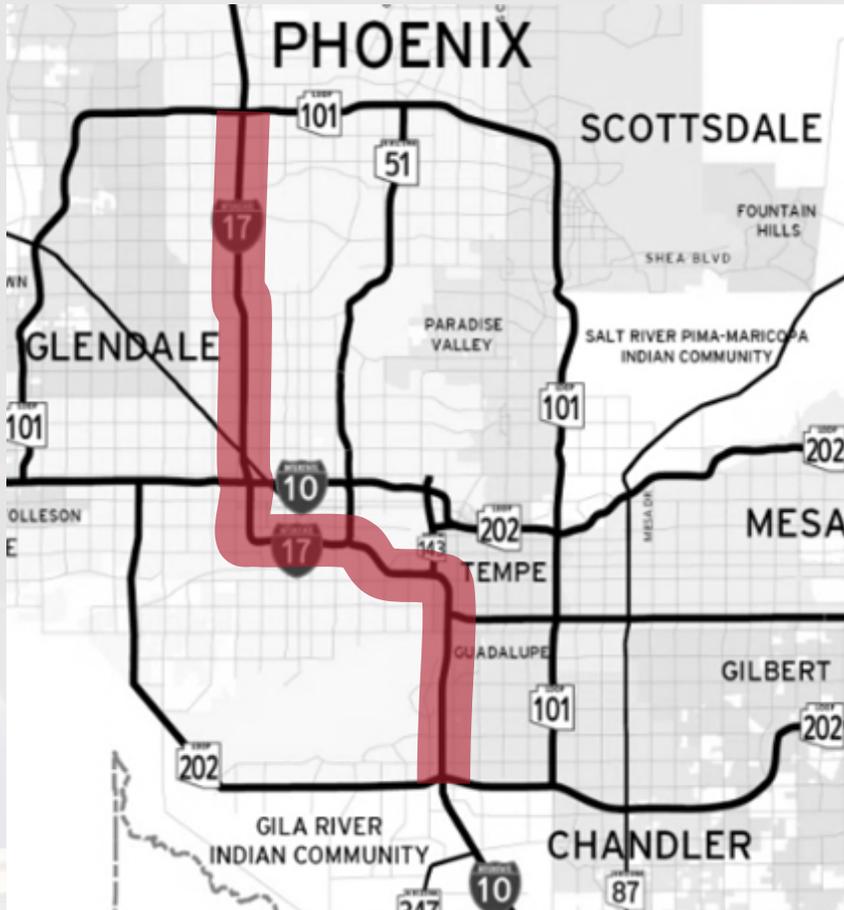




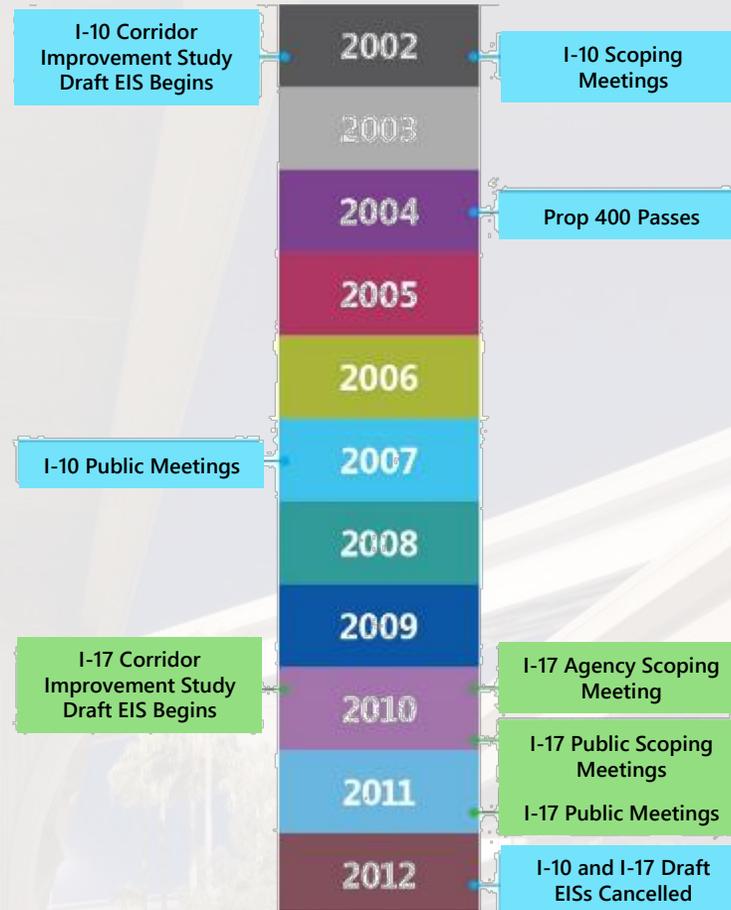
 "The Stack" System Interchange - Phoenix

Final Recommendation and Lessons Learned from the I-10/I-17 "Spine" Corridor Master Plan

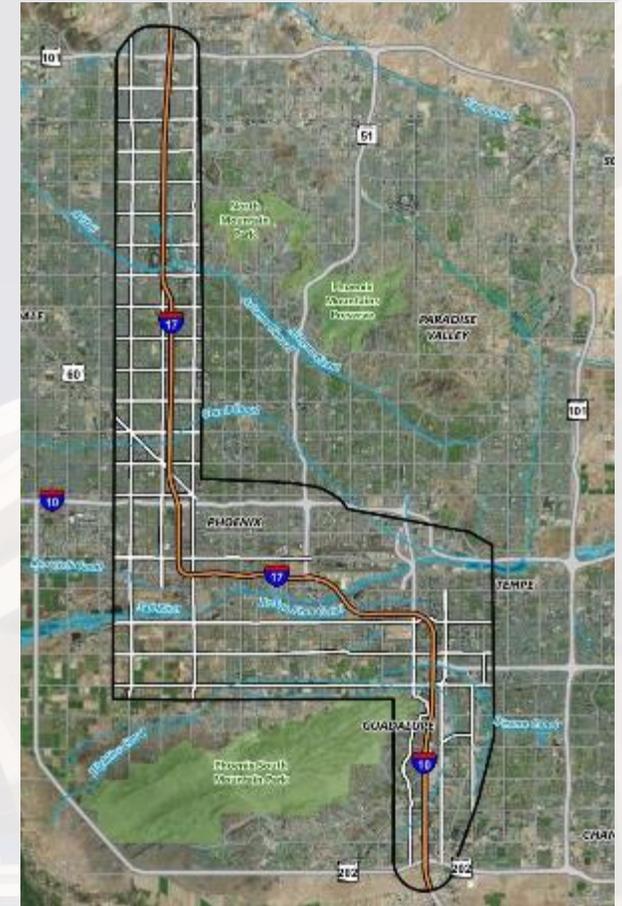
March 29, 2018



31-Miles of Corridor



Earlier Efforts



Study Limits

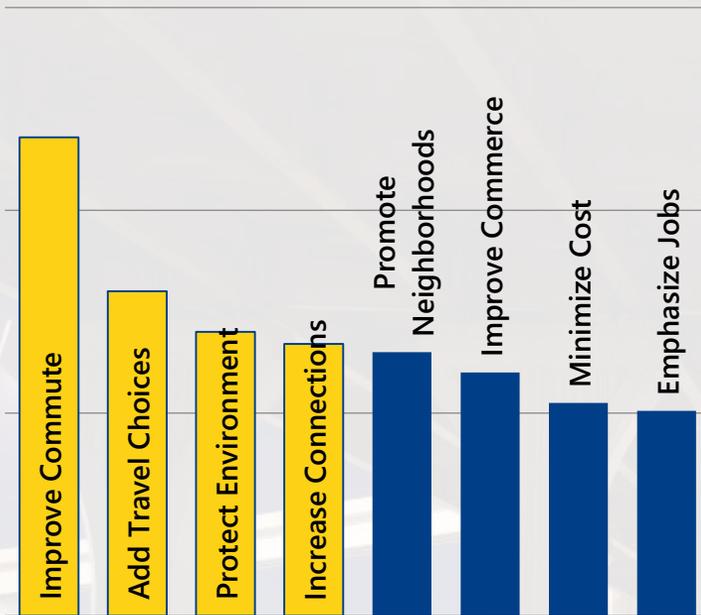


*Members of Alternatives Evaluation Partners

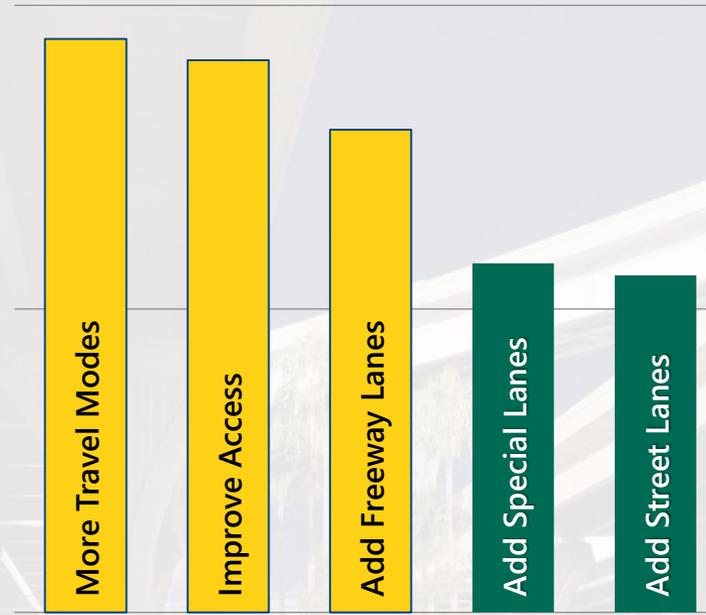


Public survey periods in 2015 and 2017. More than 2,500 responses.

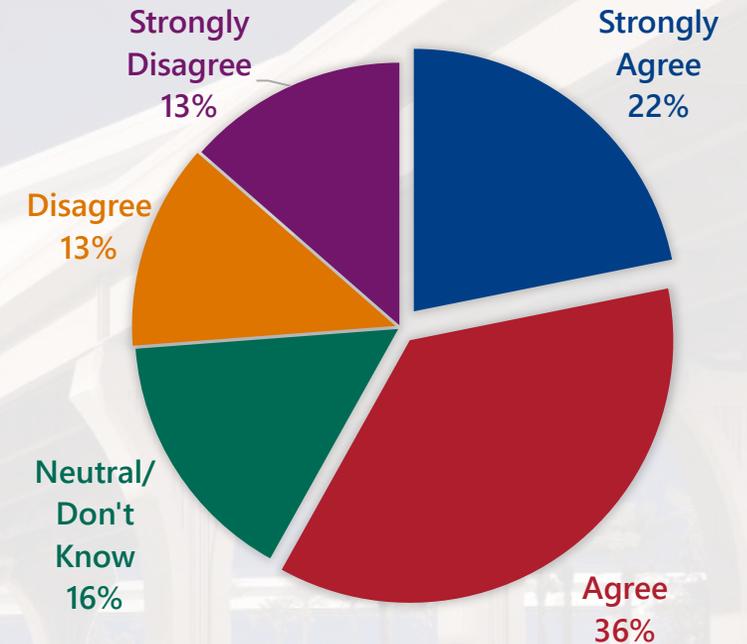
90+% say "build something" ■ 2/3 were commuters ■ 90% use personal vehicles



Public Priorities



Public's Preferred Strategies

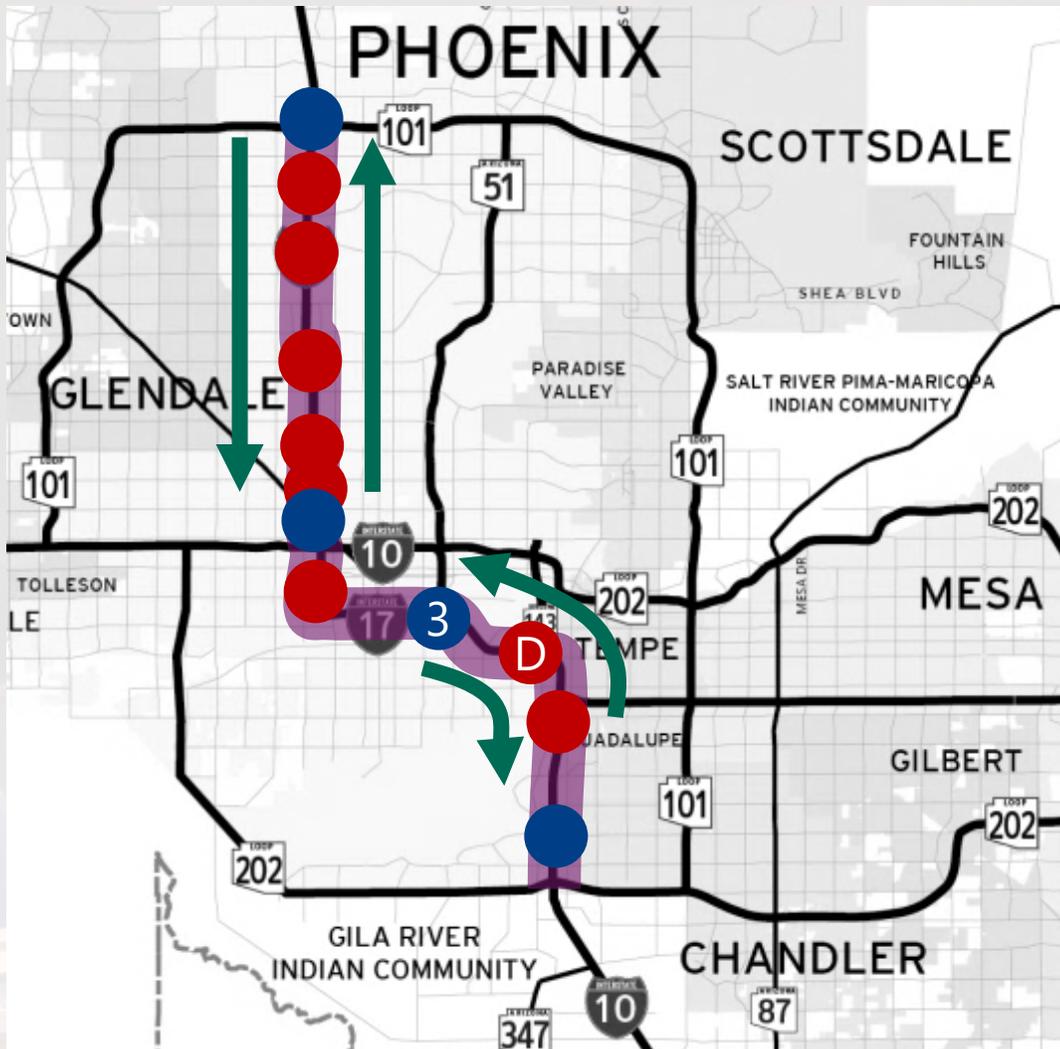


Feedback on the Recommended Alternative

A New Way of Thinking

- Holistic Multimodal Solution.
- Existing system optimization.
- **Practical/Context Sensitive Design.**
- **Congestion Management, Reliability, and Mobility – not LOS.**
- Safety hotspots.
- Economic growth.
- Aging infrastructure.
- Future technologies.
- A framework for a build out vision.
- Define a program of projects.
- Recommendation requires broad agency support and flexibility with alternate futures.



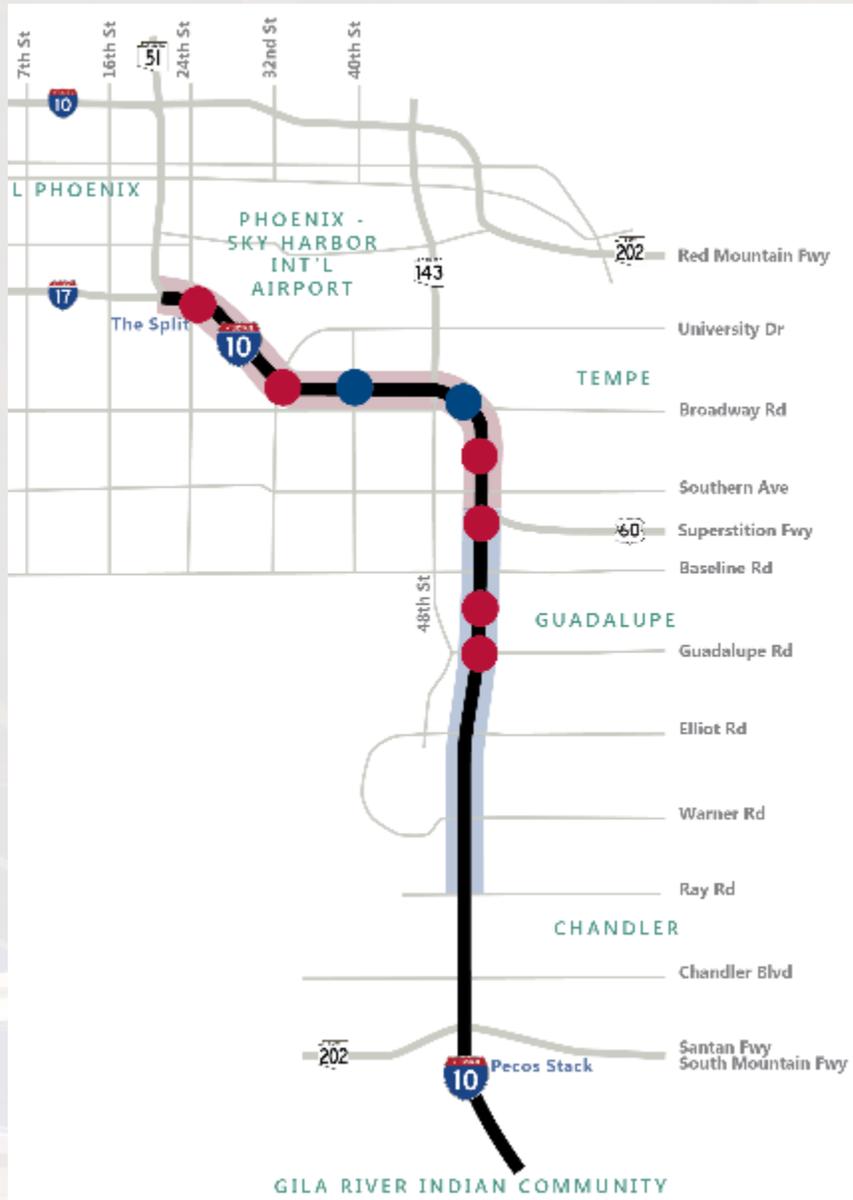


- Improves safety by **modernizing** interstates to current design standards.
- Adds a minimum of **one-lane** throughout entire corridor (HOV, GP, and/or C-D lanes).
- Expands and creates continuous **Managed Capacity** operation along:
 - Interstate 10, from Interstate 17 to US-60; and
 - Interstate 17, from Interstate 10 Split to Loop 101.
- **Improves/reconstructs 24 of the 31 traffic interchanges** throughout the corridor.
- Adds **five DHOV ramps** and new interchanges.
- Plans and enhances **bicycle/pedestrian connections** across the corridor at **20 locations** including **9 new structures**.
- Transit system enhancements.

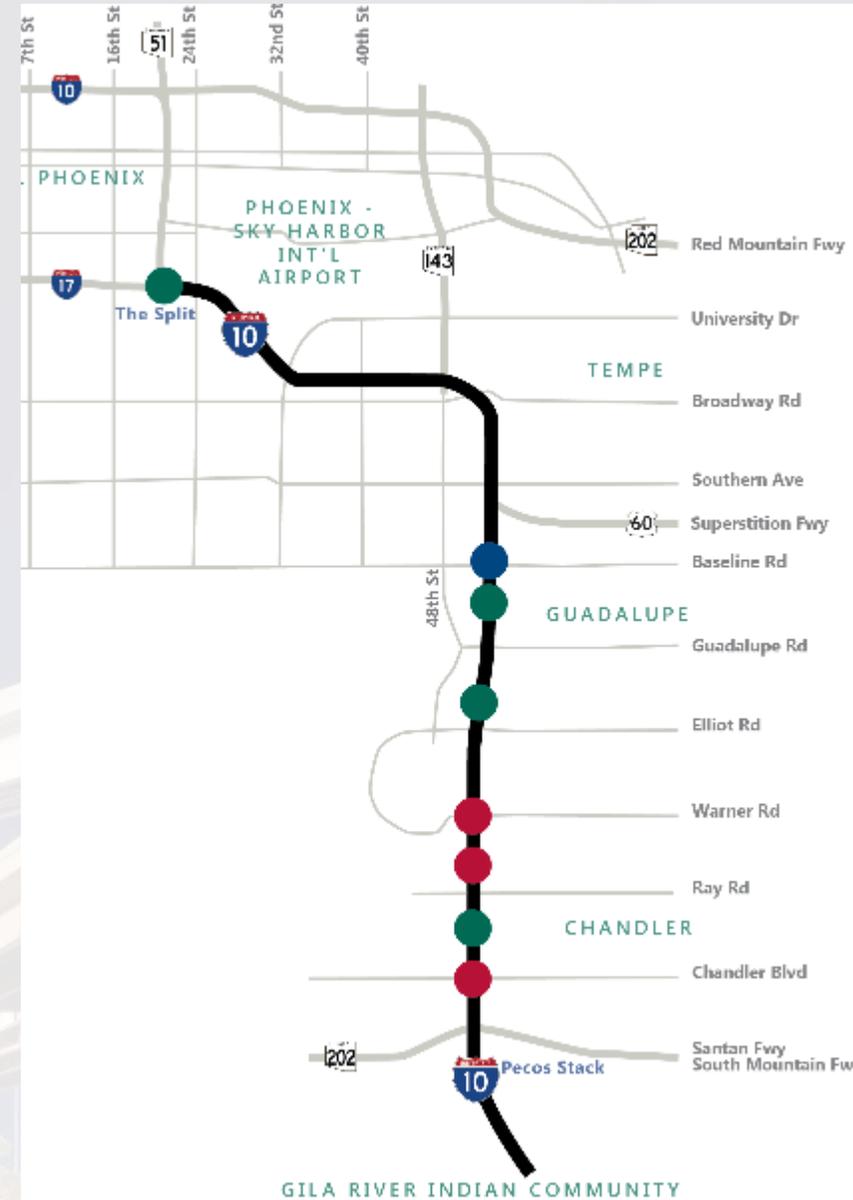


INTERSTATE 10

Projects Funded through 2028



Projects Funded after 2028

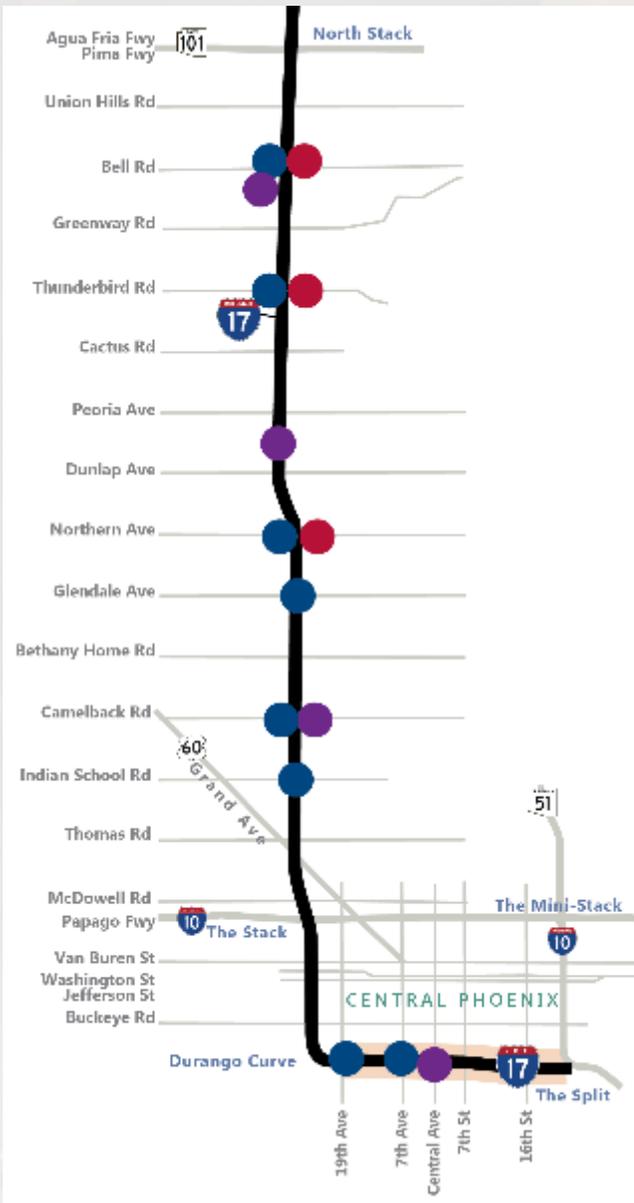


- Interchange Reconstruction
- Bike/Pedestrian
- HOV/Public Transportation
- Segment Mainline Widening

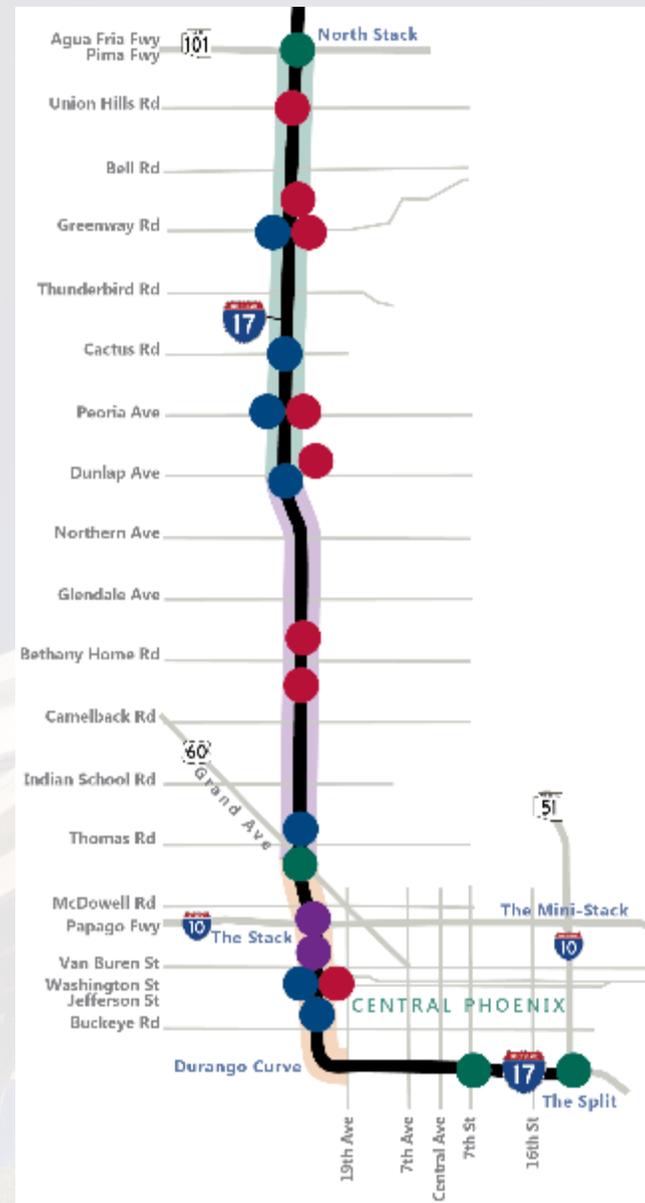


INTERSTATE 17

Projects Funded through 2028

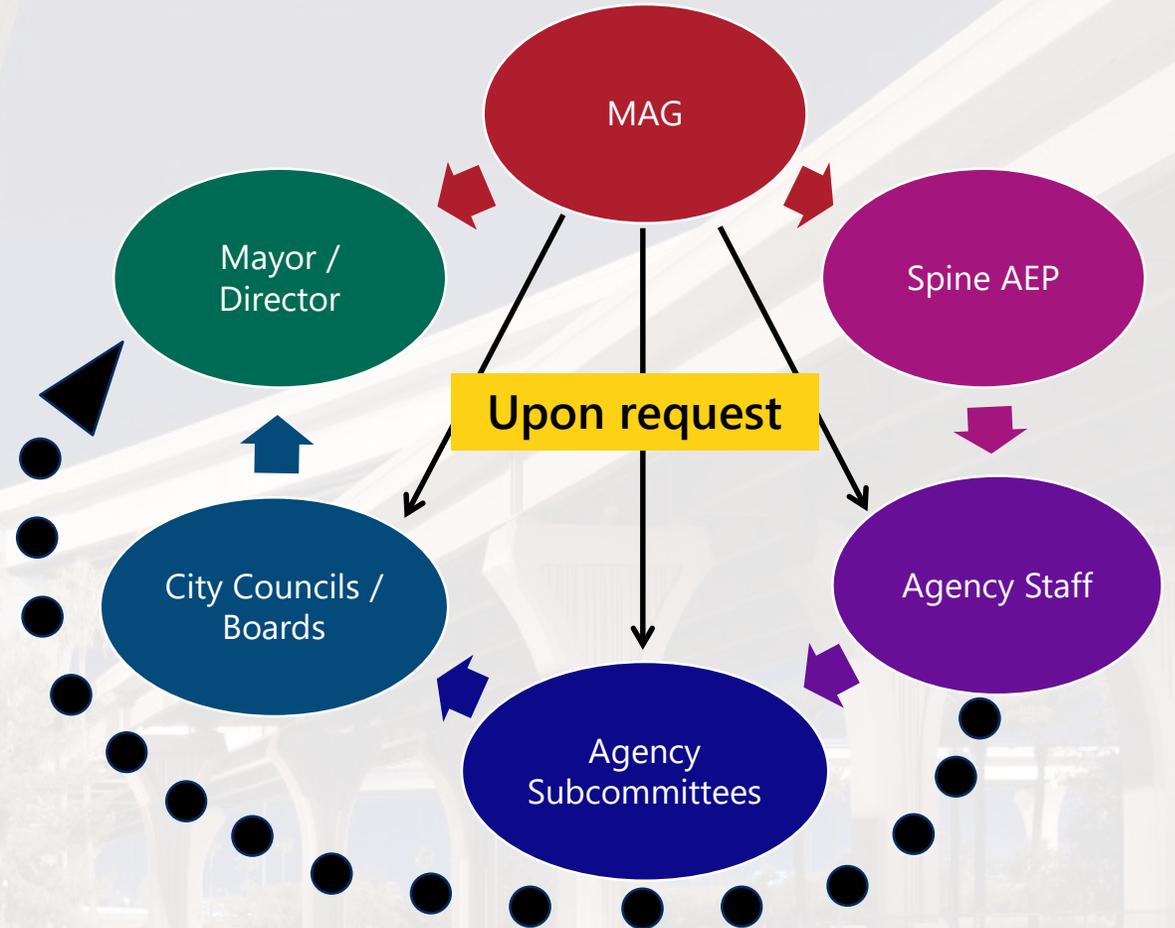


Projects Funded after 2028



Project Organization

- Management Partners – MAG, ADOT, and FHWA represented at **EVERY** meeting.
- Decision making and communication protocol challenges.
- **Thorough communications to all levels takes time.**
- Understand agencies primary roles in MPO planning:
 - MAG
 - ADOT
 - FHWA
 - Others



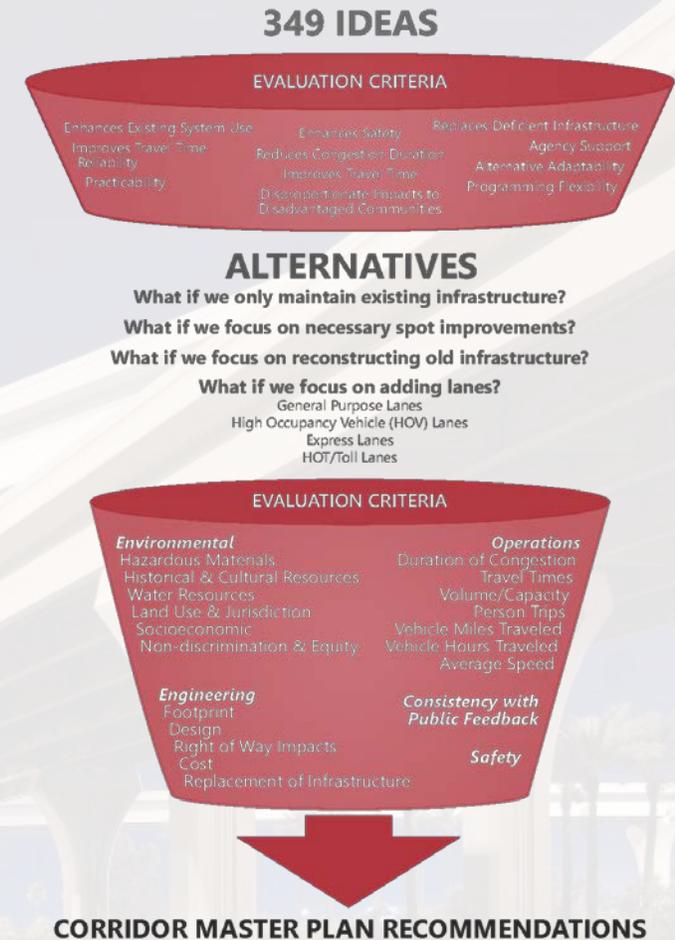
Planning and Environmental Linkages (PEL)

- Corridor Purpose and Need guides the screening process.
- Focus on the priority resources that will matter.
- Multiple agencies and NEPA rules could refer to this PEL.
- Predefine a Screening Process, but be flexible as study progresses.
- **Public engagement – technology is cheaper and more effective.**



Concept Brainstorming and Screening

- 349 concepts developed over a two day workshop.
- Alternatives brainstorming creates some interesting ideas.
- Sorting concepts:
 - Corridor solutions (backbone); and
 - Spot improvements (supporting).
- Documenting the screening process is critically important to future NEPA efforts through the PEL.



Recommended Alternative

- Defining maximum practical footprint.
- CAV adoption – methods for planning for future trips is rapidly changing.
- Avoid the temptation to over plan and over build.
- Consider and plan for system redundancy –mobile routing technology already does this.
- TI improvements based on need.
- **Operational flexibility is critical to address future uncertainty.**
- The RA defines a performance objective, and one possible configuration that meets those objectives to price and plan around.



Closing Thoughts

- **Introduction of high capacity service interchanges.**
- LRT crossings of the interstate are complicated.
- Planning without LOS objectives is challenging – a quantum shift in how many planners think.
- Managing congestion and improving travel time reliability are hard to measure.
- Identifying system gaps easier when you ignore municipal boundaries.
- Technology will change 2 and 3 times over the implementation period.



- Thank you to **ADOT** and **FHWA** for partnering on this study and having the commitment to see it to completion.
- Thank you to **Phoenix, Tempe, Guadalupe, Chandler,** and **Valley Metro** for the continuous input throughout the study.
- Thank you to all the **MAG staff** who contributed to this first of its kind effort
- Thank you to the **MAG Regional Council** and the **Transportation Policy Committee** for providing the guidance to get to an adopted recommendation.

Thank You!





Corridor Master Plan

Questions?



Spine Study RA

I-10 Funded Elements

- 6+2+Aux Lane Section
- 4+1+Aux Lane section
- C-D roads; SR-143 and US-60,
- Reconstruct I-10/SR-143/Broadway Road TI, I-10/SR-143 TI DHOV
- Reconfigure I-10/40th Street TI
- 4 New Bike/pedestrian bridge over I-10 (Alameda, Highline Canal, Western Canal, Guadalupe Road)
- 2 New TI upgrades for Bike/pedestrian improvements (24th and 32nd Streets)

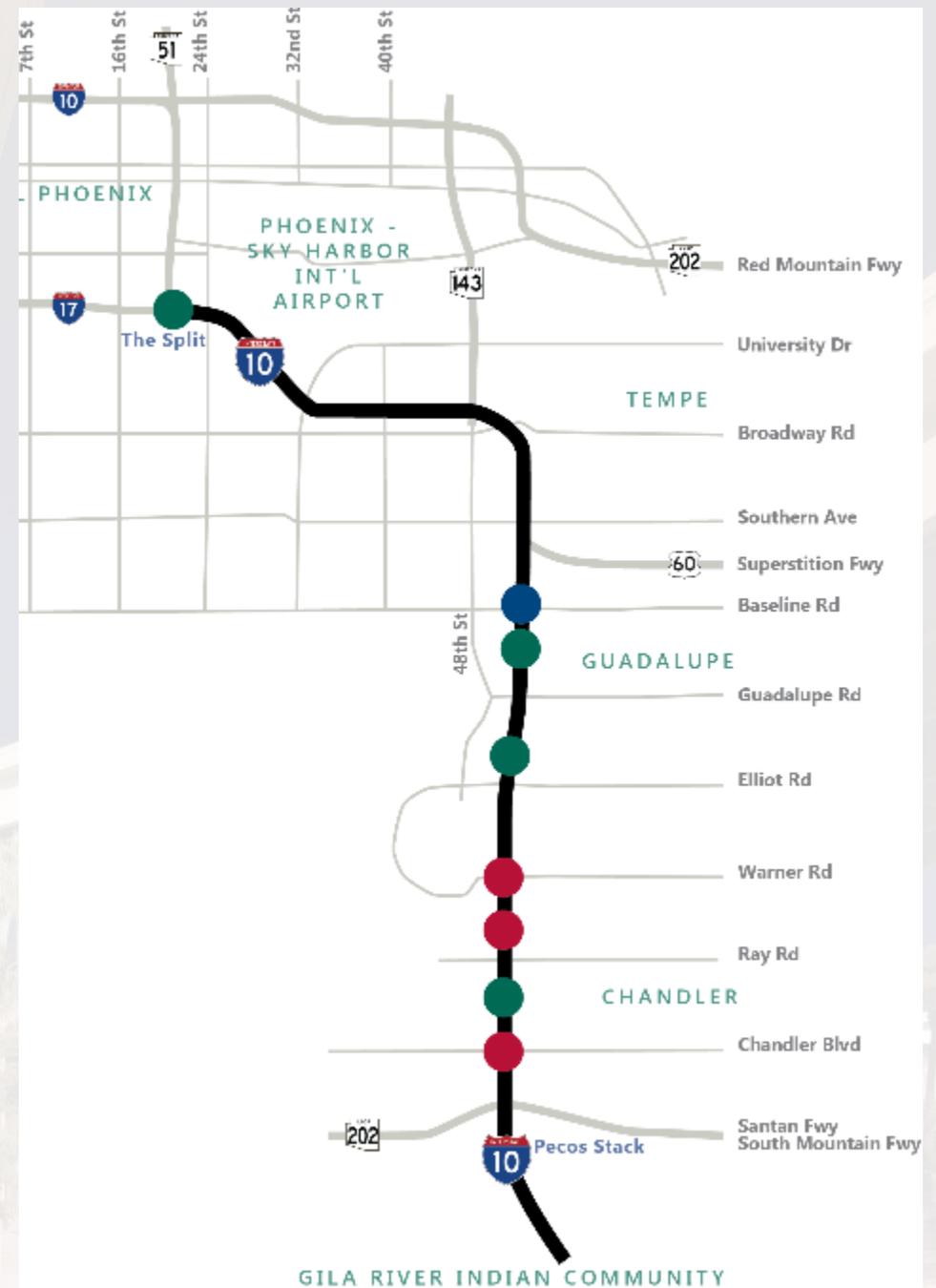


GILA RIVER INDIAN COMMUNITY

Spine Study RA

I-10 Unfunded Elements

- I-10/I-17 Split TI DHOV
- Reconstruct Baseline Road TI
- C-D road extension; US-60 to Elliot Road
- 2 New TI upgrades for Bike/pedestrian improvements (Warner and Chandler)
- 1 New Bike/pedestrian bridge over I-10 (Knox)
- I-10/Galveston DHOV TI



Spine Study RA

I-17 Funded Elements

 3+1+Aux Lane section, full I-17 reconstruction

 7th St, 7th Ave, and 19th Ave TI reconstruction

I-17/Central Ave bridge replacement for LRT

 I-17/Camelback TI LRT provisions

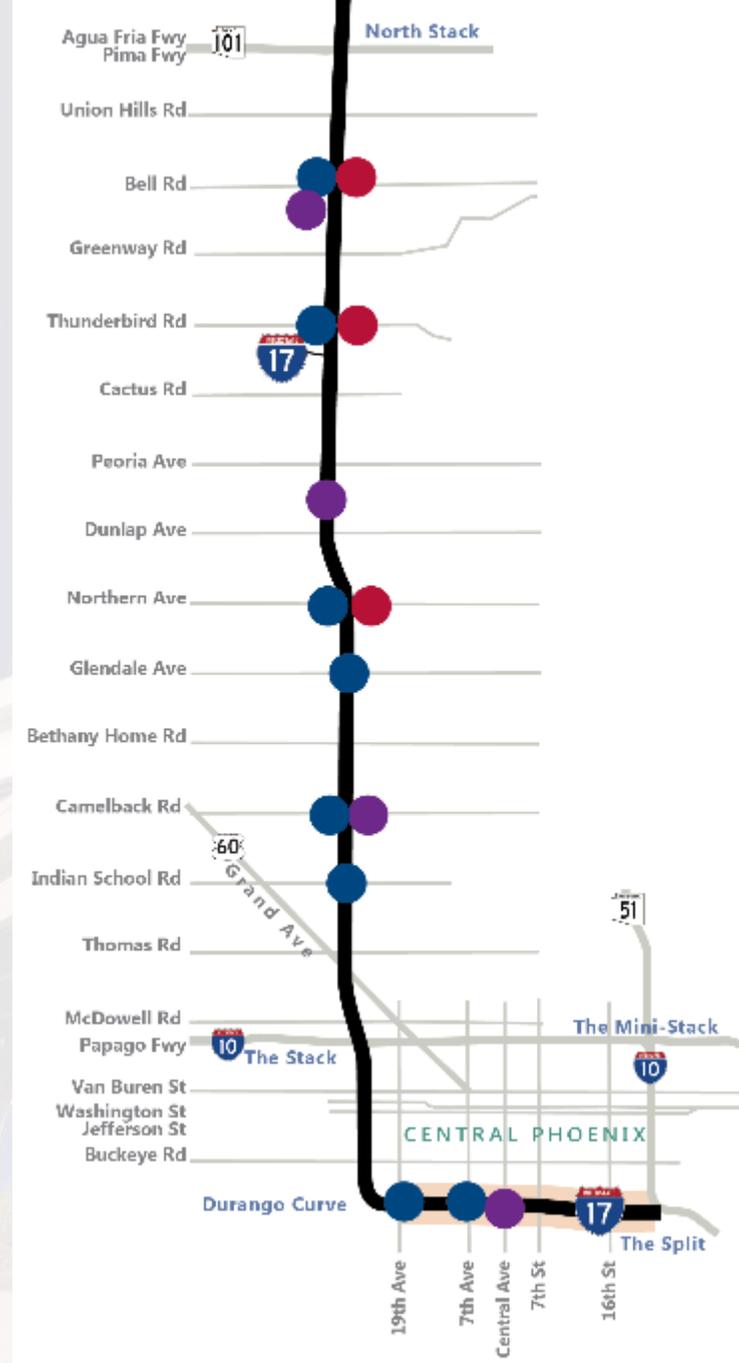
I-17/Mountain View LRT crossing

I-17/Bell Road Park and Ride expansion

 High Capacity Tis (Indian School, Camelback, Glendale, Northern, Thunderbird, Bell)

 3 New TI upgrades for Bike/pedestrian improvements (Northern, Thunderbird, Bell)

I-17 Drainage Improvements (Peoria to Greenway)



Spine Study RA

I-17 Unfunded Elements

-  3+1+Aux Lane section, full I-17 reconstruction
-  3+2+Aux Lane section, full I-17 reconstruction
-  3+2+Aux Lane section, I-17 widening
-  I-17 TI reconstruction (Jefferson/Adams, Thomas, Dunlap, Peoria, Cactus, Greenway)
-  4 DHOV TIs (I-10 Split, 7th St., Grand, SR-101L)
-  I-17/Van Buren LRT/Transit crossing for I-10 West
-  5 New TI upgrades for Bike/pedestrian improvements
-  3 Bike/pedestrian bridges over I-17 (Missouri, Maryland, Paradise Lane)

