

For information and discussion.

Update on Central Phoenix Transportation Framework Study

Transportation Review Committee
September 26, 2013

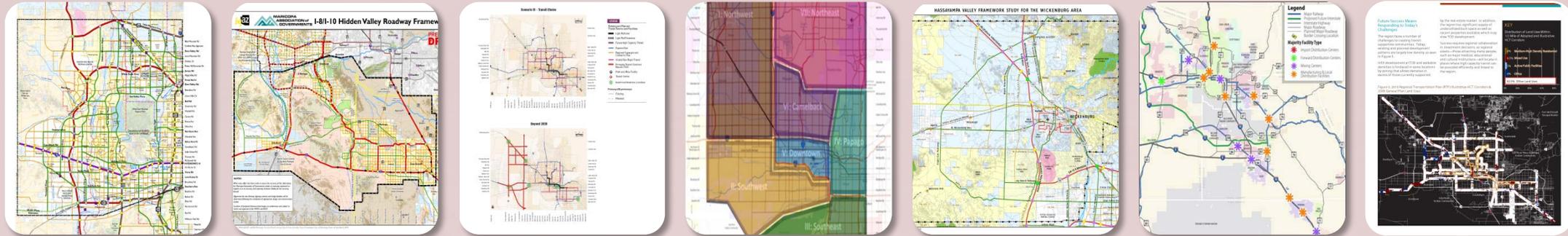


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East Sky Harbor Blvd Traffic Interchange

MAG Framework Studies



**Interstate 10/
Hassayampa
Valley
Roadway
Framework
Study**

**Interstates 8
and 10/
Hidden Valley
Transportation
Framework
Study**

**Regional
Transit
Framework
Study**

**Central
Phoenix
Transportation
Framework
Study**

**Hassayampa
Framework
Study for the
Wickenburg
Area**

**Freight
Transportation
Framework
Study**

**Sustainable
Transportation
and Land Use
Integration
Study**

Inform the Planning Process > MAG REGIONAL TRANSPORTATION PLAN

Project Timeline

CENTRAL PHOENIX TRANSPORTATION FRAMEWORK STUDY

2011

- Project Initiation.
- Data Collection and Analysis.
- **Public Outreach: Focus Groups and Geographic Dialogues.**
- Identify Range of Alternatives and Possibilities:
 - Freeways.
 - Arterials.
 - Transit.
 - Bikes.
 - Pedestrians.
- Contrast between current and future needs.

2012

- Deficiency Analysis on Eight Million Population Scenario.
- **Initial Planning Charette – Improvement Strategies “Definition of Possibilities.”**
- Catalogue in Master Database and assess implementation potential.
- Determine Study Output.
- **Second Planning Charette – I-10/I-17 “Spine Corridor” to inform the Corridor Master Plan.**

2013

- Planning Paper Work Products.
- Planning Partner and Partner Agency Reviews.
- Recommendations.
- **Strategies and Policy Recommendations to inform the NexGen Regional Transportation Plan.**

We are here.

Work Products



BUILDING A QUALITY ARIZONA
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Improvement Strategies



"Spine Corridor"



Freeway System Plan



SR-30 Corridor Extension



DHOVs and Park-n-Rides



DHOVs



ATM Deployment



Roadway Maintenance



Freeway Interchange Options



Arterial Planning and Programing



Transit Strategies



Pedestrian/Bicycle Strategies



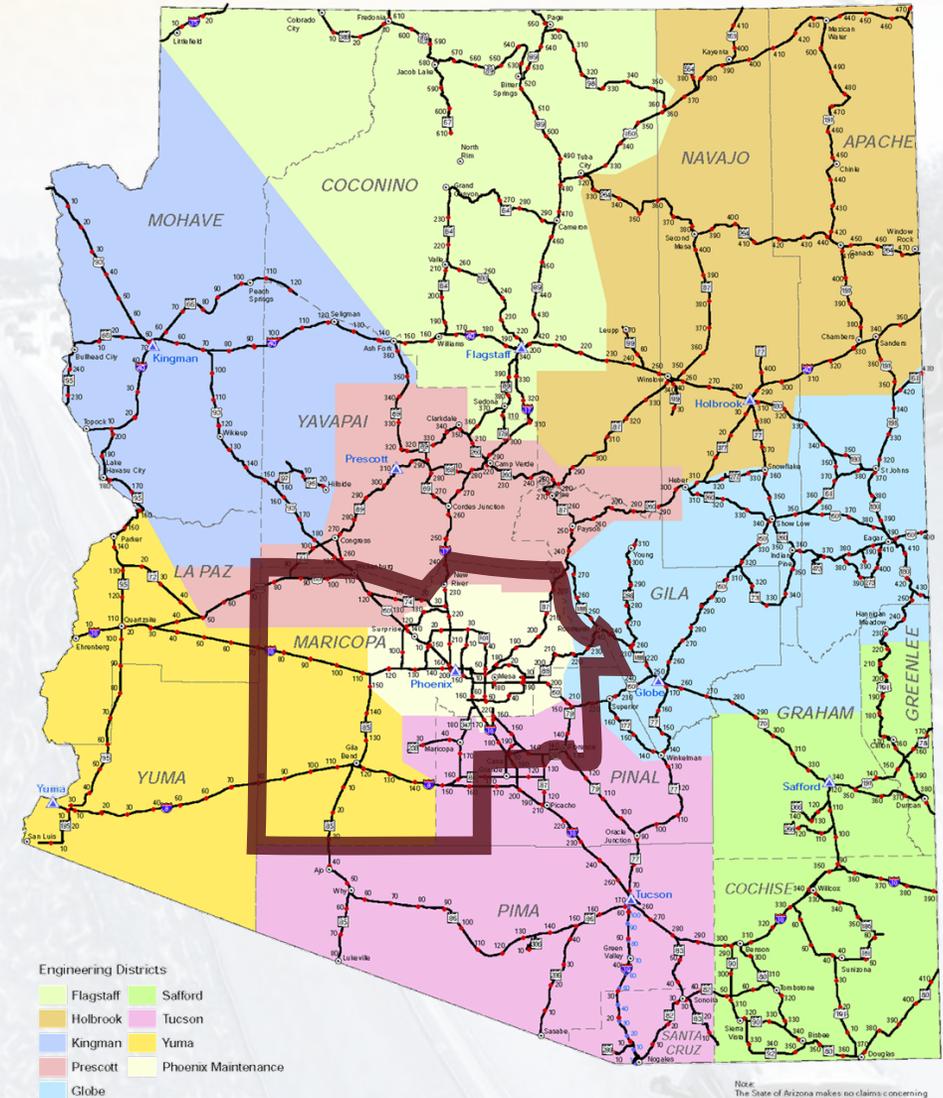
Executive Summary Poster

MAG Region ADOT Districts

District	Lane-Miles	Percent
Globe	70	1%
Phoenix*	4,900	70%
Prescott	375	5%
Tucson	635	9%
Yuma	1,020	15%
Total	7,000	100%

*ADOT Phoenix is divided into Engineering and Maintenance Districts.

ADOT Engineering and Maintenance Districts with State Milepost System



Engineering Districts

- Flagstaff
- Safford
- Holbrook
- Tucson
- Kingman
- Yuma
- Prescott
- Phoenix Maintenance
- Globe

▲ District Office • Milepost — State Highway System
● Cities and Towns • Kilometer Post - - - County Boundaries

Note: The State of Arizona makes no claims concerning the accuracy of this map nor assumes any liability resulting from the use of the information herein.

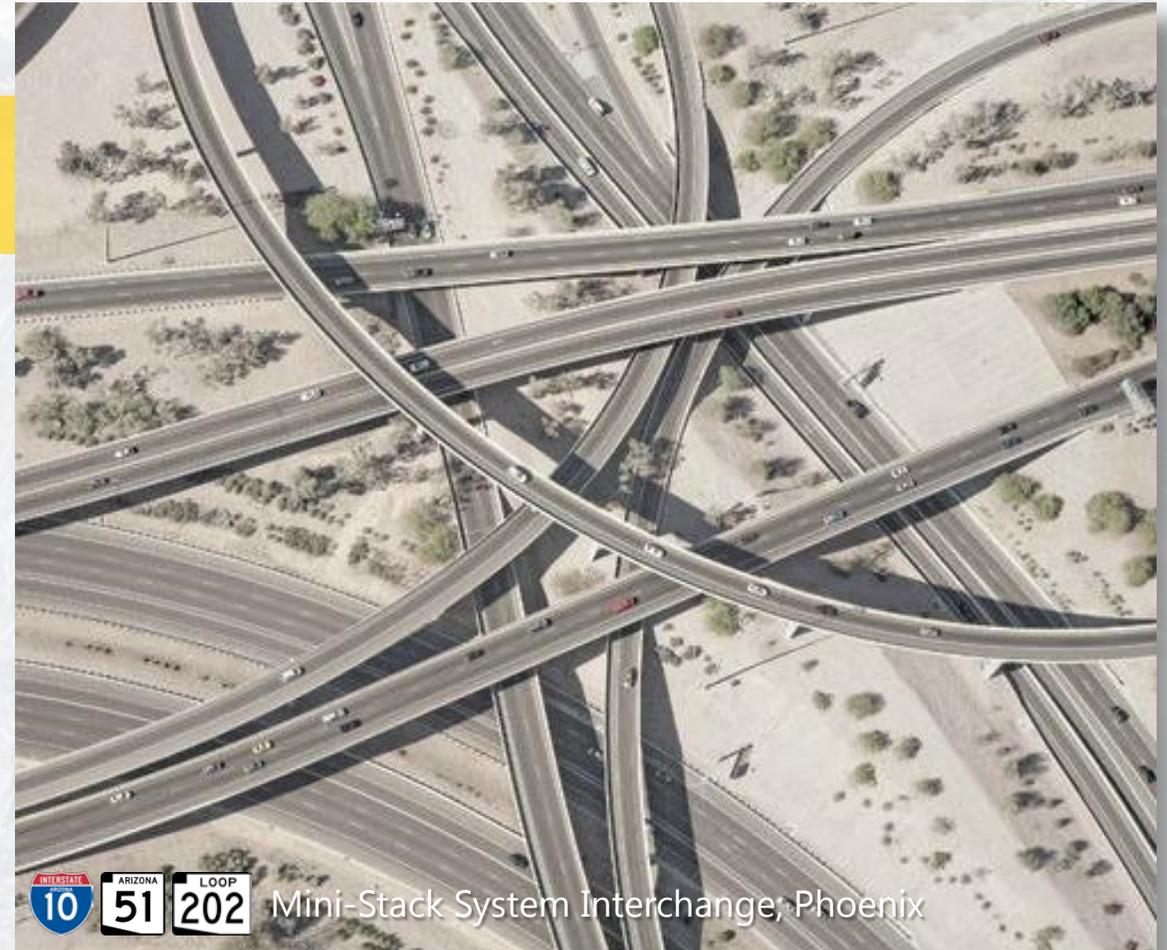
Prepared by:
 Arizona Department of Transportation
 Multimodal Planning Division
 Transportation Analysis-GIS Section
 (602) 712-2333 May 2012

0 15 30 60 Miles

Operations and Maintenance “Bubble”

- ADOT Phoenix Maintenance District facts:

- **4,900 lane-miles of roadway**
- **877 bridges**
- 109 miles of drainage channels
- 150 miles of sound walls
- 70 pump stations/245 pumps
- 174 miles of freeway management
 - 108 dynamic message signs
 - 193 cameras
- 220 miles of freeway landscaping maintenance
- 167 traffic signals/215 ramp meters
- 13,231 luminaries for street lights



Mini-Stack System Interchange, Phoenix

ADOT Roadways within MAG Region

890

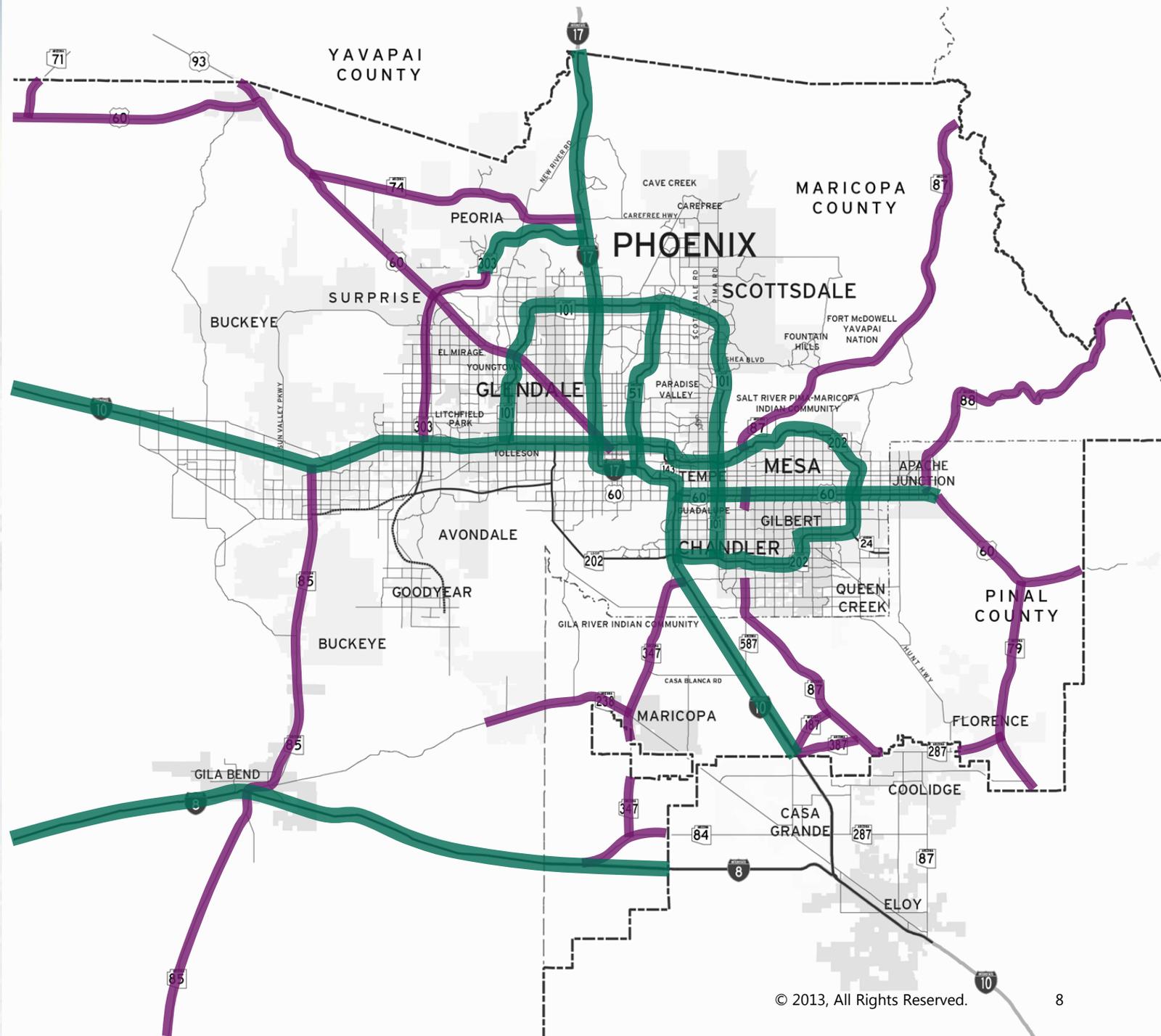
Center-Line Miles

445

Freeway Miles

445

Highway Miles

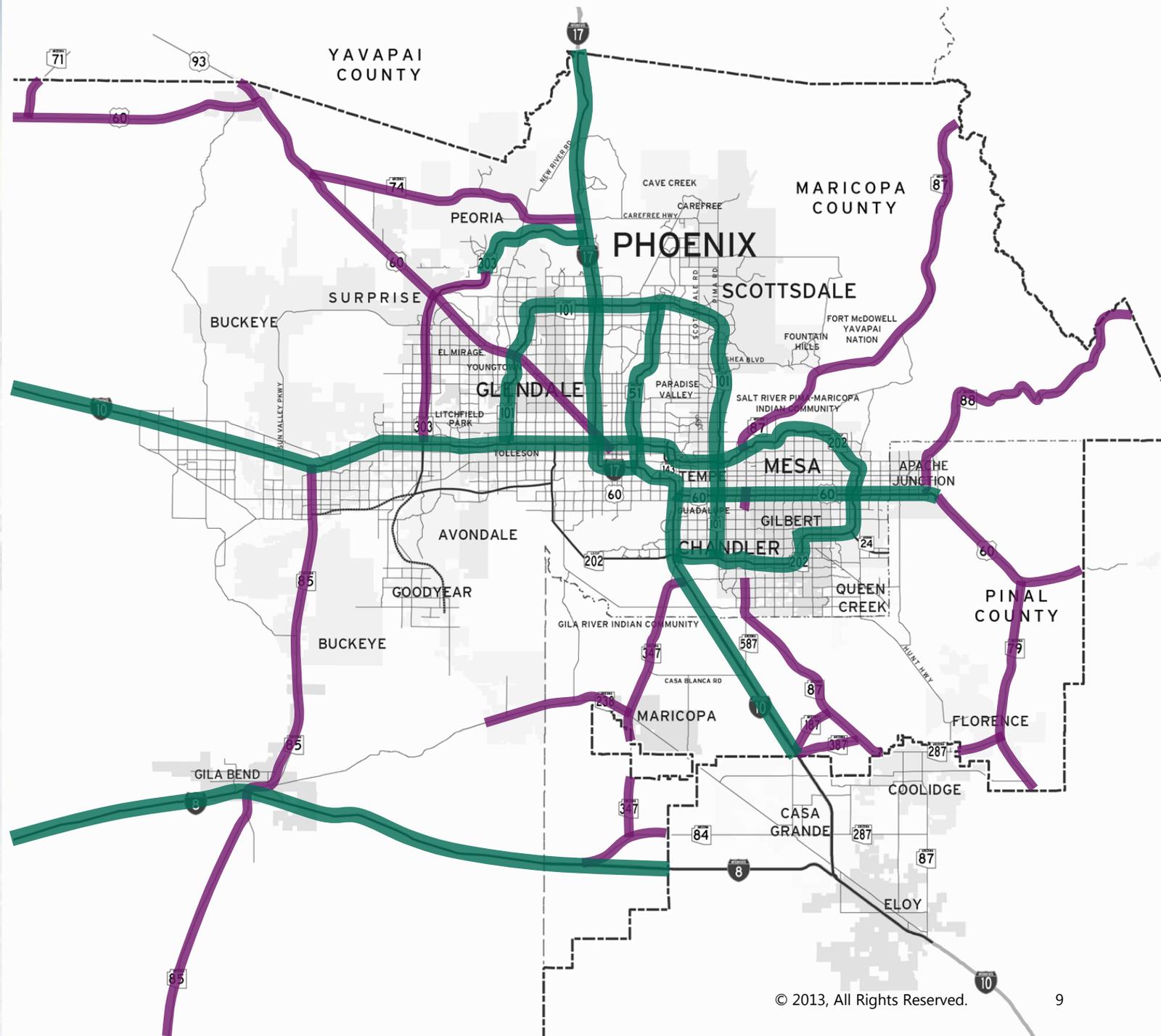


ADOT Roadways within MAG Region

7,000
Lane-Miles

5,300
Freeway Lane-Miles

2,700
Highway Lane-Miles



ADOT Roadways within Central Phoenix Area

165

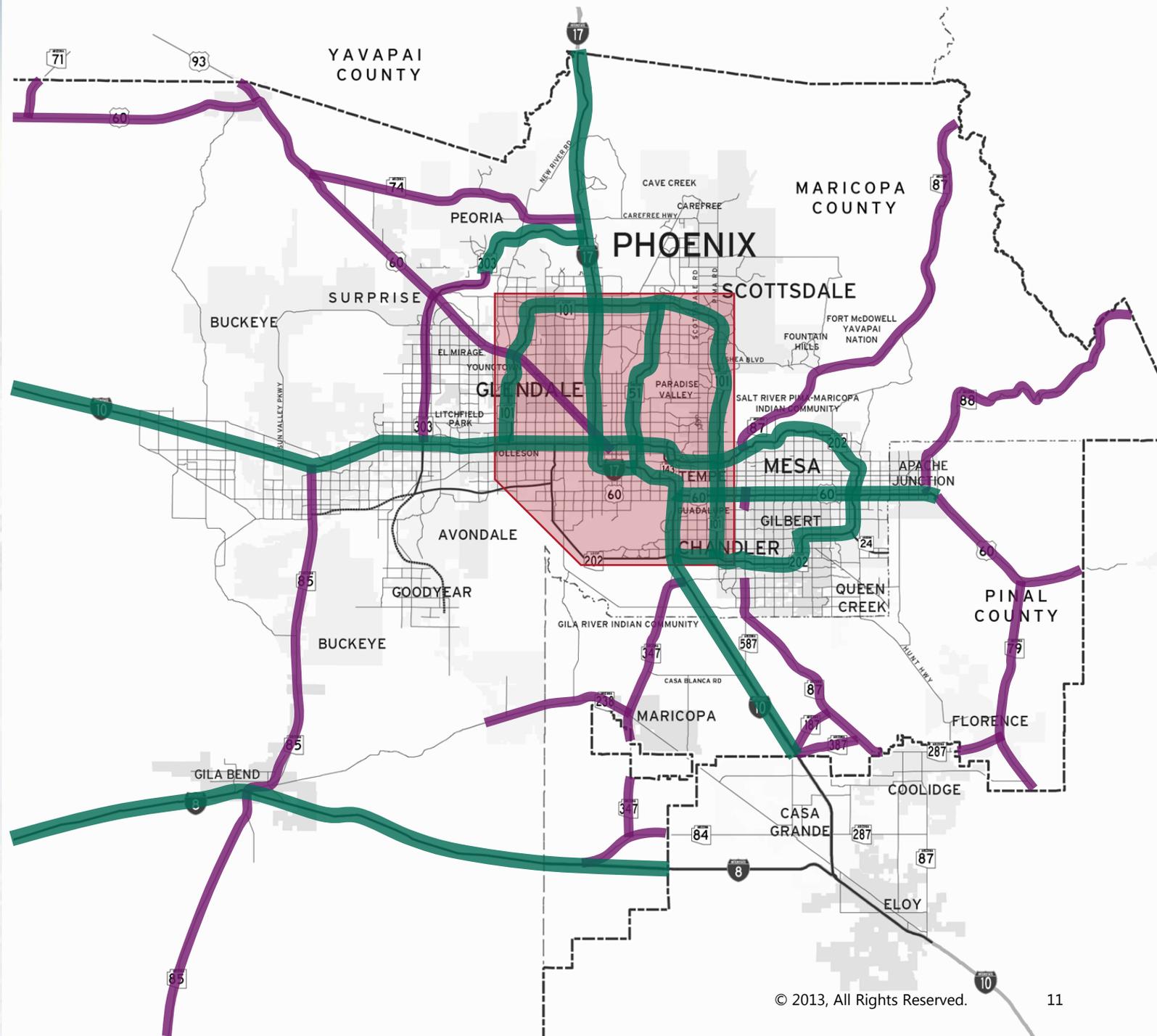
Center-Line Miles

150

Freeway Miles

15

Highway Miles



2013 Operations and Maintenance Costs

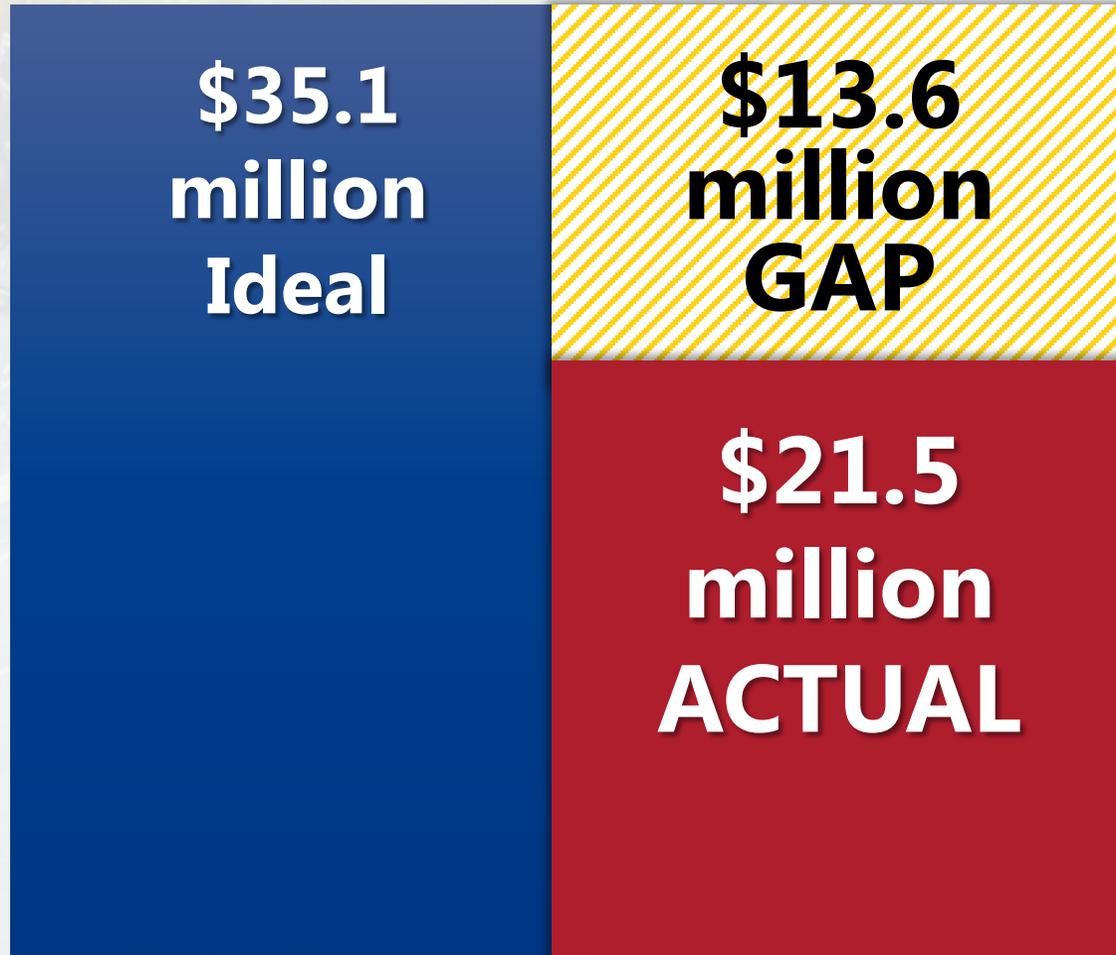
MAG REGIONAL FREEWAY AND HIGHWAY PROGRAM



- Pavement Preservation (not Quiet Pave).
- Bridge Scour and Deck Maintenance.
- Drainage/Pumps.
- Deck Park Tunnel.
- Lighting.
- Traffic Operations.
- Litter/Graffiti.
- Signs, Signals, and Striping.

2013 Operations and Maintenance Costs

CENTRAL PHOENIX STUDY AREA ROADWAYS



- Pavement Preservation (not Quiet Pave).
- Bridge Scour and Deck Maintenance.
- Drainage/Pumps.
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- Signs, Signals, and Striping.

Operations and Maintenance Costs with New Corridors

ENTIRE MAG PROGRAM

**\$80.8
million**

**Existing
System**

**\$91.6
million**

**With
Opening of
Loop 303,
Loop 202,
I-10/I-17**

**Total Operations and Maintenance thru 2040
\$2.4 billion**

2013

by 2025

Operations and Maintenance Costs with New Corridors

CENTRAL PHOENIX AREA

**\$35.1
million**

**Existing
System**

**\$44.3
million**

**With
Opening of
Loop 202,
I-10/I-17**

**Total Operations and Maintenance thru 2040
\$1.2 billion**

2013

by 2025

“Big Budget” Maintenance Items

By 2040:

- Quiet Pavement Replacement – up to **three applications**.
- Interstate 10/Interstate 17 traffic interchange - “The Stack” - structure rehabilitation and deck replacement.
- Deck Park Tunnel Maintenance.
- Pump Replacement and Rehabilitation.



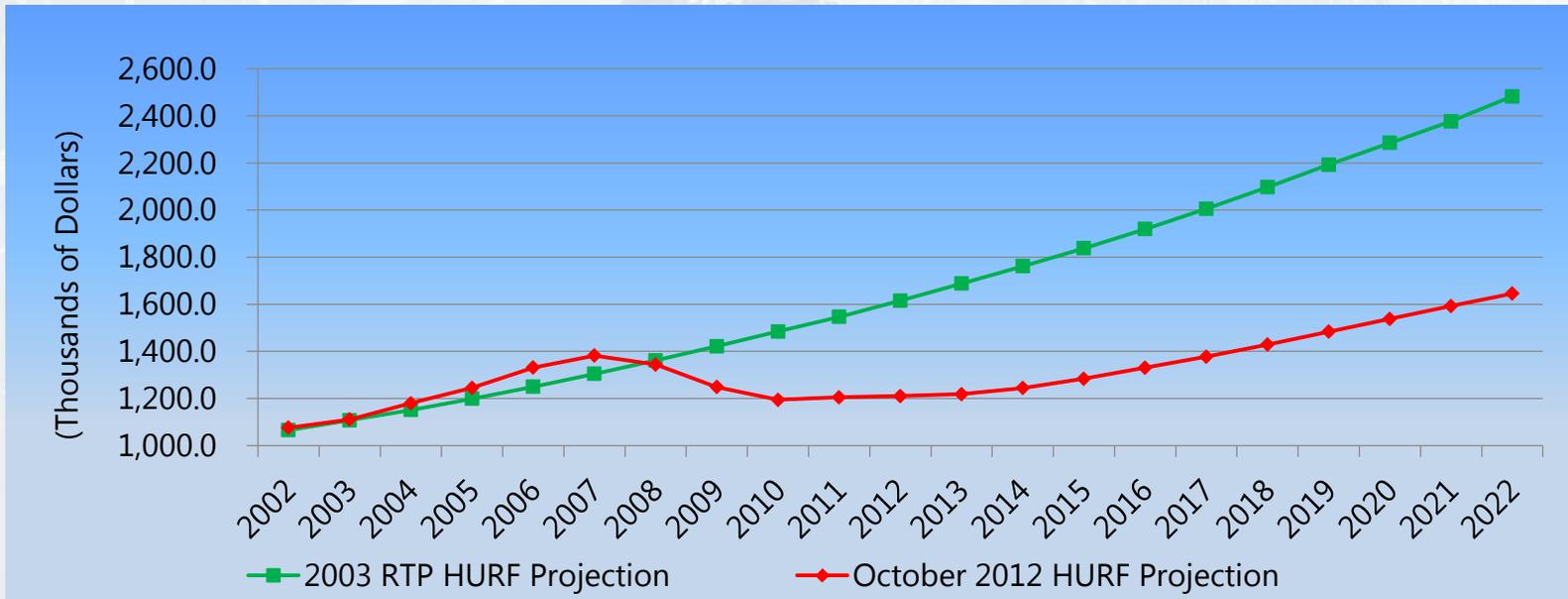
Rough Estimate - \$1.0 billion

Local Agency Operations and Maintenance

- Average cost for municipal street operations and maintenance is **\$15,000 per lane-mile per year.**
- Central Phoenix study opportunities to **address known bottlenecks** while at the same time consider potential **complete streets** and provisions for **transit and pedestrian friendly amenities.**
- Should there be a distinction to **identify surface street improvements** and maintenance that is **regionally significant?**

Major Regional Improvements			
PROGRAM	FUNDED	UNFUNDED	TOTAL
Arterial Streets	\$715,000,000	\$753,000,000	\$1,468,000,000
Bridges (New)	\$112,000,000	\$751,000,000	\$863,000,000
Bridges (Maint/Rehab/Replacement)	\$34,000,000	\$52,000,000	\$86,000,000
Intersection Restoration	\$17,000,000	\$94,000,000	\$111,000,000
Regional Transportation Plan	\$229,000,000	\$313,000,000	\$542,000,000
Rehabilitation Program	\$468,000,000	\$357,000,000	\$825,000,000
Total Major Regional Improvements	\$1,575,000,000	\$2,320,000,000	\$3,895,000,000
Major Drainage Improvements			
PROGRAM	FUNDED	UNFUNDED	TOTAL
Detention Basins and Channels	\$83,000,000	\$489,000,000	\$572,000,000
Storm Sewers/Storm Sewer Rehab	\$125,000,000	\$341,000,000	\$466,000,000
Total Major Drainage Improvements	\$208,000,000	\$830,000,000	\$1,038,000,000
Other Local Improvements			
PROGRAM	FUNDED	UNFUNDED	TOTAL
ADA Compliance	\$6,000,000	\$28,000,000	\$34,000,000
Bikeway/Pedestrian Bridge/Tunnel	\$22,000,000	\$21,000,000	\$43,000,000
Dam and Levee Safety Program	\$2,000,000	\$15,000,000	\$17,000,000
Dust Control	\$32,000,000	\$8,000,000	\$40,000,000
Landscape Retrofit/Screen Walls	\$53,000,000	\$18,000,000	\$71,000,000
Local Drainage	\$47,000,000	\$154,000,000	\$201,000,000
Local Street Modernization	\$139,000,000	\$161,000,000	\$300,000,000
Safety Projects/Traffic Calming	\$42,000,000	\$26,000,000	\$68,000,000
Signals (New)	\$77,000,000	\$23,000,000	\$100,000,000
Signal System Upgrade	\$25,000,000	\$52,000,000	\$77,000,000
Total Other Local Improvements	\$445,000,000	\$506,000,000	\$951,000,000
Total Infrastructure Needs	2,228,000,000	3,656,000,000	5,884,000,000

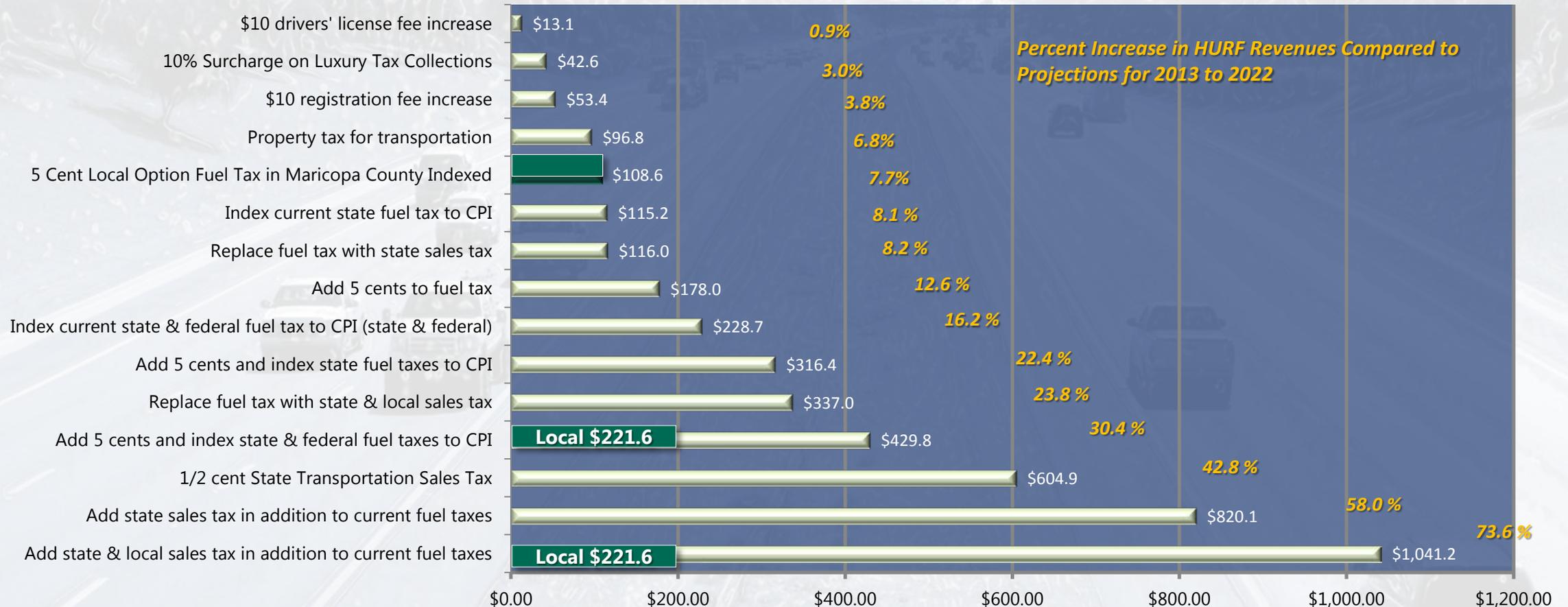
Sales tax revenues \$6.0 billion below 2003 forecast



Statewide HURF revenues \$7.5 billion below 2003 forecast

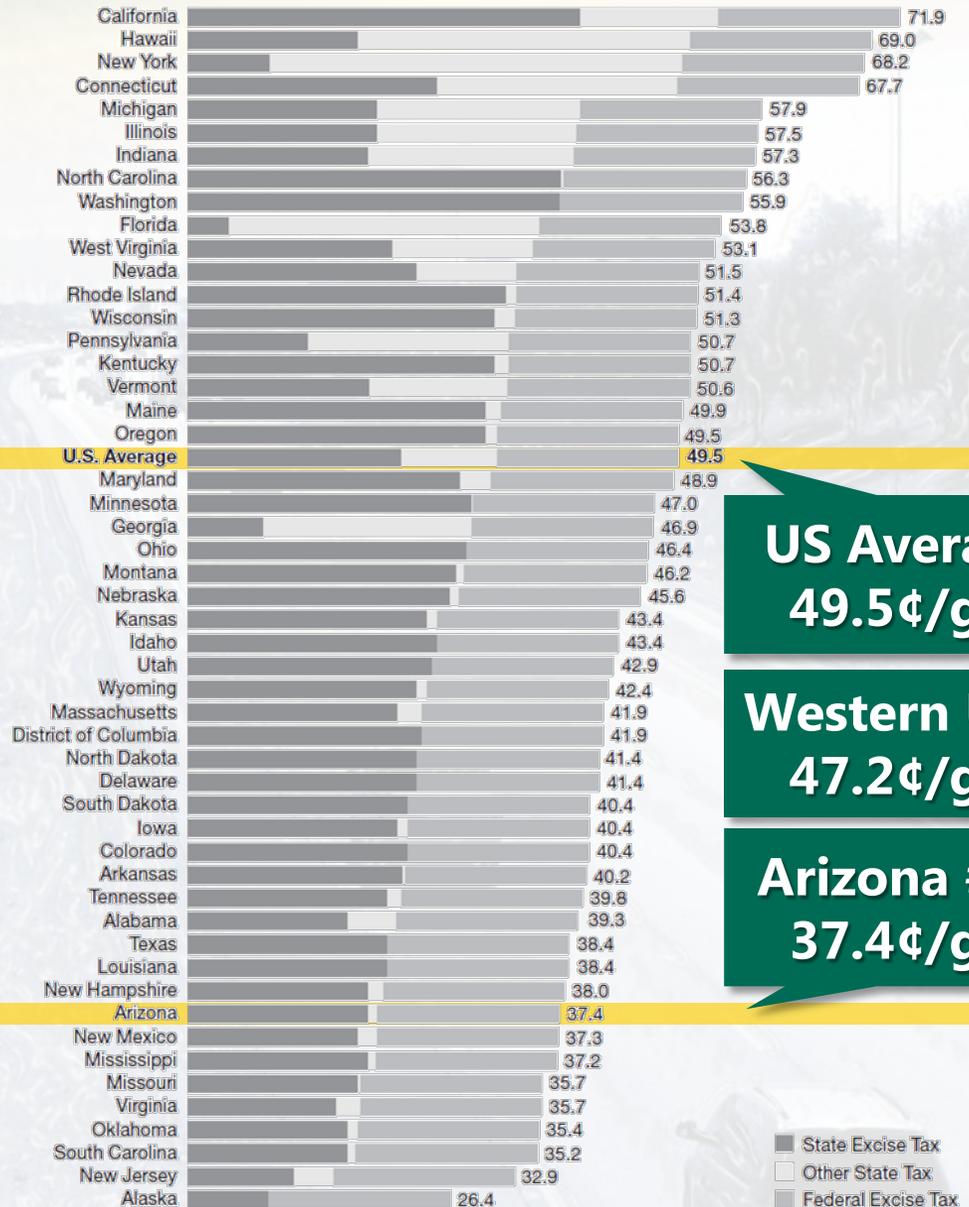
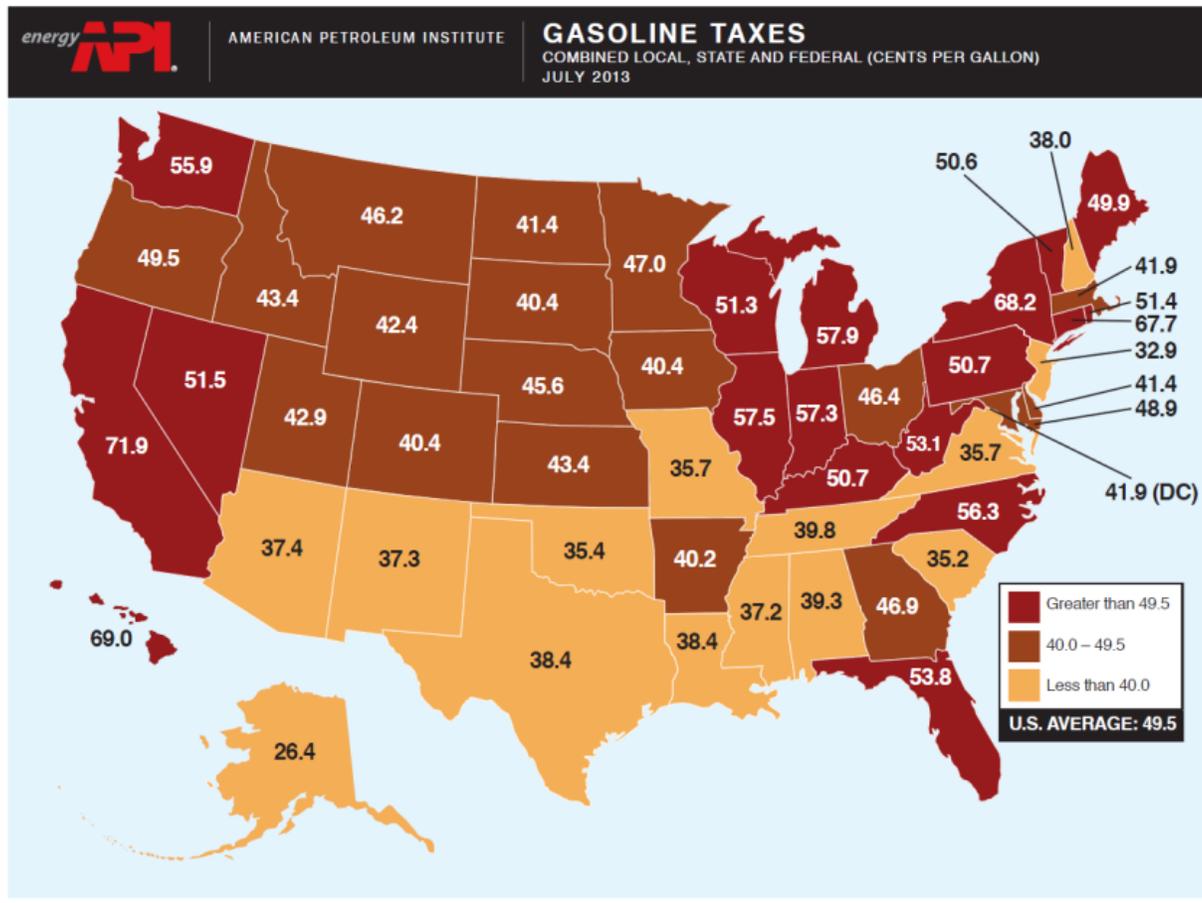
Potential Transportation Revenue Sources

Annual Average Net New Statewide Revenue 2013 to 2022 (millions of dollars)



Federal and State Gas Rates

Gasoline Motor Fuel Taxes as of July 1, 2013



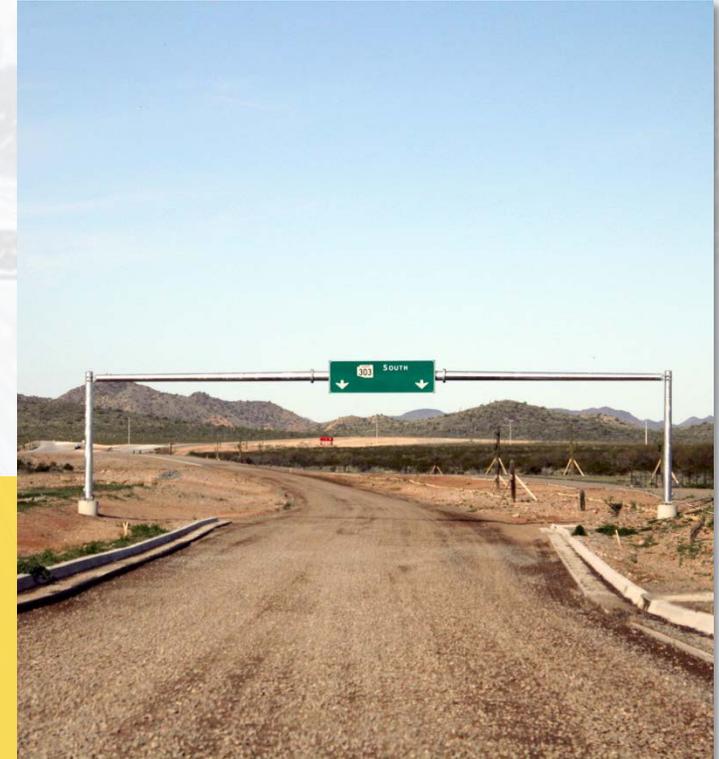
US Average
49.5¢/gal

Western USA
47.2¢/gal

Arizona #43
37.4¢/gal

Phased Fuel Tax Increase

- 7.5-cents to 10-cents per gallon increase to meet average of Western states.
- 10-cents, phased in at 2-cents per year for five years, indexed for inflation.
 - Average annual increase of **\$434 million** over next **10 years**, increasing HURF by **30 percent**.
- Total new revenues: **\$4.3 billion** (2013 to 2022)
 - ADOT: \$2.2 billion
 - Cities: \$1.3 billion
 - Counties: \$0.8 billion
- Provides short-term funding to support road maintenance needs while alternatives to fuel taxes explored.



Next Work Products



Improvement Strategies



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Bob Hazlett
Senior Engineering Manager
bhazlett@azmag.gov

