



PUBLIC MEETING AGENDA

Transportation Commission

MEETING DATE

Tuesday, September 10, 2019
7:30 a.m.

MEETING LOCATION

City of Tempe
Don Cassano Community Room
200. E. Fifth Street, 2nd 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.	Brian Fellows, Commission Chair	Information
2. Approval of Meeting Minutes The Commission will be asked to review and approve meeting minutes from the August 13, 2019 meeting.	Brian Fellows, Commission Chair	Action
3. Transit Shelter Design Staff will make a presentation regarding the transit shelter design process.	Bonnie Richardson, Engineering & Transportation Department	Information and Possible Action
4. North South Railroad Spur Multi-use Path Project Staff will provide an update on the North South Railroad Spur Multi-use Path Project.	Robert Yabes, Engineering & Transportation Department	Information and Possible Action
5. Grand Canal Multi-use Path Staff will provide an update on the Grand Canal Multi-use Path Project.	Chase Walman, Engineering & Transportation Department	Information and Possible Action
6. Transit Program/Security Update Staff will make a presentation about the Tempe transit program along with transit security statistics from FY 18/19.	Jon King, Tempe Police Department and Eric Iwersen Engineering & Transportation Department	Information and Possible Action
7. Department & Regional Transportation Updates Staff will provide updates and current issues being discussed at regional transportation and transit agencies.	Engineering & Transportation Department Staff	Information
8. Future Agenda Items Commission may request future agenda items.	Brian Fellows, Commission Chair	Information and Possible Action

According to the Arizona Open Meeting Law, the Transportation Commission may only discuss matters listed on the agenda. The city of Tempe endeavors to make all public meetings accessible to persons with disabilities. With 48 hours advance notice, special assistance is available at public meetings for sight and/or hearing-impaired persons. Please call 350-4311 (voice) or for Relay Users: 711 to request an accommodation to participate in a public meeting.



Minutes
City of Tempe Meeting of the Transportation Commission
August 13, 2019

Minutes of the meeting of Tempe Transportation Commission held on Tuesday, August 13, 2019, 7:30 a.m. in the Tempe Transportation Center, Don Cassano Community Room located at 200 E. Fifth Street, Tempe, Arizona.

(MEMBERS) Present:

Susan Conklu	John Federico
JC Porter	Peter Schelstraete
Paul Hubbell (via phone)	Pam Goronkin
David A. King	Brian Fellows
Ryan Guzy	Cyndi Streid (via phone)
John Kissinger	

(MEMBERS) Absent:

Bonnie Gerepka	Shana Ellis
Jeremy Browning	Lloyd Thomas

City Staff Present:

Shelly Seyler, Deputy Engineering & Transportation Director	Sue Taaffe, Senior Management Assistant
Robert Yabes, Principal Planner	TaiAnna Yee, Public Information Officer
Bonnie Richardson, Principal Planner	Laura Kajfez, Neighborhood Services Specialist
Eric Iwersen, Transit Manager	Amanda Nelson, Public Information Officer
Chase Walman, Planner II	Vanessa Spartan, Planner II
Joe Clements, Transportation Financial Analyst	Robbie Aaron, Planner II
Ambika Adhikari, Principal Planner	Shauna Warner, Neighborhood Program Manager
Julian Dresang, City Traffic Engineer	Braden Kay, Sustainability Director

Guests Present:

Cliff Anderson	David Sokolowski
Jason Simmers	Robert Pakonin

Commission Chair Brian Fellows called the meeting to order at 7:31 a.m.

Agenda Item 1 – Public Appearances

Cliff Anderson spoke about agenda item # 4 – Setting Speed Limits including the importance of enforcement and safety.

Agenda Item 2 – Minutes

Brian Fellows introduced the minutes of June 11, 2019 meeting of the Transportation Commission and asked for a motion for approval with one change under agenda item number four.

Motion: Commissioner Pam Goronkin

Second: Commissioner David King

Decision: Approved by Commissioners:

Susan Conklu

JC Porter

Paul Hubbell (via phone)

David A. King

Ryan Guzy

John Kissinger

John Federico

Peter Schelstraete

Pam Goronkin

Brian Fellows

Cyndi Streid (via phone)

Agenda Item 3 – Transportation Overlay District

Ambika Adhikari provided an overview of the Transportation Overlay District (TOD) and Urban Core Master Plan.

Topics included:

- Study area
- Updates to the draft plan since June
 - Establishes seven zones
 - Refines list of permitted uses
 - Refines development and façade standards
 - Includes civic space standards
 - Includes trip reduction and parking
 - Includes bonus program
- Public Outreach
- Trip Reduction Program
- TOD Adoption Process

Discussion included Transportation Management Associations, trip reduction & parking and TOD changes.

Agenda Item 4 – Setting Speed Limits

Julian Dresang presented information on proposed speed limit changes in Tempe. Topics included:

- History of speed limits
- Process/Vision Zero
- Speed related crash data
- Effects of speed on safety
- Proposed speed limit reductions
 - Maximum arterial speed limits (low bike/ped activity) = 40 mph
 - Maximum arterial speed limits (medium bike/ped activity) = 35 mph
 - Maximum arterial speed limits (high bike/ped activity) = 30 mph
 - Maximum arterial speed limits (very high bike/ped activity) = 25 mph
 - Maximum collector speed limits = 25-30 mph
 - Maximum local/neighborhood speed limits = 20-25 mph
- Next steps

Discussion included speed limits in school zones, Apache Boulevard speed limit, enforcement, compliance, costs, data, congestion, trip times and public participation.

A motion was made to recommend to the City Council changing Apache Boulevard from 35 mph to 30 mph between Mill Avenue and Price Road/Loop 101.

Motion: Commissioner JC Porter

Second: Commissioner Pam Goronkin

Decision: Approved by Commissioners:

Susan Conklu

JC Porter

Paul Hubbell (via phone)

David A. King

Ryan Guzy

John Kissinger

John Federico

Pam Goronkin

Brian Fellows

Cyndi Streid (via phone)

Peter Schelstraete opposed the motion.

Agenda Item 5 – El Paso Multi-use Path

Chase Walman and Robert Pakonin provided an overview of the 30% designs of the El Paso Multi-use Path project.

Topics included:

- Project history
- 30% design opportunities and constraints
- Landscape palette
- Next Steps

Discussion included easements, crossings and BIKEiT wayfinding signage.

Agenda Item 6 – 3-Foot Signage

Julian Dresang discussed with the Commissioners Tempe's non-use of share the road signage. Discussion included adding signage regarding motorists giving cyclists three feet when passing. Signage will be added in select areas of Tempe as a pilot program.

Agenda Item 7 – Department & Regional Transportation Updates

Susan Conklu stated that the City of Scottsdale submitted its application for the Bicycle Friend Community designation to the League of American Bicyclists.

Agenda Item 8 - Future Agenda Items

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

- September 10
 - North/South Railroad Multi-use Path Project
 - Transit Shelter Design
 - Grand Canal Multi-use Path Project
 - Transit Program/Security Update
- October 8
 - Annual Report
 - McClintock Drive Project Update
 - ASU ADA Program
 - El Paso Multi-use Paths
 - MAG Value Mapping Survey Results
- November 12
 - Annual Report
 - Bike Share
 - Tempe/Mesa Streetcar Extension Feasibility Study

- Bicycle Plan for Achieving Platinum Level Bike Friendly Community
- December 10
- January 14
 - Commission Business
 - Transit Shelter Design
 - Orbit Vehicles
- February 11
- March 10
- April 14
 - Paid Media Plan
- May 12
 - Bike Hero
 - Capital Improvements Project Update
 - MAG Design Assistance Grants

The next meeting is scheduled for September 10, 2019.

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

Prepared by: Sue Taaffe

Reviewed by: Shelly Seyler

MEMORANDUM

TO: Tempe Transportation Commission
FROM: Bonnie Richardson, Principal Planner, 480-350-8628
DATE: September 10, 2019
SUBJECT: Transit Shelter Design Project
ITEM #: 3



PURPOSE:

This memo introduces the new Tempe Transit Shelter Design Project, including proposed schedule, outreach and design process.

RECOMMENDATION OR DIRECTION REQUESTED: Provide feedback on proposed project approach.

CITY COUNCIL STRATEGIC PRIORITY:

- Quality of Life 3.26 Achieve a multimodal transportation system (20-minute city) where residents can walk, bicycle, or use public transit to meet all basic daily, non-work needs.
- Quality of Life 3.29 Achieve ratings of “Very Satisfied” or “Satisfied” with the “Overall Satisfaction with Transit System in Tempe” greater than or equal to 80% as measured by the City of Tempe Transit Survey.

BACKGROUND INFORMATION:

HISTORY

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

NEW TRANSIT SHELTER DESIGNS

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

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

Most of the unshaded locations have challenging site conditions, making it difficult to install the current design in the existing Right of Way. At least 3 different size options will be developed to accommodate a variety of sites and ridership capacity.

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

STEERING COMMITTEE

In order to diversify our fact-gathering, a Steering Committee has been established to inform the consultants and staff from a variety of experiences: bus patrons, bus drivers, students, sustainability experts, transit agencies (Metro, ASU), planners, designers and residents. The first committee meeting was held on August 14, with good discussion about member experiences, the Tempe Transit and Metro services, and new ideas. A second meeting in November will be focused on the initial concept sketches following public input.

PROJECT TIMELINE

- August 2019 Research; Steering Committee Meeting #1
- Sept - Nov Public Meetings; Develop 8 initial concept sketches; Steering Committee Meeting #2
- Dec – Feb 2020 Develop 3 recommended alternatives; Public Meetings; Selection of a Preferred Alternative
- Feb – June Engineering plan development
- Summer 2020 Prototype fabrication; finalization of plans & details
- Fall 2020 Begin installation in accordance with Budget & Prioritization Plan

PUBLIC MEETINGS

Residents and transit users are encouraged to attend public meetings to discuss design priorities.

- Saturday, Sept. 21, 2019 from 9-10:30 a.m.
MAC6, 1438 W. Broadway Road #101
- Wednesday, Sept. 25, 2019 from 5:30-7 p.m.
Tempe Public Library, Meeting Room A
3500 S. Rural Road

In these first two meetings, public input will include user experiences and identifying key attributes for the shelter designs. Additional meetings will be held in January 2020 to gather input on the proposed designs. Surveys are available at public meetings and online.

FISCAL IMPACT or IMPACT TO CURRENT RESOURCES:

Funding for shelter designs, fabrication and installations are through the annual bus stop improvements funding portion of the Tempe Transit Tax.

ATTACHMENTS:

1. Transit Shelter Design Steering Committee List
2. PowerPoint for Aug. 14 Steering Committee

Transit Shelter Design Steering Committee

- **Transportation Commission**
 - John Federico, federico63_2000@yahoo.com
- **Sustainability Commission**
 - John Kane, jfkane@architekton.com
- **Neighborhood Advisory Commission**
 - Kyomi Kurooka, kkurooka@yahoo.com
 - Jonathan Gelbart (Alt.), jdgelbart@gmail.com
- **Design Review Commission**
 - Michelle Schwartz, Michelle.Schwartz@rsparch.com
- **Commission on Disability Concerns**
 - Katie Schmidt, kebschmidt@gmail.com
- **Arts & Culture Commission**
 - Kyomi Kurooka, kkurooka@yahoo.com
- **Residents, businesses & property owners**
 - **ASU student** – Grace Logan, Grace_Logan@tempe.gov
 - **McClintock High School student** – Sophie Nelson, sophster.nelson@gmail.com; Shalae Clemens, shalae8888@gmail.com
 - **Resident** – Dawne Walczak, ppna.recorder@gmail.com
- **ASU Research**
 - Paul Coseo, Paul.Coseo@asu.edu
 - David Hondula, David.Hondula@asu.edu
 - Christine Lee, christinelee@asu.edu
- **Transit users**
 - David Sokolowski, davidsokolowski@rocketmail.com
 - Robert Freedman, Runninginaz@aol.com
- **Valley Metro**
 - Alba Rodriguez, ARodriguez@valleymetro.org
 - Scott Wisner, swisner@valleymetro.org
- **First Transit + Bus Drivers**
 - Mike Jones, MJones42@hotmail.com
 - Tremeal Manley, Tremeal.Charae@gmail.com
 - We will meet with others at EVBOM
- **Downtown Tempe Authority**
 - Kate Borders, kate@downtowntempe.com

Transit Shelter Design Steering Committee

- **Tempe Bicycle Action Group**
 - Stevie Milne, stevie@biketempe.org
- **ASU Transit/Planning**
 - JC Porter, J.Porter@asu.edu
 - Byron Sampson, Byron.Sampson@asu.edu
 - Norm Yatabe, norman.yatabe@asu.edu
 - Ed Soltero, Edmundo.Soltero@asu.edu

Designing Tempe's New Transit Shelters

Transportation Commission
September 10, 2019

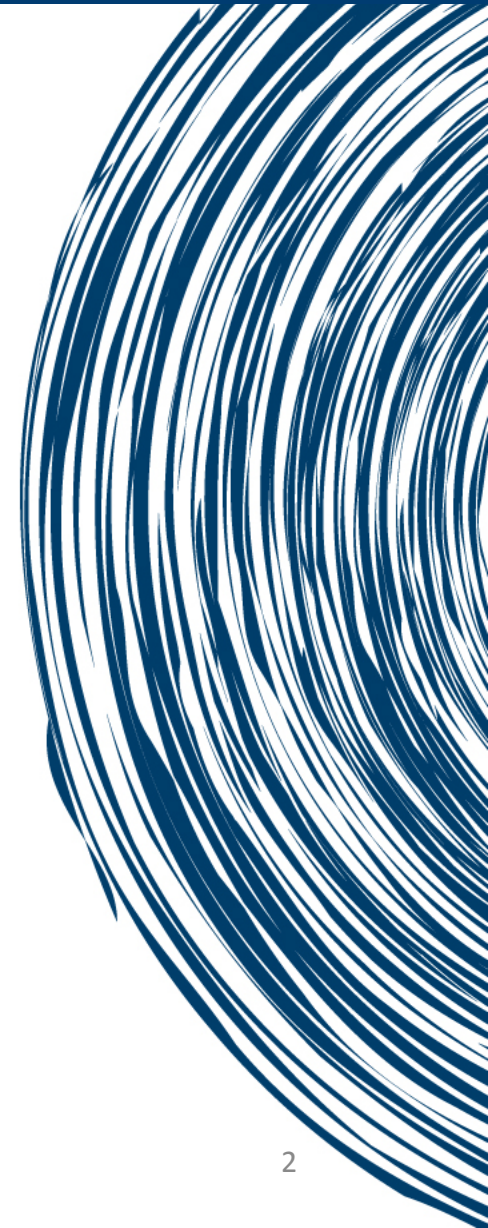




Quality of Life

3.26: Achieve a multimodal transportation system (20-minute city) where residents can walk, bicycle, or use public transit to meet all basic daily, non-work needs.

3.29: Achieve a rating 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.



Transit Shelter Design Steering Committee



Purpose: to provide their experience & knowledge about Tempe's transit system & shelters, as members who:



- have specific skills in design, art, materials research;
- use the shelters, ride or drive the bus, or manage bus systems;
- participate on related city commissions;
- are residents, local businesses, students & property owners;
- represent ASU Transit, Valley Metro, First Transit

Value: to assist in developing & finalizing the best solutions for Tempe's new transit shelters

Transit Shelter Design Project



What makes a good transit shelter?

easy to fabricate & maintain?

convenient?

comfortable?

safe?

functional?

attractive?

iconic?



does it consider the local environment?
are the materials appropriate?

Transit shelter design goals



maximize shade!

architecturally unique to the City of Tempe

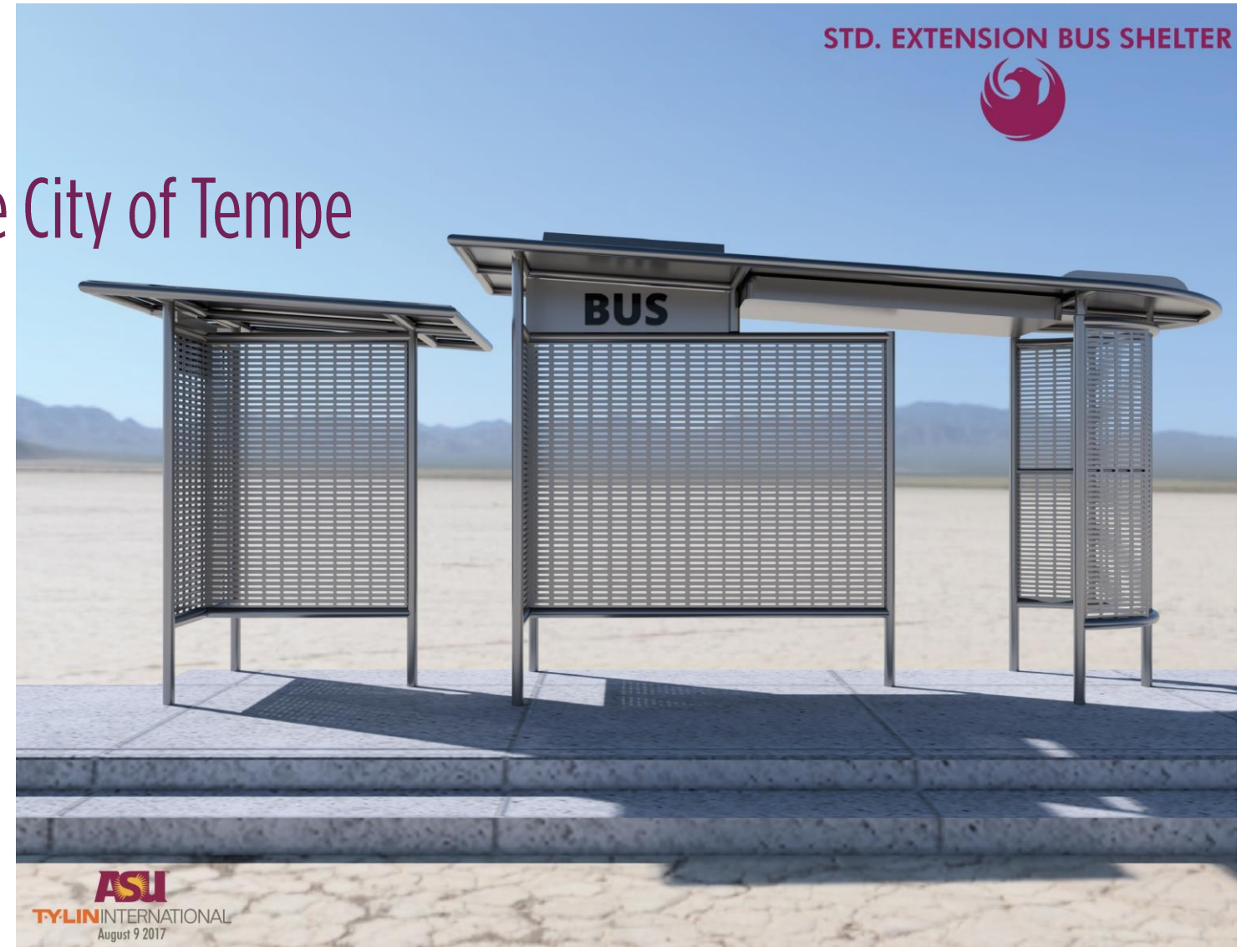
sustainability focused

good investment for long life
comfortable and safe

flexible modular design
for variety of sites

cool

easy to install
& maintain



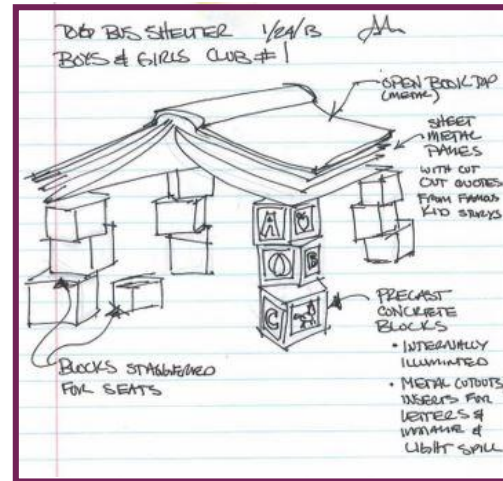
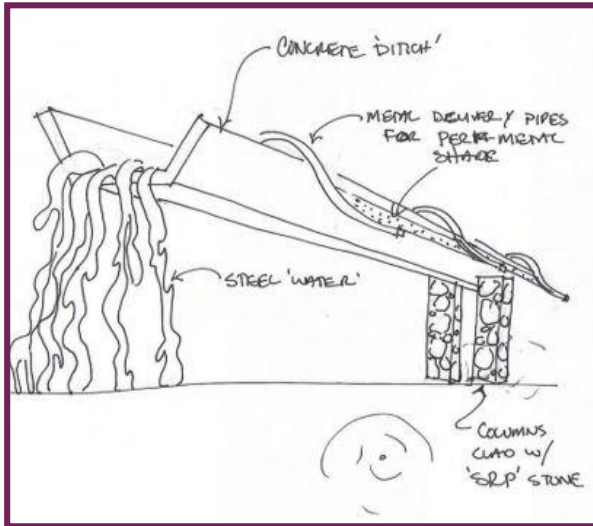
Process – Concept Stage



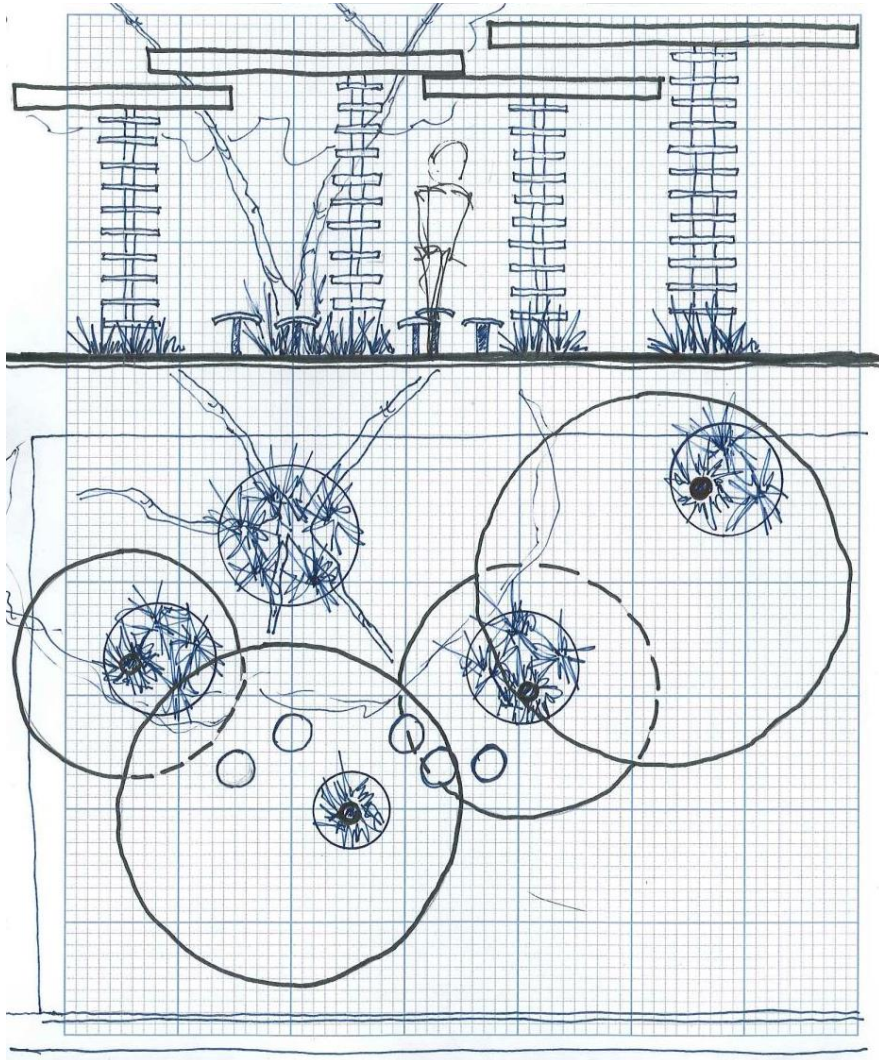
- 8 initial concept sketches
- 3 recommended alternatives
- Time-of-day shade analysis
- 1 preferred concept



TY·LIN INTERNATIONAL



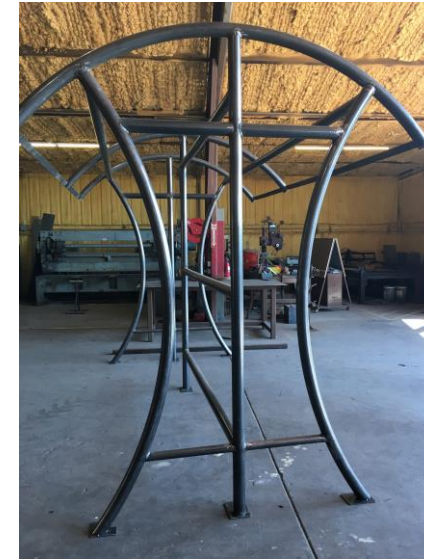
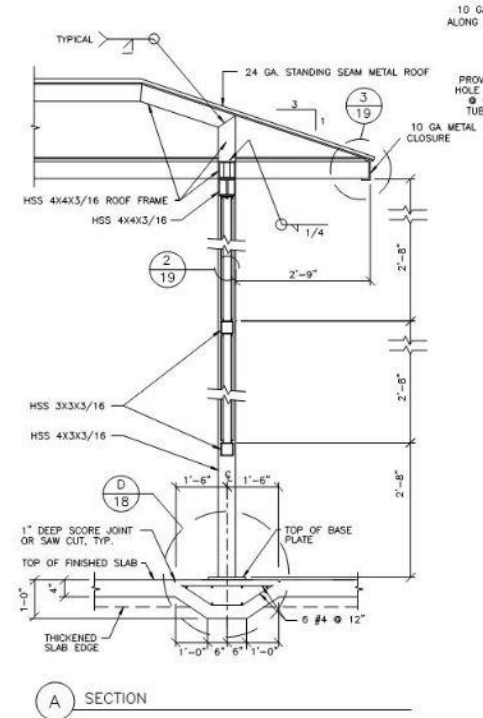
Process – Concept Stage





Process – Final Design

- detailed plan development
- fabrication of a prototype
- new Tempe details finalized
- installation



Transit Shelter Prioritization



Households with no vehicles 9.4%
Use transit as means to work 5%
Households living below poverty 21%
**Population density:
people per square mile 4,050**

A Site Priority Matrix will be used to identify which transit stops merit further study.



Ridership 9 million+

Tempe Transit System



- **Multi-Modal**

- Light Rail
- 16 local bus routes
- 3 commuter express routes
- 7 neighborhood circulator routes (Orbit + FLASH)
- Tempe Streetcar (May, 2021)
- Paratransit and RideChoice

- **Dedicated transit sales tax**



- **9 Million+** annual boardings
- 5.1 million annual miles of transit service
- **806 bus stops**, 308 have shelters
- 124 buses
- Partnership with Valley Metro for transit service operations



Tempe Key Transit Stop Locations



- **high ridership locations**
 1. Tempe Transportation Center
 2. SB Priest at Washington
 3. Tempe Marketplace
 4. WB Baseline at Priest
 5. SB McClintock at Southern
 6. University/Rural Transit Center
 7. NB McClintock at Southern
 8. NB McClintock at Apache
 9. NB Rural at Southern
 10. SB Mill at Southern
- **right-of-way constraints**
- **physical constraints**



Tempe Transit - Perceptions



Public Transit Market Research Survey – 2018, biannually



What makes a Tempe transit shelter 'iconic'?



design approach

origami?
subtle?
bold?

branding

city-wide system
regional system
Tempe values



consistent shape with
different colors

different shapes with
same color

?????????



Tempe: what are we known for...



ASU / Tempe Town Lake / Mill Avenue

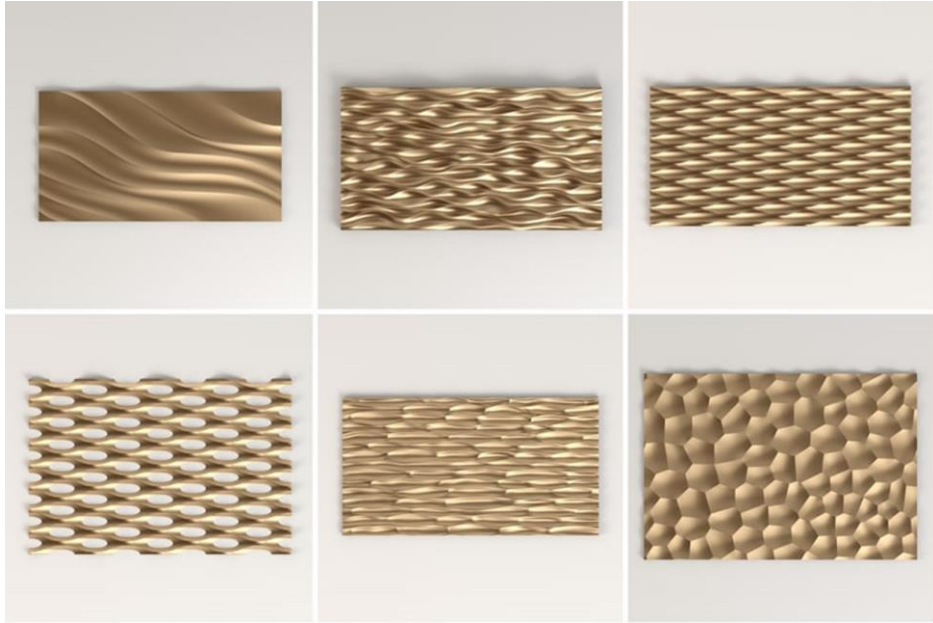
Innovative / Smart / Progressive / Creative

Compassionate Problem Solvers

Outspoken and Engaged

Friendly / Diverse / Active / Outgoing

Looking around for inspiration

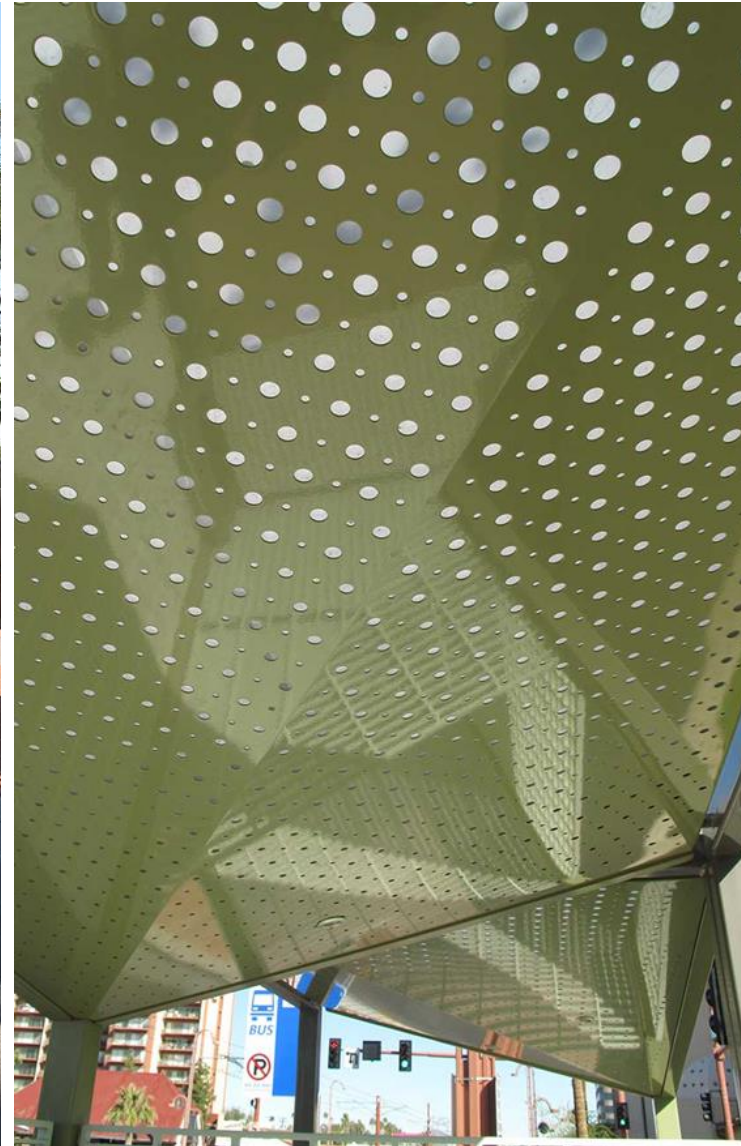


nature
buildings
infrastructure
art, sculpture
materials

other cities
countries



Looking around for inspiration



- variety in vertical screens
- colorful perforated roof
- heat reducing materials
- air movement
- modular
- good visibility
- unique lighting at night



Darren Petrucci, A-I-R
with TranSystems

Looking around for inspiration



Good Ideas:

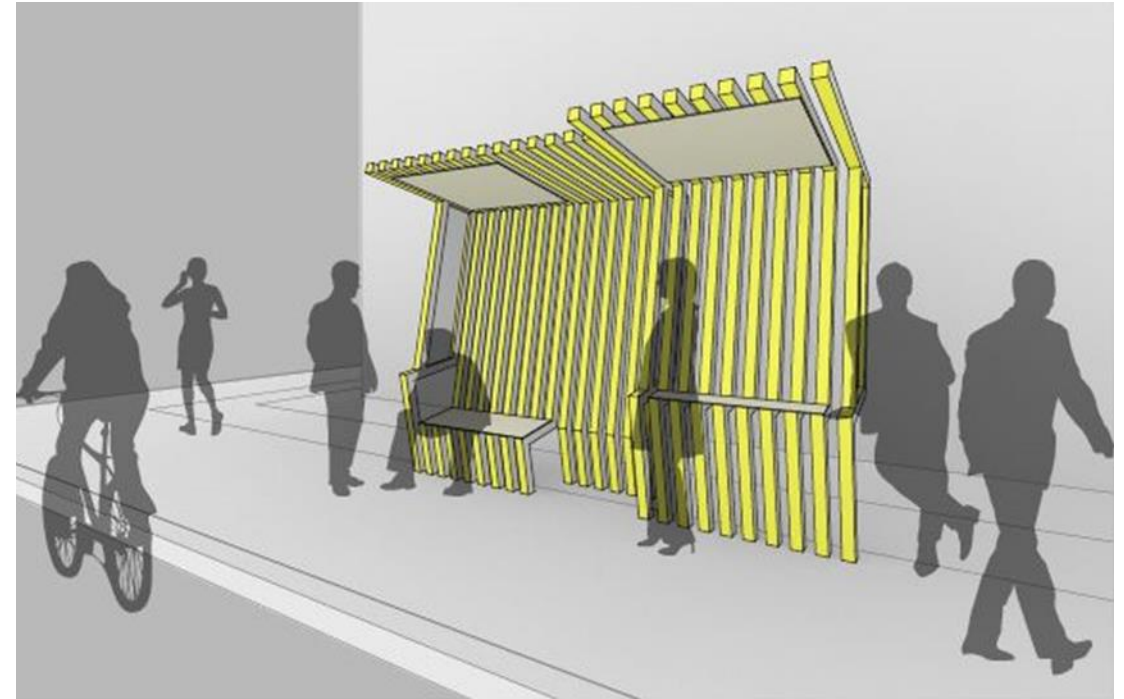
- design screen separate from shelter
- mount on a pin system & adjust to the specific site, then lock in place
- attach seating to structure



- sleek, simple
- integrated seating
- bus schedules on post, matching shelter

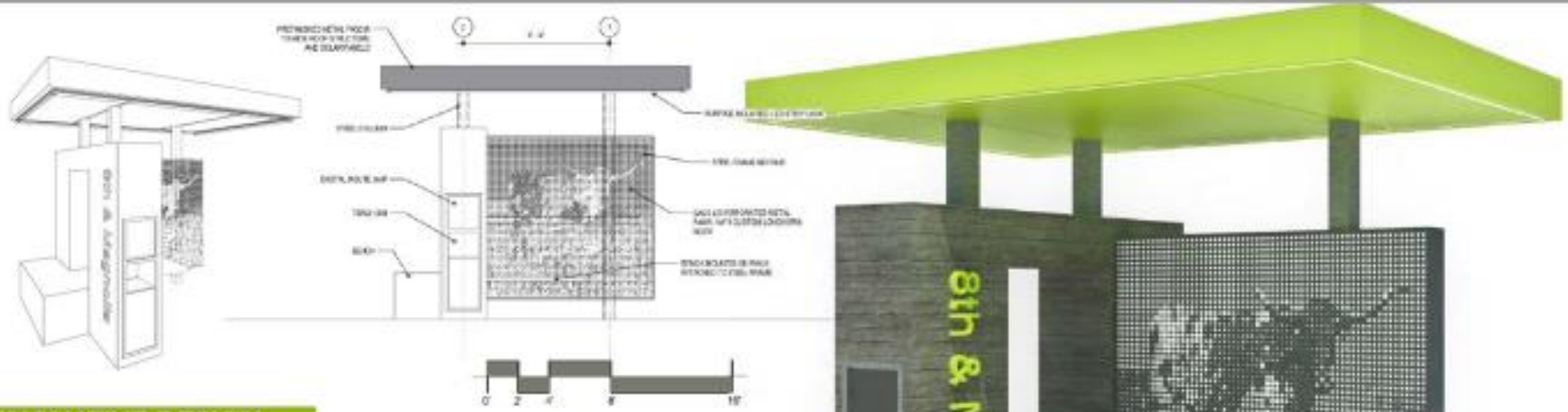


Looking around for inspiration



design competitions
simple, small shelters
modular

Looking around for inspiration



INNOVATIVE DESIGN

Three steel columns support the roof, clad with prefinished metal sheets that conceal the structure and solar panels, used to power LED strip lights, a digital route map, charging station, waiting rider notification, and a back-lit perforated panel. This prototype shows a longhorn motif that connects to Fort Worth's western heritage, and provides transparent enclosure. The design could easily be

changed based on different areas of the city. The roof slopes to one internal roof drain inside a column that releases onto the sidewalk behind. The mass, built with simple metal studs and clad in graffiti resistant tile, houses the electrical components and includes a built-in trash bin. Two separate seating options with space reserved for a wheelchair complete the design.

STATISTICS / QUOTES

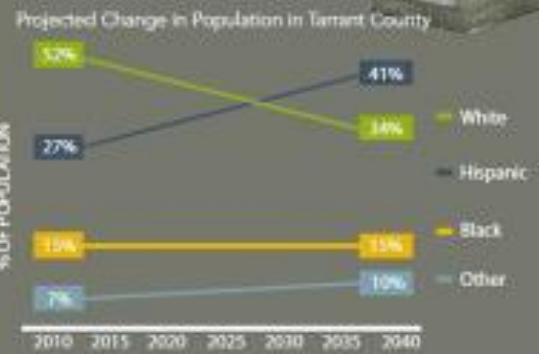
BABY BOOMERS

In Tarrant County, the population of residents age 65 and older is projected to increase by 174% by 2040, far more than any other age group in the county.

55.4% increase
in bus ridership since 2006

MILLENNIALS

21% of new residents between 2010 and 2040 is projected to come from Millennials. Looking forward, better transit options will be crucial to attracting and retaining Millennials in Fort Worth and Tarrant County.



"The T needs a rebrand. The thought of The T is you have fallen upon bad times or no other form of transportation; in other cities it is a viable form of transportation, like NYC, Boston, and Austin. Cities like Austin have added Wi-Fi and fun names to make it an option..."

(Build Your Own Transit System survey respondent)

Looking around for inspiration



constructed canopy within tree canopy
light translucent materials
light, airy

colorful
flexible placement
provides personal, individual spaces



Looking around for inspiration



exposed structure integrated with landscape

sustainability concept
habitat inspired screen
water harvesting

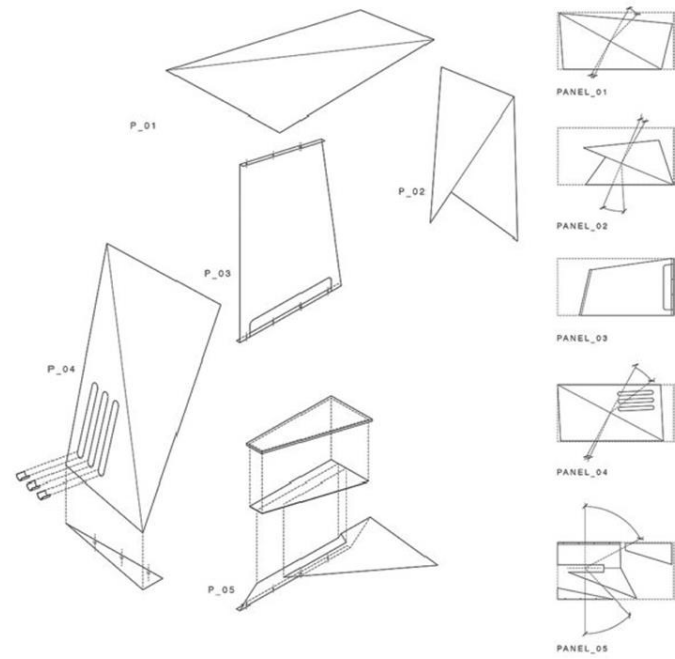


Climate Adapted
People Shelters (CAPS)

Looking around for inspiration



- origami inspired design
- same structure, different colors
- same color, different folds
- fits shallow sites
- integrated seating



Looking around for inspiration - materials



smog eating concrete

- Titanium dioxide (TiO_2) catalyzes the decomposition of dirt = self cleaning
- reduces certain pollutants by 25 – 45% (NO_x)
- cool surface
- flexible design

smog eating pavement

- same properties as above
- appropriate for shelter pads, bike lanes

Looking around for inspiration - materials



new materials



Looking around for inspiration

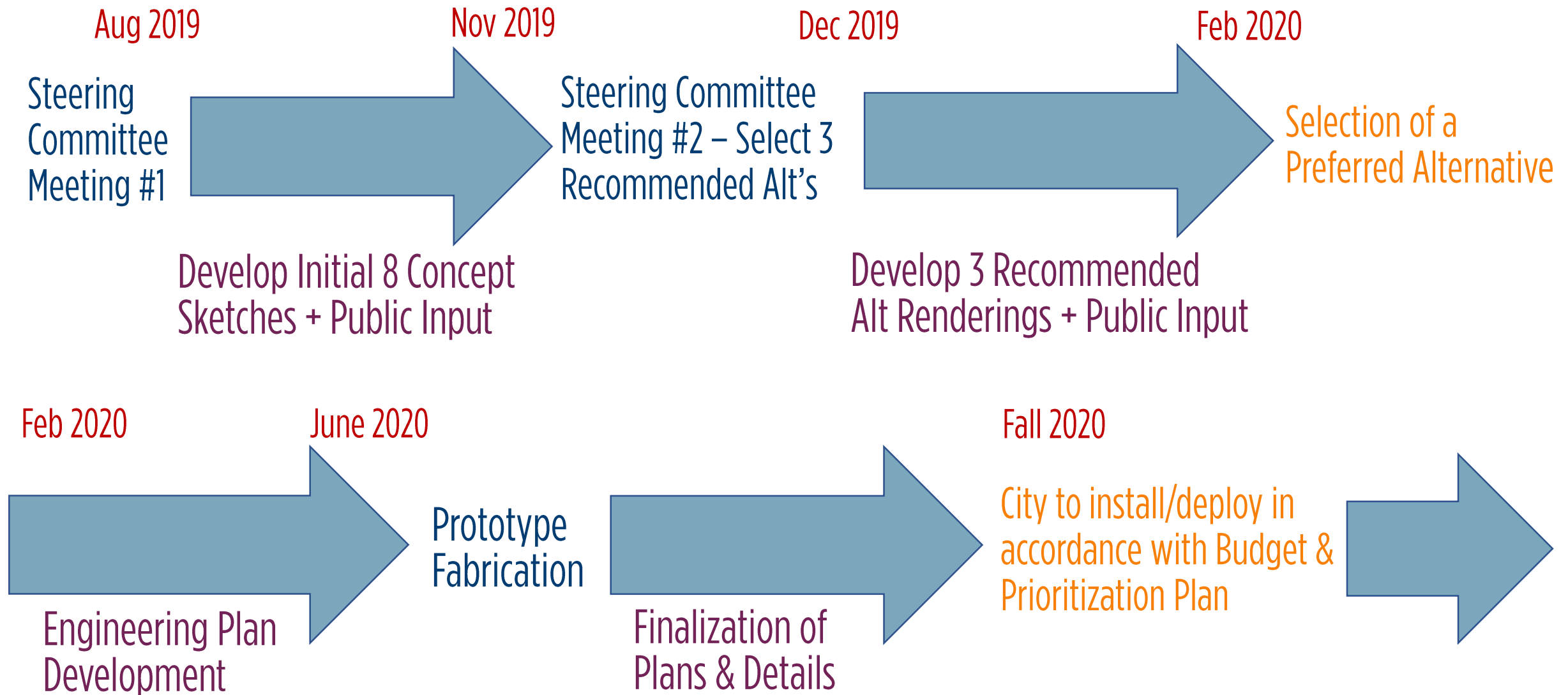


- transparent screen
- dramatic green light bar
- contemporary



Darren Petrucci, A-I-R

The Timeline



Community Outreach



PUBLIC MEETINGS

Sept. 21, 2019 - from 9-10:30 a.m. at MAC6 located at 1438 W. Broadway Road #101, Tempe

Sept. 25, 2019 - from 5:30-7 p.m. at the Tempe Public Library, Meeting Room A, located at 3500 S. Rural Road, Tempe

Online comment will be taken from Sept. 21 to Oct. 16, 2019
tempe.gov/TransitShelters



Contact:
Bonnie Richardson
Architect/Urban Planner
City of Tempe Transportation

480-350-8628
bonnie_richardson@tempe.gov

MEMORANDUM

TO: Tempe Transportation Commission
FROM: Vanessa Spartan, Planner II, 480-858-2897
DATE: September 10, 2019
SUBJECT: North/South Railroad Spur Multi-Use Path – Phase I
ITEM #: 4



PURPOSE:

The purpose of this presentation is to update the Transportation Commission on Phase I of the North/South Railroad Spur Multi-Use Path Project.

RECOMMENDATION OR DIRECTION REQUESTED:

This item is for information and input, and possible recommendation.

CITY COUNCIL STRATEGIC PRIORITY:

- Quality of Life – 3.26: Achieve a multimodal transportation system (20-minute city) where residents can walk, bicycle, or use public transit to meet all basic daily, non-work needs.
- Sustainable Growth & Development – 4.7: Achieve or exceed Council adopted standards for improved access and usability as documented in the “Above and Beyond ADA” plan.
- Safe & Secure Communities – 1.08: Achieve a reduction in the number of fatal and serious injury crashes to zero.

BACKGROUND INFORMATION:

The proposed North/South Rail Spur Multi-Use Path project is a joint City of Tempe/Congestion Mitigation and Air Quality (CMAQ) project. This Phase I project would be located along and adjacent to the existing Union Pacific Railroad (UPRR) corridor between Baseline Road and University Drive. The pathway would share the paved roadway along Kyrene Road and Farmer Avenue and be located in currently undeveloped portions of UPRR’s spur line corridor between Southern Avenue and 13th Street. This proposed project is approximately 16,300 linear feet in total length which equates to approximately 3.1-miles. A future Phase II would extend the path south to Knox Road. The combined Phase I and II efforts would eventually provide a 7-mile connection.

Project History: In 2012 the City of Tempe received a Design Assistance Grant from the Maricopa Association of Governments to study the full corridor extents (University Drive to Knox Road). That process concluded with a Narrative Report entailing a preliminary design recommendation in January 2015. The Transportation Commission was updated in May 2014 and December 2014 on that preliminary design effort.

Following completion of the preliminary design, the City then applied for CMAQ funds to complete design and construction of the project. A design team was hired in 2017 to develop and design construction documents for a buildable project that strives to provide a safe and low-stress north/south bicycle facility that spans the city limits.

The 2015 Transportation Master Plan supports the implementation of this project including identifying the pathway in the Recommended Bicycle Pedestrian Improvements 2040 map and project list.

Design Goals: The goals for this non-motorized facility design identified by project staff, design team, and stakeholders include:

- Providing safe mobility for all
- Utilize City right-of-way when available
- Coordinate with Union Pacific Railroad where needed
- Provide safe/signalized crossings across busy roadways

- Include sidewalks and curb, return ramp upgrades, potential installation of railing/fencing when adjacent to the UPRR spur line, lighting, landscaping, three (3) node areas, roadway striping, existing traffic signal modifications, new pedestrian signals, potential UPRR gate installation, and wayfinding signage

Community Outreach & Public Feedback: Two public meetings were held on October 3 and 13, 2018 to introduce the project, present the 30% design drawings, and collect public feedback on the project direction. This feedback was used to inform revisions and priorities for improvements on the corridor. Those unable to attend the meetings were encouraged to visit the project website: tempe.gov/NorthSouthRailroadPath for more detailed information and to provide input online between October 3 and 27, 2018.

CURRENT STATUS:

Environmental Scope: Following public meetings in October 2018, a post-30% design was created to initiate discussions with ADOT regarding environmental processes and the possible environmental scope of work. Results of those discussions indicated that cultural resource testing and monitoring would likely be required. The estimate for the cultural resource testing and monitoring is approximately \$1,500,000. If items are recovered in the testing period, additional environmental scope may be required, and additional funds may be needed for recovery and mitigation. The scope of the cultural resource testing can only be determined after 60% designs are approved by UPRR. UPRR will only review designs once the City has entered into design review agreements (PE agreements) which are discussed below.

Railroad Scope: The post-30% design was also used in discussions with Union Pacific Railroad (UPRR) regarding engineering design requirements, review procedures, and acquisition processes. In these discussions a concern was raised regarding a constrained segment of the UPRR right-of-way that occurs for approximately 550' north of Southern Avenue. In this area the path improvements (including fencing, landscaping and the path surface) would be located less than 25' from the rail bed. UPRR staff stated that typically no easements are allowed inside the 25' area from a rail bed and that they encourage the City explore an alternative route.

In addition to the constrained right-of-way, several new items affecting the project costs were presented that were not included in the preliminary design study completed in 2015. These items include:

- UPRR's requirement for separate design review agreements (PE agreements) for the full corridor as well as for each crossing along the corridor (6 agreements totaling \$225,000);
- Estimate of UPRR's charges for crossing design (\$550,000) and construction (\$1,100,000); and
- New annual crossing maintenance cost for each crossing (totaling \$50,000).

The acquisition of an easement to construct and maintain the path was discussed. Due to Federal grant requirements staff could not discuss the specific dollar value of the easement but were informed this would likely be an annual easement and not a one-time purchase.

In total, there are at least \$3,375,000 of unanticipated costs beyond those identified in the 2015 preliminary design study. When combined with the anticipated budget for design and construction, the 3.1-mile path corridor would cost approximately \$6,410,899 (one-time cost), plus \$60,500 in maintenance (annual cost), as well as the yet to be negotiated easement purchase or lease. A summary of the various cost factors is provided in the table below.

Cost Factors	One Time Cost	Annual Cost
UPRR Design Review - PE Agreements	\$ 225,000	
UPRR Crossing Design	\$ 550,000	
UPRR Crossing Construction	\$ 1,100,000	
UPRR Easement - <i>unknown</i>	<i>TBD</i>	<i>TBD</i>
Environmental - testing and monitoring	\$ 1,500,000	
Annual Crossing Maintenance	\$ -	\$ 50,000
SUBTOTAL FOR ENVIRONMENTAL AND UPRR	\$ 3,375,000	\$ 50,000
Design and Construction Costs identified in CIP	\$ 3,035,899	\$ 10,500
TOTAL	\$ 6,410,899	\$ 60,500

Alternative Route: Following discussions with ADOT and UPRR, City staff began investigating an alternative north-south route that would avoid UPRR properties and rail crossings. Included in the PowerPoint is an alternative route that encompasses the corridor limits (University Drive to Baseline Road). The alternative route includes the following considerations:

- **University Drive to 13th Street**
 - The UPRR right-of-way is too narrow in this area. The route utilizes Farmer Avenue and includes the addition of on-street shared lane markings (sharrows).
- **13th Street to Broadway Road**
 - This segment of the route avoids UPRR right-of-way by utilizing the existing bike lanes on 13th Street and would create a low-stress / traffic calming design on Roosevelt Street. The new design of Roosevelt in this area could be accommodated by repurposing the underutilized center turn lane. Neighborhood / public input would inform the applicable traffic calming solutions.
- **Broadway Road to Southern Avenue**
 - This segment of the route avoids UPRR right-of-way by utilizing Roosevelt Street. The new Roosevelt Street design would include new sidewalk in areas where there is no sidewalk present, as well as widening the bike lane where feasible.
 - The Alameda Drive railroad crossing would be handled as a maintenance project, separate from the North/South path project.
 - This route segment avoids creating an unsafe environment with two-way bicycle traffic on Southern Avenue. To do this, the route would utilize a physically abandoned rail spur, creating a low-stress connection from Roosevelt Street to the existing Southern Avenue / Kyrene Road traffic signal. A bicycle and pedestrian node could be created in this area. This area would require property / easement acquisition.
- **Southern Avenue to Baseline Road**
 - This segment of the route would utilize the curb to curb distance on Kyrene Road. Two options would be explored, including: 1) Creating a protected cycletrack on the west side of the road with driveway/roadway intersection treatments, or 2) Widen the existing bicycle lanes and add a physical barrier for protection.
 - At Baseline Road, bicycles and pedestrians would travel along the north sidewalk and cross Baseline Road at a new bicycle/pedestrian signalized crossing at approximately 130' to 200' east of the UPRR tracks, providing a connection to the Western Canal Path and Kiwanis Park. A bicycle/pedestrian node could be created in this area.
 - The design would explore extending the median from the UPRR tracks to the west to restrict turning movements at Kyrene Road and introduce a median east of the UPRR tracks to provide additional protection at the pedestrian crossing.

Council Direction: Staff will be seeking Council direction on how to proceed with this project. Three options are available:

1. **Proceed with rail corridor route.**
 - a. Additional funding would be needed, and Council direction would be needed to determine which projects are moved further back in the CIP process to fill this project's funding need.
2. **Proceed with alternative route.**
 - a. Staff estimates that design of the new route would begin in 2019 and could be bid in 2022/2023.
3. **Proceed with a no-build option.**
 - a. Staff would close the project and return Federal funds to Maricopa Association of Governments.

FISCAL IMPACT or IMPACT TO CURRENT RESOURCES:

Programmed funding for Phase 1 design includes \$507,000 from the City transit fund. Programmed funding for Phase 1 construction includes \$2.3 million in federal Congestion Mitigation and Air Quality funds and \$220,000 in City transit funds.

Following direction from Council, funding for the project would likely be deferred from FY 2019-2020 to FY2022-2023.

ATTACHMENTS:

1. PowerPoint

North/South Rail Spur Multi-use Path – Phase 1

Transportation Commission Meeting

September 10, 2019



Performance Measures



Quality of Life

3.26: Achieve a multimodal transportation system (20-minute city) where residents can walk, bicycle, or use public transit to meet all basic daily, non-work needs.



Sustainable Growth & Development

4.7: Achieve or exceed Council adopted standards for improved access and usability as documented in the “Above and Beyond ADA” plan.



Safe & Secure Communities

1.08: Achieve a reduction in the number of fatal and serious injury crashes to zero.

City Council Direction



Direction on Phase 1

- Proceed with current alignment
- Proceed with the alternative route
- No Build

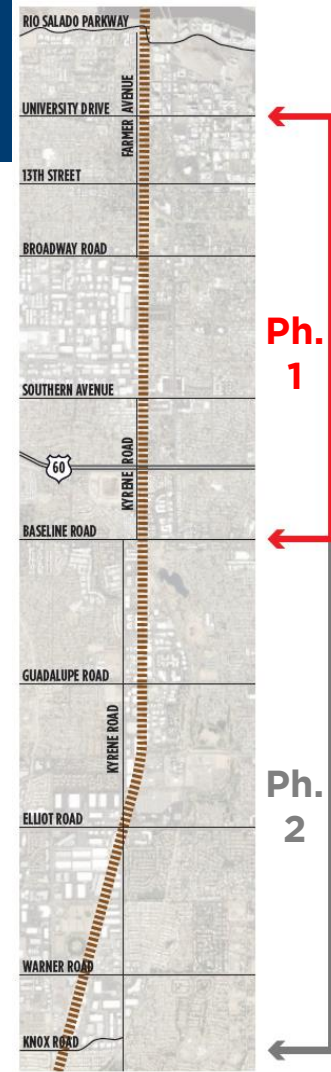
Project Overview Map



- | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|---------------------|-------------------|---------|------------------------|--------------------|-------------------------|---------------------------------------|---------------------|-----------------------|----------------------------|----------------------------------|--|-------------------|-----------------------------|--|---------------------|--------------------------|--|-----------------------|---------------------|--|
| <ul style="list-style-type: none"> ● Connection to existing North/South Spur path ◆ Farmer Ave. ORBIT route ★ Re-route to Farmer Ave. or Kyrene Rd. signalized intersection ○ Remove/replace sidewalk railing (low clearance) - public art opportunity — Proposed pathway alignment | <ul style="list-style-type: none"> ■ New signalized intersection ■ Pathway or fill material needed (import) in this area ■ Utilize existing un-signalized paved crossing (verify ADA accessibility) ★ Candidate node locations ← Future Phase 2 South to Knox Road | <p>KEY LAND OWNERS (IN ADDITION TO PRIVATE RESIDENTS)</p> <table border="0"> <tr> <td>1 TEMPE HIGH SCHOOL</td> <td>8 BROADWAY TOWERS</td> <td>15 ADOT</td> </tr> <tr> <td>2 FARMER ARTS DISTRICT</td> <td>9 AZ BOARD REGENTS</td> <td>16 FLAGSTONE APARTMENTS</td> </tr> <tr> <td>3 VACANT PARCEL (PENDING DEVELOPMENT)</td> <td>10 AAA SELF STORAGE</td> <td>17 VARIOUS BUSINESSES</td> </tr> <tr> <td>4 FARMER GOODWIN TOWNHOMES</td> <td>11 INDUSTRIAL BUSINESS COMPLEXES</td> <td></td> </tr> <tr> <td>5 FARMER'S BLOCKS</td> <td>12 BROADWAY INDUSTRIAL PARK</td> <td></td> </tr> <tr> <td>6 NICOLE APARTMENTS</td> <td>13 SOLARA AT MILL AVENUE</td> <td></td> </tr> <tr> <td>7 STATE COLLEGE HOMES</td> <td>14 201 WEST HERMOSA</td> <td></td> </tr> </table> | 1 TEMPE HIGH SCHOOL | 8 BROADWAY TOWERS | 15 ADOT | 2 FARMER ARTS DISTRICT | 9 AZ BOARD REGENTS | 16 FLAGSTONE APARTMENTS | 3 VACANT PARCEL (PENDING DEVELOPMENT) | 10 AAA SELF STORAGE | 17 VARIOUS BUSINESSES | 4 FARMER GOODWIN TOWNHOMES | 11 INDUSTRIAL BUSINESS COMPLEXES | | 5 FARMER'S BLOCKS | 12 BROADWAY INDUSTRIAL PARK | | 6 NICOLE APARTMENTS | 13 SOLARA AT MILL AVENUE | | 7 STATE COLLEGE HOMES | 14 201 WEST HERMOSA | |
| 1 TEMPE HIGH SCHOOL | 8 BROADWAY TOWERS | 15 ADOT | | | | | | | | | | | | | | | | | | | | | |
| 2 FARMER ARTS DISTRICT | 9 AZ BOARD REGENTS | 16 FLAGSTONE APARTMENTS | | | | | | | | | | | | | | | | | | | | | |
| 3 VACANT PARCEL (PENDING DEVELOPMENT) | 10 AAA SELF STORAGE | 17 VARIOUS BUSINESSES | | | | | | | | | | | | | | | | | | | | | |
| 4 FARMER GOODWIN TOWNHOMES | 11 INDUSTRIAL BUSINESS COMPLEXES | | | | | | | | | | | | | | | | | | | | | | |
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| 6 NICOLE APARTMENTS | 13 SOLARA AT MILL AVENUE | | | | | | | | | | | | | | | | | | | | | | |
| 7 STATE COLLEGE HOMES | 14 201 WEST HERMOSA | | | | | | | | | | | | | | | | | | | | | | |

Background

- Transportation Master Plan
- 2015 MAG Design Assistance funds completed for full 7-mile corridor
- Programmed Funds
 - Phase 1: in design
 - Design: \$500K Transit Fund
 - Construction: \$2.3M CMAQ and \$220K Transit Fund
 - Phase 2: in 2020
 - Design: \$491K Transit Fund
 - Construction: \$2.8M CMAQ and \$338K Transit Fund
- Public Meetings and Online Survey held October 2018
- Current Status: Between 30% and 60% Design



Intent & Issues



- Low-use UPRR corridor with issues
- Missing Link
- Safety and Crossing Enhancements
- Landscape Enhancements
- Controls Public Access Points
- Easement Acquisition Necessary
- Cultural Resource Testing



Connection to Western Canal Path – S. of Baseline Rd.



Connection to North – N. of University Dr.



N. of Southern Ave – Adjacent Properties



Alameda Drive Crossing

Discussions with Union Pacific Railroad



Cost Factors	One Time Cost	Annual Cost
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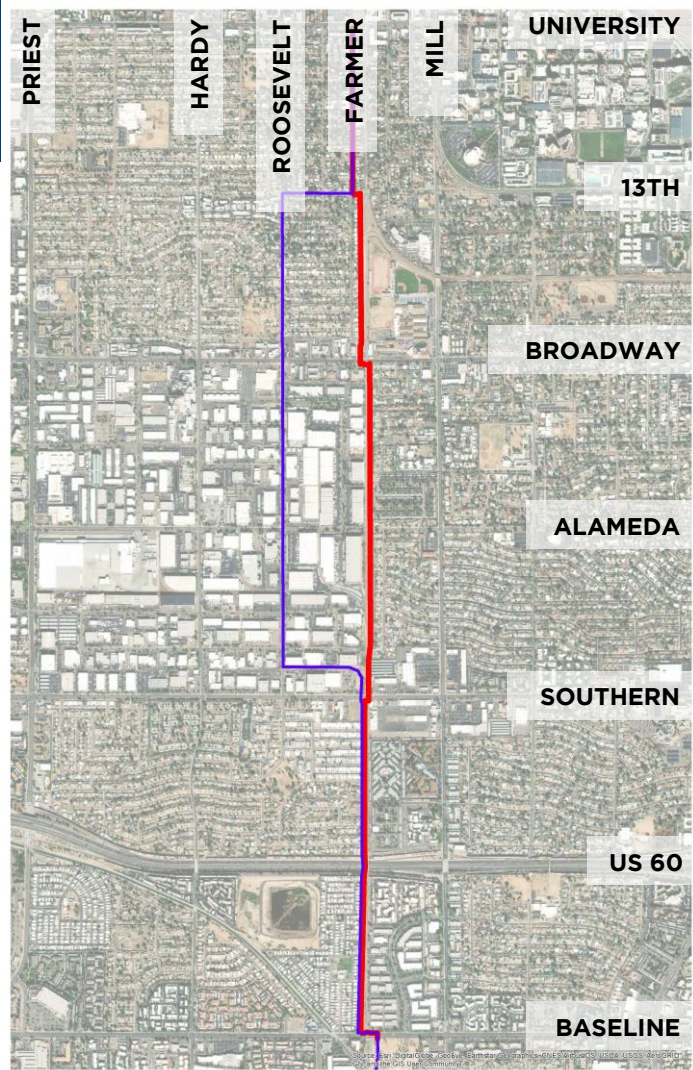
Phase 1: University to Baseline

Original Alignment

- Low stress design, capturing commuter and recreational users, addresses rail corridor issues

Alternative Alignment

- Moderate stress route, some property acquisition, adds ½ mile to trip



University to Broadway



University to 13th

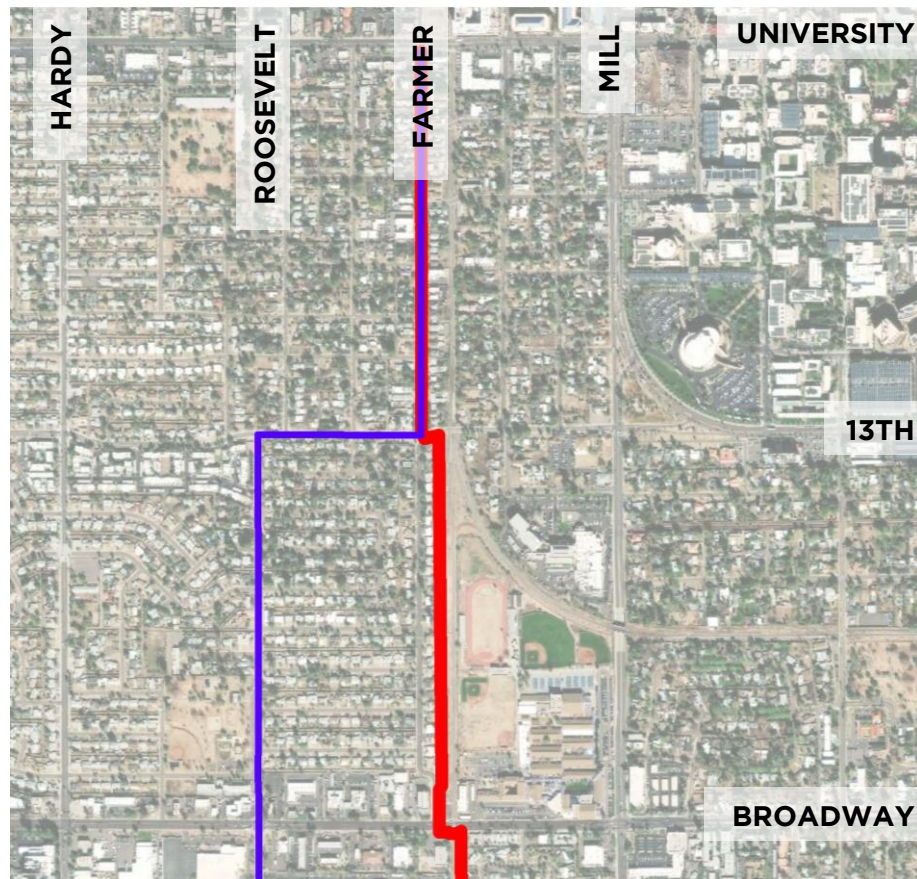
- UPRR ROW is too narrow.
- Farmer Ave. with on-street sharrow markings.

13th to Broadway

- UPRR ROW triggers additional costs.
- Alternative is to use bike lanes on 13th Street and to create a low-stress / traffic calming design on Roosevelt.

Original Alignment

Alternative Alignment



Broadway to Southern

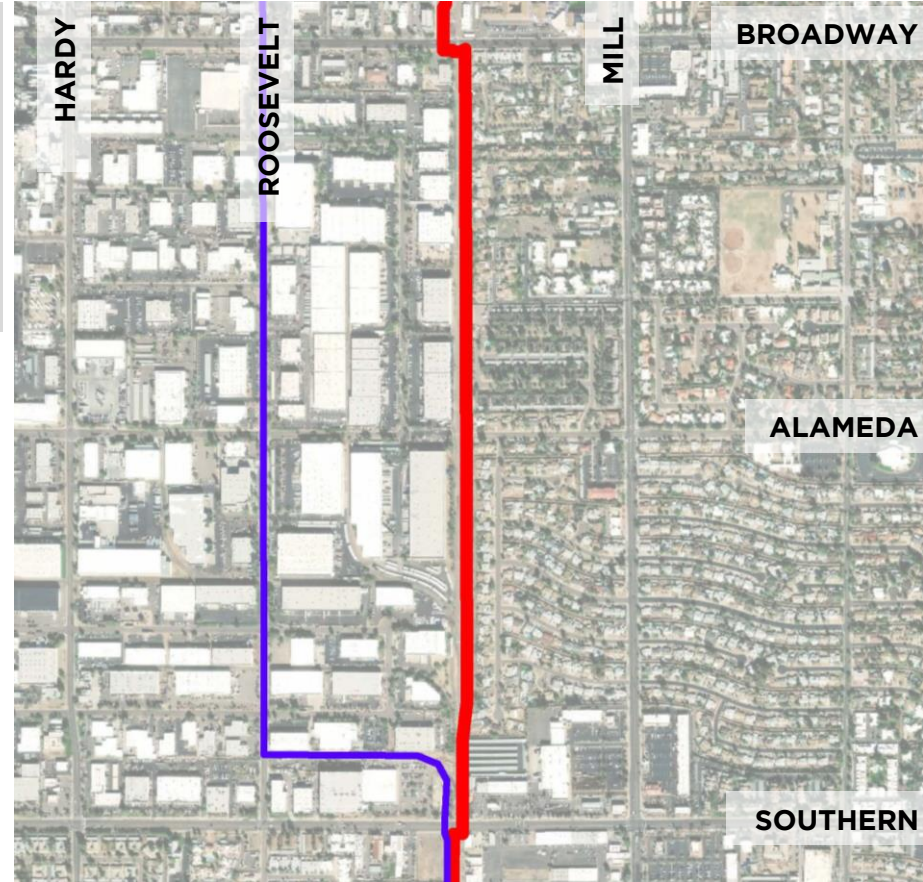


Broadway to Southern

- UPRR ROW triggers additional costs and is too narrow in the area 550' north of Southern.
- Alternative is to enhance bike lanes and fill sidewalk gaps on Roosevelt.
- Alameda crossing will be handled as a separate maintenance improvement project.

Original Alignment

Alternative Alignment



Broadway to Southern



Broadway to Southern

- Physically “abandoned” rail spur will provide a low-stress connection from Roosevelt to the existing Southern/Kyrene traffic signal and a location for a bike/ped node area. This will require right-of-way/easement acquisitions.



Node Example

North/South Rail Spur Multi-use Path with Landscaping and Lighting (~25' wide)

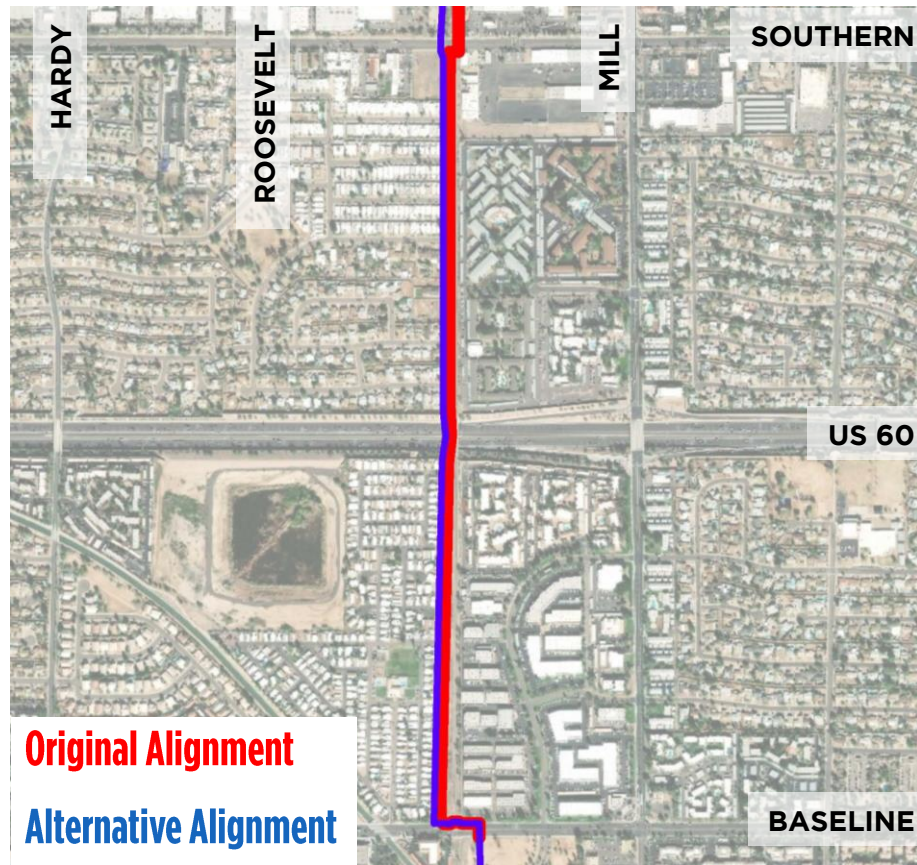
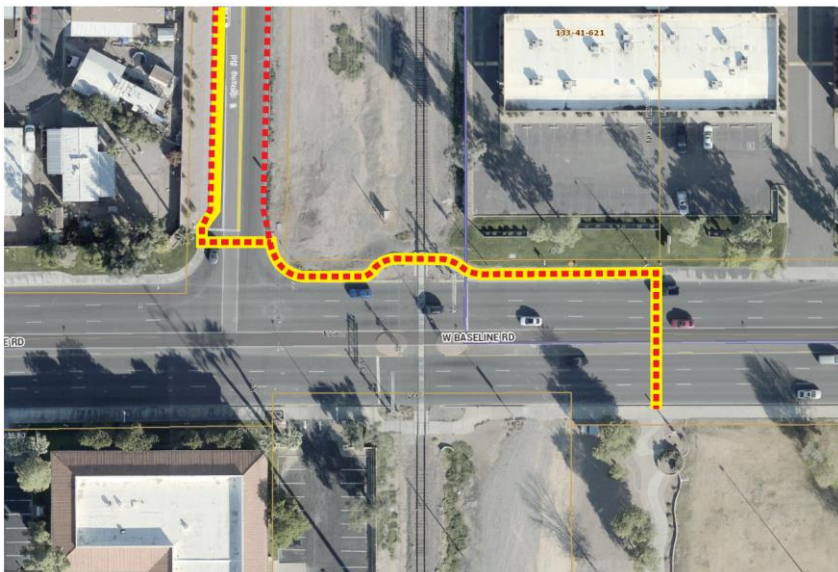


Southern to Baseline



Southern to Baseline

- Two options for the bike facility design will be explored:
 - Create a protected two-way cycletrack on west side of road with enhanced driveway treatments
 - Widen existing bike lanes and add physical barrier for protection



Original Alignment

Alternative Alignment

Southern to Baseline

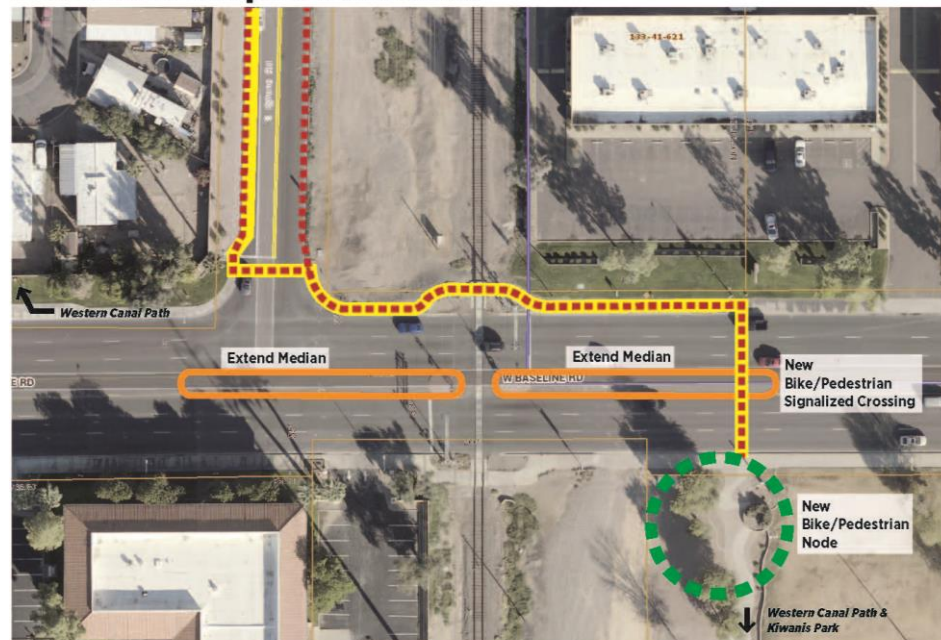


Southern to Baseline

- At Baseline, bikes/peds will travel along north sidewalk and cross at new bike/ped signalized crossing at approximately 130' to 200' east of the UPRR tracks, connecting to Western Canal Path and Kiwanis Park.
- Medians will be extended to restrict turning movements at Kyrene Road and to create a pedestrian refuge at the signalized bike/ped crossing.
- A bike/ped node will be created at Western Canal path.



North/South Path Baseline Improvements



Next Steps



- September 10, 2019: Transportation Commission
- September 19, 2019: City Council Issue Review Session
 - Direction on Phase 1 Alignment
 - Existing Alignment, New Alignment, or No Build
 - New Alignment Tentative Schedule
 - Winter 2022/2023: Bid
- Future Considerations
 - Phase 2

MEMORANDUM

TO: Tempe Transportation Commission
FROM: Chase Walman, Planner II, 480-858-2072
DATE: September 10, 2019
SUBJECT: Grand Canal Multi-use Path Phase II
ITEM #: 5



PURPOSE:

The purpose of this memo is to provide the Commission with a review of the draft Project Assessment Report and Preliminary Design Plans for the Grand Canal Phase II project: connecting the Grand Canal Multi-use Path with the Rio Salado North Bank Multi-use Path.

RECOMMENDATION OR DIRECTION REQUESTED:

Information only.

CITY COUNCIL STRATEGIC PRIORITY:

- Performance Measure 3.26 - 20 Minute City
- Performance Measure 3.14 - ADA Transition Plan

BACKGROUND INFORMATION:

In May 2018, the Commission recommended staff put forward an application for the Grand Canal – North Bank Connection to compete for Maricopa Association of Governments (MAG) Design Assistance funding. Tempe was ultimately awarded \$67,500 to develop a preliminary project assessment report and design concepts for a way to connect the Grand Canal Multi-Use Path with the Rio Salado North Bank Path. Although no design or construction funding is identified at this time, the report will allow staff to identify preliminary design concepts with potential alignment, do an initial environmental investigation, understand project constraints, gather public feedback, and develop an estimated project cost to aid in the pursuit future funding opportunities.

The second round of public meetings will be held September 14th and 16th to present design concepts developed from all input received to date. Following the second round of meetings, all feedback will be incorporated into a refined design concept, and a finalized project assessment report and plans will be submitted to MAG.

All meetings will be held at the Field Services Assembly Hall, 55 South Priest Drive. Dates and times are listed below.

- September 14, 2019 from 9:00 to 10:00 a.m.
- September 16, 2019 from 5:30 to 6:30 p.m.

Residents can comment online at www.tempe.gov/grandcanal from September 14th to September 29th.

FISCAL IMPACT or IMPACT TO CURRENT RESOURCES:

\$67,500 Maricopa Association of Governments design grant. Final design and construction unfunded.

ATTACHMENTS:

PowerPoint
15% Preliminary Design Plans

Grand Canal Multi-use Path Phase II Draft PA Update

**Transportation Commission
September 10, 2019**

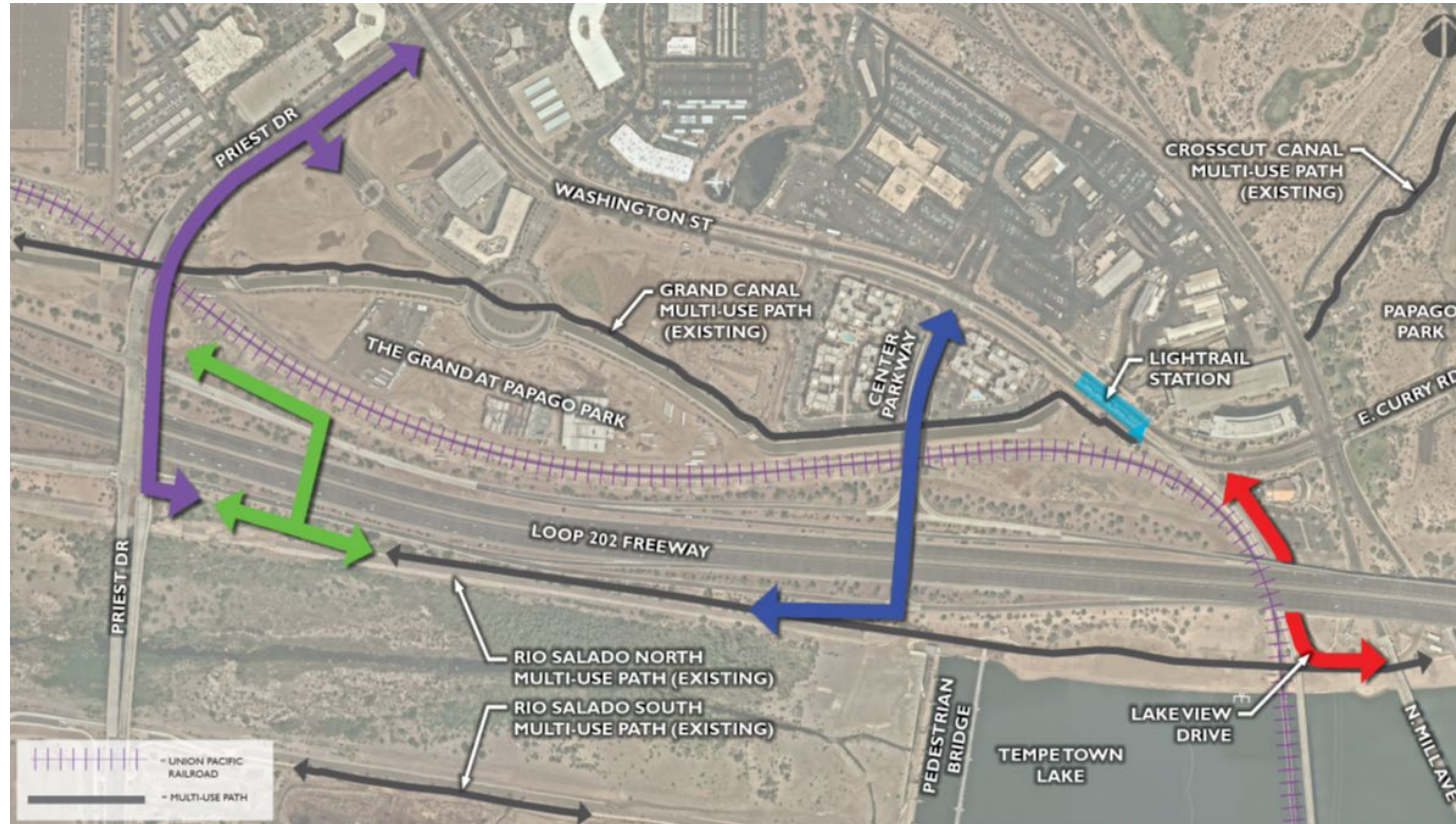


Overview



- **Grand Canal Phase II**
(Preliminary Design)

- Connects the Grand Canal Multi-Use Path to the Rio Salado North Bank Multi-Use Path.



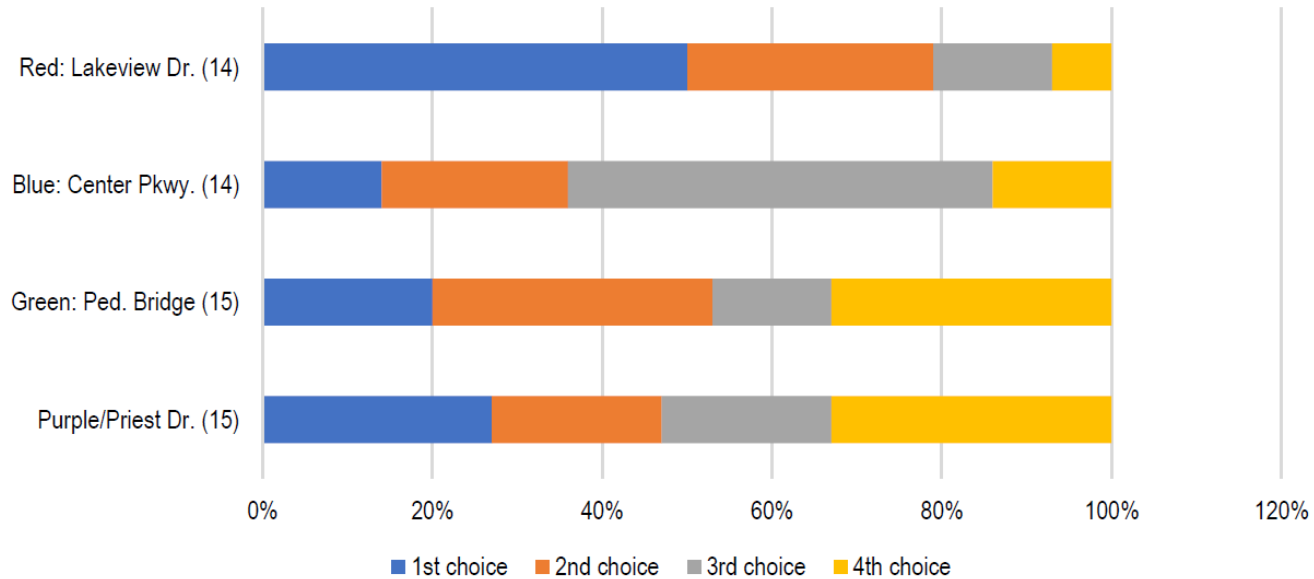
PURPLE ALTERNATIVE: PRIEST DRIVE

BLUE ALTERNATIVE: CENTER PARKWAY

GREEN ALTERNATIVE: PEDESTRIAN BRIDGE

RED ALTERNATIVE: LAKE VIEW DRIVE

Feedback on Conceptual Alternatives



Average Priorities for the 16 responses:

1. Red: Lakeview Drive
2. Purple: Priest Drive
3. Green: Pedestrian Bridge
4. Blue: Center Parkway

Preferred Alternative



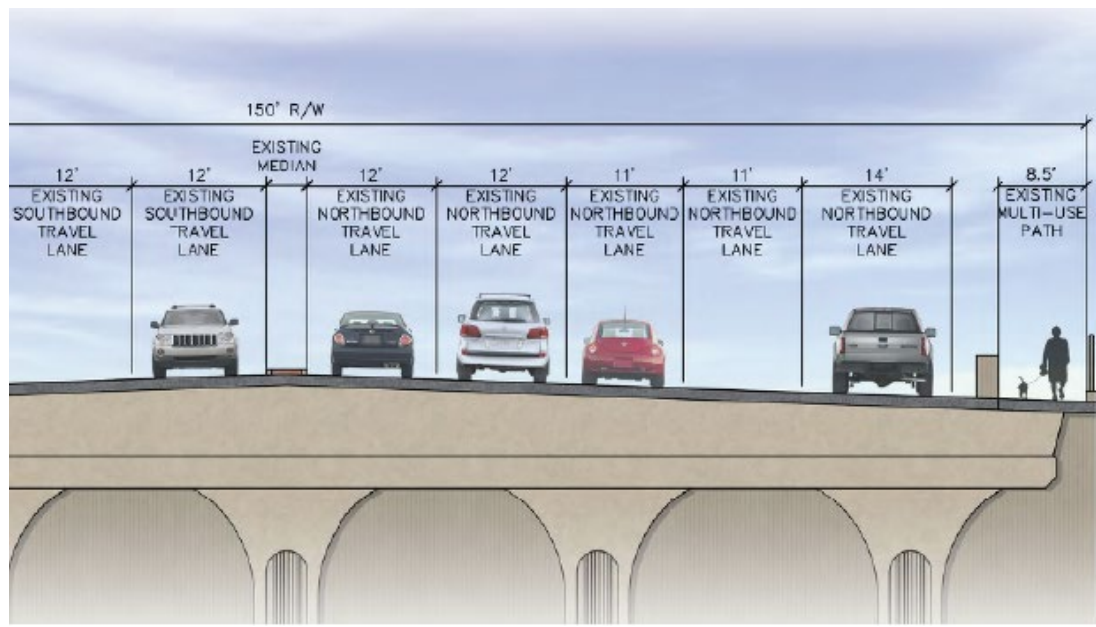
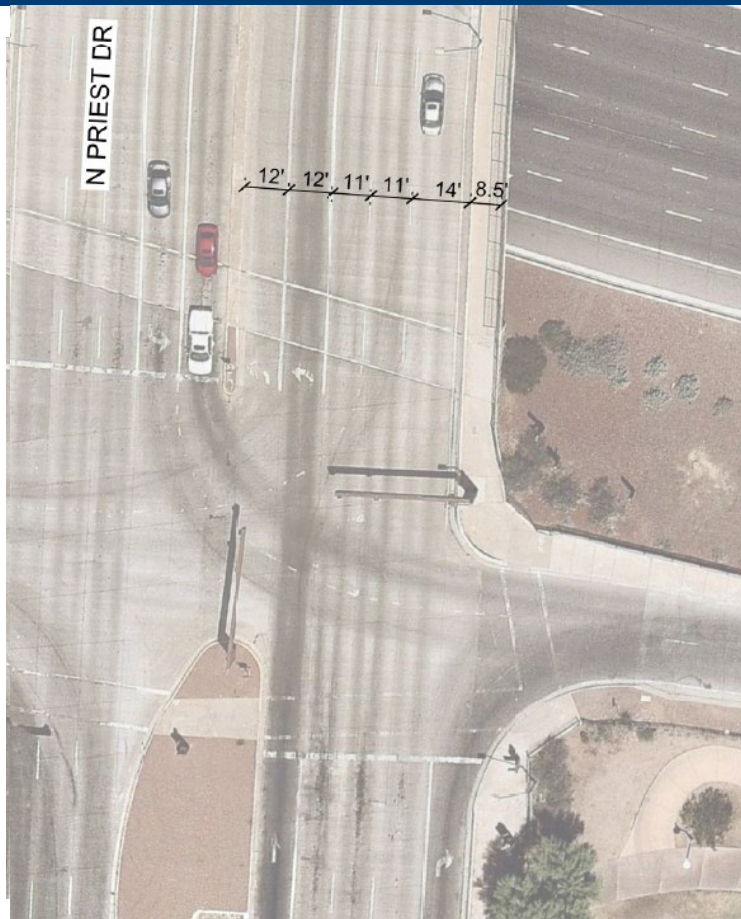
Priest Drive Improvements



- Widening the east sidewalk from 8-ft to 10-ft
- High visibility striping and signage at all pedestrian crossing locations
- Relocating existing pedestrian concrete barrier and lighting
- Upgrade pedestrian ramps to be ADA compliant
- Connects directly to Rio Salado North Bank Path with bike lanes at Washington St and Grand Development: directly connecting to the Grand Canal Path.



Priest Drive Improvements



Priest Drive Improvements



Priest Drive Improvements



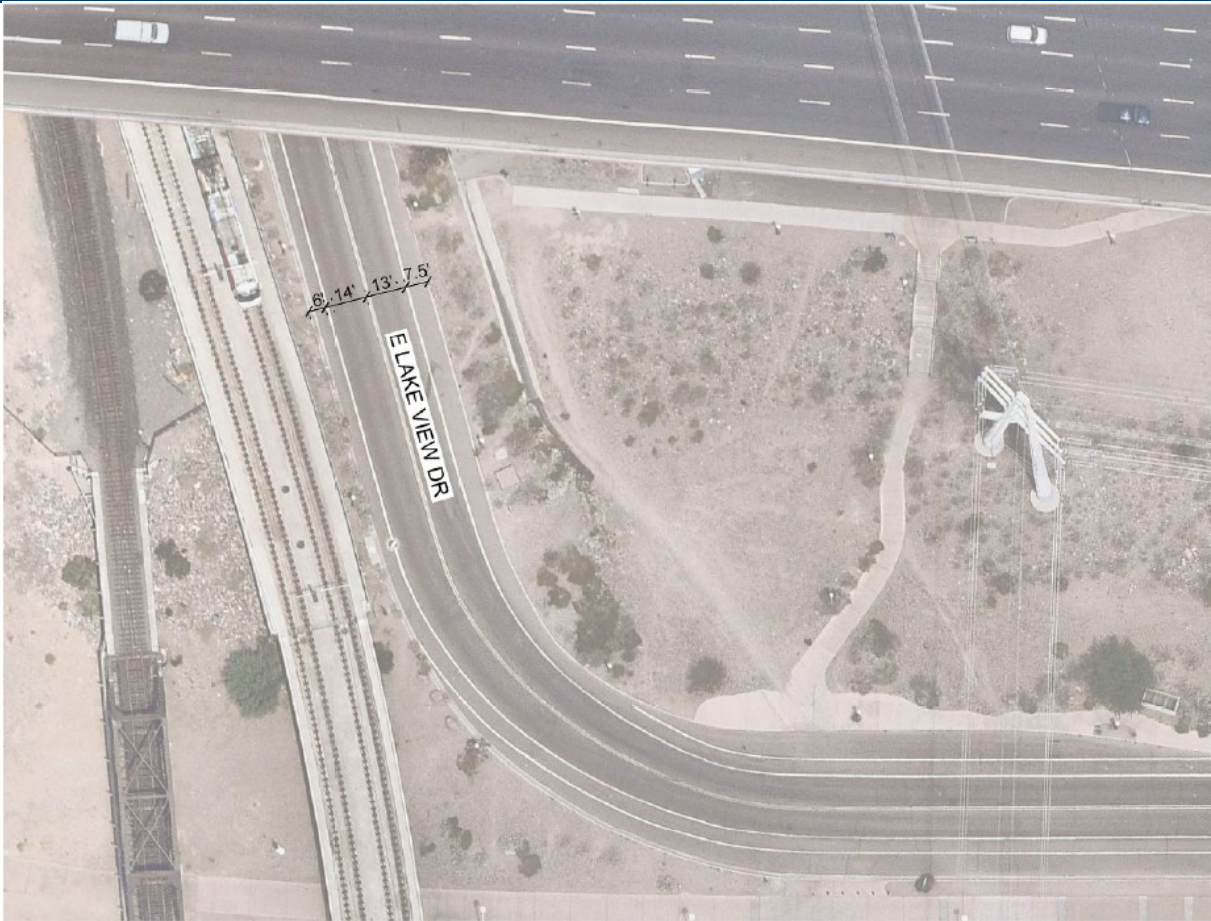
Lake View Drive Improvements



- Providing ADA-Compliant access from Mill/Curry Sidewalk to Rio Salado North Bank Path
- High visibility striping and signage at all pedestrian crossing locations
- Re-striping to provide buffered bike lanes on each side of the roadway
- Upgrade pedestrian ramps to ADA compliance
- Direct access to Washington Street Grand Canal Path entrance from Rio Salado North Bank Path



Lake View Drive Improvements



Lake View Drive Improvements



Lake View Drive Improvements





The background features a central light blue circle surrounded by concentric rings of dark blue and yellow, creating a tunnel-like or ripple effect.

Next Steps

Next Steps

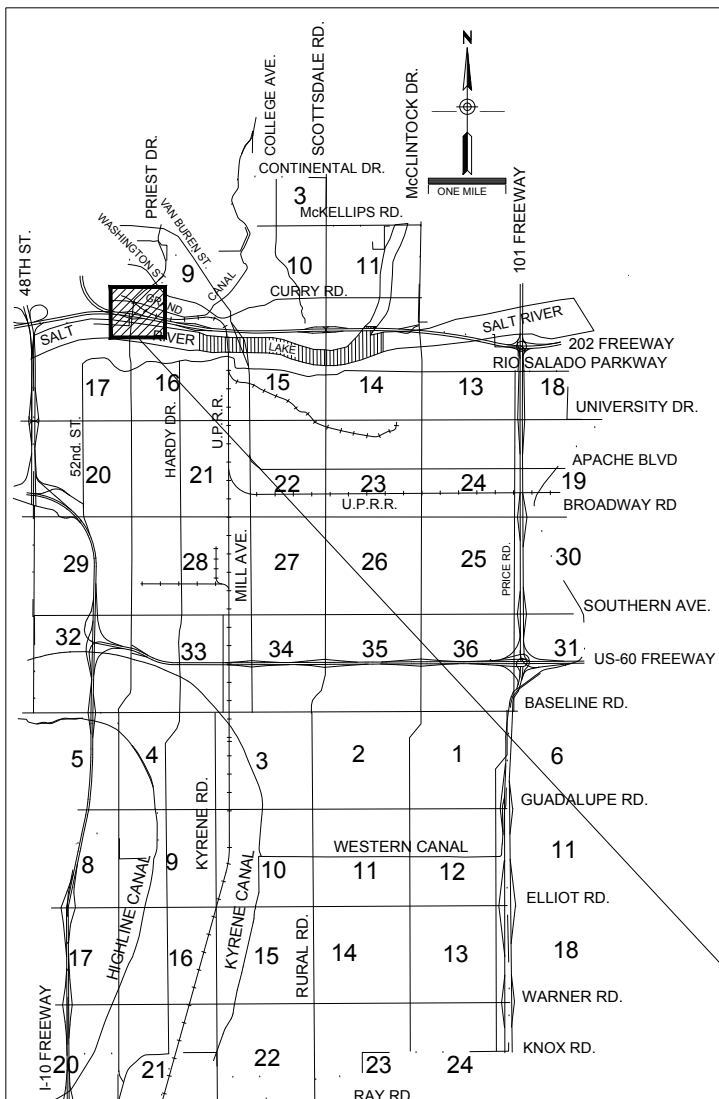


- Public meetings to be held to present design concepts developed from all input received to date:
 - Saturday, September 14th at Field Services Assembly Hall 9:00 A.M.
 - Monday, September 16th at Field Services Assembly Hall 5:30 P.M.
- Incorporate all feedback into a refined design concept, and finalize project assessment report.
- Submit final project assessment report and 15% preliminary design plans to MAG

CITY OF TEMPE ENGINEERING AND TRANSPORTATION DEPARTMENT DIVISION OF ENGINEERING NORTH BANK GRAND CANAL PEDESTRIAN IMPROVEMENTS PROJECT NO. 828A-0N



NO.	DESCRIPTION	DATE



DESCRIPTION	SHEET NO.
COVER SHEET	1
GENERAL NOTES SHEET	2
RECOMMENDED ALTERNATIVE SHEETS	3-6

Luke Jensen (480) 707-8581 AT & T	8/29/19 DATE	Kevin McKenzie (480) 225-1406 AIR PRODUCTS & CHEMICALS	8/29/19 DATE
Michelle Sanchez (480) 268-1524 PAULEY CONSTRUCTION, LLC	8/29/19 DATE	Scott Vollrath (602) 568-3284 ADOT- MARICOPA	8/29/19 DATE
Jim Duncan (602) 236-5380 SALT RIVER PROJECT - MARICOPA COUNTY	8/29/19 DATE	Carby Hrober (602) 493-4225 ARIZONA PUBLIC SERVICE	8/29/19 DATE
Troy Gungl (480) 730-3675 SOUTHWEST GAS HIGH PRESSURE SE	8/29/19 DATE	Mark Kovara (480) 727-0444 ARIZONA STATE UNIVERSITY	8/29/19 DATE
John Rock (209) 499-7218 ZAYO GROUP FKA AGL / MCI (VERIZON)	8/29/19 DATE	Cory Fasthorse (480) 205-4896 ARIZONA STATE UNIVERSITY	8/29/19 DATE
		Scott Davis (602) 723-0983 CITY OF PHOENIX IT SERVICES	8/29/19 DATE
		Art Nunez (602) 534-6979 CITY OF PHOENIX WATER SERVICES DEPT	8/29/19 DATE
		Diana Carpenter (623) 328-4054 COX COMMUNICATIONS- MARICOPA	8/29/19 DATE
		Jason Jensen (801) 735-2464 CENTURYLINK	8/29/19 DATE
		Judy Henry (877) 366-8344 LEVEL 3	8/29/19 DATE

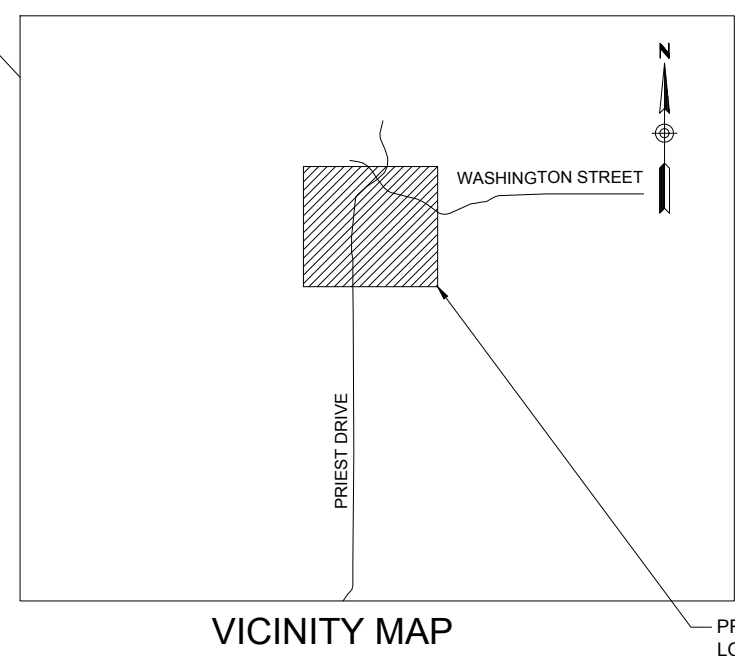
MAYOR
MARK W. MITCHELL

VICE MAYOR
LAUREN KUBY

CITY COUNCIL
JENNIFER ADAMS
ROBIN ARREDONDO-SAVAGE
ARLENE CHIN
RANDY KEATING
JOEL NAVARRO

CITY MANAGER
ANDREW CHING

CITY ENGINEER
MARILYN DEROSA, P.E., R.G.



CONTACTS:

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31 EAST FIFTH STREET,
GARDEN LEVEL, WEST WING
TEMPE, AZ 85281
PHONE: (480) 350-8200

ENGINEER:
KIMLEY-HORN & ASSOCIATES
7740 N 16TH ST, SUITE 300
PHOENIX, AZ 85281
ANNE DEBOARD
(602) 906-1106



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7740 N. 16th STREET, SUITE 300, PHOENIX, AZ 85020
PHONE: 602-944-5500 FAX: 602-944-7423
WWW.KIMLEY-HORN.COM

**15%
PROGRESS
SET**

APPROVED

ENGINEERING AND TRANSPORTATION DIRECTOR/CITY ENGINEER _____ DATE _____

MARICOPA COUNTY ENVIRONMENTAL SERVICES DEPARTMENT _____ DATE _____

REFERENCE 1/4 SECTION LOCATION:	AS-BUILT INFORMATION IS INCLUDED IN THESE AREAS ON THIS SET OF DRAWINGS	PERMITS REQUIRED FOR THIS SET OF DRAWINGS
SW09N4 SE08N4 NW16N4 NE17N4	<input type="checkbox"/> SEWER (SW) <input type="checkbox"/> WATER (WA) <input type="checkbox"/> WATER-RECLAIMED (WA) <input type="checkbox"/> STORM DRAIN/DRYWELL (DR) <input type="checkbox"/> PAVING (PV) <input type="checkbox"/> OFFSITE (C,G,SW,DW) <input type="checkbox"/> GRADING/DRAINAGE (DR)	<input type="checkbox"/> FIRE LINE (UF) <input type="checkbox"/> CITY IRRIG. <input type="checkbox"/> BIKE PATH <input type="checkbox"/> LANDSCAPE/SPRCLR <input type="checkbox"/> STREET LIGHTS (ST) <input type="checkbox"/> BUILDINGS <input type="checkbox"/> OTHER
	AS-BUILT PLANS CHECKED FOR FIELD CHANGES	PARCEL # _____ PROJECT # _____
INSPECTOR: _____	DATE: _____	

PROJECT # 828A-0N DS# 0008252716 TITLE: NORTH BANK GRAND CANAL CONNECTION EN#



GENERAL AND SITE PLAN NOTES

- 1. ALL CONSTRUCTION UNDER THE PUBLIC WORKS PERMIT SHALL CONFORM TO THE CITY OF TEMPE SUPPLEMENT TO THE MAG SPECIFICATIONS AND DETAILS, MARICOPA ASSOCIATION OF GOVERNMENTS UNIFORM STANDARD SPECIFICATIONS AND DETAILS (MAG SPECIFICATIONS AND DETAILS), AND CITY OF TEMPE TRAFFIC BARRICADE MANUAL.
2. A PERMIT ISSUED BY THE ENGINEERING DIVISION SHALL BE REQUIRED FOR ALL WORK IN THE CITY OF TEMPE RIGHTS-OF-WAY. AN INVESTIGATION FEE, IN THE AMOUNT GREATER OF \$250.00 OR DOUBLE THE PERMIT FEE, NOT TO EXCEED \$2,500, WILL BE CHARGED FOR ANY WORK WITH THE CITY OF TEMPE RIGHTS-OF-WAY IN WHICH A PERMIT HAS NOT BEEN ISSUED PRIOR TO COMMENCEMENT OF WORK.
3. THE CITY SHALL BE NOTIFIED PRIOR TO ANY CONSTRUCTION WORK. CALL THE ENGINEERING REQUEST LINE AT (480) 350-8475 AT LEAST ONE BUSINESS DAY BEFORE START OF CONSTRUCTION TO REQUEST INSPECTIONS. CONSTRUCTION WORK CONCEALED WITHOUT INSPECTION BY THE CITY SHALL BE SUBJECT TO EXPOSURE AT THE CONTRACTOR'S EXPENSE.
4. RIGHT-OF-WAY IMPROVEMENTS SHALL NOT BE ACCEPTED UNTIL 3 MIL MINIMUM DOUBLE MATTE BLACK LINE MYLAR REPRODUCIBLE "AS-BUILT" PLANS HAVE BEEN SUBMITTED TO AND APPROVED BY THE ENGINEERING DIVISION.
5. LOCATION OF ALL WATER VALVES, MANHOLES, AND CLEANOUTS MUST BE REFERENCED AT ALL TIMES DURING CONSTRUCTION AND MADE AVAILABLE TO THE WATER AND WASTEWATER DIVISION.
6. NO JOB WILL BE CONSIDERED COMPLETE UNTIL ALL CURBS, PAVEMENT, AND SIDEWALKS HAVE BEEN SWEEP CLEAN OF ALL DIRT AND DEBRIS AND ALL SURVEY MONUMENTS ARE INSTALLED ACCORDING TO THE PLANS.
7. ALL EXISTING STREET MONUMENTS MUST BE PRESERVED. PRIOR TO CONSTRUCTION, MONUMENTS WILL BE REFERENCED HORIZONTALLY AND VERTICALLY. AFTER CONSTRUCTION, MONUMENTS SHALL BE RESET AND FIELD NOTES, INCLUDING NEW ELEVATION, SHALL BE FILED WITH THE CITY.
8. FIRE RISER, DETAILS AND FDC ARE FOR REFERENCE ONLY AND ARE NOT APPROVED ON THESE DRAWINGS. FIRE SPRINKLER PLANS MUST BE SUBMITTED FOR SEPARATE FIRE DEPARTMENT REVIEW AND APPROVAL.
9. ALL OVERHEAD UTILITY LINES (OTHER THAN TRANSMISSION LINES 12.5KV OR GREATER) ON OR ADJACENT TO THE SITE, INCLUDING STREET OR ALLEY CROSSINGS, SHALL BE PLACED UNDERGROUND PER CITY CODE SECTION 25-120 THROUGH SECTION 25-126 AND ORDINANCE NO. 88.85
10. ALL ON-SITE PRIVATE UTILITIES AND DETAILS SHOWN IN THESE PLANS ARE FOR REFERENCE ONLY AND ARE NOT APPROVED ON THESE DRAWINGS. SEE PLANS THAT ARE APPROVED BY BUILDING SAFETY FOR ON-SITE PRIVATE UTILITIES.
11. THIS SET OF PLANS HAS BEEN REVIEWED FOR COMPLIANCE WITH CITY REQUIREMENTS PRIOR TO ISSUANCE OF CONSTRUCTION PERMITS. HOWEVER, SUCH REVIEW SHALL NOT PREVENT THE CITY FROM REQUIRING CORRECTION OF ERRORS IN PLANS FOUND TO BE IN VIOLATION OF ANY LAW OR ORDINANCE. IT IS THE RESPONSIBILITY OF THE PROFESSIONAL ENGINEER SEALING AND SIGNING THESE PLANS TO BE CERTAIN THAT THEY ARE IN FULL COMPLIANCE WITH CITY OF TEMPE STANDARDS, DETAILS, CRITERION, LAWS, AND ORDINANCES.
12. THE CITY DOES NOT WARRANT ANY QUANTITIES SHOWN ON THESE PLANS.
13. THE CITY APPROVAL IS FOR GENERAL LAYOUT IN THE RIGHT-OF-WAY, ON-SITE GRADING, DRAINAGE, WATER AND SEWER. THIS PLAN CHECK APPROVAL IS VALID FOR A PERIOD OF ONE YEAR FROM APPLICATION DATE. CONSTRUCTION PERMITS SHALL BE OBTAINED DURING THIS PERIOD OR THE PLANS SHALL BE RESUBMITTED FOR REVIEW AND APPROVAL. ONE 6 MONTH EXTENSION MAY BE GRANTED UPON REQUEST IF THE REQUEST IS MADE PRIOR TO THE EXPIRATION OF THE ONE YEAR PERIOD AT A COST OF 25% OF THE TOTAL PLAN CHECK FEE. PERMITS MUST THEN BE ISSUED WITH 6 MONTHS AND THEY WILL BE VALID FOR ONE YEAR FROM ISSUE DATE, OTHERWISE, THE PROJECT EXPIRES AND PERMITS ARE VOIDED.
14. AN APPROVED SET OF PLANS SHALL BE AVAILABLE ON THE JOB SITE AT ALL TIMES.
15. CONSTRUCTION ITEMS SHALL NOT BE ACCEPTED UNTIL 3 MIL MINIMUM DOUBLE MATTE BLACK LINE MYLAR REPRODUCIBLE "AS-BUILT" PLANS HAVE BEEN SUBMITTED TO AND APPROVED BY THE ENGINEERING DIVISION.
16. THE DEVELOPER IS RESPONSIBLE FOR THE REMOVAL OR RELOCATION OF ALL OBSTRUCTIONS WITHIN THE RIGHT-OF-WAY PRIOR TO STARTING NEW CONSTRUCTION.
17. THE DEVELOPER IS RESPONSIBLE FOR ARRANGING THE RELOCATION AND ASSOCIATED COSTS OF ALL UTILITIES. A UTILITY RELOCATION SCHEDULE SHALL BE SUBMITTED PRIOR TO THE START OF NEW CONSTRUCTION.
18. THE DEVELOPER IS RESPONSIBLE FOR OBTAINING OR DEDICATING ALL REQUIRED RIGHTS-OF-WAY AND EASEMENTS TO THE CITY PRIOR TO APPROVAL OF IMPROVEMENT PLANS.
19. THE CONTRACTOR SHALL CONTACT ARIZONA BLUE STAKE AT 602-263-1100 AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
20. THE CONTRACTOR SHALL BARRICADE CONSTRUCTION SITES AT ALL TIMES PER THE CITY OF TEMPE TRAFFIC BARRICADE MANUAL. WHEN REQUIRED BY THE CITY, A TRAFFIC CONTROL PLAN SHALL BE SUBMITTED FOR APPROVAL IN ADVANCE OF CONSTRUCTION.
21. THE CONTRACTOR MAY OBTAIN A FIRE HYDRANT METER FOR CONSTRUCTION WATER FROM CUSTOMER SERVICES. THIS METER SHOULD BE ORDERED TWO WORKING DAYS PRIOR TO THE START OF CONSTRUCTION. THE UNLAWFUL REMOVAL OF WATER FROM A FIRE HYDRANT IS A VIOLATION OF THE MUNICIPAL CODE, PUNISHABLE BY FINE AND/OR IMPRISONMENT.
22. ALL BROKEN OR DISPLACED EXISTING CONCRETE CURB, GUTTER, OR SIDEWALK SHALL BE REMOVED AND REPLACED AS DIRECTED BY THE CITY OF TEMPE ENGINEERING DIVISION INSPECTOR.
23. ALL CITY FACILITIES, ALLEYS AND ROADWAY SURFACES DAMAGED BY DEVELOPER/CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED/RESTORED TO THE SATISFACTION OF THE CITY OF TEMPE ENGINEERING DIVISION INSPECTOR PER THE RESPECTIVE CITY AND/OR MAG STANDARD DETAIL.

PAVING PLAN NOTES

- 1. NO PAVING CONSTRUCTION SHALL BE STARTED UNTIL ALL UNDERGROUND UTILITIES WITHIN THE ROADWAY PRISM ARE COMPLETED.
2. THE MAXIMUM STAKE INTERVAL FOR GRADES OF 0.2% OR LESS SHALL BE 25 FOR CONCRETE WORK AND 50 FOR ASPHALT ROADWAY SECTION, EXCEPT ON HORIZONTAL OR VERTICAL CURVES WHERE A MAXIMUM STAKE INTERVAL OF 20 FOR CONCRETE WORK SHALL BE REQUIRED. ALL CURB RETURNS SHALL BE STAKED AT THE P.C., P.T. AND THE MIDPOINT OF THE RETURN. NO GRADE STAKE INTERVAL SHALL EXCEED 50.
3. GUTTERS WILL BE WATER TESTED IN THE PRESENCE OF THE CITY ENGINEER, OR DESIGNEE, TO INSURE PROPER DRAINAGE, PRIOR TO FINAL APPROVAL BY THE ENGINEERING DIVISION.
4. UNDERGROUND STREET LIGHT AND TRAFFIC SIGNAL CIRCUITS SHALL BE INSTALLED AS PART OF THE OFFSITE IMPROVEMENTS. NEW FOUNDATIONS FOR TRAFFIC SIGNAL POLES SHALL BE POURED FAR ENOUGH IN ADVANCE TO ALLOW SUFFICIENT TIME FOR CONCRETE CURING AND FOR SCHEDULING THE RELOCATION OF THE EXISTING TRAFFIC SIGNALS.
5. ADDRESS OVERLAY REQUIREMENTS WHERE OPEN CUTTING IS PERMITTED. FINISHED PAVEMENT SURFACE MATERIALS SUCH AS RUBBERIZED ASPHALT SHALL BE MATCHED IN FIELD.
6. PAVING IMPROVEMENTS SHALL NOT BE ACCEPTED UNTIL 3 MIL MINIMUM DOUBLE MATTE BLACK LINE MYLAR REPRODUCIBLE AS-BUILT PLANS HAVE BEEN SUBMITTED TO AND APPROVED BY THE ENGINEERING DIVISION.

SEWER, WATER AND UTILITY PLAN NOTES

- 1. THE CONTRACTOR SHALL UNCOVER ALL EXISTING LINES BEING TIED INTO TO VERIFY THEIR LOCATION, SIZE, MATERIAL TYPE, ETC. PRIOR TO CONSTRUCTION OF NEW LINES. THE CONTRACTOR WILL LOCATE OR HAVE LOCATED ALL EXISTING UNDERGROUND PIPELINES, TELEPHONE AND ELECTRIC CONDUITS, AND STRUCTURES IN ADVANCE OF CONSTRUCTION AND WILL OBSERVE ALL POSSIBLE PRECAUTIONS TO AVOID DAMAGE TO SAME. CALL BLUE STAKE AT 602-263-1100.
2. SUMMITS IN WATER LINES SHALL BE LOCATED AT FIRE HYDRANTS.
3. BACKFILLING SHALL NOT BE STARTED UNTIL LINES ARE APPROVED BY THE ENGINEERING DIVISION.
4. IF A BACKFLOW PREVENTION ASSEMBLY IS REQUIRED TO BE INSTALLED, THE CONTRACTOR WILL CALL THE DEVELOPMENT SERVICES DEPARTMENT AT 480-350-8341 FOR AN INSPECTION BEFORE BACKFILLING THE ASSEMBLY.
5. ALL PUBLIC WATER LINES SHALL BE CLASS 52 DIP, PROTECTED WITH HIGH DENSITY POLYETHYLENE CORROSION PROTECTION PER MAG SPECIFICATION 610.
6. ALL NEW WATER AND SEWER CONNECTIONS TO EXISTING LINES SHALL BE DONE ONLY BY OPEN-CUT ON MAJOR ARTERIAL STREETS, MAJOR INTERSECTIONS OR THE PRESENCE OF A MAJOR WATER OR SEWER LINE. BORED INSTALLATIONS MUST BE CLEARLY IDENTIFIED AND SPECIFICALLY APPROVED BY THE CITY ENGINEER, OR DESIGNEE.
7. ALL ON-SITE SEWER SYSTEMS ARE CONSIDERED PRIVATE UNLESS OTHERWISE NOTED ON PLANS AND MUST BE APPROVED BY THE CITY OF TEMPE BUILDING SAFETY DIVISION OF THE DEVELOPMENT SERVICES DEPARTMENT.
8. IN ACCORDANCE WITH AAC R18-4-119, ALL MATERIALS ADDED AFTER JANUARY 1, 1993, WHICH MAY COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NATIONAL SANITATION FOUNDATION STANDARDS 60 AND 61.
9. ALL MANHOLE INSTALLATIONS SHALL BE COMPLETE IN PLACE INCLUDING ALL EXCAVATION, BACKFILL, SWEEPS, AND CONDUITS NECESSARY TO COMPLETE THE INSTALLATION OF THE MANHOLE AND CONNECTIONS TO THE MAINLINE CONDUITS.
10. FOR THE EXISTING SEWER STUB CONNECTIONS ONLY. (TO BE SIGNED ON "AS-BUILT" MYLAR.) "THIS IS TO CERTIFY THAT AN ACTUAL FIELD FLOW TEST ON THE EXISTING SEWER STUB WAS PERFORMED AND WAS FOUND TO BE ACCEPTABLE AND FREE OF ANY OBSTRUCTIONS PRIOR TO FINAL BUILDING CONNECTION"

- 11. ALL VALVES SHALL BE FLANGED TO FITTINGS, PREFERABLY TEES.
12. THRUST & ANCHOR BLOCKS PER MAG STANDARD DETAIL 301, 380 & 381.
13. ONLY THE CITY OF TEMPE WATER MANAGEMENT DIVISION PERSONNEL SHALL OPERATE ANY EXISTING VALVES OR ANY VALVE CONNECTING NEW WORK TO EXISTING CITY WATER SYSTEM.
14. SEWER, WATER AND UTILITY IMPROVEMENTS SHALL NOT BE ACCEPTED UNTIL 3 MIL MINIMUM DOUBLE MATTE BLACK LINE MYLAR REPRODUCIBLE "AS-BUILT" PLANS HAVE BEEN SUBMITTED TO AND APPROVED BY THE ENGINEERING DIVISION.
15. WATER, STORM DRAIN & SANITARY SEWER SEPARATION/PROTECTION SHALL BE PER MAG STANDARD DETAIL 404-1, 404-2, AND 404-3 WITH CITY APPROVAL. THE CITY CONSIDERS STORM DRAINS TO BE "SEWER" WHEN CROSSING WATER LINES. THE CITY CONSIDERS STORM DRAINS TO BE "POTABLE WATER" WHEN CROSSING SANITARY SEWER LINES.
16. THE CONTRACTOR SHALL TAKE EVERY PRECAUTION TO PREVENT FOREIGN MATERIAL FROM ENTERING THE PIPE WHILE IT IS BEING STORED.
17. DURING INSTALLATION AND AT ALL TIMES WHEN PIPE LAYING IS NOT IN PROGRESS, THE OPEN ENDS OF THE PIPE IN THE TRENCH SHALL BE CLOSED BY A WATER-TIGHT PLUG OR OTHER MEANS APPROVED BY THE CITY OF TEMPE ENGINEERING INSPECTOR. IF IN THE OPINION OF THE CITY OF TEMPE ENGINEERING INSPECTOR THE PIPE CONTAINS DIRT THAT WILL NOT BE REMOVED DURING THE FLUSHING OPERATION, THE INTERIOR OF THE PIPE SHALL BE CLEANED AND SWABBED, AS NECESSARY, WITH A .005 TO .010 PERCENT CHLORINE SOLUTION.

- 18. AFTER PRESSURE TESTING AND BEFORE PLACING IN SERVICE, ALL WATER LINES SHALL BE DISINFECTED AND TESTED FOR WATER QUALITY IN ACCORDANCE WITH MAG STANDARD SPECIFICATIONS SECTION 611. IF THE WATERLINE FAILS THE CHLORINE RESIDUAL TEST OR FAILS TO MEET THE WATER QUALITY TEST MORE THAN THREE (3) TIMES, THE CITY OF TEMPE ENGINEERING INSPECTOR RESERVES THE RIGHT TO REQUIRE THE INSTALLED WATER LINE TO BE CLEANED BY PIGGING THE LINE, IN ACCORDANCE WITH STANDARD PROCEDURES, AT NO COST TO THE CITY.

ON SITE DRAINAGE PLAN NOTES

- 1. A PUBLIC WORKS PERMIT ISSUED BY THE ENGINEERING DIVISION SHALL BE REQUIRED FOR THE ONSITE DRAINAGE OF THE PROJECT.
2. DRYWELLS MUST BE REGISTERED WITH THE ARIZONA STATE DEPARTMENT OF ENVIRONMENTAL QUALITY. AN AQUIFER PROTECTION PERMIT (APP) MAY ALSO BE REQUIRED.
3. PRIOR TO ACCEPTANCE THE OWNER/DEVELOPER SHALL FURNISH THE FOLLOWING:
a.) DRILLING LOG AND CERTIFICATION OF COMPLIANCE FOR ALL DRY WELLS.
b.) A 3 MIL MINIMUM DOUBLE MATTE, BLACK AND WHITE REPRODUCIBLE MYLAR COPY OF THE APPROVED PLANS WITH THIS CERTIFICATION SIGNED BY A REGISTERED PROFESSIONAL ENGINEER:
4. "THIS IS TO CERTIFY THAT AN ACTUAL FIELD SURVEY WAS MADE UNDER MY SUPERVISION OF THE SUBJECT SITE AND THAT FINISH FLOOR AND RETENTION ELEVATIONS ARE THE TRUE "AS BUILT" CONDITIONS, AND THEY MEET OR EXCEED THE ORIGINAL RETENTION REQUIREMENTS AS SHOWN ON THIS APPROVED PLAN."

Table with 3 columns: ENGINEER, DATE, ARIZONA P.E. NUMBER. Below the table is a paragraph of text regarding UNDERGROUND STORM WATER STORAGE SYSTEMS WHEN USED AND SPECIFICALLY APPROVED BY THE CITY ENGINEER, OR DESIGNEE, SHALL BE THE SOLE RESPONSIBILITY OF THE OWNER, INCLUDING THE DESIGN, CONSTRUCTION, INSPECTION, MONITORING AND MAINTENANCE.

STREET LIGHTING PLAN NOTES

- 1. STREET LIGHTS TO BE STREAMLINE STEEL POLES AND INSTALLED ON FOUNDATIONS PER CITY OF TEMPE STANDARD DETAIL T-651.
2. STREET LIGHTS TO BE ARCHITECTURAL STREET LIGHTS AND INSTALLED ON FOUNDATIONS PER CITY OF TEMPE STANDARD DETAIL T-652.
3. STREET LIGHTS TO BE ARCHITECTURAL TEMPE SPECIAL DISTRICT LIGHTING AND INSTALLED ON FOUNDATIONS PER CITY OF TEMPE STANDARD DETAIL T-645.
4. STREET LIGHTS TO BE DECORATIVE SPECIAL DISTRICT STREET LIGHTS AND INSTALLED ON FOUNDATIONS PER CITY OF TEMPE STANDARD DETAIL T-653.
5. ALL STREET LIGHTS TO HAVE INDIVIDUAL PULL BOX (J-BOX), (PROVIDED BY THE UTILITY COMPANY), INSTALLED WITHIN 2' TO 4' FROM THE BASE OF THE POLE AND PER CITY OF TEMPE STANDARD DETAIL T-650.
6. ALL STREET LIGHTS TO BE 2' FROM BACK OF CURB WHERE RECESSED OR NO SIDEWALK EXISTS, OR 2' BACK OF WALK TO THE FACE OF POLE UNLESS OTHERWISE APPROVED BY CITY.
7. ALL STREET LIGHT CONDUITS TO BE 2-1/2" PVC SCHEDULE 40.
8. STREET LIGHTING IMPROVEMENTS SHALL NOT BE ACCEPTED UNTIL 3 MIL MINIMUM DOUBLE MATTE BLACK LINE MYLAR REPRODUCIBLE "AS-BUILT" PLANS HAVE BEEN SUBMITTED TO AND APPROVED BY THE ENGINEERING DIVISION.

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Table with 4 columns: MARK, DATE, DESCRIPTION, BY. Includes project information: DEPARTMENT OF ENGINEERING AND TRANSPORTATION, CITY OF TEMPE, DIVISION OF ENGINEERING, P.O. BOX 5002, TEMPE, AZ 85280. SURVEYED: N/A, DESIGNED: JCV, DRAWN: JJN, CHECKED: ASD, SCALE: 1"=20'. DESCRIPTION: NORTH BANK GRAND CANAL PEDESTRIAN IMPROVEMENTS, Tempe, Arizona. DATE: 08/2019, PROJECT NO.: 828A-0N, SHT: 2 of 6.

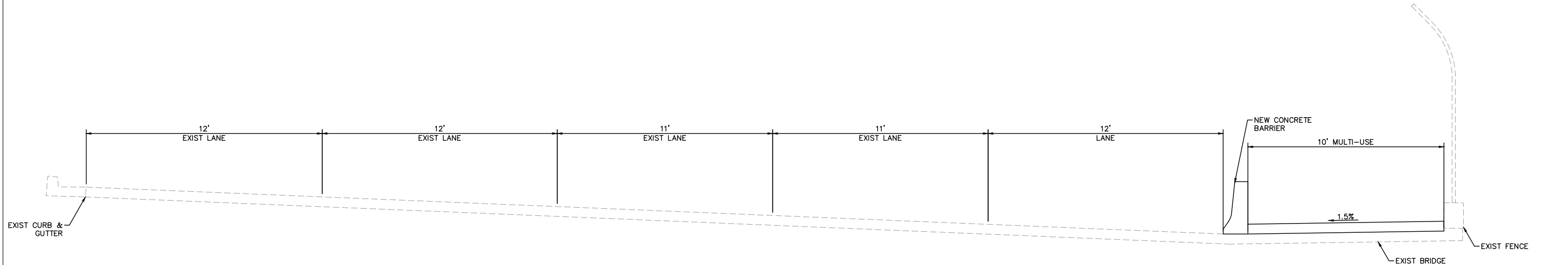


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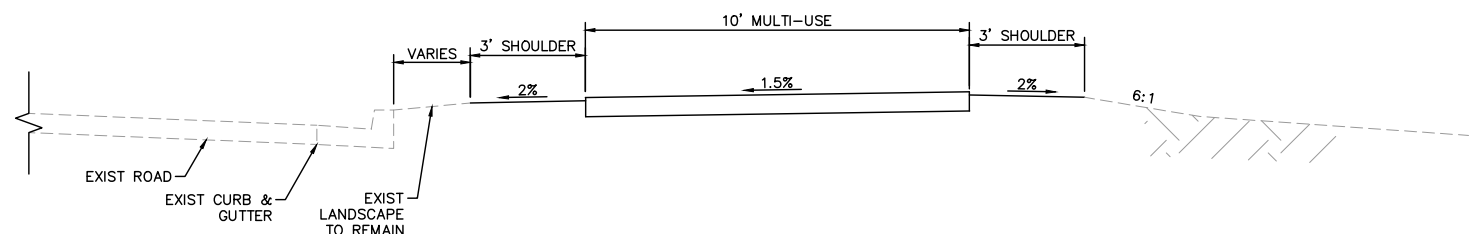
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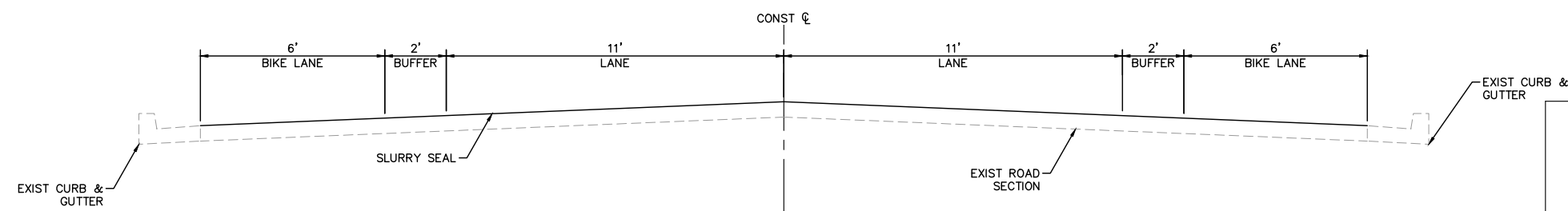
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PRIEST DRIVE BRIDGE SECTION



PRIEST DRIVE SECTION



LAKE VIEW DRIVE SECTION

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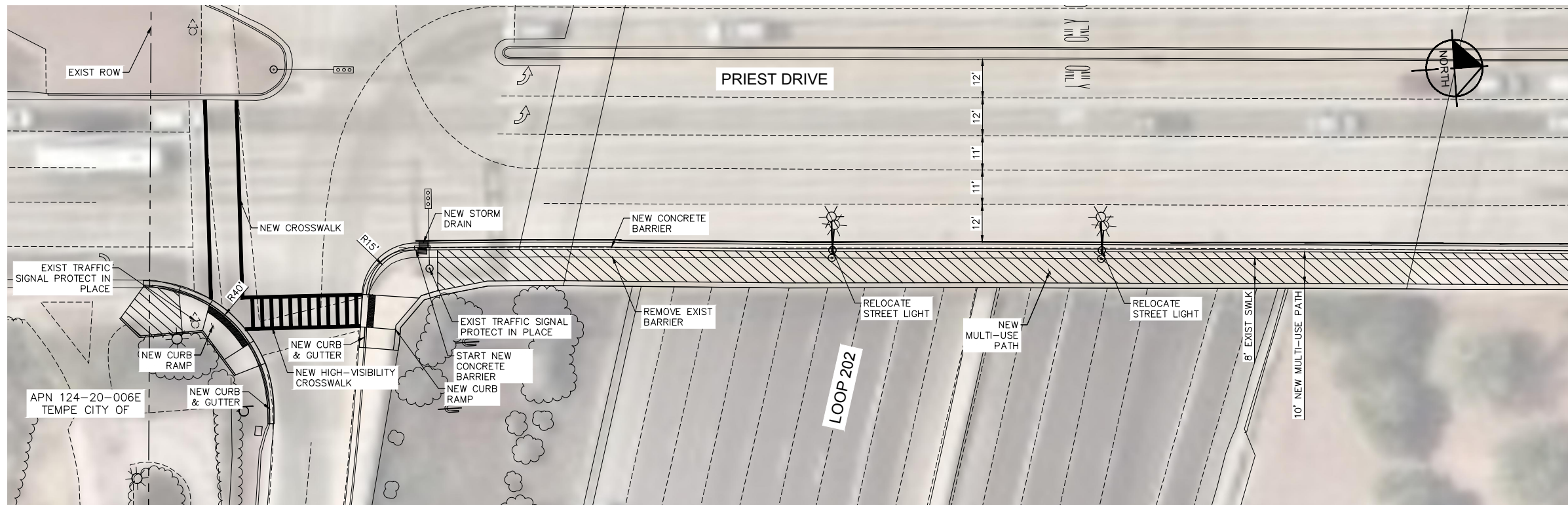
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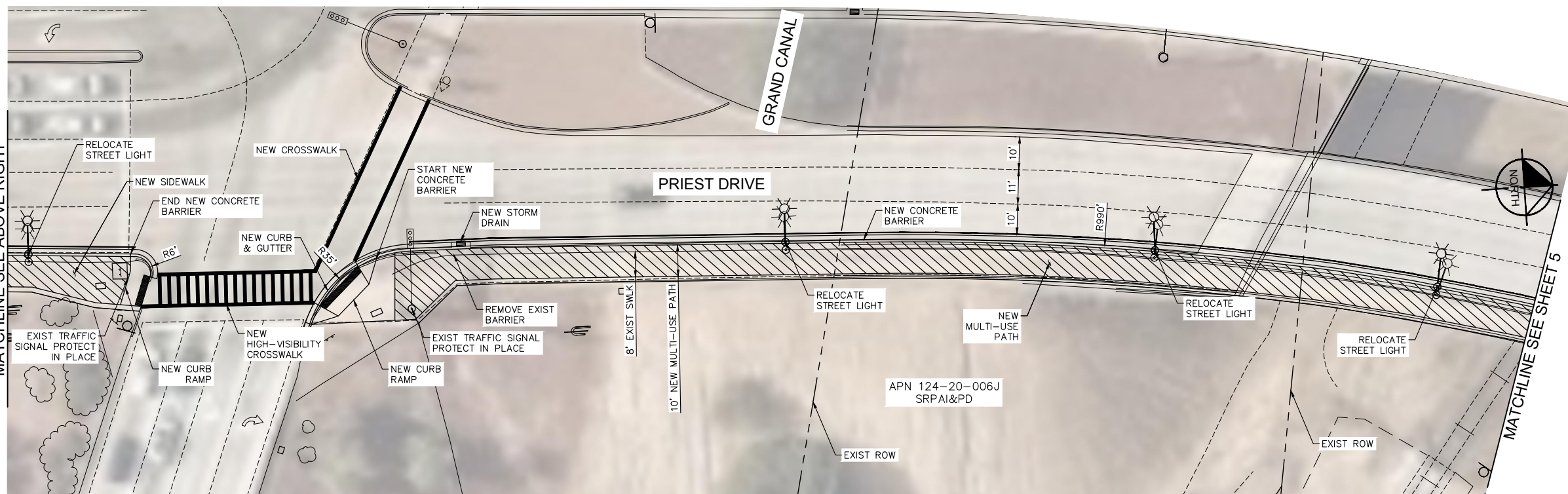
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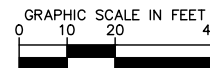
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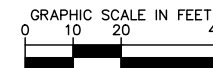
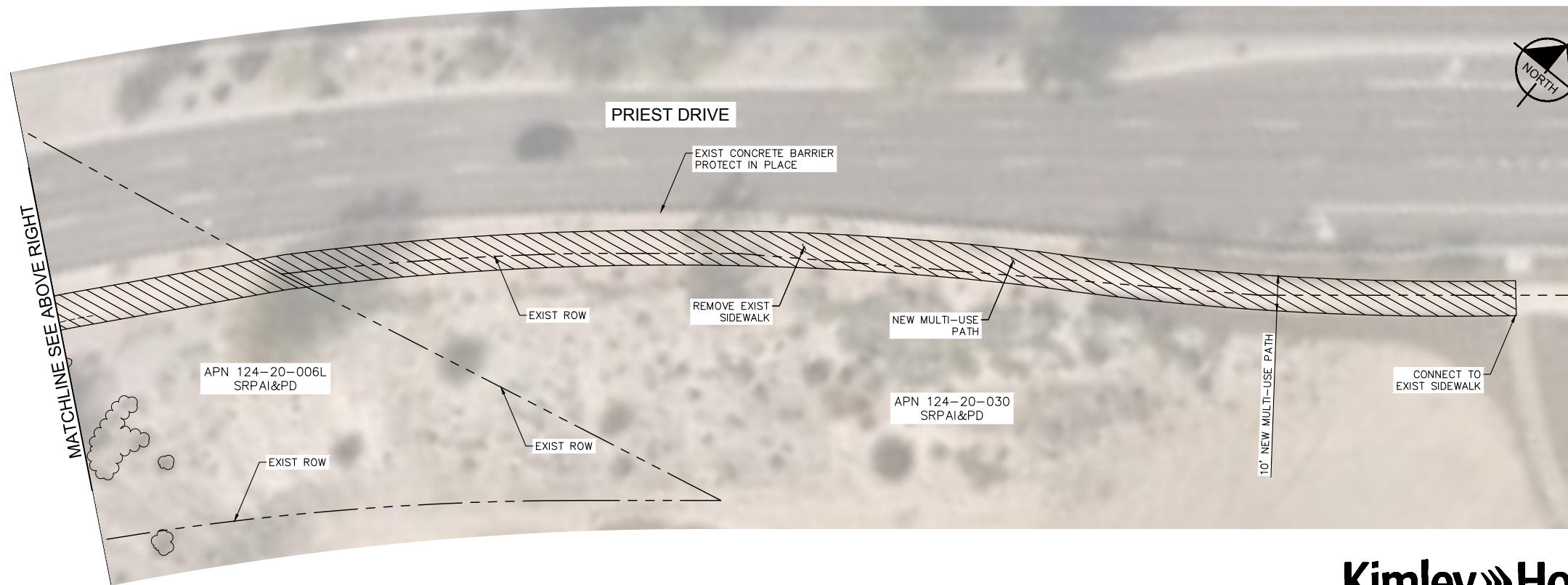
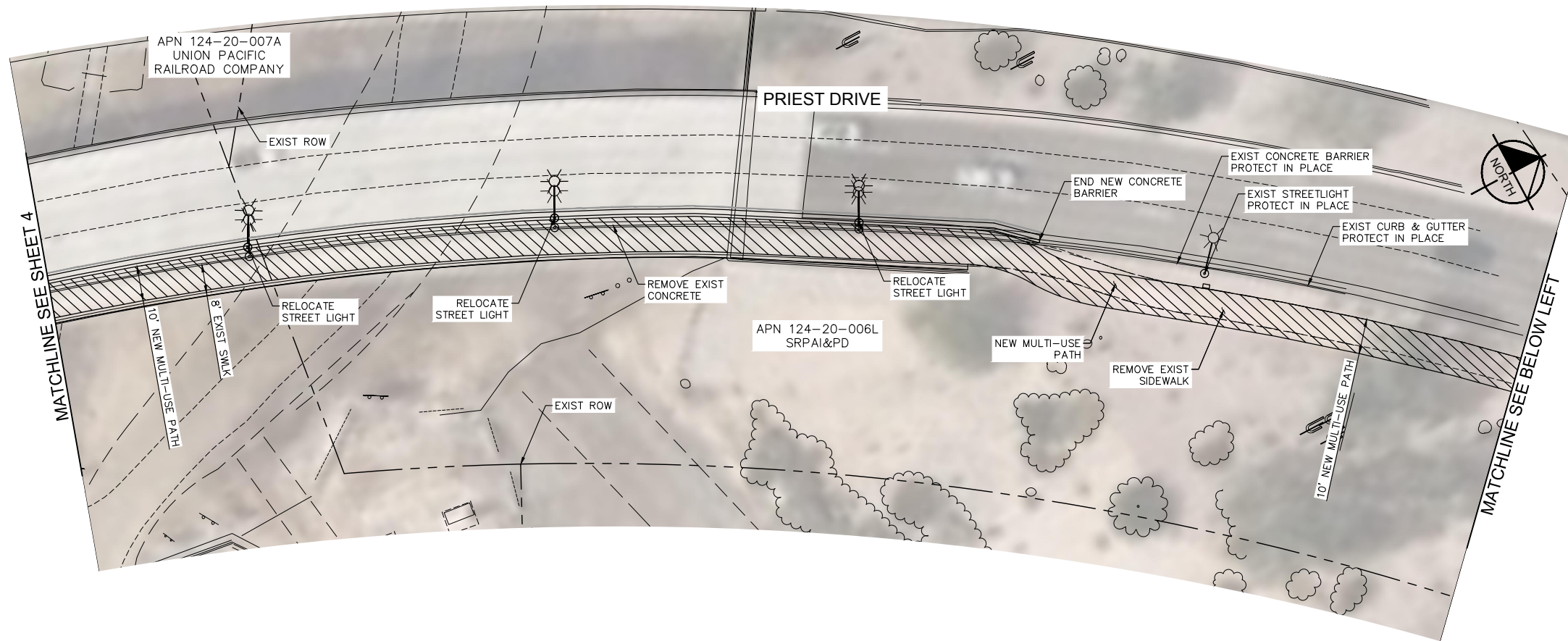
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PROJECT # 828A-0N SHEET # 4 OF 6 DS# 8240662 EN#

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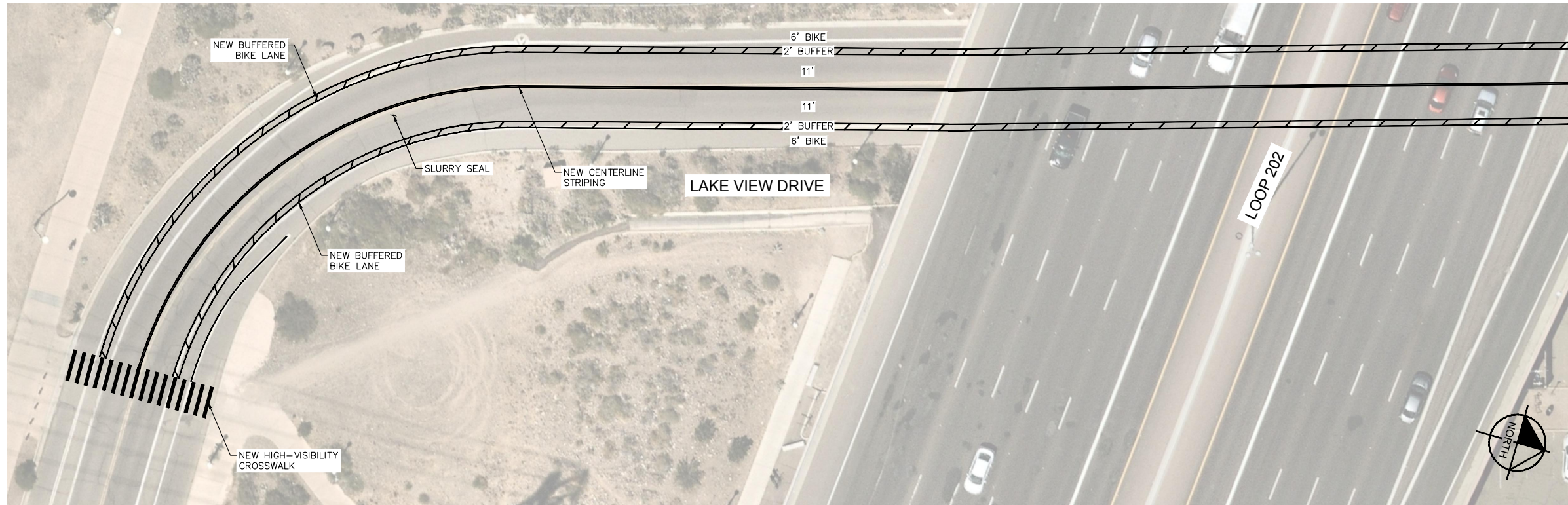
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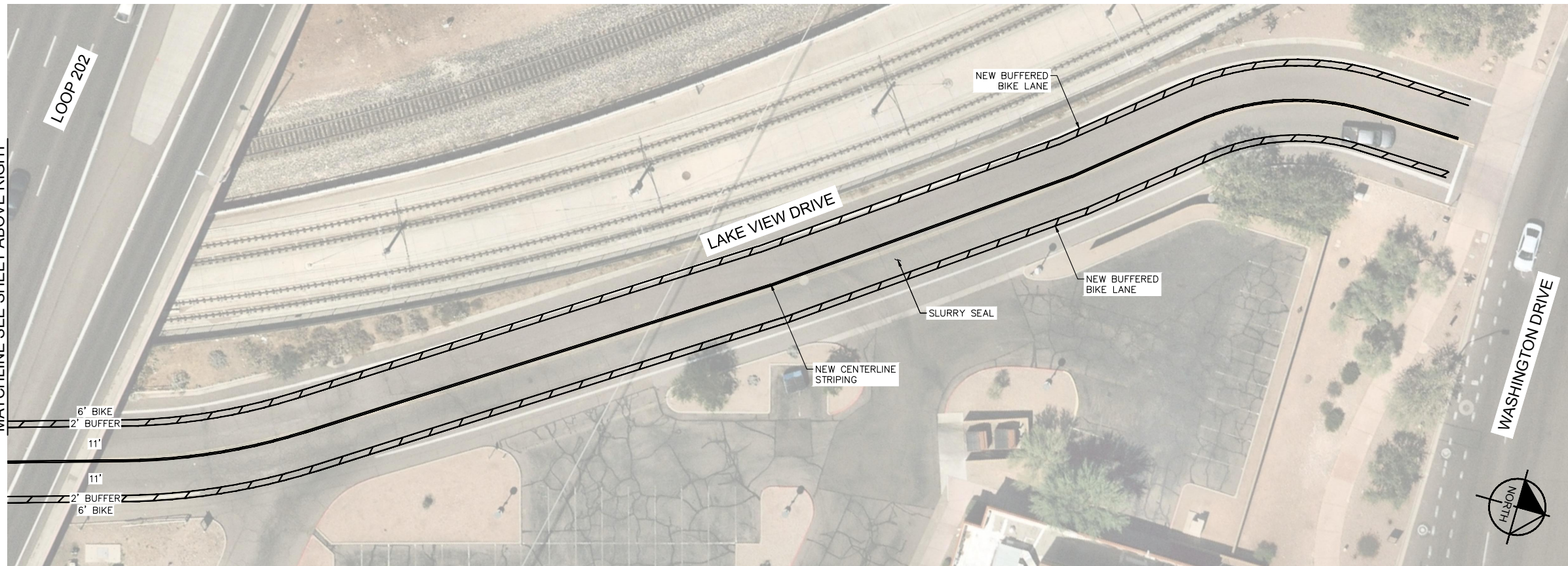
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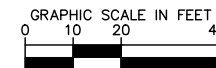
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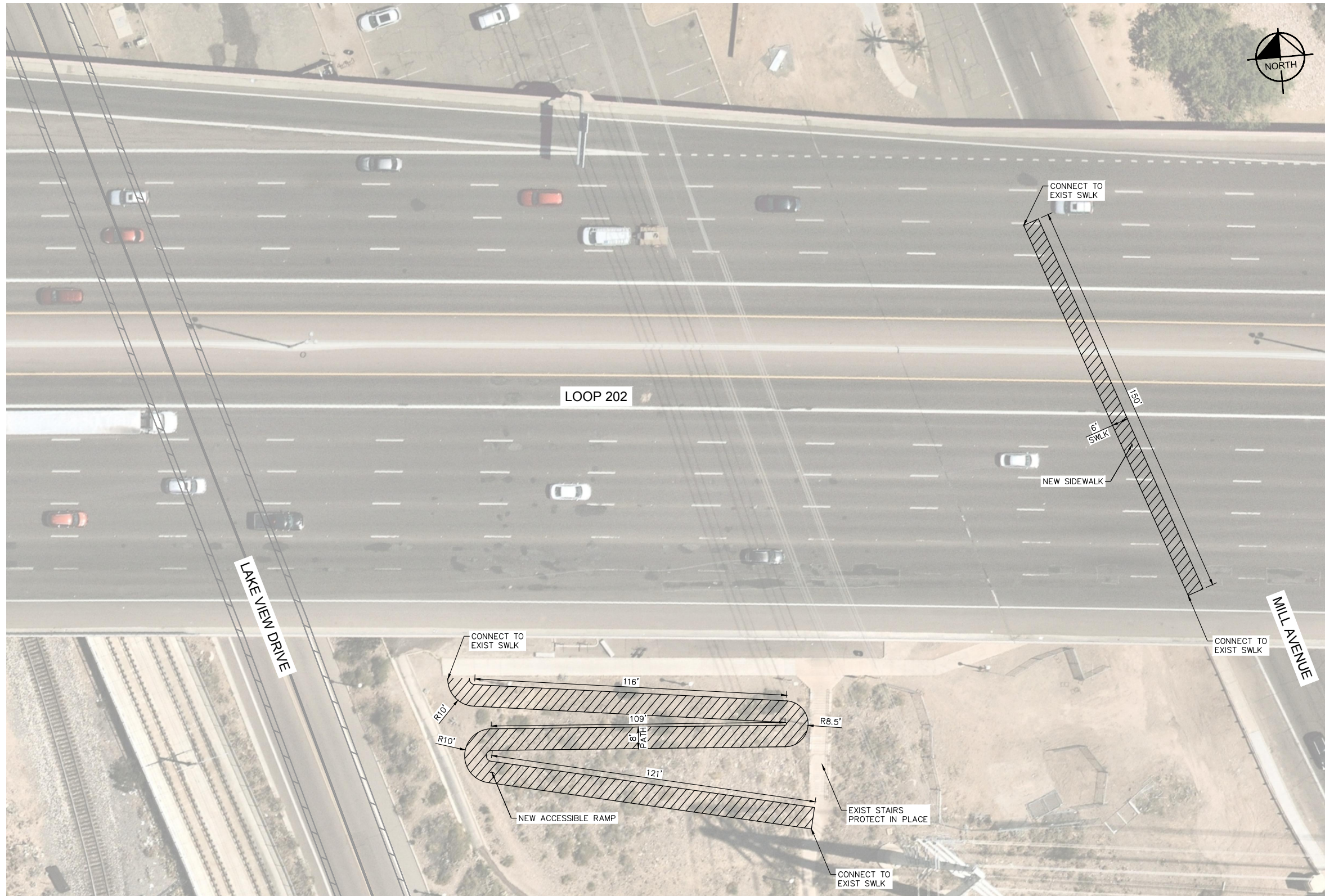
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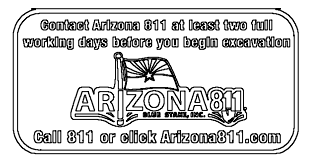
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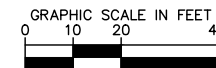
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PROJECT # 828A-0N DS# EN# 8240662 TITLE: NORTH BANK GRAND CANAL CONNECTION

MEMORANDUM

TO: Tempe Transportation Commission
FROM: Jon King, Sergeant, 480 350-8633
Sam Stevenson, Senior Planner, 480-858-7765
Eric Iwersen, Transit Manager, 480-350-8810
DATE: September 10, 2019
SUBJECT: Tempe Transit Program/Security Update
ITEM #: 6



PURPOSE:

To provide the Commission with an updaters on the Tempe Transit and Security programs.

RECOMMENDATION OR DIRECTION REQUESTED:

For information.

CITY COUNCIL STRATEGIC PRIORITY:

- Quality of Life - 3.26: Achieve a multimodal transportation system (20-minute city) where residents can walk, bicycle, or use public transit to meet all basic daily, non-work needs.
- Quality of Life 3.29: Achieve ratings of “Very Satisfied” or “Satisfied” with the “Overall Satisfaction with Transit System in Tempe” greater than or equal to 80% as measured by the City of Tempe Transit Survey.

BACKGROUND INFORMATION:

TRANSIT PROGRAM

The City of Tempe Transit program plans, funds, and is a partner in providing the necessary oversight for Tempe’s fixed-route transit operations, including over 5.1 million annual revenue miles across multiple modes comprising sixteen local bus routes, three express bus routes, seven neighborhood circulator routes and one light rail alignment, in addition to accessible paratransit and RideChoice services.

Transit operations expenditures for FY 2019-2020 will be approximately \$43.4 million. Tempe’s dedicated transit tax funds approximately 2/3 of the annual operating expenses, with the remaining costs funded through regional Proposition 400 funds, passenger fares, federal grants, and ASU (FLASH and a portion of Orbit).

Notable recent and future service changes include an adjustment to the FLASH route, funded through a partnership with ASU, to better connect the ASU campus and downtown Tempe to several of the university’s outlying facilities and activity centers. The change was developed through the collection of passenger survey data in fall 2018 and was implemented following a public involvement process including a public meeting in downtown Tempe in addition to Valley Metro’s public involvement opportunities for regional service changes. Additionally, staff is evaluating a potential change to the Orbit Earth route to better connect to activity centers on the north side of Tempe Town Lake, and also studying a potential modification to route 72 to eliminate the deviation to the Tempe Transportation Center. Elimination of the deviation is expected to improve operating efficiency and service reliability, however the change would be made pending the community’s response following a significant public involvement process.

Orbit fleet replacement is ongoing. Through deliveries in 2017, 2018, and 2019, the City has received 25 new heavy-duty Orbit buses to add capacity where needed on the busiest Orbit routes. In order to complete the replacement of the aging cutaway-style Orbit buses, an additional 17 vehicles must be procured for delivery in 2020/2021. The vehicles will be procured through a competitive request for proposals (RFP) process in partnership with Valley Metro, with a specific performance-based

specification to address the unique aspects of Orbit service, including neighborhood compatibility, sustainability/alternative fuels, operating range, and environmental requirements.

Regional projects with impacts to Tempe's transit system include the procurement of a new fare collection system, which will incorporate mobile ticketing and account-based smart cards available to the general public. The project is being led by the City of Phoenix, and Tempe is represented as part of the evaluation process. Additionally, staff is working with MAG and other regional cities to study future commuter express bus alternatives. Tempe currently provides commuter express service between Tempe neighborhoods and downtown Phoenix, but this study will shed light on the feasibility of expanding commuter express service to other destinations in the region.

SECURITY

The safety and security of the passengers, employees and contractors is paramount. The public's overall perception of the safety of the Transit system is also vital.

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

The Transit sergeant oversees facility security for the Tempe Transit Center (TTC) and East Valley Bus Operations and Maintenance (EVBOM).

Transit contributes some funding for a Police Explosives Ordinance Detection (EOD) K9. The handler and K9 are deployed for large special events. The K9 handler assists the Transit sergeant with administrative tasks and can be a resource to the patrol officers for Transit related questions.

Tempe utilizes off-duty Tempe Police officers to provide a presence on the Light Rail and local Bus system during peak service hours and late nights on weekends. They primarily work in uniform, but at times plain clothes deployments are more effective particularly on the bus system and at bus stops. The officers working the Light Rail security detail work closely with Valley Metro's contract fare inspectors/security officers. Because security has no legislative authority to detain people, the number of citations written by fare inspectors have increased dramatically due to the added presence of police officers.

Training and Education

During the last fiscal year every sworn Tempe Police Officer from the Chief down (370 officers) went through bus systems training and on-board bus scenarios of realistic situations and the challenges of dealing with them on a bus. Officers also learned how to safely shut down the engine of a bus from the exterior of the bus should the need present itself. The entire SWAT and Explosive Ordinance Teams and K9s conducted systems and scenario training on both Light Rail and City buses.

Supervisors for First Transit, the City Bus contractor, were given a presentation on dealing with passengers with mental health issues and what resources are available to them. They were also provide indicators that can be used to look for possible mental health or post traumatic stress related issues in their own employees

Outreach

During the past year, Transit Facilities and Transit Security began taking part in weekly conference calls with Tempe Homeless Services (HOPE Team) to increase and speed up the flow of information. Problem areas are discussed among the group and an action plan is developed. Sometimes a complaint or problem can be addressed in a matter of hours rather than weeks. We have found that outreach can be more effective than traditional Police enforcement in certain circumstances and is an invaluable tool.

FISCAL IMPACT or IMPACT TO CURRENT RESOURCES:

N/a

ATTACHMENTS:

PowerPoint

Tempe Transit Program and Security Update

**Transportation Commission
September 10, 2019**



Agenda



- Transit Program Overview & Funding
- Bus System Performance
- Tempe Transit Service Changes
- Travel Demand Management (TDM)
- Bus Stop & Pullout Update
- Fleet Update
- Regional Projects Update
- Transit Security Update

Tempe Transit Program Overview



- 16 Local Bus Routes
- 3 Express Routes
- Orbit (6 Routes) and FLASH
- Light Rail
- Paratransit & RideChoice
- 2 Operating Facilities
- 124 fixed-route buses
- 9 million passenger boardings (FY19)
- 5.1 million miles of service (FY19)
- Dedicated Transit Tax



Tempe Transit Program Funding



● Transit Operating Budget - \$43.4 million (FY20)

● Revenues:

- Transit Tax: \$29M
- Prop 400: \$6M
- Farebox recovery: \$5.4M (declining)
- Fed grants: \$1.7M (declining)
- ASU: \$1.3M (Orbit/Flash)

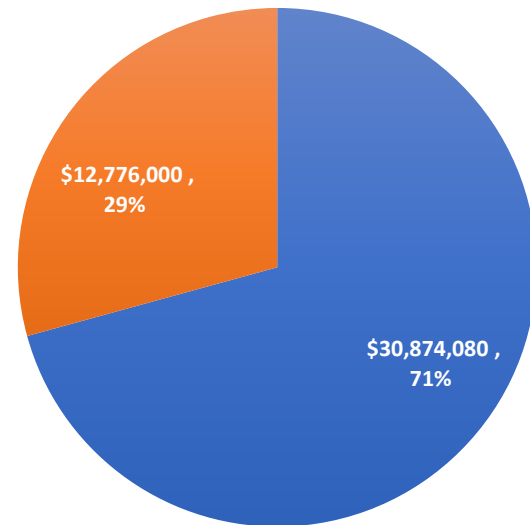
● Proposition 400 (regional funding)

- Extends through 2025
- Rail Capital
- Bus Operating and Capital (fleet)

● Federal Grants

- Capital projects (vehicles and facilities)

Transit Service Operations Expenditures (FY20)



■ Bus Operations ■ Rail Operations

Bus System Performance Update



Key Performance Indicator	Standard	FY 2017	FY 2018	FY 2019
On-Time Performance	$\geq 92.00\%$	92.11%	92.40%	92.28%*
Complaints per 100,000 Boardings	≤ 45	49.78	52.48	59.01
Mechanical Failures per 100,000 Revenue Miles	≤ 12	8.52	3.6	3.43
Percentage of Revenue Service Completed	$\geq 99.85\%$	99.91%	99.97%	99.96%
Accidents per 100,000 Total Miles	≤ 0.90	0.67	0.83	0.67

*9 months of data. Due to the CAD/AVL system upgrade, OTP is unavailable for April, May, and June.

Tempe Transit Service Changes



- FLASH
- Partnership with ASU
- On-board and online survey – fall, 2018
- Public meeting – November 13, 2018
- Route adjustment to better serve outlying activity centers as suggested by survey respondents
 - Brickyard/Mill Avenue
 - Tempe Transportation Center
 - University Center
 - University Services Building
- April, 2019 regional service change process

Tempe FLASH

Current Route



Proposed Route



Tempe Transit Service Changes



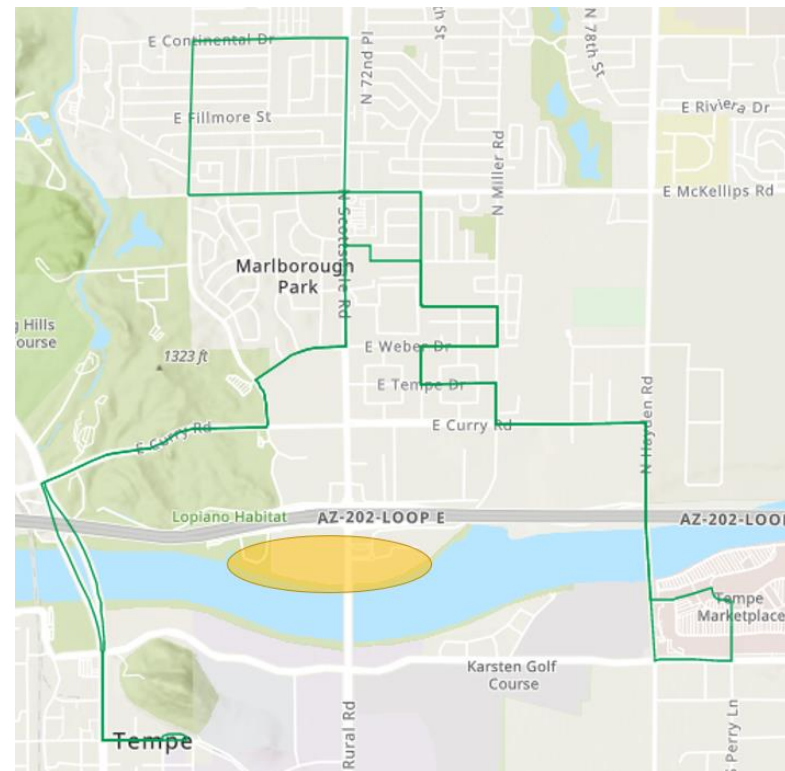
- FLASH
- ASU Event – FLASH Lunch
- FLASH bus design refresh
- Doorhangers and neighborhood outreach



Tempe Transit Service Changes



- Orbit Earth
- Explore options to adjust route to serve new activity centers near Rural Rd./Playa Del Norte/WaterMark
- April, 2020 implementation

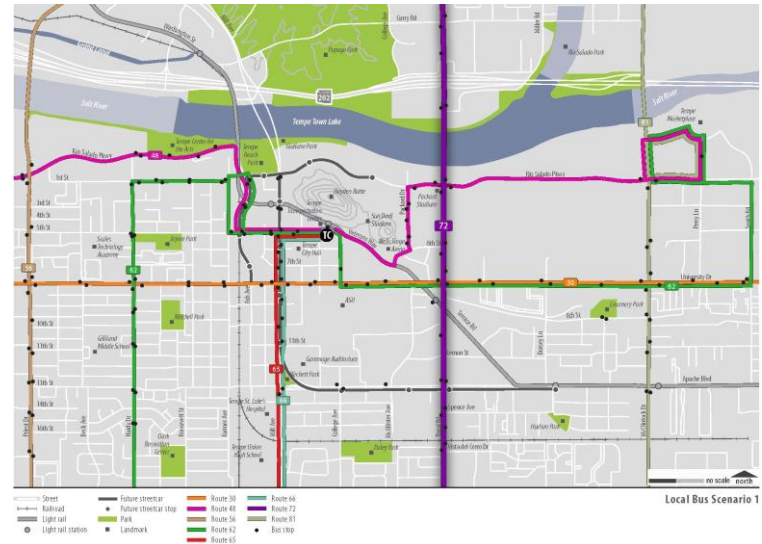
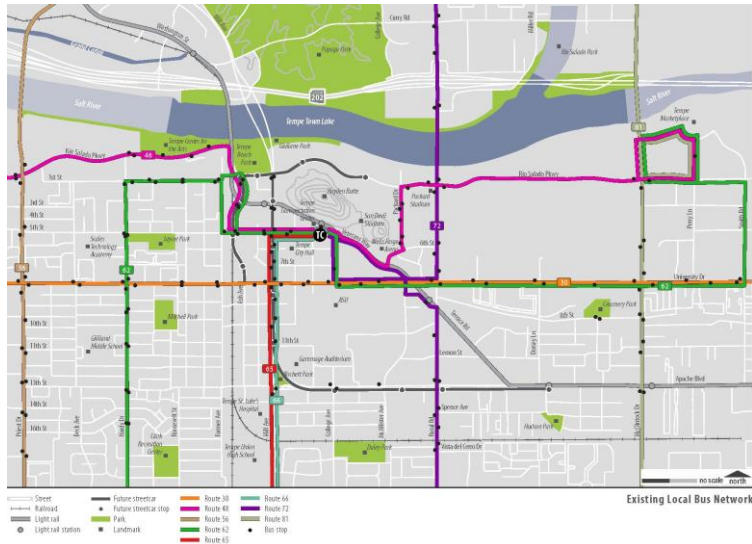


Tempe Transit Service Changes



Downtown Tempe Transit Study

- Maximize Operational Efficiency, Ridership Potential, & Customer Convenience
- Route 72 – analyze elimination of deviation into Tempe Transportation Center



Travel Demand Management (TDM)



- Transit as a TDM strategy
- Partnership
 - City of Tempe
 - Local Tempe employers
 - DTA
 - Tempe Chamber of Commerce
 - Valley Metro
- Education and Resource Sharing
 - Existing Services
 - Future Planning Efforts
 - New Technologies



Transit Amenities Update



● Bus Pullout Installation

- Prioritization Approved by Council 2017
- Priest Dr./Ray Rd. Northbound
- Priest Dr./Elliot Rd. Northbound
- Several high-priority locations in design (13 locations)



● Transit Shelter Design

- Emphasis on Sustainability
- Stakeholder Focus Group
- Prioritization Process TBD



Fleet Update



- Delivery of 25 heavy-duty Orbit buses completed
- Additional 17 Orbit buses to be replaced during 2020/2021
 - Specific Orbit vehicle RFP
 - Performance Specification
 - Orbit Duty Cycle
 - Community Feedback
 - Sustainability/Alternative Fuels
- Vehicle Testing, 10/17 and 1/18



Regional Transit Service Updates



● Fare Collection System Procurement

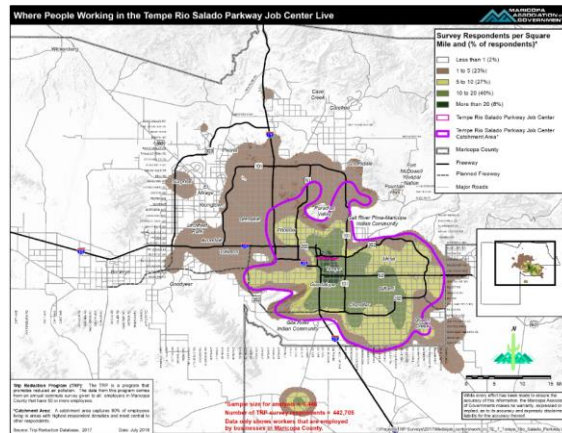
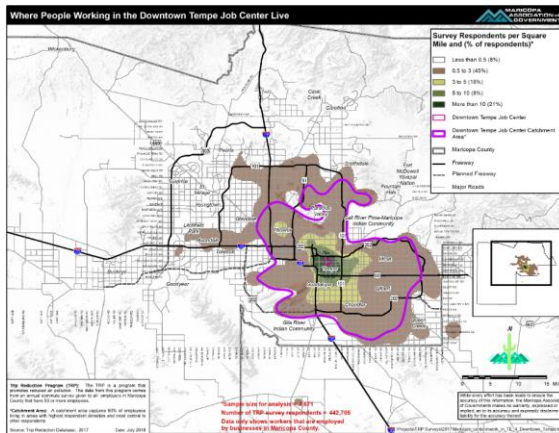
- Mobile Ticketing
- Account-Based Smart Card
- City of Phoenix Procurement



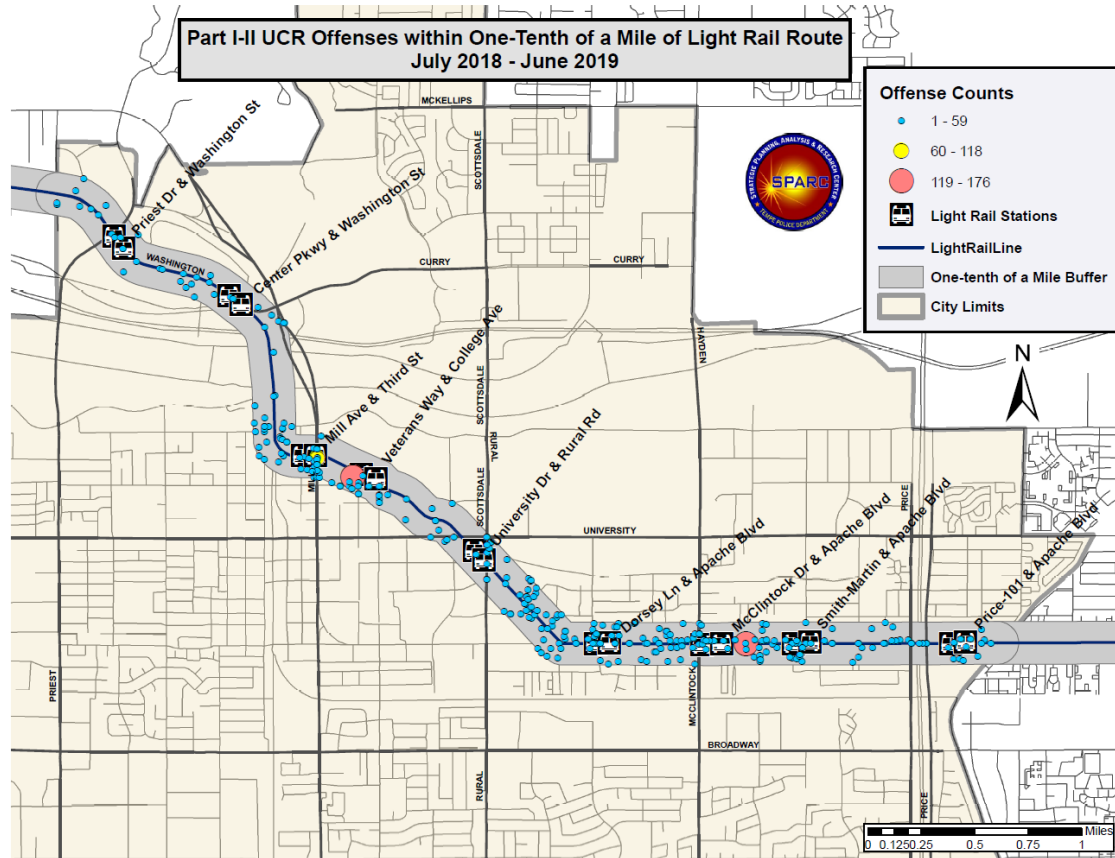
● Clever Devices System Installation

● Commuter Express Bus Study

- MAG
- July 2019 – February 2020
- Develop Alternatives
 - Technical Analysis
 - Stakeholder Input



Transit Security Update – Light Rail



Transit Security Update – Light Rail



Date	Fare Inspection	Fare Violation	Alcohol Violations	Trespass	Code of Conduct Warnings	Warrant	Positive Feedback
July	669	16	0	4	63	4	41
August	1029	95	12	40	69	10	38
September	1238	84	6	57	35	16	31
October	1250	72	12	26	63	19	35
November	1297	57	7	30	69	12	20
December	1314	87	8	22	68	10	40
January	1388	69	5	24	60	15	38
February	964	40	2	24	62	11	18
March	953	50	5	13	59	25	13
April	1222	97	7	32	64	19	38
May	1118	88	6	26	57	12	20
June	418	71	5	21	60	11	24
Totals	12860	826	75	319	729	164	356

Tempe Police Officer Light Rail Security Program Activity
June 2018- July 2019

Transit Security Update – Light Rail



		UCR PART I	UCR PART II	TOTAL
2018	Jul	56	102	158
	Aug	71	141	212
	Sep	60	148	208
	Oct	65	134	199
	Nov	62	120	182
	Dec	50	132	182
	Total	364	777	1,141
2019	Jan	48	132	180
	Feb	48	104	152
	Mar	49	134	183
	Apr	67	104	171
	May	56	124	180
	Jun	45	128	173
	Total	313	726	1,039
TOTAL	677	1,503	2,180	

Part 1 and Part 2 crimes within 1/10th mi of
LRT alignment

	2018						2019						TOTAL
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	
MILL AVE/3RD ST	2	3	3	1	2	1	3	3	1	1	2	2	24
MCCLINTOCK DR/APACHE BLVD	1	1	1		1	5		3	1	1	3	3	20
UNIVERSITY DR/RURAL RD		1		2		1	3		1	1	2	2	13
PRICE-101 FWY/APACHE BLVD	1	1	1		1				3	1		1	9
PRIEST DR/WASHINGTON ST	1	1		1		1	1		1	1	2		9
VETERANS WAY/COLLEGE AVE	1	1		1	1			2				1	7
DORSEY LANE/APACHE BLVD						1	2		1	1	1	1	7
SMITH-MARTIN/APACHE BLVD	1			1				1			1	1	5
WASHINGTON ST/CENTER PKWY		1		1		1							3
TOTAL	7	9	5	7	5	10	9	9	8	6	11	11	97

Part 1 and Part 2 crimes reported at station platforms

Light Rail Security Update



- Security/Police partnership - increase in productivity
- Respect the ride
- Information/resource sharing between agencies
- Trespassing enforcement
- Training – Tactical Team and EOD
- Community Engagement Coordinators (CEC's)

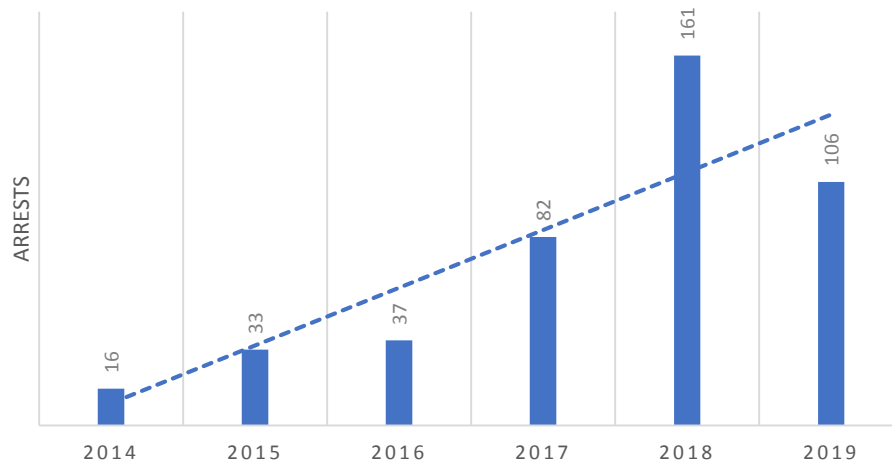


Bus Security Program Update



- Positive feedback from Bus operators and public
- Balance between enforcement and Social services referrals
- Problem solving – CPTED, HOPE Team, Legal
- Training – Entire Police Dept., Tactical Team, Mental Health for First Transit
- EVBOM camera system improvements

BUS SECURITY PROGRAM ARRESTS



Questions

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MEMORANDUM

TO: Tempe Transportation Commission
FROM: Shelly Seyler, Deputy Engineering & Transportation Director, 350-8854
DATE: August 13, 2019
SUBJECT: Future Agenda Items
ITEM #: 8



PURPOSE:

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

RECOMMENDATION OR DIRECTION REQUESTED:

This item is for information only.

CITY COUNCIL STRATEGIC PRIORITY:

- N/a

BACKGROUND INFORMATION:

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

- October 8
 - Annual Report
 - McClintock Drive Project Update
 - ASU ADA Program
 - El Paso Multi-use Paths
 - MAG Value Mapping Survey Results
- November 12
 - Annual Report
 - Bike Share
 - Tempe/Mesa Streetcar Extension Feasibility Study
 - Bicycle Plan for Achieving Platinum Level Bike Friendly Community
- December 10
- January 14
 - Commission Business
 - Transit Shelter Design
 - Orbit Vehicles
- February 11
- March 10
- April 14
 - Paid Media Plan
- May 12
 - Bike Hero
 - Capital Improvements Project Update
 - MAG Design Assistance Grants

FISCAL IMPACT or IMPACT TO CURRENT RESOURCES: N/a

ATTACHMENTS: None