



MAG's Major Amendments to the Regional Transportation Plan

State Transportation Board
May 30, 2017



Interstate 10 Interstate 17 Corridor Master Plan

Final Recommendations

Accepted by MAG
Regional Council

May 24, 2017



2014

- Project Scoping
- Data Discovery
- Partner Needs

2015

- Public Meetings
- Needs Assessment Report
- 349 Concepts

2016

- Three Screening Levels
- Seven Alternatives
- Three Variations

2017

- Public Meetings
- Corridor Master Plan Acceptance into Regional Transportation Plan





Aging Infrastructure



Four Light Rail
Crossings of I-17



Planning for Bicycles
and Pedestrians

Issues



Technology



Constrained Corridor



Increasing Demand

Issues

349 IDEAS

EVALUATION CRITERIA

Enhances Existing System Use	Enhances Safety	Replaces Deficient Infrastructure
Improves Travel Time	Reduces Congestion Duration	Agency Support
Reliability	Improves Travel Time	Alternative Adaptability
Practicability	Disproportionate Impacts to Disadvantaged Communities	Programming Flexibility

ALTERNATIVES

What if we only maintain existing infrastructure?

What if we focus on necessary spot improvements?

What if we focus on reconstructing old infrastructure?

What if we focus on adding lanes?

General Purpose Lanes
High Occupancy Vehicle (HOV) Lanes
Express Lanes
HOT/Toll Lanes

EVALUATION CRITERIA

Environmental Hazardous Materials Historical & Cultural Resources Water Resources Land Use & Jurisdiction Socioeconomic Non-discrimination & Equity	Operations Duration of Congestion Travel Times Volume/Capacity Person Trips Vehicle Miles Traveled Vehicle Hours Traveled Average Speed
Engineering Footprint Design Right of Way Impacts Cost Replacement of Infrastructure	Consistency with Public Feedback Safety

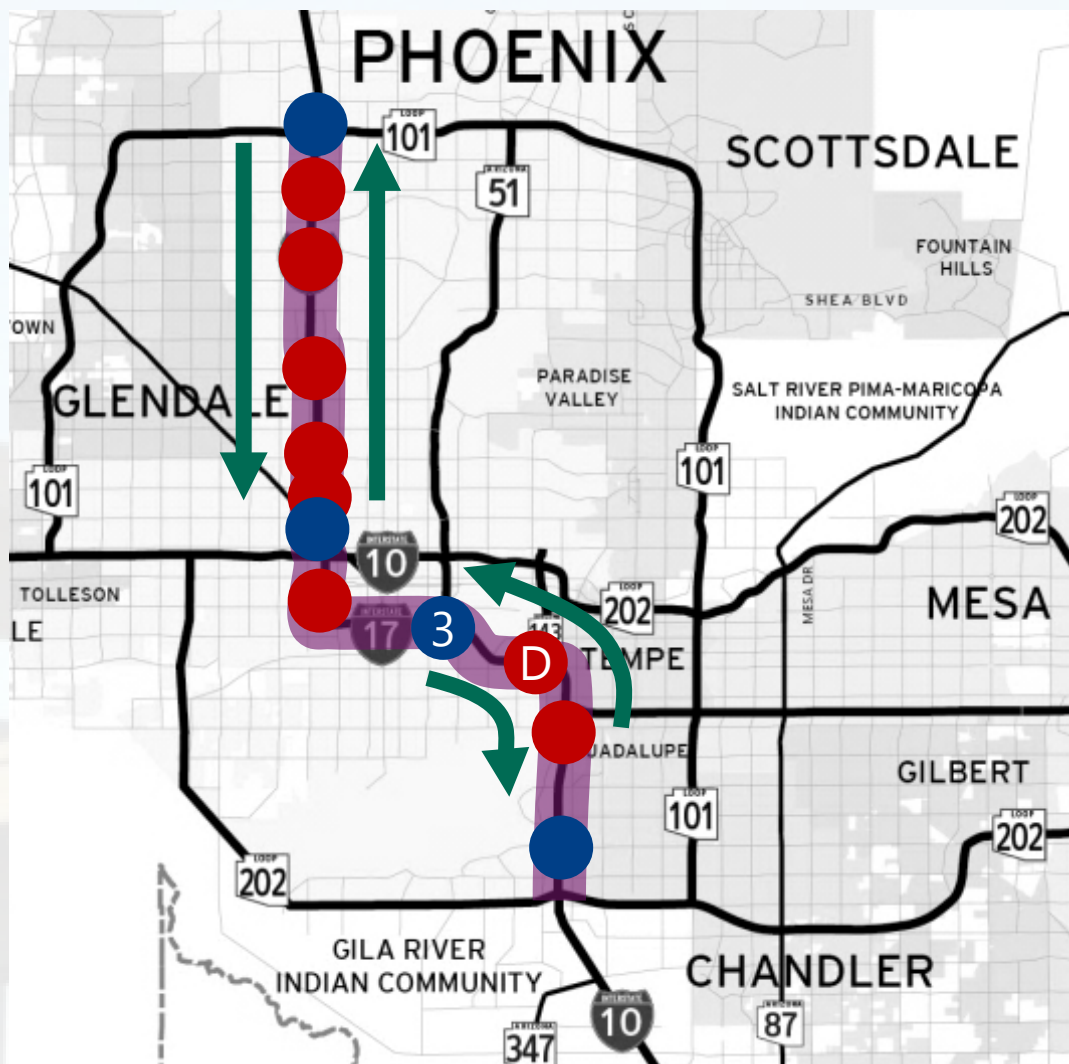


CORRIDOR MASTER PLAN RECOMMENDATIONS



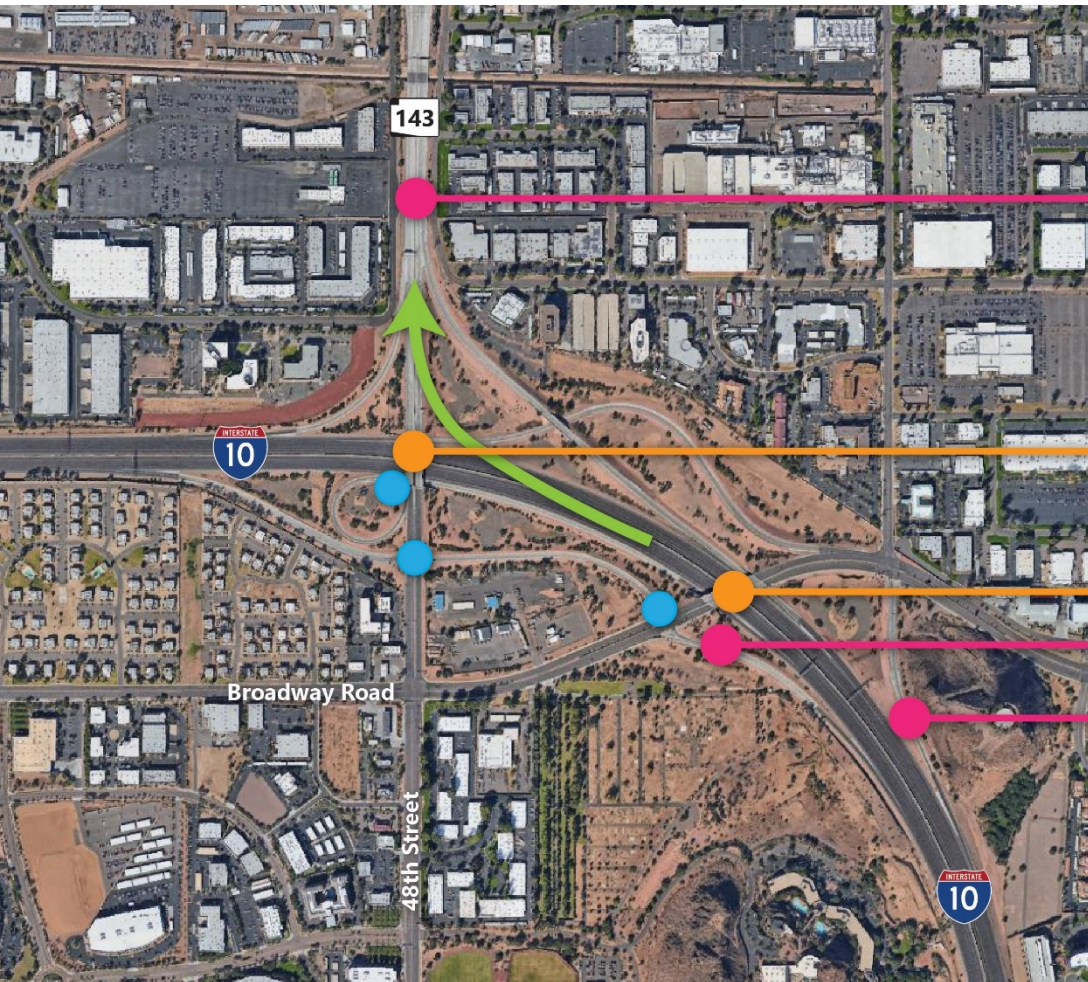
Establishing the Corridor Master Plan Recommendation

Interstate 10/Interstate 17
Corridor Master Plan



- Improves safety by **modernizing** interstates to current design standards.
- Adds a minimum of **one-lane** throughout entire corridor.
- Expands **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**.

Overall Corridor Master Plan Recommendations



Address lane change (or "weave") movements

Reconstruct 48th Street and Broadway Road bridges over I-10

Reconfigure Broadway Road ramps to better accommodate traffic volumes

Construct a direct high occupancy vehicle (DHOV) ramp from westbound I-10 to SR-143.

Reconfigure traffic interchanges to better accommodate traffic volumes and improve safety and efficiency

I-10/SR-143/ Broadway Rd Interchange Improvements

Proposed interchange reconstruction to target problem areas.

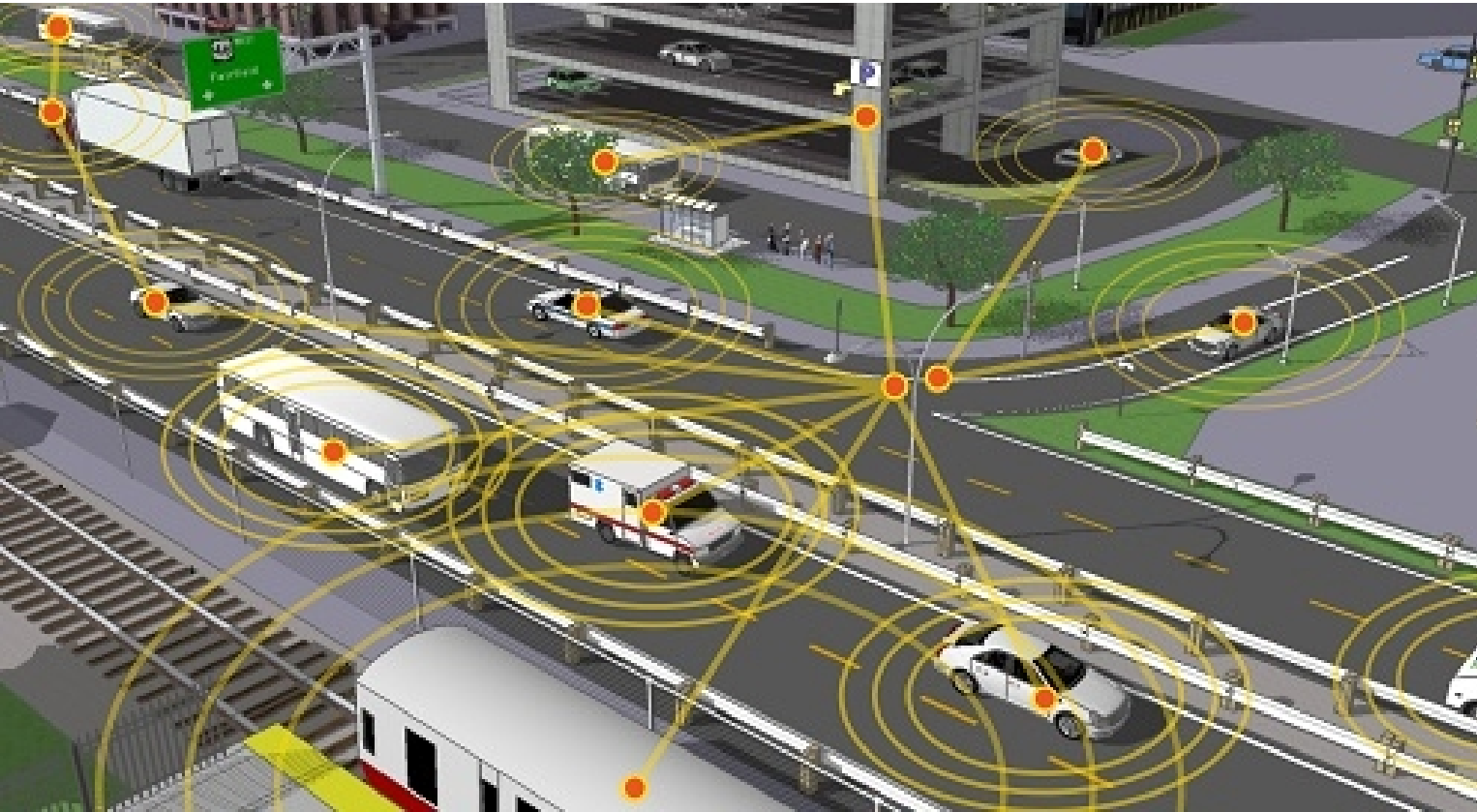


Interchange Improvements

Example of a Platform Diamond Interchange concept from Redford Township, MI

I-96 (Jefferies Fwy)/US-24 (Telegraph Rd)

(Photo: Bing Maps)



Technology Enhancements

Illustration of connected vehicle and transportation infrastructure technology.

(Photo Source: USDOT Volpe Center, Cambridge MA)



Direct High Occupancy Vehicle (DHOV) Ramp

Example of direct high occupancy vehicle (DHOV) connectors between Loop 202 (Santan Freeway) and I-10.

Photo Source: Google Earth.



Light Rail Transit Crossing

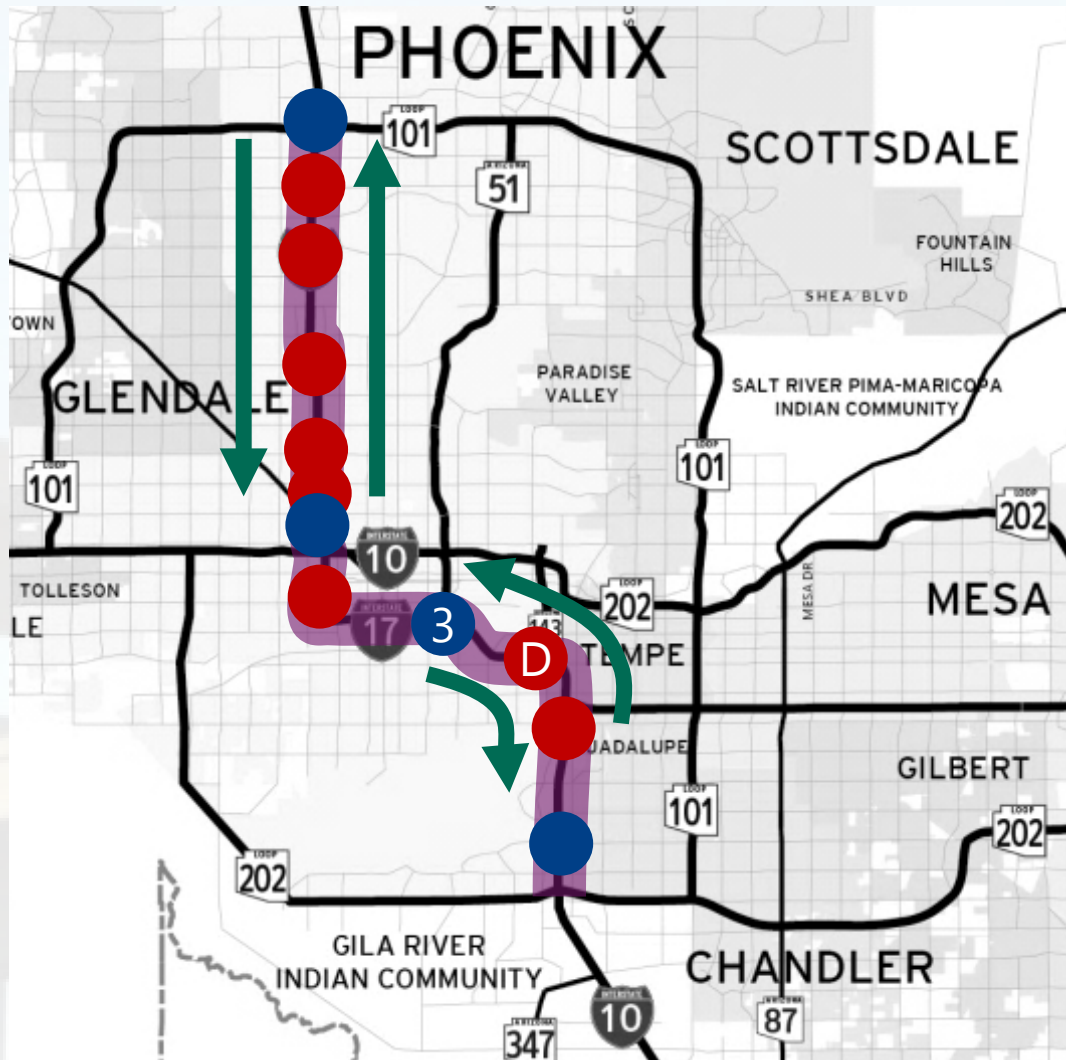
Valley Metro Light Rail Train
undercrossing Loop 202 (Red
Mountain Freeway) in Tempe.



Bicycle/ Pedestrian Bridge Over Freeway

Example of pedestrian bridge
over Loop 101 at 63th Avenue.

(Photo Source: ADOT)

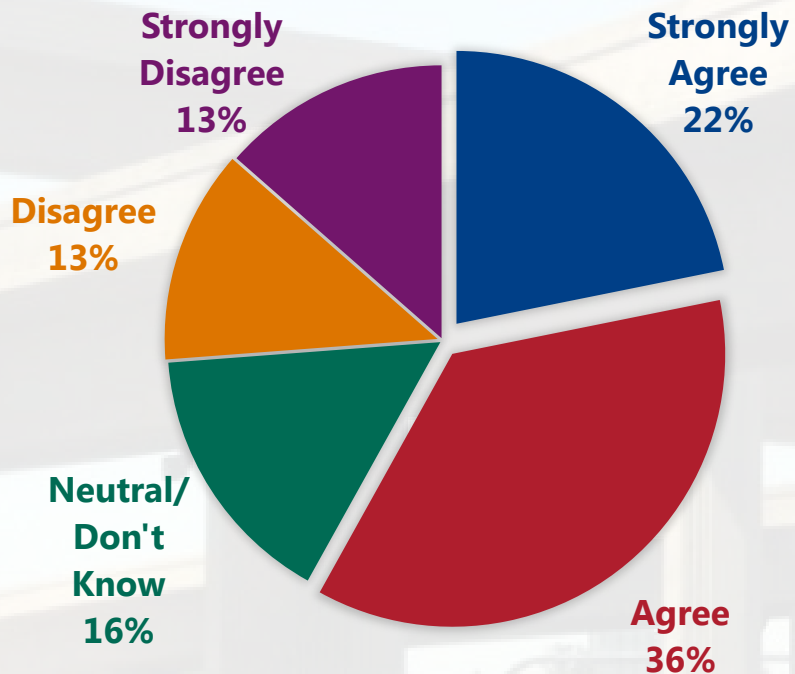


- ✓ Improves Commute.
- ✓ Adds Travel Choices.
- ✓ Protects the Environment.
- ✓ Increases Connections.
- ✓ Promotes Neighborhoods.
- ✓ Improves Commerce.
- ✓ Minimizes Cost.
- ✓ Emphasizes Jobs.

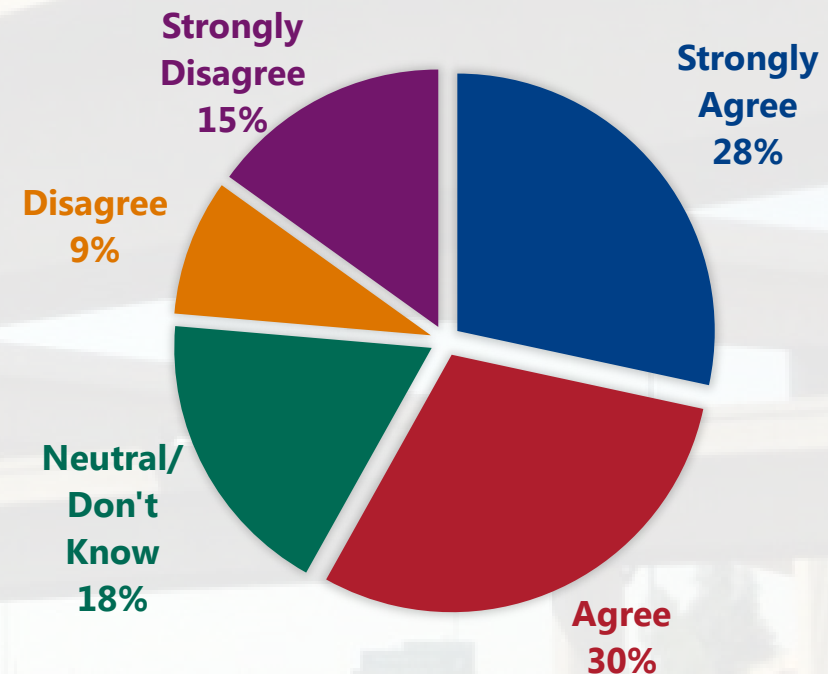
Responds to Priorities

Recent Public Comment

Thoughts about the strategy?



Thoughts about ROW acquisition?



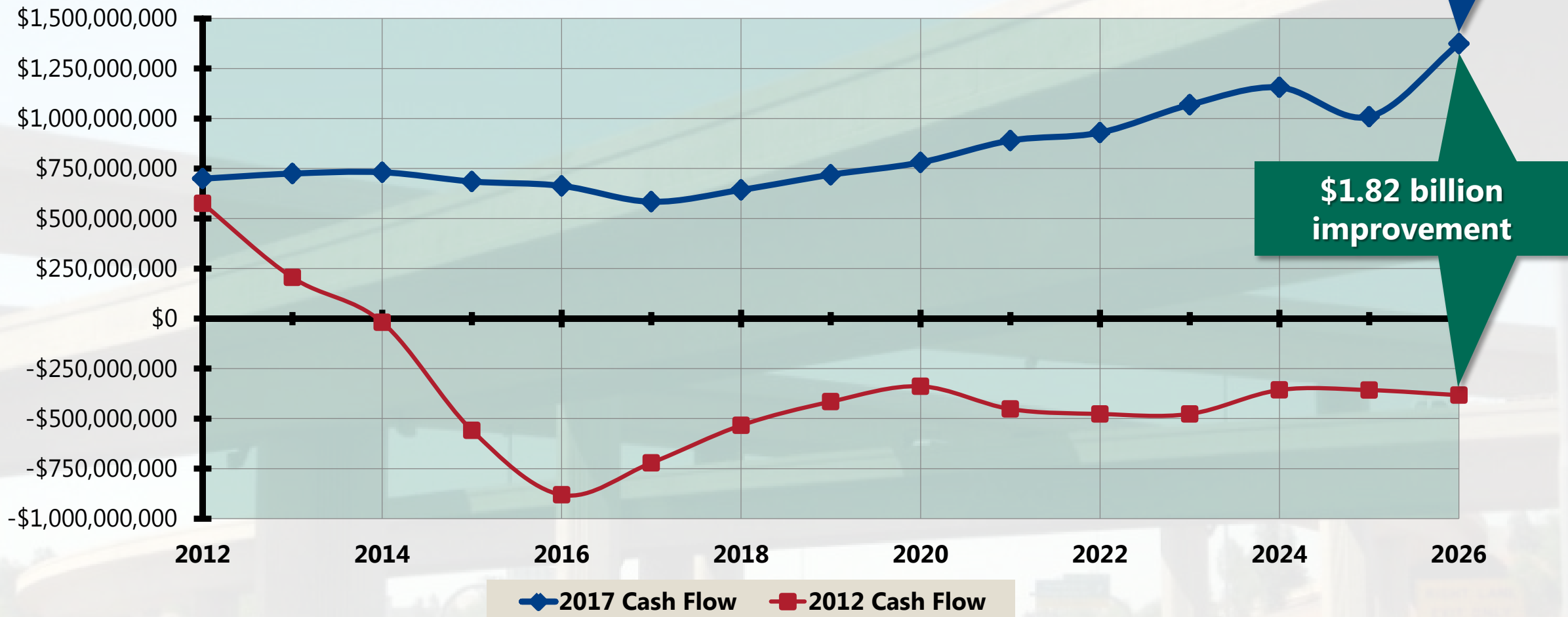


How will this
Corridor Master
Plan and other
projects be
accomplished?

REGIONAL FREEWAY
AND HIGHWAY
PROGRAM

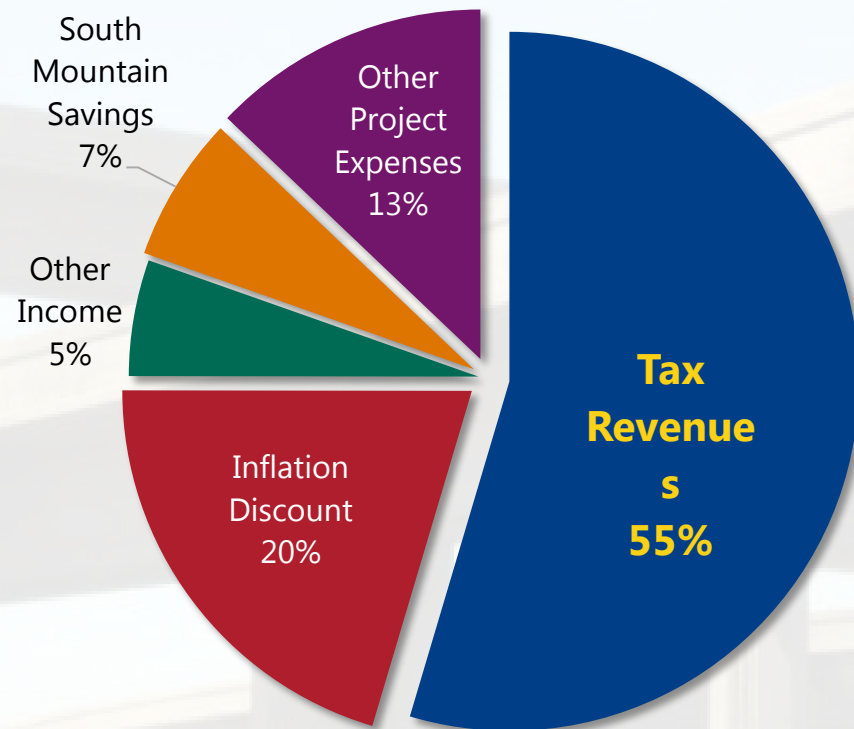
Rebalancing

Projected Year-End Cash Flow Balances



Source: ADOT and MAG Estimates, March 2017.

Why did the ending balance change so much?



Item	Amount (Thousands of Dollars)
Tax Revenues	\$992,455
Inflation Discount	\$371,304
Other Income	\$97,648
South Mountain Savings	\$122,000
Other Project Expenses	\$234,379
Total Change	\$1,817,786

Source: ADOT Cash Flow Model for the MAG Regional Freeway & Highway Program,
July 2013 Certification and January 2017 Certification.

2017 Regional Freeway and Highway Program



**Construction
\$1.77 billion**

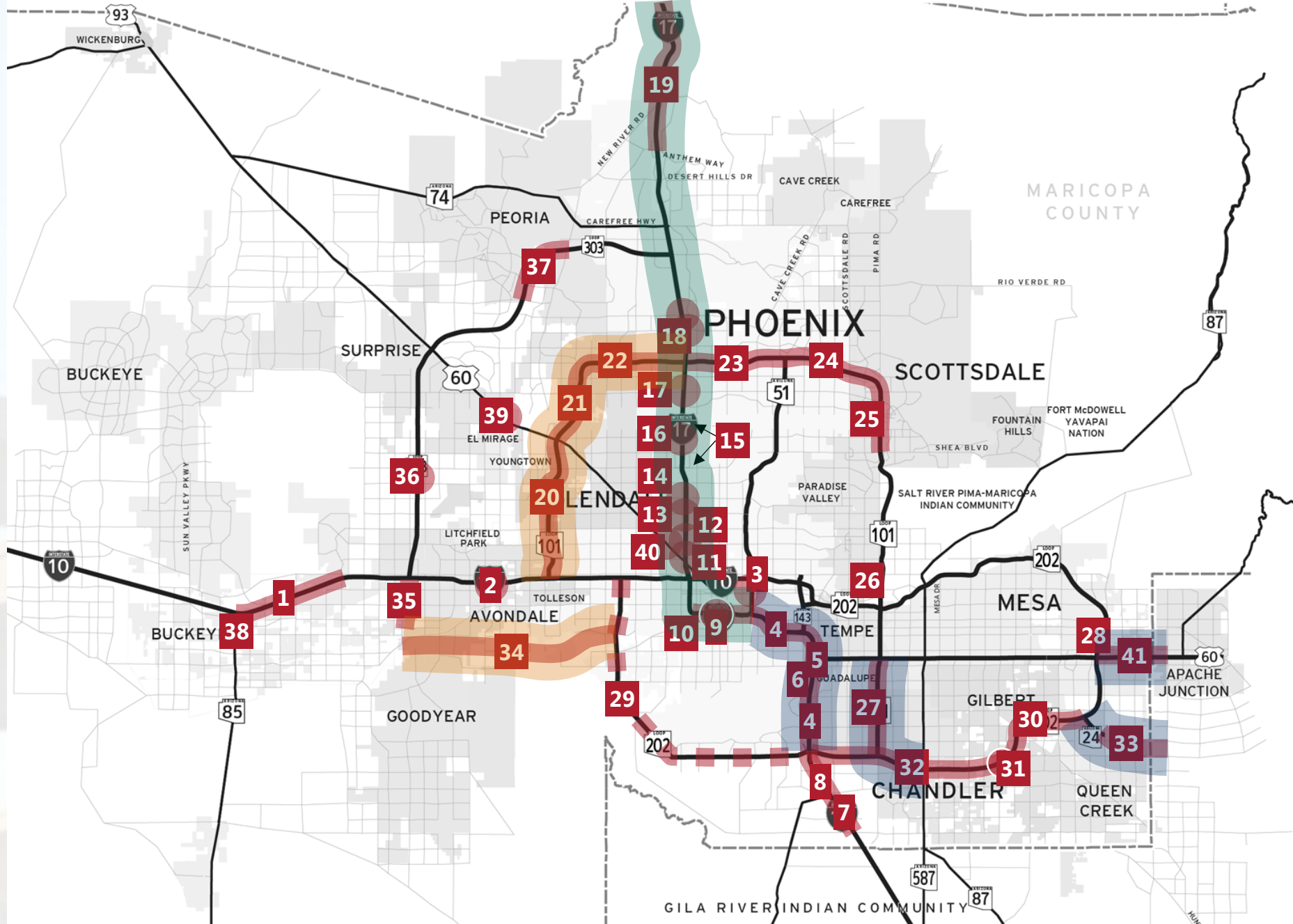
**Programmed Projects
\$2.00 billion**



**Rebalanced Projects
\$1.25 billion**

**Total Program
\$5.02 billion**





Regional Freeway and Highway Program – Project IDs

Next Steps

- **Regional Transportation Plan and Transportation Improvement Program Amendments** – to be developed this Fall.
- **Constant Cash Flow Monitoring** – in cooperation with ADOT and FHWA partners.
- **Quarterly Regional Freeway and Highway Program Reporting** – beginning now.



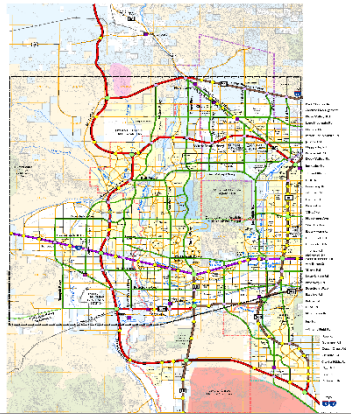
Map ID	Corridor	Limits	Predesign	Design	ROW/Utility	Construction
--	SR-202L	Construct New Freeway, I-10/Pecos to I-10/59th Ave	Complete	95% Complete	75% Complete	Open 12/2019
--	US-60	Thunderbird-Thompson Ranch, Rebuild Intersection	Complete	Complete	Complete	Open 12/2017
--	SR-303L	I-10 to Van Buren St, Complete Interchange	Complete	Complete	Complete	Open 12/2017
1	I-10	SR-85 to Verrado Way, Add Lanes	Underway			12/2018
2	I-10	Fairway Dr, New Interchange	Complete	Underway		4/2018
3	I-10	Sky Harbor West, Rebuild Interchange	Underway			12/2024
4	I-10	I-17 Split to SR-202L, Add Lanes	Underway			1/2021
9	I-17	Central Avenue Overcrossing	Underway	Start 10/2017		2/2019
10	I-17	I-10 Split to 19th Ave, Rebuild/Add Lanes	Underway			9/2024
12	I-17	Camelback Rd Traffic Interchange, Rebuild	Underway	Start 3/2019		1/2021
18	I-17	Happy Valley/Pinnacle Peak, Rebuild	Complete	Underway		1/2018
19	I-17	North of Anthem Way, Add Lanes	Underway			1/2020
23	SR-101L	I-17 to SR-51, Add Lanes	Complete	Underway		5/2019
24	SR-101L	SR-51 to Pima Rd, Add Lanes	Complete	Underway		4/2020
27	SR-101L	Baseline Rd to SR-202L/Santan, Add Lanes	Complete	Underway		1/2019
31	SR-202L	Lindsay Rd, New Interchange	80% Complete	City Lead		3/2021
33	SR-24	Ellsworth Rd to Ironwood Dr, Phase I	Complete	Underway		1/2019
34	SR-30	SR-303L to SR-202L, Phase I Construction	70% Complete			2/2022
35	SR-303L	MC-85 to Van Buren St	70% Complete			2/2021
37	SR-303L	Happy Valley Pkwy to Lake Pleasant Pkwy	50% Complete	Ready to Start		1/2019
38	SR-85	Warner St Bridge	Complete	Complete	Complete	1/2018
39	US-60	Greenway to Thompson Ranch, Rebuild Frontage Rd	Complete	80% Complete		10/2017
41	US-60	Crismon Rd to Meridian Rd, Add Lanes	95% Complete	Ready to Start		1/2020



MAJOR REGIONAL TRANSPORTATION PLAN AMENDMENTS

Interstate 11 and Arizona SR-30

2008



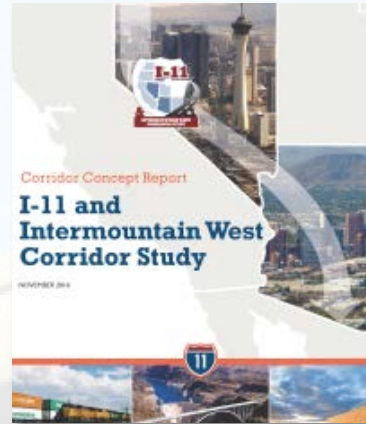
- Buckeye General Plan.
- Interstate 10/ Hassayampa Valley Framework Study.

2012



- MAP-21 designates Interstate 11 along US-93 between Metro Phoenix and Las Vegas.

2014



- ADOT/NDOT complete I-11 and Intermountain West Corridor Study.

2015



- FAST Act extends Interstate 11 south to Nogales in Arizona and north to Reno in Nevada.

2016



- ADOT begins Tier I EIS Study for segment between Nogales and Wickenburg (SIU 2, 3, 4).

Resolution supporting SIU 4 Corridor MAG Regional Council March 2014

Resolution by the Maricopa Association of Governments Regional Council supporting inclusion of:
MAG adopted, illustrative corridors; independent segments for environmental assessment; and
further study of the Alternative C through eastern Pima County as identified as part of the Interstate
I-11 and Intermountain West Corridor Study.

Whereas, the most recently enacted federal surface transportation funding legislation, Moving Ahead for
Progress in the 21st Century Act (MAP-21), amended the CANAMEX Corridor by adding the Interstate
I-11 (I-11) designation to U.S. Route 93 from the vicinity of Phoenix to Las Vegas; and

Whereas, ADOT and the Nevada Department of Transportation (NDOT) are jointly conducting a
transportation planning study called the I-11 and Intermountain West Corridor Study (hereinafter "I-11
Study"), which was initiated in 2012 and is scheduled for completion in mid-2014; and

Whereas, according to the I-11 Study's "Corridor Vision Summary" from October 2012, "The
Intermountain West is confronted with a rapidly growing population, expanding global trade, and aging
transportation infrastructure that is reaching capacity." The document also states that, "If extended north
of Las Vegas and south of Phoenix, this corridor has the potential to become a major multimodal north-
south transcontinental corridor through the Intermountain West. The Corridor would connect major
cities, existing and future trade hubs, existing and future domestic and international deepwater ports,
intersecting Interstate highways, and railroads."; and

Whereas, the current I-11 Study involves two levels of effort. A detailed alternatives analysis is being
conducted for the segment between Phoenix and Las Vegas, while high level visioning is being conducted
for the Southern Arizona Connectivity Segment from Phoenix to the Arizona/Mexico border; and

Whereas, the Maricopa Association of Governments is the designated transportation planning agency
under federal law for Maricopa County and portions of Pinal County.

Whereas, the MAG Regional Council adopted certain illustrative corridors for future consideration and
analysis as a result of the Interstate 10/Hassayampa Valley Roadway Framework Study and the Interstate
8 and 19/Hidden Valley Roadway Framework Study. Through an extensive transportation planning and
public involvement effort for both studies, the Hassayampa Freeway Corridor, which provides the link
between I-10 and U.S. 93 in Wickenburg and also provides a corridor south of I-10 into Pinal County.

Whereas, for the universe of potential alternatives identified for the Southern Arizona Connectivity
Segment of the I-11 Study, an October 2013 technical memorandum was developed, entitled "Draft
Level I Evaluation Results Summary." This document recommends only one of the Southern Arizona
Connectivity Segment alternatives for future analysis, which is Alternative C. This alternative travels
through the Tucson region to connect to Mexico at Nogales. The opportunities for this alternative,
identified through this evaluation, include connecting major freight and economic activity centers within
Arizona and Mexico throughout the entire corridor. It also references the capacity of land ports of entry
in Nogales to accommodate major passenger and freight traffic; and

Whereas, federal guidance for MPO planning includes activities that increase the accessibility and mobility
of people and freight. It also includes projects and strategies to "support the economic vitality of the

metropolitan area, especially by enabling global competitiveness, productivity, and efficiency" (23 USC
134(h)); and

Whereas, the Pima Association of Governments Regional Council approved a resolution on January 23,
2014, supporting further study of the Southern Arizona Connectivity Segment's Alternative C through
Eastern Pima County as identified as part of the I-11 and Intermountain West Corridor Study; and

Whereas, the Maricopa Association of Governments and Pima Association of Governments participate
in the Joint Planning Advisory Council to address issues of growth, development and economic
opportunity in the Sun Corridor megaregion.

Therefore, be it resolved that:

The MAG Regional Council understands that the I-11 and Intermountain West Corridor is an important
surface transportation facility for trade, economic development, economic expansion, and mobility.

The MAG Regional Council respectfully requests that the MAG adopted, illustrative corridors, including
the Hassayampa and Hidden Valley studies, be shown on all of the relevant maps of study alternatives and
as part of the I-11 studies.

The MAG Regional Council requests that the current I-11 study also identify I-11 segments that are of
independent utility with logical termini that will allow subsequent environment assessments for each
segment to move forward as soon as possible.

The MAG Regional Council supports the draft recommendation for the Southern Arizona Connectivity
Segment calling for further study of Alternative C through eastern Pima County. Such further study should
integrate efforts with those of the Phoenix to Las Vegas segment, resulting in a contiguous corridor from
Arizona's southern border with Mexico to the state's northern border with Nevada.

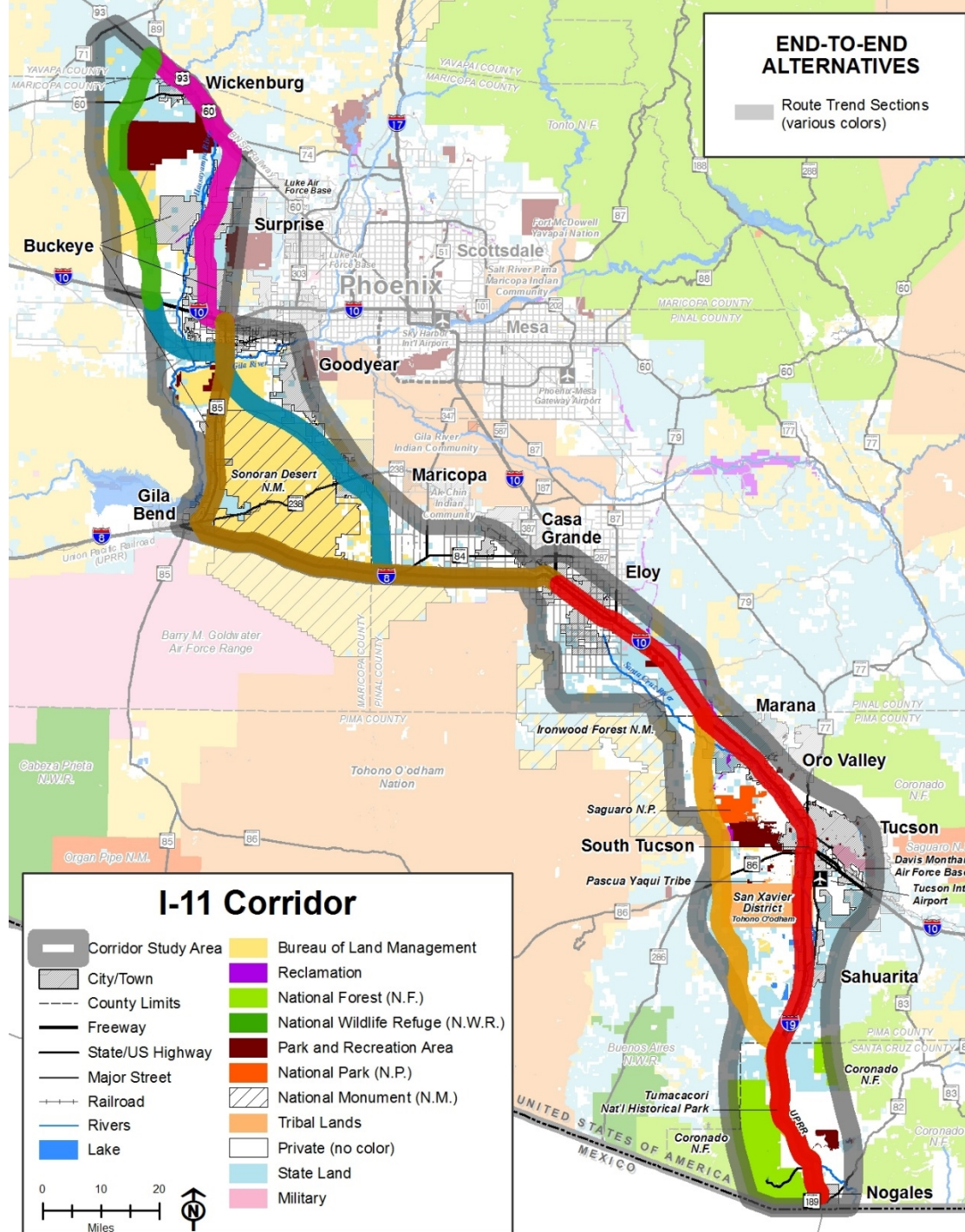
The MAG Regional Council understands that detailed analysis of the Southern Arizona Connectivity
Segment's Alternative C must involve examining a range of feasible alternatives as required by the Federal
Highway Administration's National Environmental Policy Act.

PASSED AND ADOPTED BY THE MARICOPA ASSOCIATION OF GOVERNMENTS this 26th
day of March, 2014.

ATTEST:


Scott Smith, Mayor of Mesa, Chair


Dennis Smith, Executive Director

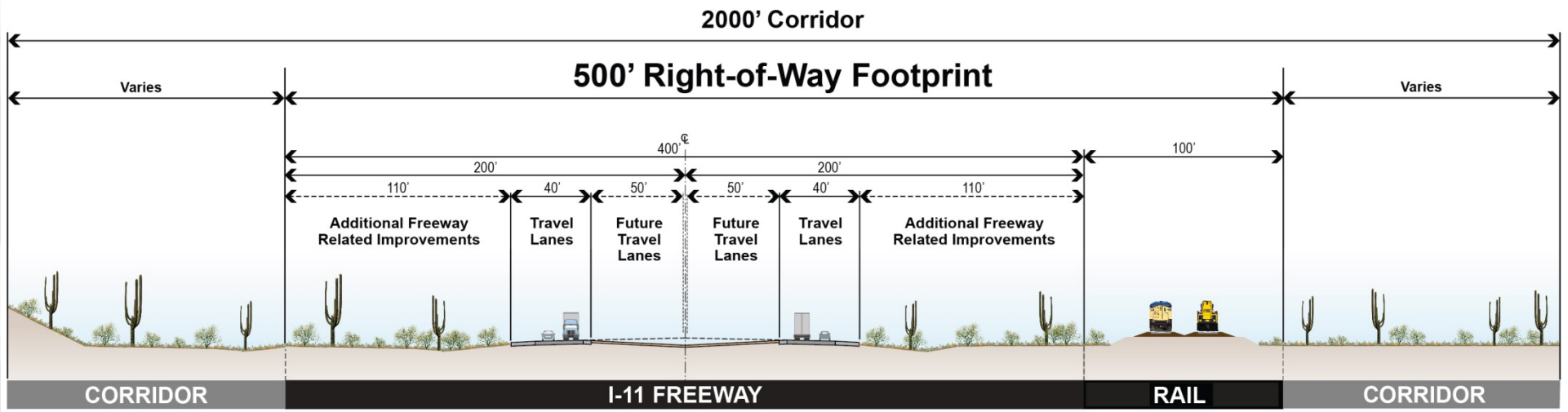
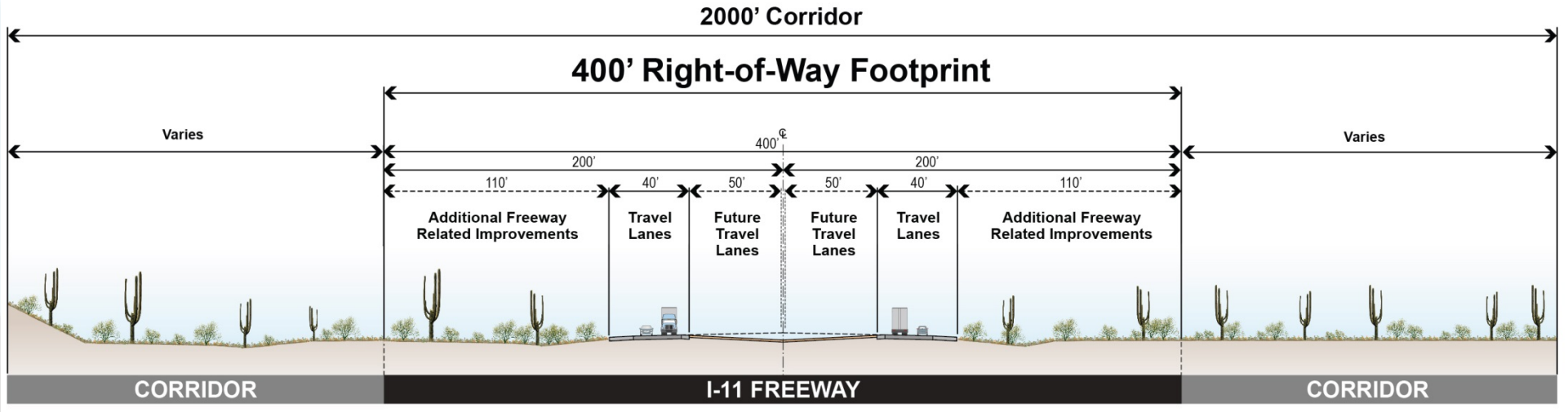


Present Corridor Alternatives under consideration in Tier I EIS

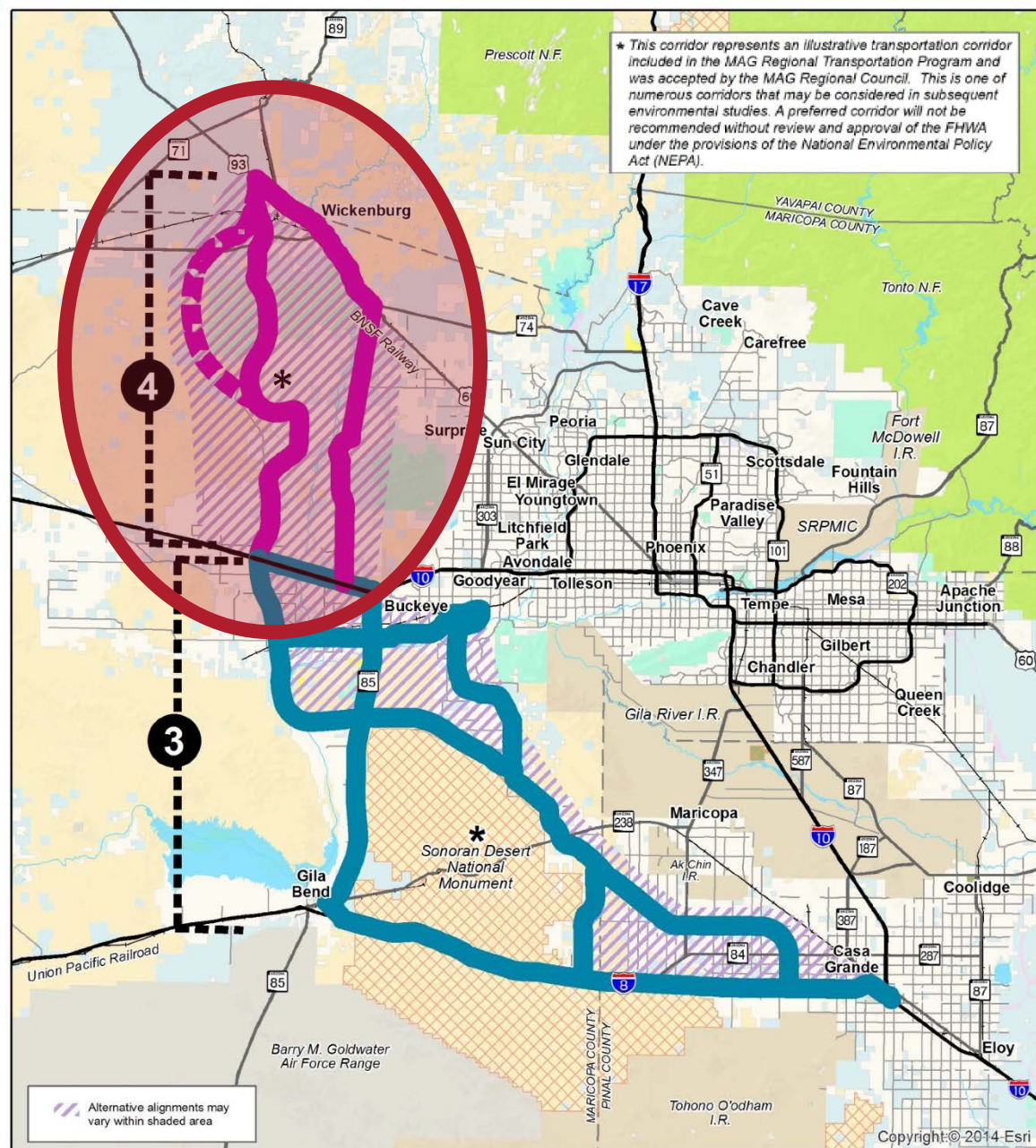
ADOT I-11 Tier I Environmental Impact Statement Study
April 2017

Tiered EIS Studies Outcomes

Activities	Tier 1 “Programmatic” EIS	Tier 2 “Project” Environmental Reviews
NEPA Class of Action	Tier 1 EIS	EIS, EA, or CE
Purpose and Need	<ul style="list-style-type: none"> Refine purpose and need from prior feasibility study Consider federal, state, regional, and local needs 	<ul style="list-style-type: none"> Refine purpose and need from Tier 1 Address needs specific to proposed project
Alternatives	<ul style="list-style-type: none"> Develop, evaluate, and screen corridor alternatives Identify types of proposed transportation facility 	Define project alignment and configuration <ul style="list-style-type: none"> Identify potential design options
Engineering	<ul style="list-style-type: none"> Very conceptual design Typical sections for proposed transportation facility Phased Implementation Plan for smaller proposed projects 	More refined engineering <ul style="list-style-type: none"> Detailed drawings, vertical profiles, and typical sections Access details and interchange design
Analysis	<ul style="list-style-type: none"> Broad, high-level Relies heavily on readily available information Primarily geographic information system (GIS) based 	<ul style="list-style-type: none"> Site-specific resource information, impacts, and mitigation
Agency and Public Input	<ul style="list-style-type: none"> Identify key issues early Build consensus 	<ul style="list-style-type: none"> Established relationships No surprises
Proposed Action	<ul style="list-style-type: none"> Select Preferred Corridor Alternative (2000 feet wide) Proposed transportation facility Phased Implementation Plan Mitigation strategies 	<ul style="list-style-type: none"> Select well-defined project alignment and configuration Right-of-Way Requirements <ul style="list-style-type: none"> Specific mitigation commitments



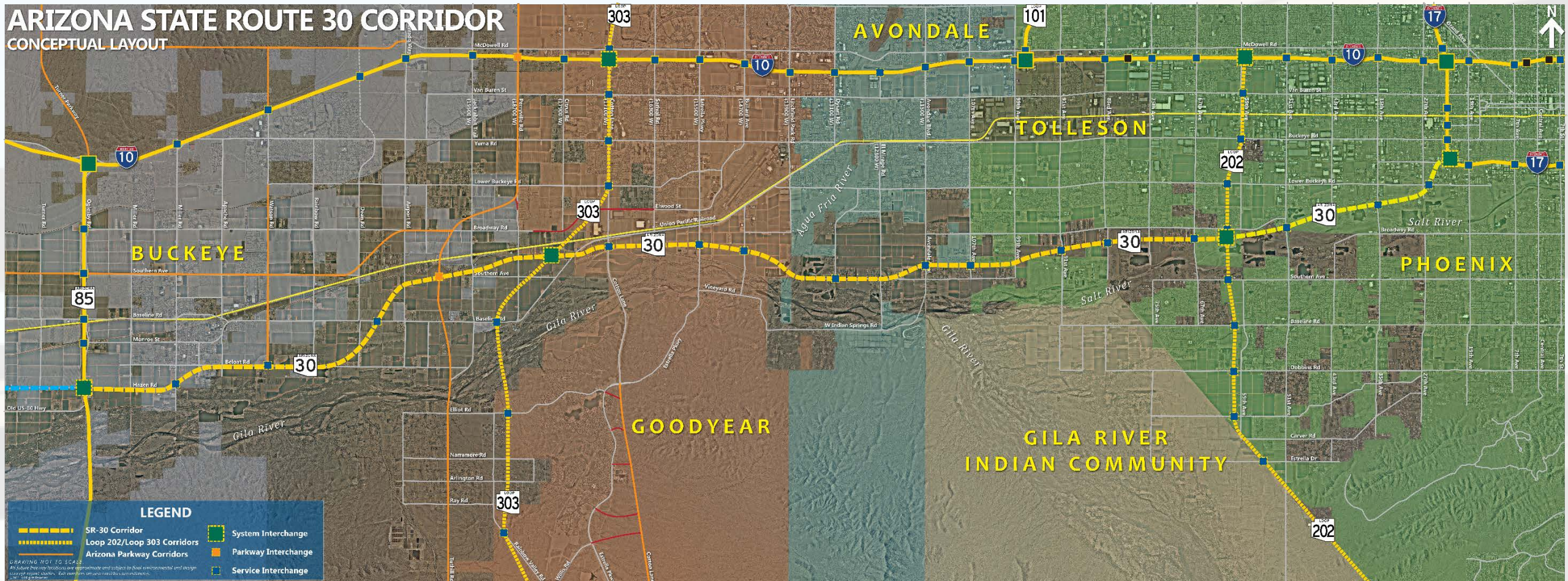
What a 2000-ft Corridor Means



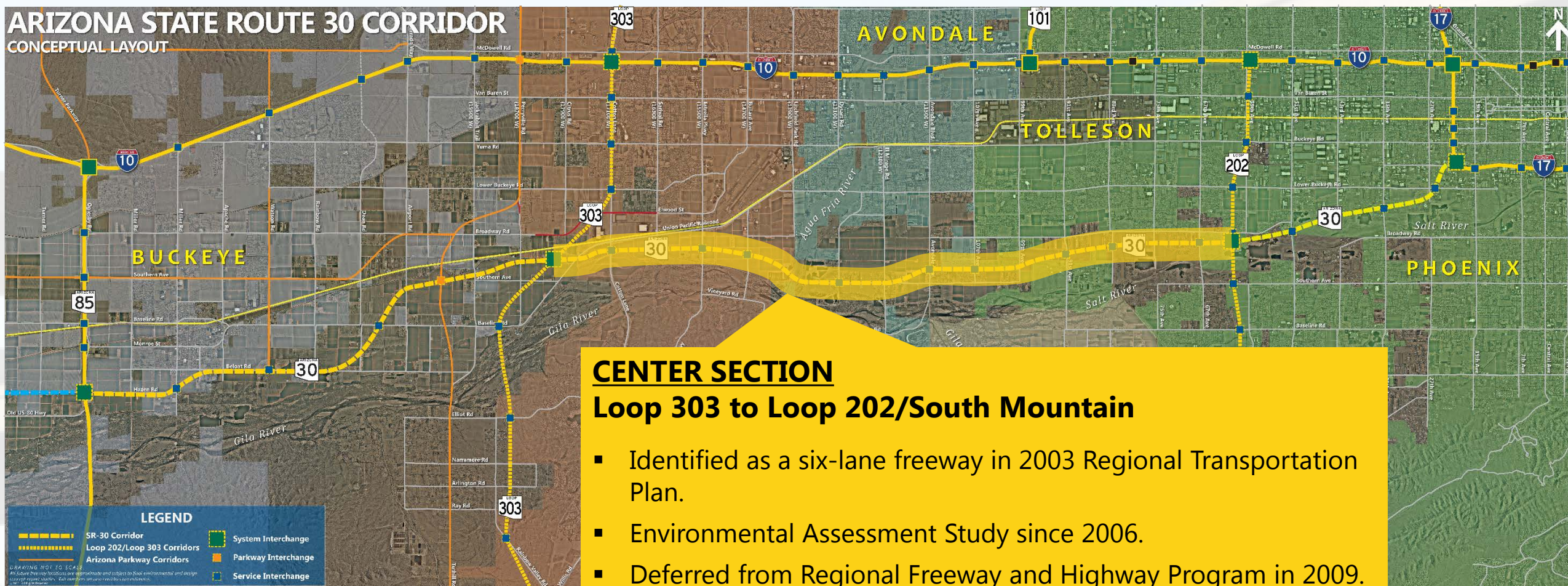
Purpose of Major Amendment

MAG 2040 Regional Transportation Plan

ARIZONA STATE ROUTE 30 CORRIDOR CONCEPTUAL LAYOUT



ARIZONA STATE ROUTE 30 CORRIDOR CONCEPTUAL LAYOUT

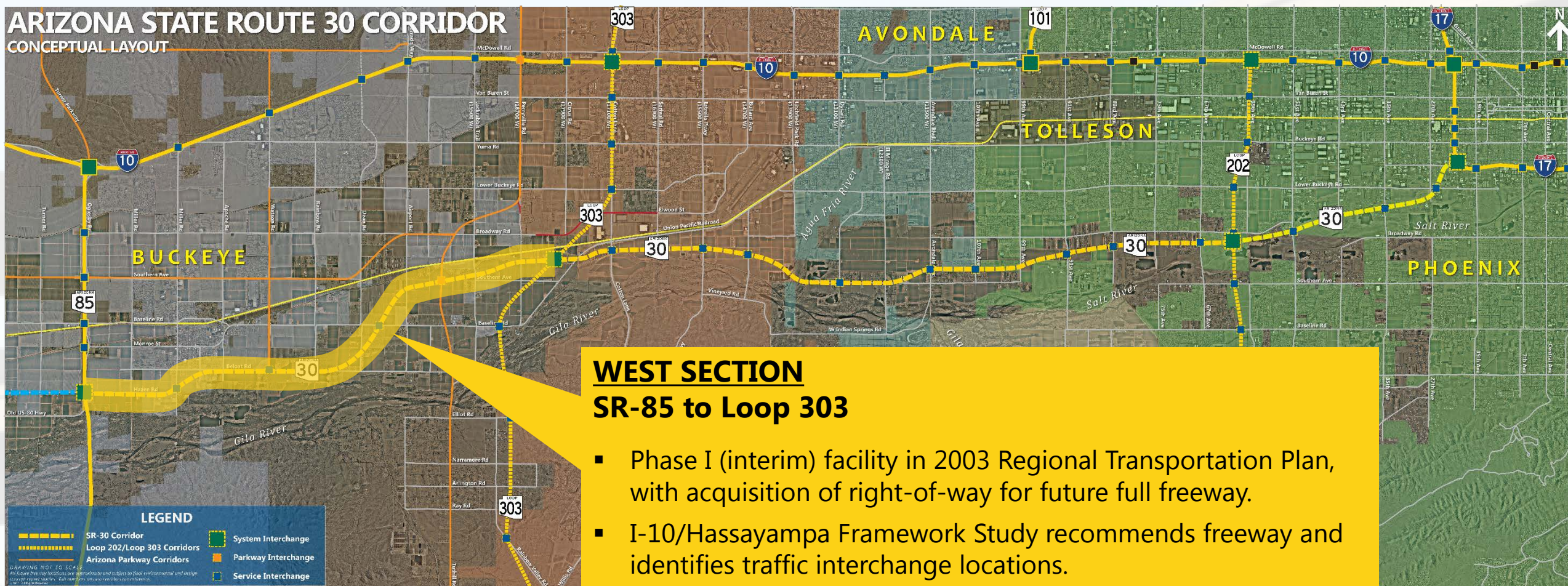


CENTER SECTION

Loop 303 to Loop 202/South Mountain

- Identified as a six-lane freeway in 2003 Regional Transportation Plan.
- Environmental Assessment Study since 2006.
- Deferred from Regional Freeway and Highway Program in 2009.
- Phase I (Interim) Facility returned to program in 2017.

ARIZONA STATE ROUTE 30 CORRIDOR CONCEPTUAL LAYOUT

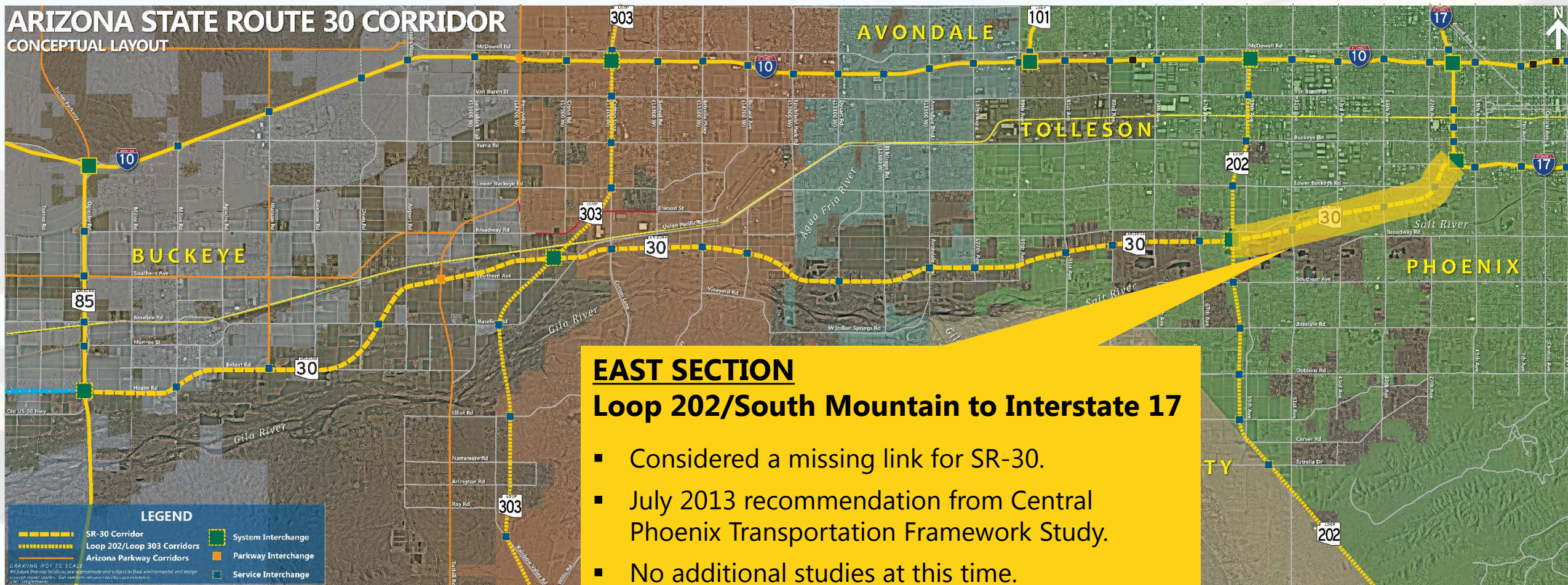


WEST SECTION SR-85 to Loop 303

- Phase I (interim) facility in 2003 Regional Transportation Plan, with acquisition of right-of-way for future full freeway.
- I-10/Hassayampa Framework Study recommends freeway and identifies traffic interchange locations.
- Deferred from Program in 2009.

All SR-30 and Loop 303 (south of Van Buren St) route locations depicted are illustrative and may change after appropriate environmental studies are cleared.

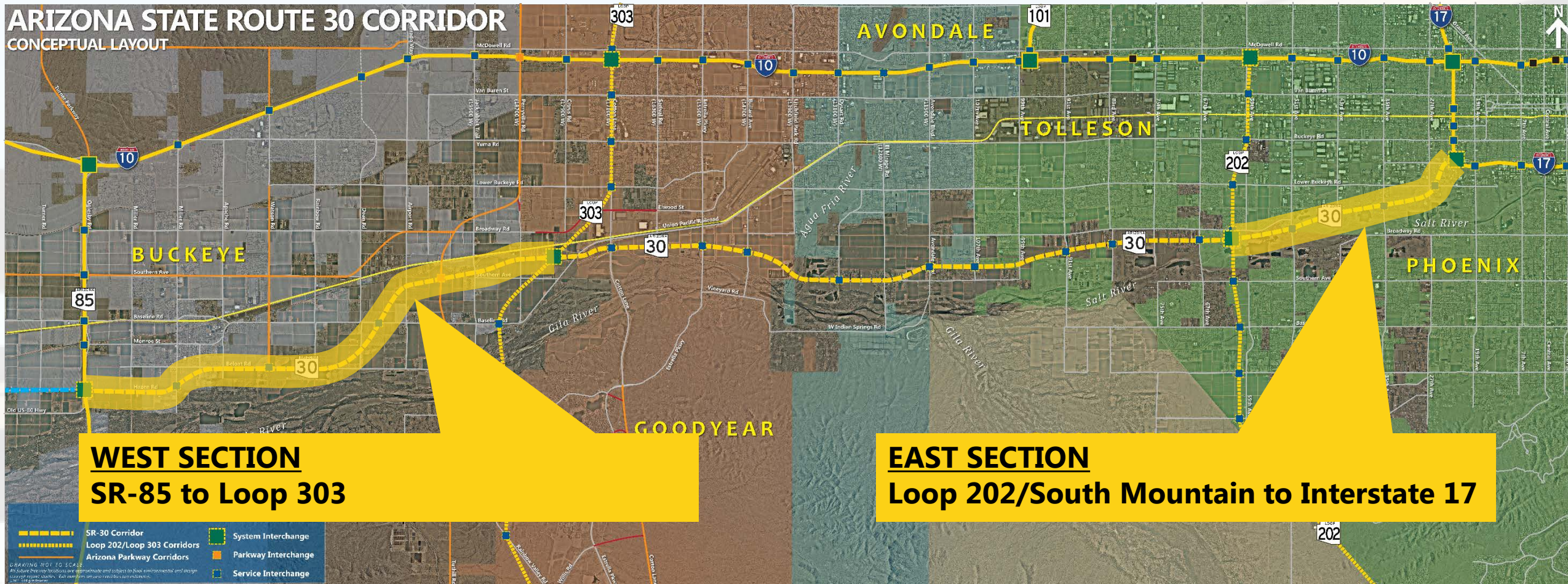
ARIZONA STATE ROUTE 30 CORRIDOR CONCEPTUAL LAYOUT



EAST SECTION

Loop 202/South Mountain to Interstate 17

- Considered a missing link for SR-30.
- July 2013 recommendation from Central Phoenix Transportation Framework Study.
- No additional studies at this time.



Purpose of Major Amendment

All SR-30 and Loop 303 (south of Van Buren St) route locations depicted are illustrative and may change after appropriate environmental studies are cleared.

Major Regional Transportation Plan Amendment

Per Arizona Revised Statutes (A.R.S.) 28-6353:

- Consideration by the TPC.
- If reasonable, the recommendation is submitted for review by the Regional Public Transportation Authority, the State Transportation Board, the Maricopa County Board of Supervisors, Indian Communities, Cities, Towns, and the Citizens Transportation Oversight Committee.
- After review, a majority vote on the recommendation is needed from the Regional Public Transportation Authority, the State Transportation Board, and the Maricopa County Board of Supervisors.
- The TPC must consider any written recommendations submitted by the reviewing entities.
- The TPC shall recommend approval, disapproval or modification of the proposed amendment to the Regional Council for consideration.



Major Regional Transportation Plan Amendment

Date	Agency	Action
April 2017	Transportation Policy Committee Regional Council	Approve concept and request consultation on Major Regional Transportation Plan Amendment.
June/July 2017	Regional Public Transportation Authority State Transportation Board Maricopa County Board of Supervisors	Recommend approval of the Major Regional Transportation Plan Amendment.
August 2017	Transportation Policy Committee Regional Council	Recommend Major Amendment to the MAG Regional Transportation Plan, contingent upon finding of air quality conformity.
September 2017	Regional Council	Final action to amend the MAG Regional Transportation Plan.
October 2017	US Department of Transportation	Finding of air quality conformity.



MAG's Major Amendments to the Regional Transportation Plan

State Transportation Board
May 30, 2017