	82,331
	•	General Obligation Bonds	-	827,000	827,000	-	-	-	_	827,000
		Federal Grant - CMAQ	_	2,347,045	2,347,045	-	-	-	_	2,347,045
		Development Impact Fees	_	TBD	TBD	_	_	_	_	TBD
		Project Total	82,331	3,174,045	3,256,376	-	-	-	-	3,256,376
202	Fiber Optic Installation - University, Broadway and Southern	General Obligation Bonds	-	-	-	270,000	-	-	-	270,000
202	Future Project Conduit Install - Fiber network expansion	General Obligation Bonds	-	377,000	377,000	-	-	-	-	377,000
203	ITS Safety and Performance Upgrades -									
203	Phase 1	General Obligation Bonds	50,000	-	50,000	58,695	-	-	_	108,695
		Federal Grant - CMAQ	-	_	-	392,010	-	_	_	392,010
		Project Total	50,000	-	50,000	450,705	-	_	-	500,705
204	ITS Safety and Performance Upgrades -									
204	Phase 2	General Obligation Bonds	50,000	100,000	150,000	-	58,695	-	-	208,695
		Federal Grant - CMAQ	-	-	-	-	392,010	-	-	392,010
		Project Total	50,000	100,000	150,000	-	450,705	-	-	600,705
205	Light Rail Efficiency Improvement at									
	University Dr	General Obligation Bonds	561,170	-	561,170	-	-	-	-	561,170
		Development Impact Fees	TBD	-	TBD	-	-	-	-	TBD
		Project Total	561,170	-	561,170	-	-	-	-	561,170
206	New Signals/Safety Upgrades	Highway User Revenue Fund	-	400,000	400,000	-	-	-	-	400,000
206	New Traffic Signals - Developer Participation	Developer Assistance	180,000	400,000	580,000	-	-	-	-	580,000
207	Rural Rd Light Rail Intersection Improvement	General Obligation Bonds	85,561 1	- 97	85,561	-	-	-	-	85,561



## **Traffic Signals and Street Lighting Program 2017-18 CIP Project Requests and Descriptions**

	Proposed		New 201 Proposed Capital Budget Appropri		2017-18 Total Requested	Additional Projected Needs				Total 5-Year
Page #	Project Name	Funding Source(s)	Re-appropriations	Request	Appropriation .	2018-19	2019-20	2020-21	2021-22	Program
208	Streetlight LED Replacement Program	General Obligation Bonds	-	250,000	250,000	353,680	353,680	-	-	957,360
209	Streetlight Pole Structural Replacement	General Obligation Bonds	-	204,951	204,951	204,951	204,951	204,951	204,951	1,024,755
209	Streetlight Upgrade/New Installation	General Obligation Bonds	-	167,215	167,215	167,215	167,215	167,215	167,215	836,075
210	Traffic Signal Green Signs	General Obligation Bonds	-	99,522	99,522	99,522	99,522	99,522	99,522	497,610
211	Traffic Signal Infrastructure	General Obligation Bonds	-	275,000	275,000	275,000	275,000	275,000	275,000	1,375,000
212	Traffic Signal Pedestrian Access Improvements	General Obligation Bonds	-	-	-	365,000	-	-	-	365,000
	Traffic Signals and Street Lighting		1,676,434	5,447,733	7,124,167	2,186,073	1,551,073	746,688	746,688	12,354,689

The table above lists the individual projects that comprise the Traffic Signals and Street Lights Program and the associated five-year funding requests. The detailed project descriptions and justifications are provided on the pages that follow.

Project No.	6906169	Name:	Fiber Optic Installation and ITS Improv: Broadway/I-10 and Rio Salado/L101
Department:	Public Works		Project Location: Various
Est. Start Date:	Ongoing		Est. Completion Date: 06/30/18

The purpose of this project is to provide the city with a reliable communications network to view, monitor, and actively manage traffic conditions both on the arterial streets and at the freeway ramp intersections to reduce delay and improve traffic flow. The project will install new conduit and make use of existing conduit to provide fiber connection from ADOT's node 12 building to the signals at Broadway and Ramp K, Broadway and 48th St, and 48th St and Ramp C. Wireless radios will be installed at Broadway and Ramp L, 48th and Cotton Center, 48th and Alameda, and 48th and Southern. High speed DSL copper communications will be installed along Rio Salado and McClintock. Communications devices to be installed include fiber optic cable, pull boxes, splice closure, patch panels, fiber optic jumper cables, VDSL switches, and Ethernet switches. The project also includes purchasing and installing 22 CCTV cameras for each interchange intersection in Tempe. The project will provide communication links to the ramp intersections at the Broadway and I-10 interchange and at Rio Salado/ Loop 101 ramp intersections with fiber and wireless connections. This will complete the City's fiber backbone rings provided through ADOT's freeway system fiber.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$326,343

	2017-18		Estimated Fu	uture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	212,394					
New Appropriation Request	-					
Total Estimated Project Costs	212,394	-	-	-	-	212,394
Project Funding Sources						
General Obligation Bonds	17,394	-	-	-	-	17,394
Federal Grant - CMAQ	195,000	-	-	-	-	195,000
Development Impact Fees	TBD	-	-	-	-	TBD
Total Sources	212,394	-	-	-	-	212,394
New Operating Budget Impacts	None					

Project No.	6906171	Name:	Fiber Optic Installation and ITS Improv: Elliot, Guadalupe and Warner
Department:	Public Works		Project Location: Various
Est. Start Date:	Ongoing		Est. Completion Date: 06/30/18

Tempe currently leases phone lines to facilitate traffic signal operations. This project will use an existing conduit along Elliot for fiber optic communication to the signals. In addition, wireless radios will be used to provide communication to signals along Guadalupe and Warner to the fiber optic line on Elliot. CCTVs will be placed at the major intersections for traffic monitoring. Seventy percent of this project will be funded through a CMAQ grant as part of the MAG TIP. The project will be used to monitor and adjust signal timing through centralized command and control strategies to improve traffic flow and minimize congestion along the corridors of Elliot Rd, Guadalupe Rd, and Warner Rd. This project promotes multi-jurisdictional congestion relief by providing a platform to better coordinate traffic signals and responding to accidents/incidents in a more cooperative and efficient process.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$516,669.

	2017-18		Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total	
Prior Funding to Re-appropriate	454,978						
New Appropriation Request	-						
Total Estimated Project Costs	454,978	-	-	-	-	454,978	
Project Funding Sources							
General Obligation Bonds	177,860	-	-	-	-	177,86	
Federal Grant - CMAQ	277,118	-	-	-	-	277,11	
Development Impact Fees	TBD	-	-	-	-	TBI	
Total Sources	454,978	-	-	-	-	454,97	

Project No. 6907261 Name	Fiber Optic Installation: Rural Road				
Department: Public Works	Project Location: Rural Road				
Est. Start Date: Ongoing	Est. Completion Date: 12/31/18				

The project will install conduit and fiber in the Rural Rd corridor from the north city border to the south city border. Conduit location will vary along the route and will include installation under the roadway, under light rail transit, and on bridges. Devices to be installed to complete the system include pull boxes, splice closures, patch panels, fiber optic jumper cables, and Ethernet switches. The purpose of this project is to provide the city with a reliable communications network to view, monitor, and actively manage traffic conditions. The ultimate goal is to have a hybrid fiber/wireless network that will increase communications bandwidth, eliminate the need for telephone lease lines, and improve system performance. The project will provide a fiber backbone through the middle of the city on Rural Rd, one of Tempe's major north-south arterial routes. In addition to federal grant matching funds, the City is contributing \$684,000 to add three additional spare conduit for the length of the project for future use. The City is pursuing increased grant funding which increases the local required match to \$143,000.

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Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$172,553.

	2017-18		Estimated Future Costs			
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	82,331					
New Appropriation Request	3,174,045					
Total Estimated Project Costs	3,256,376	-	-	-	-	3,256,37
Project Funding Sources						
Capital Projects Fund Balance	82,331	-	-	-	-	82,33
General Obligation Bonds	827,000	-	-	-	-	827,00
Federal Grant - CMAQ	2,347,045	-	-	-	-	2,347,04
Development Impact Fees	TBD	-	-	-	-	TB
Total Sources	3,256,376	-	-	-	-	3,256,3

Project No. TBD Name: Fiber Optic Installation - University, Broadway and Southern

Department:Public WorksProject Location:VariousEst. Start Date:07/01/18Est. Completion Date:12/31/19

#### Project Description, Purpose and Need:

The project will install fiber in vacant conduit that was installed by previous projects. The installation of the fiber backbone on Rural Road now provides a framework for branching onto these adjacent roadways. Devices to be installed to complete the system include fiber, pull boxes, splice closures, patch panels, fiber optic jumper cables, and Ethernet switches. The purpose of this project is to provide the city with a reliable communications network to view, monitor, and actively manage traffic conditions. Fiber is a more reliable than wireless technologies, has increased bandwidth and eliminates the need for telephone lease lines. The project will add fiber to one mile of University (Rural to McClintock), one mile of Broadway (Rural to Priest) and half of a mile on Southern (Rural to College).

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Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

#### Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the adopted FY 2016-17 five year CIP.

	2017-18					
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	-	]				
Total Estimated Project Costs	-	270,000	-	-	-	270,000
Project Funding Sources						
General Obligation Bonds	-	270,000	-	-	-	270,000
New Operating Budget Impacts	None					

Project No.	TBD	ame: Future Project Conduit Install - Fiber network expans	ion
Department:	Public Works	Project Location: Citywide	
Est. Start Date:	07/01/17	Est. Completion Date: 12/31/18	
		•	

#### Project Description, Purpose and Need:

This project will provide funding for the expansion of the city's fiber network in conjunction with other city CIP projects underway. By creating a funding source for future use, efficiency and cost savings will be realized by allowing projects to include the installation of conduit for use by the city or other entities.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

#### Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the adopted FY 2016-17 five year CIP.

	2017-18	Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
<b>New Appropriation Request</b>	377,000					
Total Estimated Project Costs	377,000	-	-	-	-	377,000
Project Funding Sources						
General Obligation Bonds	377,000	-	-	-	-	377,000
New Operating Budget Impacts	None					

Project No.	6908371	Name:	ne: ITS Safety and Performance Upgrades - Phase 1			
Department:	Public Works		Project Location: Various			
Est. Start Date:	Ongoing		Est. Completion Date: 12/31/19			

The project will provide the city with safety and performance upgrades of its install Intelligent Transportation System (ITS) network to improve communications reliability and expand its capabilities to view, monitor and actively manage traffic conditions. This project will install wireless radios, CCTVs and Emergency Vehicle Preemption (EVP) devices to improve real-time traffic signal operations, improve traffic flow and decrease delays. In addition, this project will install a bi-directional Dynamic Message Sign (DMS) and shared-lane bicycle detection that will be used for multimodal and transit operations, for traveler information and for special event traffic management. This project is Phase 1 of a larger project that was divided into two phases in order to comply with Maricopa Association of Government (MAG) project funding limits for ITS grants.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$50,000.

	2017-18	Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	50,000					
New Appropriation Request	-					
Total Estimated Project Costs	50,000	450,705	-	-	-	500,7
Project Funding Sources						
General Obligation Bonds	50,000	58,695	-	-	-	108,6
Federal Grant - CMAQ	-	392,010	-	-	-	392,0
Total Sources	50,000	450,705	-	-	-	500,7
New Operating Budget Impacts	None					

 Project No.
 6908381
 Name:
 ITS Safety and Performance Upgrades - Phase 2

 Department:
 Public Works
 Project Location:
 Various

 Est. Start Date:
 Ongoing
 Est. Completion Date:
 12/31/20

#### Project Description, Purpose and Need:

The project will provide the city with safety and performance upgrades of its install Intelligent Transportation System (ITS) network to improve communications reliability and expand its capabilities to view, monitor and actively manage traffic conditions. This project will install wireless radios, CCTVs and Emergency Vehicle Preemption (EVP) devices to improve real-time traffic signal operations, improve traffic flow and decrease delays. In addition, this project will install a bi-directional Dynamic Message Sign (DMS) and shared-lane bicycle detection that will be used for multi-modal and transit operations, for traveler information and for special event traffic management. This project is Phase 2 of a larger project that was divided into two phases in order to comply with Maricopa Association of Government (MAG) project funding limits for ITS grants.

Sustainable Growth &

Council Strategic Priority Alignment: Development

Project Priority Type: Customer Enhancements

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$50,000.

	2017-18	Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	50,000					
New Appropriation Request	100,000					
Total Estimated Project Costs	150,000	-	450,705	-	-	600,705
Project Funding Sources						
General Obligation Bonds	150,000	-	58,695	-	-	208,695
Federal Grant - CMAQ	-	-	392,010	-	-	392,010
Total Sources	150,000	-	450,705	-	-	600,705
New Operating Budget Impacts	None					

Project No. 6907	731 Name:	Light Rail Efficiency Impro	vement at University Drive
Department: Publi	ic Works	Project Location:	University Dr
Est. Start Date: Ongo	oing	Est. Completion Date:	06/30/18

The City of Tempe's Transportation Department is tasked with providing residents and visitors with a safe and efficient transportation system. Traffic Engineering staff spends a significant amount of time monitoring traffic and identifying potential solutions for improving capacity and reducing congestion on Tempe's transportation network. This project will increase capacity on Rural Rd and improve the efficiency of light rail vehicles at University Dr. Improvements will include new sensors and improved equipment that will minimize the amount of time that gate arms are activated on University Dr, causing congestion and delay to all users. The intersection of Rural Rd and University Dr is the busiest intersection in the City of Tempe. The light rail crossing of University Dr is only 600 feet west of this intersection. Based on the current train schedule, and the fact that there are both eastbound and westbound trains, it is not uncommon for the gates at University Dr to be activated every 5 minutes. The current train sensors and equipment result in premature activation of the gates which results in delay to users along University Dr as well as Rural Rd. This operation can function much more efficiently with the installation of new sensors and improved equipment.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$575,000.

	2017-18	Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	561,170					
<b>New Appropriation Request</b>	-					
Total Estimated Project Costs	561,170	-	-	-	-	561,170
Project Funding Sources						
General Obligation Bonds	561,170	-	-	-	-	561,170
Development Impact Fees	TBD	-	-	-	-	TBD
Total Sources	561,170	-	-	-	-	561,170
New Operating Budget Impacts	None					

 Project No.
 6906209
 Name:
 New Signals / Safety Upgrades

 Department:
 Public Works
 Project Location:
 Citywide

 Est. Start Date:
 Ongoing
 Est. Completion Date:
 Ongoing

#### Project Description, Purpose and Need:

This project provides for the installation of new traffic signals and associated equipment based on traffic engineering studies and warrants. It will also allow for replacement of existing outdated signals and address all safety updates to meet state and federal regulations. A modular intersection costs an average of \$400,000 depending on the size of intersection, which takes into account two modular poles at each corner. This will allow the city to upgrade approximately one of the city's 228 signalized intersections every other year and/or add one new traffic signal based on traffic engineering warrants. To manage traffic safely and efficiently by installing new signals and/or modifying existing signal indications based on traffic engineering studies.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Public Health and Safety

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 budget appropriations in the amount of \$180,000.

	2017-18	Estimated Future Costs				
	Request	2017-18	2018-19	2019-20	2020-21	Total
Prior Funding to Re-appropriate	-					
<b>New Appropriation Request</b>	400,000					
Total Estimated Project Costs	400,000	-	-	-	-	400,000
Project Funding Sources						
Highway User Revenue Fund	400,000	-	-	-	-	400,000
New Operating Budget Impacts	None					

Project No. 9669	Name:	Signals/Safety Upgrades)	oper Participation (formerly part of New
<b>Department:</b> Public W	orks	Project Location:	Citywide
Est. Start Date: Ongoing		Est. Completion Date:	Ongoing

#### Project Description, Purpose and Need:

This project provides for the installation of new traffic signal warranted through the development process and allows for the reimbursement of the new signal construction costs from the developer. An intersection costs an average of \$400,000 depending on the size of intersection, which takes into account two poles at each corner and a cabinet with hardware. To manage traffic safely and efficiently by installing new signals and/or modifying existing signal indications based on traffic engineering studies.

**Council Strategic Priority Alignment:** Safe & Secure Communities **Project Priority Type:** Public Health and Safety **Project advances the following Council Strategic Priorities performance measure(s):** 

Performance Measure 8: Maintain the number of traffic accidents in relationship to traffic volumes less than or equal to the Valley benchmark cities' average.

#### Prior Fiscal Year Funding:

This project received FY 2016-17 appropriations in the amount of \$337,531.

	2017-18	Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	180,000					
New Appropriation Request	400,000					
Total Estimated Project Costs	580,000	-	-	-	-	580,000
Project Funding Sources						
Developer Assistance	580,000	-	-	-	-	580,000
New Operating Budget Impacts	None					

Project No.	6907741	Name:	Rural Rd Light Rail Intersection Improvements
Department:	Public Works		Project Location: Rural Rd
Est. Start Date:	Ongoing		Est. Completion Date: 06/30/18

The City of Tempe's Transportation Division is tasked with providing residents and visitors with a safe and efficient transportation system. Traffic Engineering staff spends a significant amount of time monitoring traffic and identifying potential solutions for improving capacity and reducing congestion on Tempe's transportation network. This project will construct bicycle and pedestrian improvements at the intersection. The intersection of Rural Rd and Tyler/Terrace Rd is very congested. There is a significant amount of vehicular traffic as well as pedestrian and bicycle traffic. This intersection also serves a transit platform on the west side of Rural Rd that accommodates Light Rail and buses. The geometry of the intersection is skewed which has presented some unforeseen operational and safety concerns, primarily with bicyclists and pedestrians.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Customer Enhancements

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$125,000.

Request 85,561	2018-19	2019-20	2020-21	2021-22	Total
85,561					
-					
85,561	-	-	-	-	85,56
85,561				_	85,5
	85,561	85,561 - 85,561 -	85,561 85,561	85,561     -     -       85,561     -     -	85,561     -     -     -       85,561     -     -     -

Project No.	6908399	Name:	Streetlight LED Replacement Program	
Department:	Public Works		Project Location: Citywide	
Est. Start Date:	Ongoing		Est. Completion Date: Ongoing	

Replace all 4,000 residential streetlight luminaires out of the 11,080 luminaires in the system with energy efficient LED type luminaires. 1,000 streetlight luminaires will be changed out per fiscal year.

The purpose and need of this project is to replace aging 100 Watt High Pressure Sodium (HPS) street light luminaires with energy efficient LED type luminaires. LED luminaires produce clean white light with improved color rendition that the human eye is used to seeing. LED luminaires also consume fifty percent (50%) less energy and have a reduced maintenance cost. However, the energy savings realized will be contingent upon continued negotiations with both APS and SRP.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Public Health and Safety Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$250,000.

	0047.40		Estimated Fu	itura Casta		
	2017-18		Estimated Ft	iture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
<b>New Appropriation Request</b>	250,000					
Total Estimated Project Costs	250,000	353,680	353,680	-	-	957,360
Project Funding Sources						
General Obligation Bonds	250,000	353,680	353,680	-	-	957,360
New Operating Budget Impacts	None					

 Project No.
 6999849
 Name:
 Streetlight Pole Structural Replacement

 Department:
 Public Works
 Project Location:
 Citywide

 Est. Start Date:
 Ongoing
 Est. Completion Date:
 Ongoing

#### Project Description, Purpose and Need:

This project will fund the replacement of existing rusted streetlight poles. Prior year appropriations were allocated to replace all direct buried poles with a corrosive factor greater than 25 percent according to the 2011 survey. That portion of the project has been completed. Going forward, this project will focus on addressing the new 2015 survey which found 308 poles to be structurally deficient. These streetlight poles are on foundation and will need to be replaced due to wet, corrosive environments. Approximately 100 poles can be replaced per year. After the 2015 survey replacements are complete a resurvey will need to be done to reevaluate the direct bury and foundation poles not previously replaced. Out-year funds will continue to be requested to cover any poles found deficient in the resurvey.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Public Health and Safety

#### Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$314,736.

	2017-18		Estimated Fu	uture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
<b>New Appropriation Request</b>	204,951					
Total Estimated Project Costs	204,951	204,951	204,951	204,951	204,951	1,024,755
Project Funding Sources						
General Obligation Bonds	204,951	204,951	204,951	204,951	204,951	1,024,755
New Operating Budget Impacts	None					

 Project No.
 6999869
 Name:
 Streetlight Upgrade/New Installation

 Department:
 Public Works
 Project Location: Citywide

 Est. Start Date:
 Ongoing
 Est. Completion Date: Ongoing

#### Project Description, Purpose and Need:

This project allows staff to strategically prioritize improvements to the street light system including the installation of arterial dualside street lights and residential street lights per citizen requests.

To provide minimum lighting levels of one-foot candles on all arterial roadways. Tempe currently has some arterial roadways that lack dual-side lighting and this project would continue to add lighting in order to meet the minimum lighting standard. Currently Identified locations for upgrades include the north side of University D from 48th to Lindon.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Public Health and Safety

#### Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### Prior Fiscal Year Funding:

This project received FY 2016-17 appropriations in the amount of \$167,215.

	2017-18	Estimated Future Costs				
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	167,215					
Total Estimated Project Costs	167,215	167,215	167,215	167,215	167,215	836,075
Project Funding Sources						
General Obligation Bonds	167,215	167,215	167,215	167,215	167,215	836,075
New Operating Budget Impacts	None					

Project No.	6906229	Name:	Traffic Signal Green Signs
Department:	Public Works		Project Location: Citywide
Est. Start Date:	Ongoing		Est. Completion Date: Ongoing

Traffic signal internally illuminated green signs have been in place for at least 15+ years and have exceeded their product life cycle. As part of a continuing transportation asset management program, this project will begin the process of replacing sign faces (8 per intersection) at a rate of 20 intersections per year with a total of 75 modular signalized intersections that are beyond their useful life will be completed in fiscal year 17/18. This project will also replace the remaining 111 modular intersection green sign within the next four year cycle.

This project will allow Tempe to replace its aging green sign faces, which will increase visibility and improve safety for the motoring public. Currently 56 intersections out of the 75 total modular signalized intersections have been replaced.

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Public Health and Safety

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project received FY 2016-17 appropriations in the amount of \$99,522.

	2017-18		Estimated Fu	ture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
<b>New Appropriation Request</b>	99,522					
Total Estimated Project Costs	99,522	99,522	99,522	99,522	99,522	497,610
Project Funding Sources						
General Obligation Bonds	99,522	99,522	99,522	99,522	99,522	497,610
New Operating Budget Impacts	None					

Project No. 6903383	Name:	Traffic Signal Infrastructure	
Department: Public Works		Project Location: Citywide	
Est. Start Date: Ongoing		Est. Completion Date: Ongoing	

The City's transportation system includes 228 signalized intersections and associated infrastructure to support the safe movement of all modes of travel in Tempe. This project provides for the installation and repair of existing equipment related to the traffic signal system and as warranted by traffic engineering studies. In addition, this project provides for the management and replacement of underground signal system assets which have been identified for repair and replacement. The program includes a proactive asset management element where components are replaced to ensure the signal system is operating safely and efficiently. In addition, the CIP provides for unexpected emergency repairs that occur throughout the year and are needed to ensure the system remains functional.

This project is necessary in order to keep the signal system functioning properly by supplementing our existing traffic signal construction program (2 full time employees) with installing infrastructure which may include underground items such as conduit repair and replacements, new traffic signal underground j-boxes and new signal foundations

Sustainable Growth &

Council Strategic Priority Alignment: Development Project Priority Type: Public Health and Safety

Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve ratings of "Very Satisfied" or "Satisfied" with the "Quality of City Infrastructure" greater than or equal to the national benchmark cities as measured in the Community Survey.

#### Prior Fiscal Year Funding:

This project received FY 2016-17 appropriations in the amount of \$275,000.

	2017-18		Estimated Fu	uture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	275,000					
Total Estimated Project Costs	275,000	275,000	275,000	275,000	275,000	1,375,000
Project Funding Sources General Obligation Bonds	275,000	275,000	275,000	275,000	275,000	1,375,00
New Operating Budget Impacts	None					

Project No. TBI	D Name:	Traffic Signal Pedestrian Ad	ccess Improvements
Department: Pub	olic Works	Project Location:	Citywide
Est. Start Date: 07/0	01/18	Est. Completion Date:	12/31/19

The City of Tempe's Transportation Division is tasked with providing residents and visitors with a safe and efficient transportation system. This applies to all modes including non-motorized users like bicyclists and pedestrians. The Manual on Uniform Traffic Control Devices (MUTCD) is published by the Federal government. The MUTCD sets minimum standards, provides guidance, and ensures uniformity of traffic control devices across the nation. The MUTCD is updated every few years which results in necessary changes to how the City operates its transportation system. A recent update has identified the need to accommodate slower moving pedestrians like the elderly and persons with disabilities. The most efficient method to accommodate this is to install special pedestrian push-buttons that will provide extending crossing time at 157 intersections.

Council Strategic Priority Alignment: Safe & Secure Communities Project Priority Type: Public Health and Safety Project advances the following Council Strategic Priorities performance measure(s):

Performance Measure 5: Achieve rating of "Very Satisfied" with the "Feeling of Safety in the City" greater than or equal to the national benchmark cities measured in the Community Survey.

#### **Prior Fiscal Year Funding:**

This project did not receive FY 2016-17 appropriations, and was not included in the adopted FY 2016-17 five year CIP.

	2017-18		Estimated Fu	ture Costs		
	Request	2018-19	2019-20	2020-21	2021-22	Total
Prior Funding to Re-appropriate	-					
New Appropriation Request	-					
Total Estimated Project Costs	-	365,000	-	-	-	365,0
Project Funding Sources						
General Obligation Bonds	-	365,000	-	-	-	365,0
New Operating Budget Impacts	None					

# CITY OF TEMPE TRANSPORTATION COMMISSION



#### STAFF REPORT

**AGENDA ITEM 5** 

#### DATE

February 13, 2017

#### **SUBJECT**

Speed Limit Criteria

#### **PURPOSE**

The purpose of this memo is to provide the Commission with the City's process for setting speed limits, outline the proposed study selection criteria, and share the resulting proposed study locations.

#### **BACKGROUND**

Traffic Engineering periodically reviews speed limits to ensure that they are appropriate for current traffic conditions. The most recent update to speed limits in Tempe was completed in December 2007. Study locations are based on the following proposed criteria:

- 1. 35 mile per hour (MPH) high school zones
- 2. Streets with apparent inconsistencies and/or discontinuity with regards to speed limits
- 3. Midblock arterial speed limit changes
- 4. Recently completed arterial streetscape projects

Below is a list of the resulting study locations.

- All High School 35 MPH Zones
- Mill: Rio Salado to Phoenix border
- Priest: Washington to Phoenix border
- Priest: Baseline to Alameda
- Scottsdale: Rio Salado to Loop 202
- Rural: Broadway to Alameda
- Broadway: Terrace to McClintock
- Guadalupe: Highline Canal to Kyrene
- Continental: College to Scottsdale
- Center: Priest to Mill
- 1<sup>st</sup> Street: Priest to Farmer
- 5<sup>th</sup> Street: McClintock to Price
- Alameda: Kyrene to Roosevelt
- Hardy: Broadway to Southern
- Roosevelt: Broadway to Southern
- College: Alameda to US-60
- Lakeshore: Rural to Baseline
- Broadway: Mill to Rural
- University: Priest to Ash

#### **ESTABLISHING SPEED LIMITS**

Speed limits are established through engineering studies and adopted into the Tempe City Code by Council action. This applies to all non-residential streets. Residential streets have a statutory speed of 25 miles per hour (mph) based on Arizona Revised Statutes 28-701. The main factors that are generally included in an engineering study are:

#### Prevailing Vehicle Speeds

Speed limits are typically based on the measured 85<sup>th</sup> percentile speed. The 85<sup>th</sup> percentile speed is the speed at which 85 percent of free-flowing vehicles are traveling at or below the speed limit. Use of the 85<sup>th</sup> percentile speed is based on the theory that the large majority of drivers (85%) choose to drive at a speed that is reasonable and prudent. The 85<sup>th</sup> percentile method is the most widely recognized method of establishing speed limits. However, in our urban environment, use of this method alone may result in speeds that are unsafe for adjacent land use including bicycle and pedestrian activity centers.

#### Physical Features of the Roadway

These features include horizontal and vertical alignment, sight and stopping distance limitations, roadway and lane widths and raised medians.

#### Traffic Control Characteristics

This may include crosswalks, traffic signals and stop signs or other forms of traffic control.

#### • <u>Crash Experience</u>

This considers not only frequency, but also severity, causation and type. The National Highway Safety Administration reports that speeding-related crashes account for over 13,000 fatalities per year in the United States.

#### • Roadside Development

#### Roadside Friction

This includes infrastructure like driveways, alleys, bus stops, parking, etc.

#### Pedestrian and Bicycle Activity

#### • Traffic Calming Features

This can include items such as speed humps and traffic circles.

#### • <u>Signal Timing Progression</u>

This considers the vehicle speed that would be most efficient for the existing signal timing along a corridor.

After conducting an engineering study using the above criteria, appropriate speed limits are recommended. Because any updates to speed limits necessitate a change to the Tempe City Code (Chapter 19), it requires two public hearings.

#### **FISCAL IMPACT**

Potential costs would be limited to fabrication and installation of new signs.

#### **RECOMMENDATION**

For information

#### **CONTACT**

Julian Dresang
City Traffic Engineer
480-350-8025
julian\_dresang@tempe.gov

#### **ATTACHMENTS**

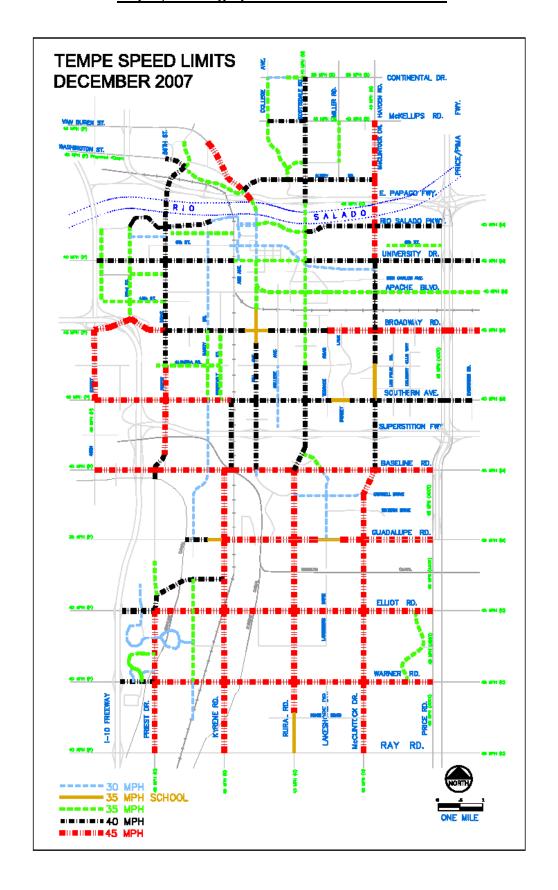
PowerPoint

• Map A: Existing speed limits

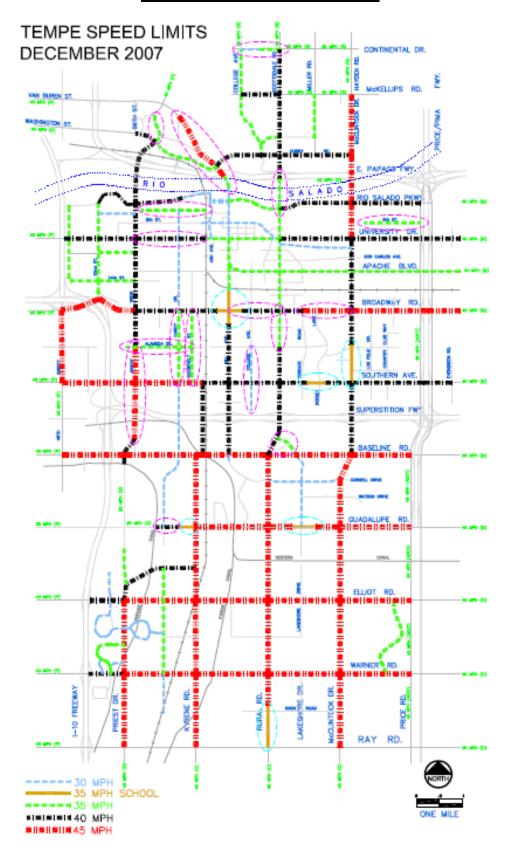
• Map B: Proposed study locations

#### ATTACHMENT A

#### Map A, Existing Speed Limits - December 2007



Map B, Proposed Study Locations



## **Speed Limit Criteria**

# Transportation Commission

March 14, 2017





### Overview

- Background
- Goals
- Process for setting speed limits
- Study location selection criteria
- Proposed study locations



### Background

- Traffic Engineering periodically reviews speed limits.
  - Last reviewed in 2007.
- Traffic conditions change.
  - Demographics, redevelopment, travel patterns, technology, trip choice.
- Changes require updating the Tempe City Code (Chapter 19).



### Goals

### Safety

- Speed limits should be appropriate for conditions.
- Speed limits should be reasonable.
- Speed is a major contributing factor in many traffic crashes.
- Speed "differential" can also be a contributing factor.

### Driver Expectations

Drivers expect consistency and continuity.



## Study Factors

- Prevailing Vehicle Speeds (85<sup>th</sup> Percentile)
- Physical Features (curves, sight distance, medians)
- Traffic Control Features (crosswalks, traffic signals)
- Crash Experience (frequency, severity, type, cause)
- Roadside Development
- Roadside Friction (driveways, alleys, bus stops, parking)
- Pedestrian & Bicycle Activity
- Traffic Calming Features (speed humps, traffic circles)
- Signal Timing Progression

### Process

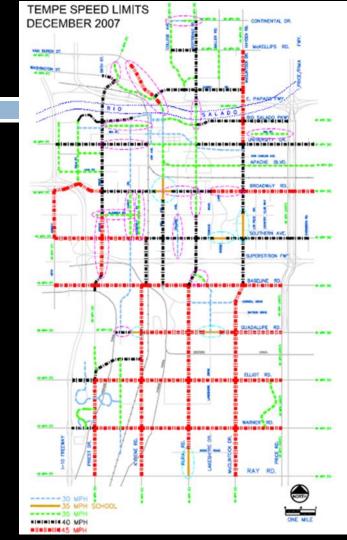
- Develop recommendations based on studies.
- Present recommendations to Transportation Commission & City Council.
- Hold two public hearings as required by the Tempe City Code.
- Educate public of changes.
- Fabricate and install speed limit signs.
- Continue public education.
- Enforcement.

### Study Location Selection Criteria

- High School 35 MPH Zones
- Inconsistency/Discontinuity
- Arterial "Midblock" Changes
- Recently Completed Streetscape Projects

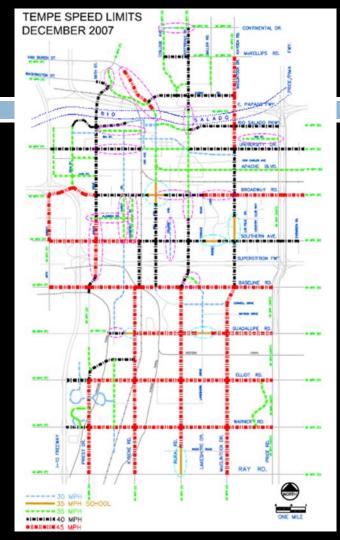
## Proposed Study Locations

- All High School 35 MPH Zones
- Mill: Rio Salado to Phoenix border
- Priest: Washington to Phoenix border
- Priest: Baseline to Alameda
- Scottsdale: Rio Salado to Loop 202
- University: Priest to Mill
- Rural: Broadway to Alameda
- Broadway: Mill to Rural
- Broadway: Terrace to McClintock
- Guadalupe: Highline Canal to Kyrene



## Proposed Study Locations

- Continental: College to Scottsdale
- Center: Priest to Mill
- 1<sup>st</sup> Street: Priest to Farmer
- 5<sup>th</sup> Street: McClintock to Price
- Alameda: Kyrene to Roosevelt
- Hardy: Broadway to Southern
- Roosevelt: Broadway to Southern
- College: Alameda to US-60
- Lakeshore: Rural to Baseline



### Council Direction Requested

 Feedback on criteria used to determine speed limit study locations.

# CITY OF TEMPE TRANSPORTATION COMMISSION



#### **STAFF REPORT**

**AGENDA ITEM 6** 

#### DATE

February 13, 2107

#### **SUBJECT**

Highline Canal Multi-use Path Project

#### **PURPOSE**

The purpose of this memo is to provide the Commission with an update on the project along with and final design concept for the Highline Canal Multi-use Path Project.

#### **BACKGROUND**

The Tempe Highline Canal Multi-use Path Project is located in west central and south Tempe extending from Baseline Road to Knox Road for approximately four miles. The project links directly to Phoenix, Guadalupe and Chandler and connects a diversity of neighborhoods to employment centers, parks, schools and commercial areas. The project will include lighting, landscaping, street crossings, public art and other path amenities.

The concept design team of Coffman Studio was retained in 2014 to develop the project design concepts that were used to advance the project into formal design and construction documents. The City hired Kimley-Horn to prepare the final design, environmental and bid-ready construction documents for approval by Arizona Department of Transportation (ADOT) and Federal Highways Administration (FHWA).

#### **NEXT STEPS**

A second public meeting will be held March 14 from 5:30 p.m. to 7 p.m. at the Tempe Union High School District Office Board Room, 500 W. Guadalupe Road to gather feedback on the final design concept. Online comment will be available from March 14 to 28 at <a href="www.tempe.gov/highlinecanal">www.tempe.gov/highlinecanal</a>. The final design documents are scheduled to be submitted to FHWA and ADOT in May 2017 to obligate the federal funds secured for the project. Project construction is estimated to start late 2017 or early 2018.

#### **FISCAL IMPACT**

The project was awarded a Maricopa Association of Governments pedestrian/bicycle design assistance funding grant in 2013 and \$3.3 million in two construction grants from federal Transportation Alternative Program funds was awarded in 2014. The project is in the Tempe Capital Improvements Program approved by the City Council and has a local match from the Transit Fund.

#### **RECOMMENDATION**

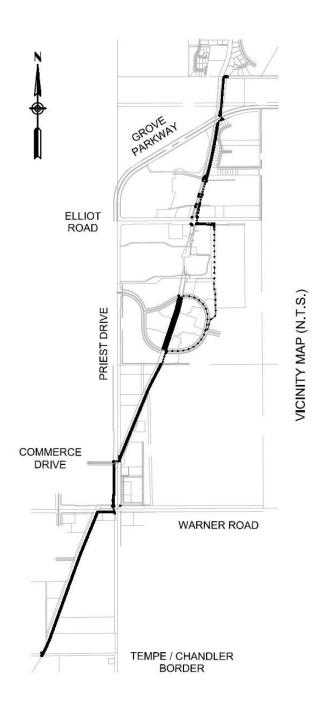
This is for information only.

#### **CONTACT**

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

#### **ATTACHMENTS**

- PowerPoint
- Design Concept



# Highline Canal Multi-use Path Project Transportation Commission March 14, 2017





### Project Overview

- Located in west central and south Tempe, extending from Baseline Road to Knox Road for 4 miles
- Links to Phoenix, Guadalupe & Chandler
- Connects a diversity of neighborhoods to employment centers, parks, schools and commercial areas
- Will include lighting, landscaping, street crossings, public art

## Funding

- \$3.3 million in grants from federal Congestion
   Mitigation and Air Quality funds
- Tempe Capital Improvements Program approved by the City Council
- Local match from the Transit Fund



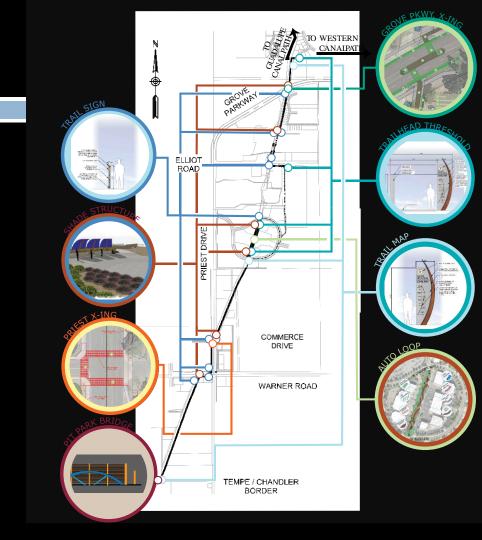
# Existing Conditions



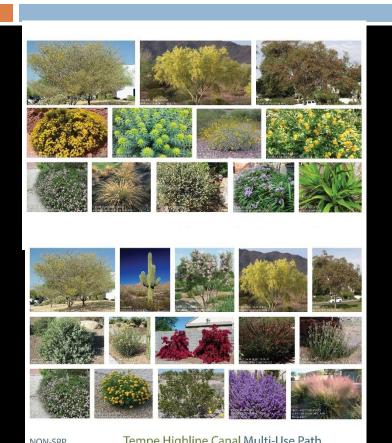


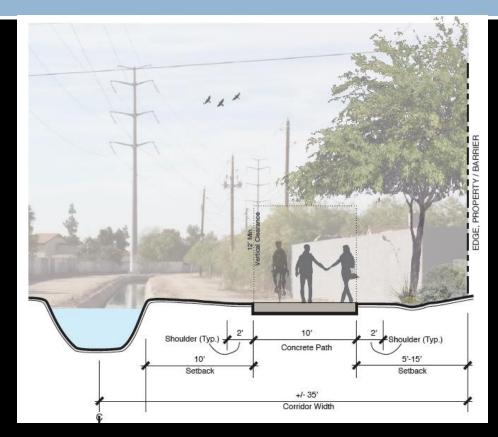
## Design Concepts

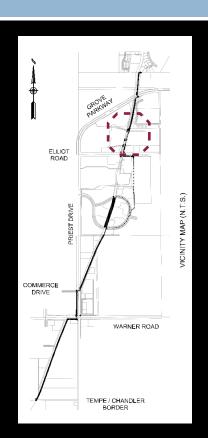
- Nodes with Drinking Fountains
- Unique Wayfinding Signs
- Generous Landscaping
- LED and Solar Lighting
- Improved/Signalized Crossings



### Path Cross Section









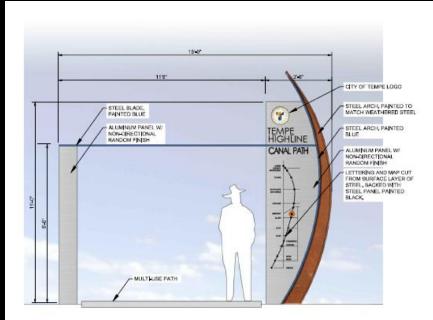


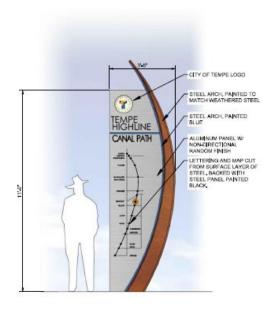






# Wayfinding Signs









## Grove Parkway

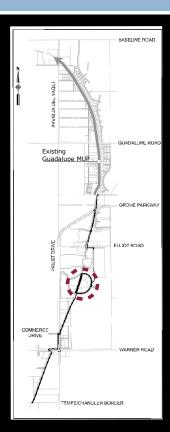
- Signalized crossing
- Additional warning signs
- Additional Crossing treatments





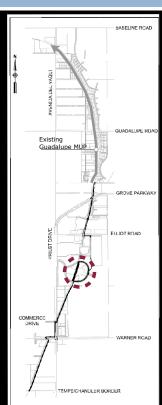
# Autoplex Loop Link





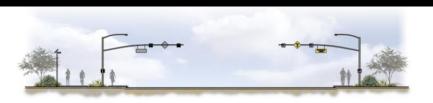
# Autoplex Loop Link





#### **Priest and Commerce**

- Signalized crossing
- Additional signage
- Additional crossing treatments
- Gateway to cycle track







#### Priest and Warner

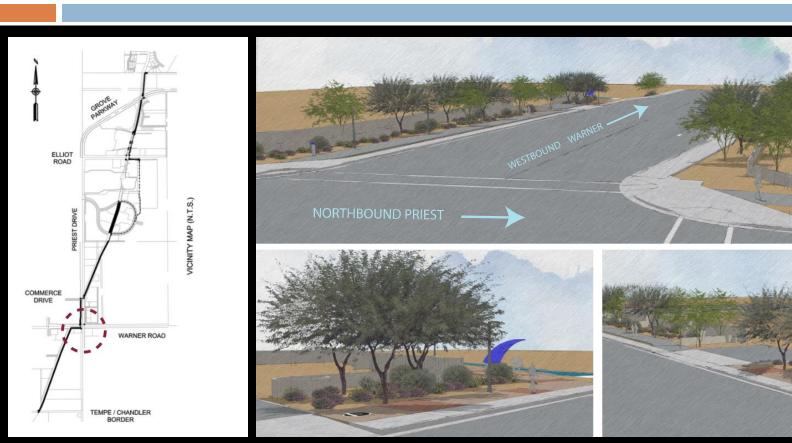
- Mid-block signal not meet warrants
- Use existing crossing
- Narrower lane widths to accommodate shared-use path along Warner Road



## Priest and Warner Crossing

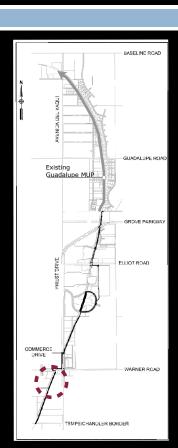


## Priest and Warner Crossing



#### Tilted Kilt Connection

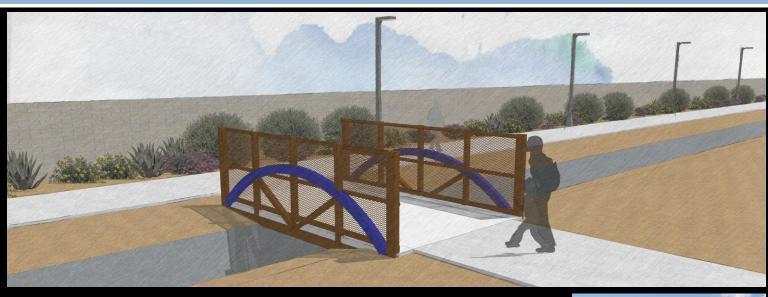
- Privatelyconstructed andfunded
- Connects multifamily housing to Tilted Kilt





## Pit Park Connection









#### Public Outreach

- Public meeting: March 14 at 5:30 p.m. at Tempe Union
   High School District Office, 500 W. Guadalupe Road.
- Online comment available at <u>www.tempe.gov/highlinecanal</u> from March 14 to 28.

# CITY OF TEMPE TRANSPORTATION COMMISSION



#### STAFF REPORT

**AGENDA ITEM 8** 

#### DATE

February 8, 2017

#### **SUBJECT**

Future Agenda Items

#### **PURPOSE**

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

#### **BACKGROUND**

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

- April 11
  - o Country Club Way Bike/Ped Project
  - o ASU Bike Registry Outreach Efforts
  - Maintenance of MUPs
  - o McClintock @ Rio Salado MUP Underpass
  - First, Ash, Rio Salado Parkway Realignment Concepts
- May 9
  - Streetcar
  - o DTA Update
  - o Tempe Involving the Public Plan
  - MAG Design Grant Applications
- June 13
  - o McClintock Drive
  - o Road Construction Traffic Mitigation
  - o Autonomous Vehicles
  - Western Canal Expansion MUP Final Design
- July 11
- August 8
  - o Leading vs. Lagging Left Turn Signals
  - o Bus Security Program
  - o Plan for Expansion of Bicycle/Pedestrian Paths
  - o Streetcar
- September 12
  - Fifth Street Project Update
  - o Annual Report
  - North/South Railroad Spur MUP
- October 10
  - Annual Report

- o Alameda Drive
- November 12
  - o Bike Share Update
  - Streetcar
- December 12
- TBD: Bicycle/Pedestrian Signal Activate Operations Update
- TBD: Small Area Transportation Study
- TBD: Prop 500

#### **RECOMMENDATION**

This item is for information only.

#### CONTACT

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