

The logo for the Arizona Department of Transportation (ADOT), consisting of the letters "ADOT" in a white, bold, sans-serif font on a dark blue background.

ADOT

A photograph of a two-lane asphalt road with yellow double lines, leading into the distance. The road is flanked by snow-covered evergreen trees. The sky is overcast and grey. The road surface appears to have some snow or ice patches, particularly in the center lane.

State of Transportation

November 20, 2019

State of Transportation

November 20, 2019

Steve Boschen

Assistant Director
Infrastructure Development and
Operations (IDO) Division

**Arizona Department of
Transportation**

Presented to



2019 16th Arizona Pavements/Materials Conference

State of Transportation

November 20, 2019

Thank You

All Sponsors and Exhibitors

2019 16th Arizona Pavements/Materials Conference

What does ADOT do?

- 28,000 Maintenance Lane Miles
- 6,800 Centerline Miles
- 4,800 Bridges

Topics for Today:

- Current Infrastructure Condition
- Age of Infrastructure
- Construction Cost Index
- Current Construction Program
- Revenue Needs
- User Fee Challenges
- Good Good Program

Snow Removal - May

ADOT



Snow Removal - May

ADOT



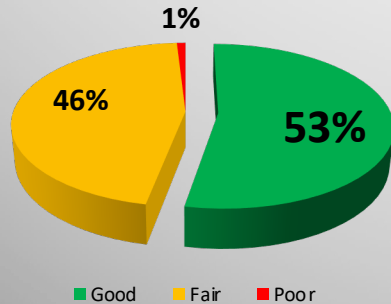
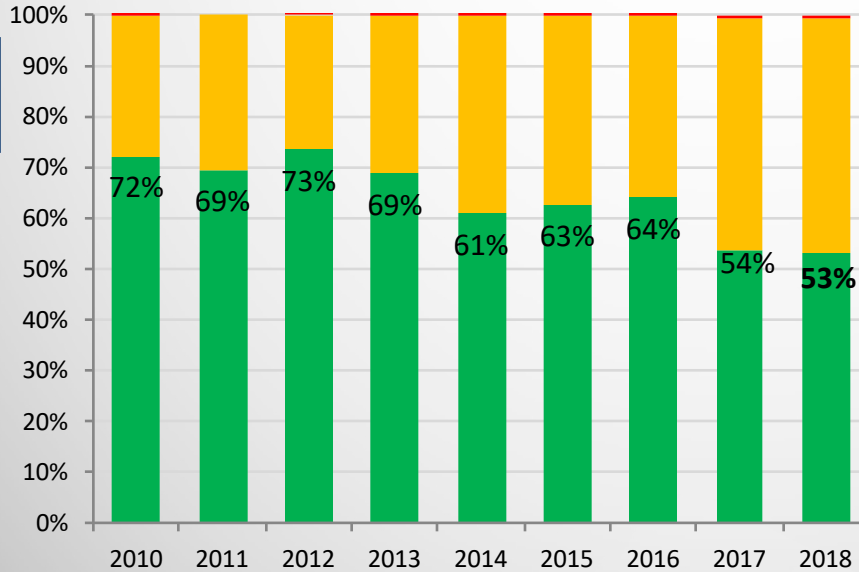
Snow Blaster

ADOT

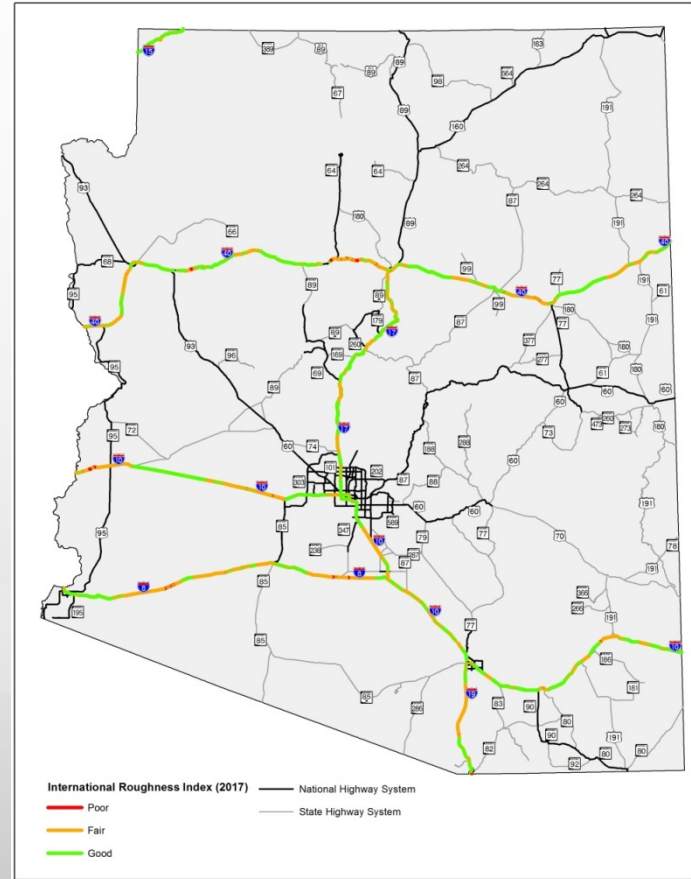


Current Infrastructure Condition (Pavement & Bridge)

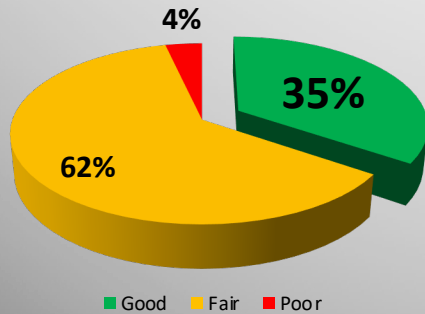
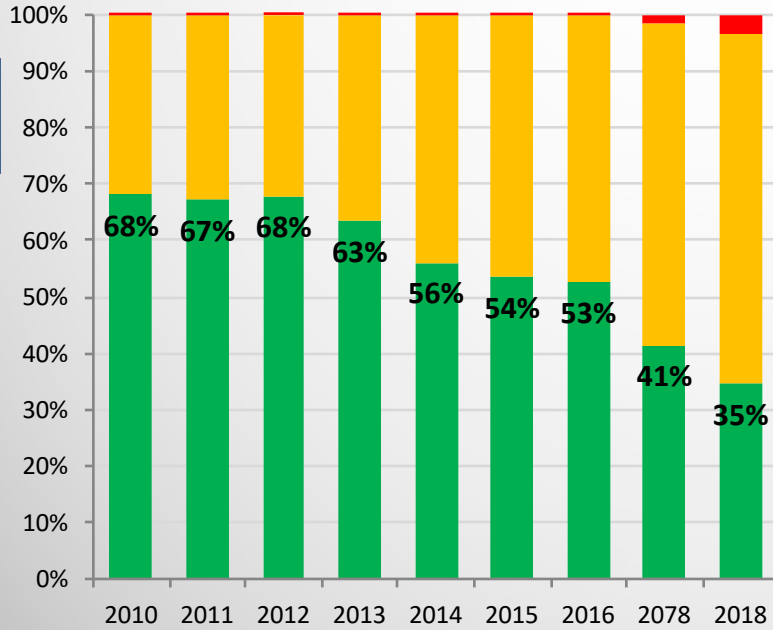
Pavement Condition: Interstates



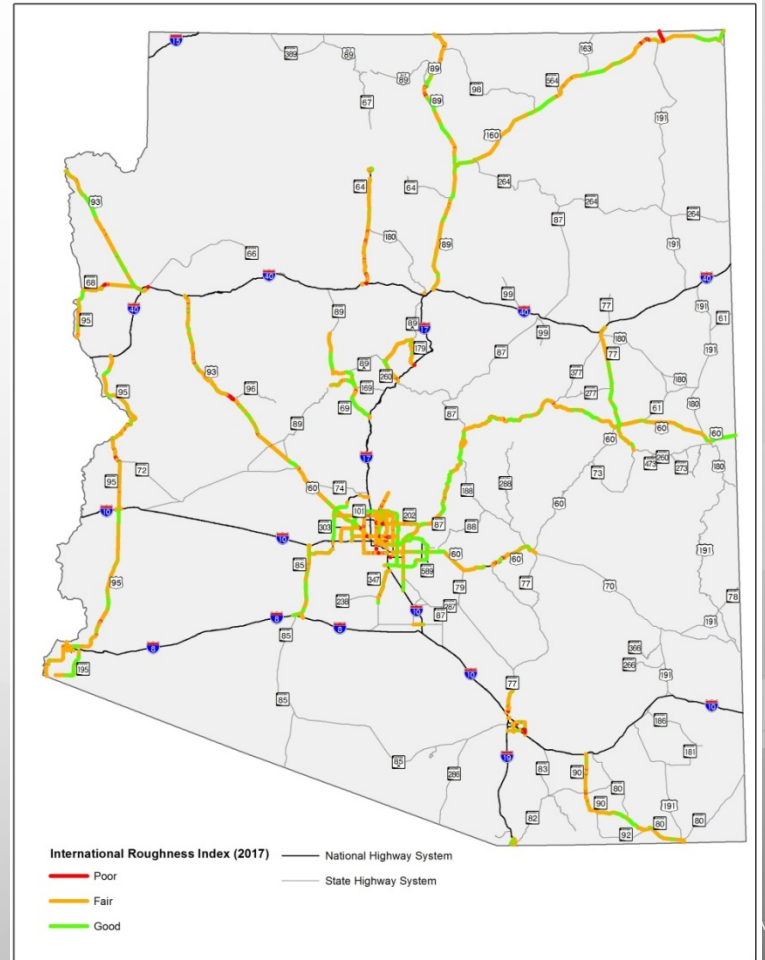
53% Good



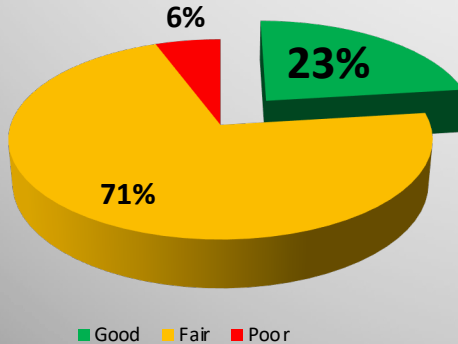
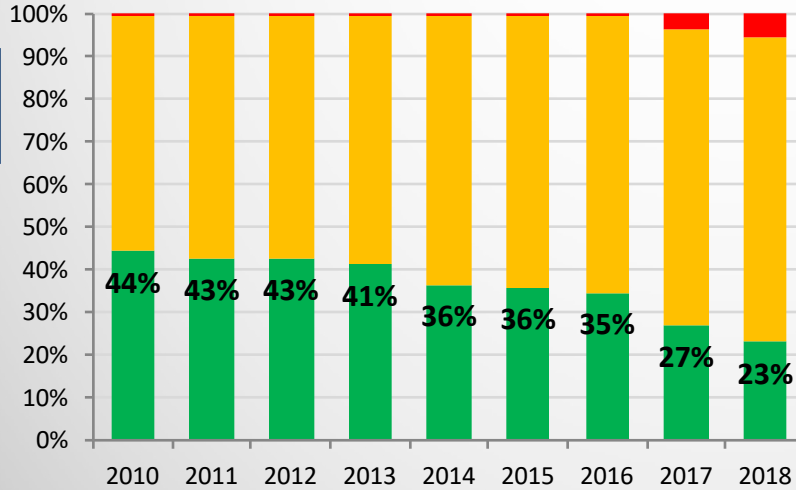
Pavement Condition: NHS



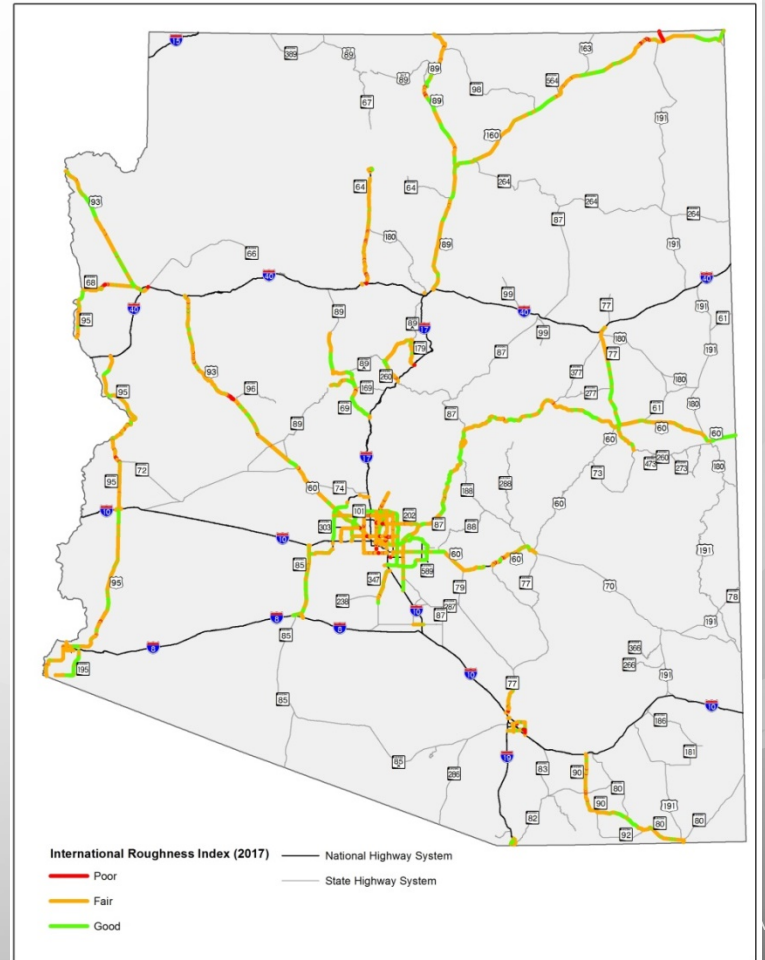
35% Good



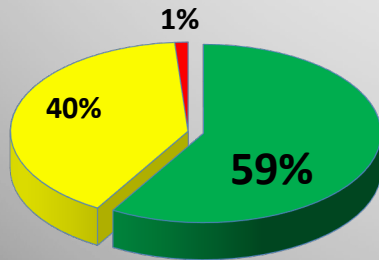
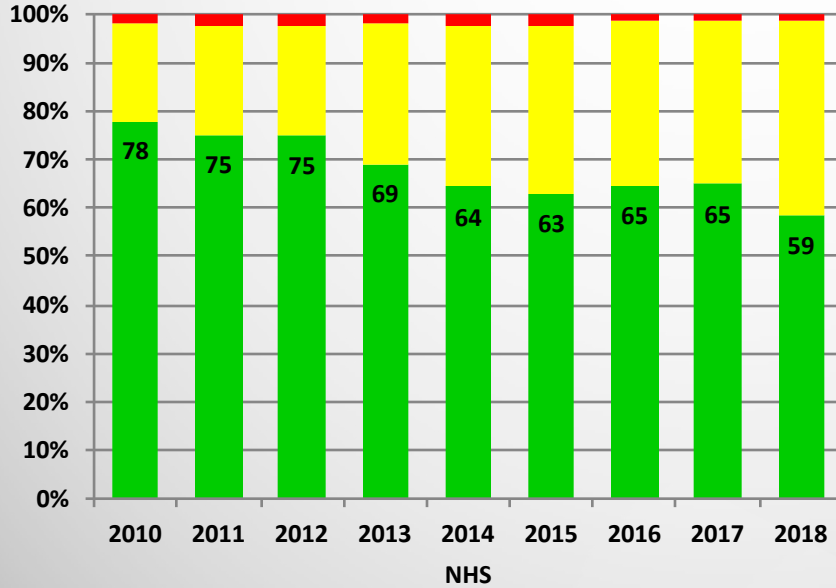
Pavement Condition: Non-NHS



23% Good



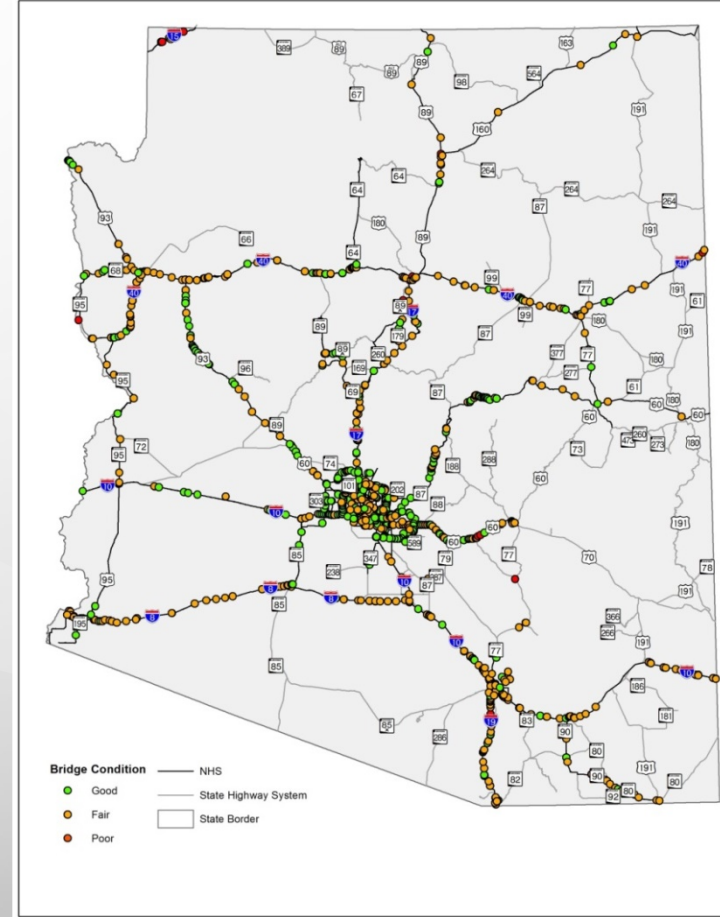
Bridge Condition



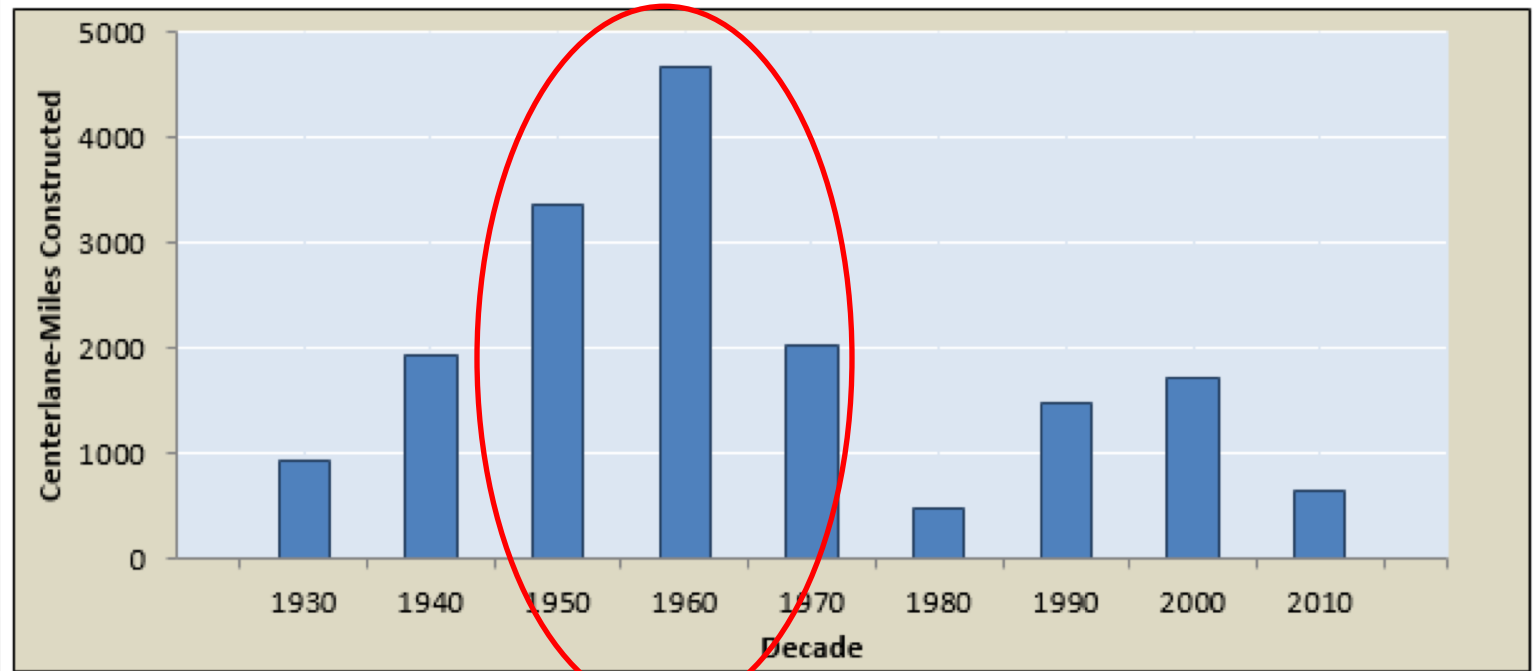
- Good
- Fair
- Poor



59% Good

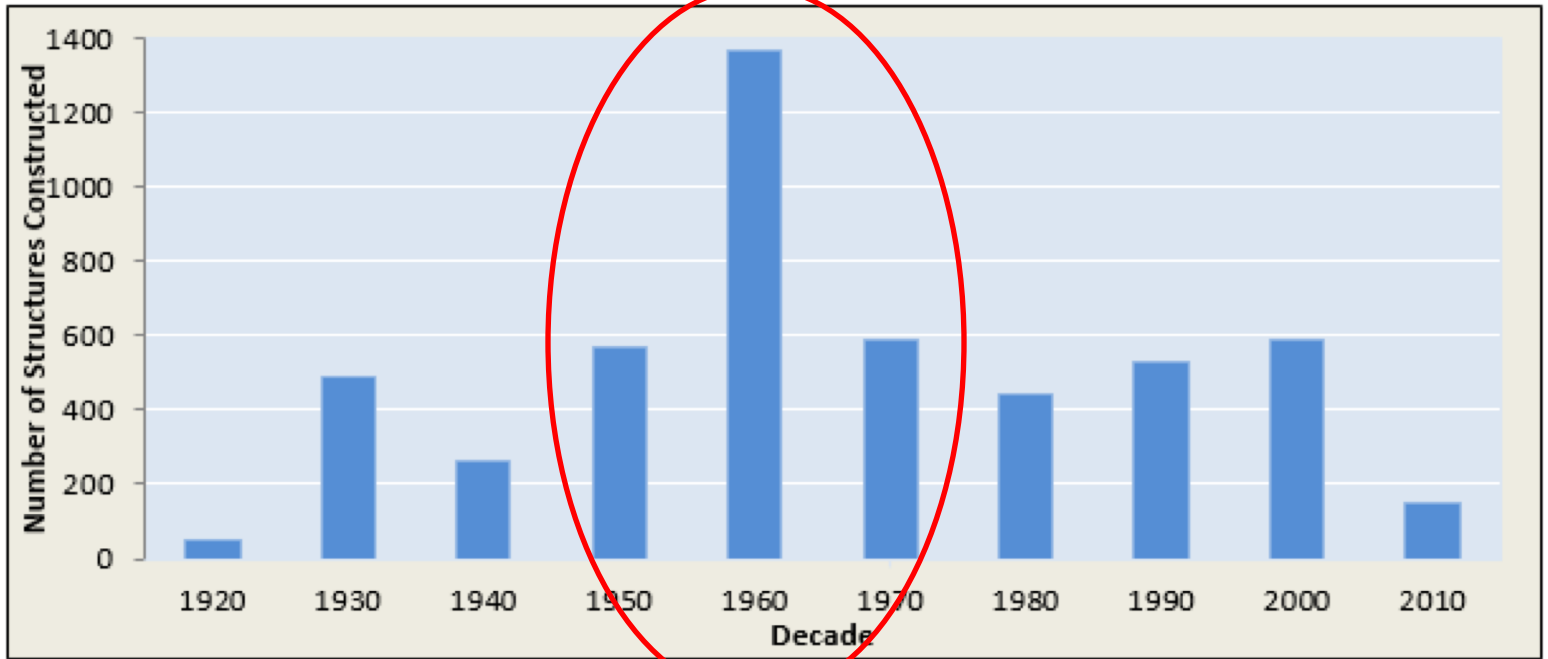


Infrastructure Age



Much of system built in 1960s or prior – **System is getting Old**

Infrastructure Age



Many of bridges built in 1960s or prior – **System is getting Old**

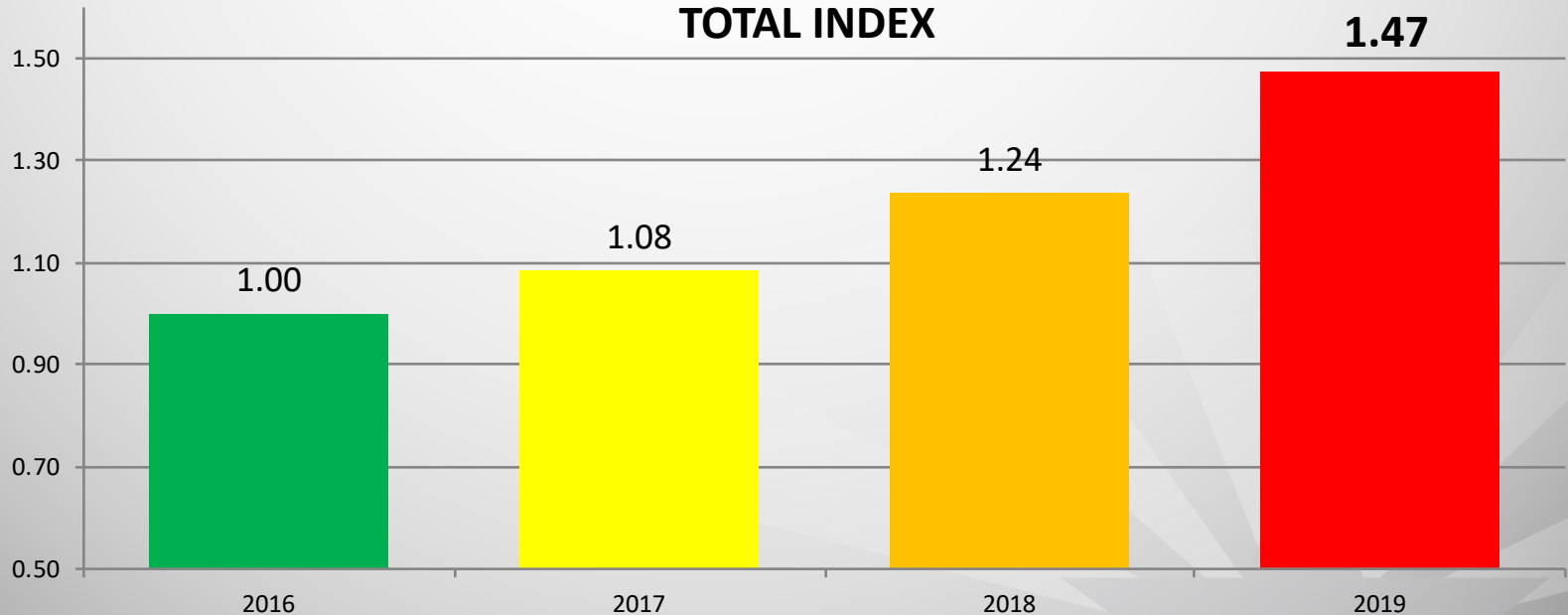
National Construction Cost Index

National Highway Construction Cost Index (NHCCI)



ADOT Construction Cost Index

ADOT



47% Increase in AZ Market

ARIZONA DEPARTMENT OF TRANSPORTATION

Preservation & Rehabilitation Focus – What does that mean?



2020-2024

Five-Year Transportation
Facilities Construction Program

Highway



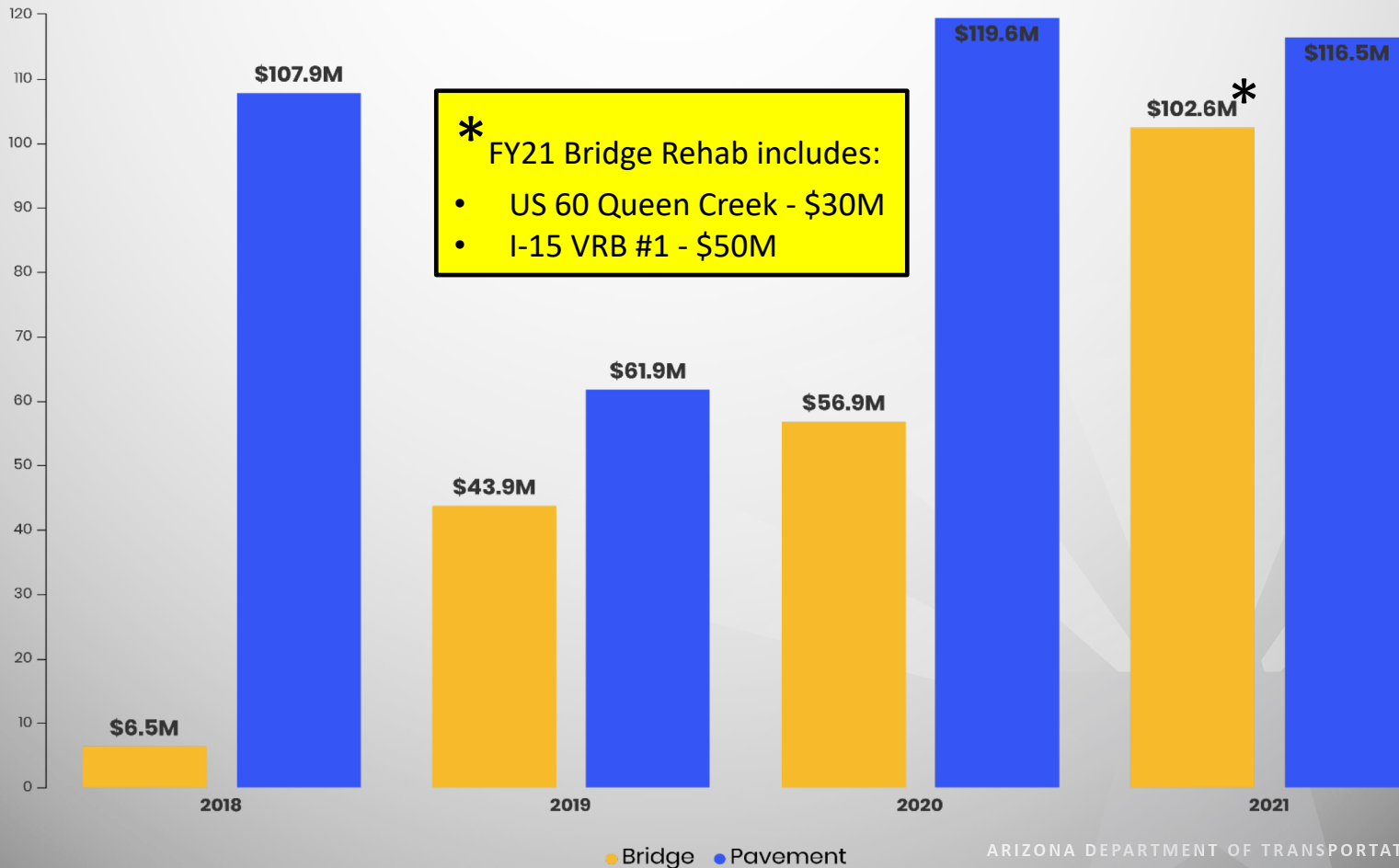
\$492M in FY 2020 Statewide program

Summary of Dollars (\$000) by Long Range Plan

| | | 2020 | 2021 | 2022 | 2023 | 2024 | Total |
|--------------|---------------------|------------------|------------------|------------------|------------------|--------------------|--------------------|
| Statewide | Expansion | \$142,875 | \$141,127 | \$110,907 | \$50,000 | \$56,200 | \$501,109 |
| | Modernization | \$58,739 | \$47,994 | \$16,760 | \$4,507 | \$0 | \$128,000 |
| | Preservation | \$210,832 | \$240,146 | \$214,639 | \$60,363 | \$32,900 | \$758,880 |
| | Total | \$412,446 | \$429,267 | \$342,306 | \$114,870 | \$89,100 | \$1,387,989 |
| Subprograms | Modernization | \$21,263 | \$18,560 | \$66,007 | \$81,349 | \$86,456 | \$273,635 |
| | Planning | \$21,500 | \$21,500 | \$21,500 | \$21,500 | \$21,500 | \$107,500 |
| | Preservation | \$16,472 | \$42,833 | \$47,683 | \$248,773 | \$236,693 | \$592,454 |
| | Project Development | \$20,051 | \$23,052 | \$23,422 | \$23,422 | \$22,822 | \$112,769 |
| | Total | \$79,286 | \$105,945 | \$158,612 | \$375,044 | \$367,471 | \$1,086,358 |
| Total | \$491,732 | \$535,212 | \$500,918 | \$489,914 | \$456,571 | \$2,474,347 | |

FY18 - FY 21 Pavement & Bridge Rehabilitation

ADOT



FY 20 Program for Pavement Rehab



| | | | | 8 (Count) | 65.05 | | \$119,622 |
|-----|----|----------|------------------------------------|-----------|-------------------------|-------------|-----------|
| USI | RT | TRACS | LOCATION | LENGTH | TypeOfWork | COST(\$000) | |
| I | 8 | F009401C | E of Yuma / Maricopa County Line | 14 | Pavement Rehabilitation | 26,000 | |
| I | 10 | F011301C | SR 587 - SR 387 | 11.26 | Pavement Rehabilitation | 24,000 | |
| I | 19 | F017401C | Duval Mine Rd TI - Pima Mine Rd TI | 7.43 | Pavement Rehabilitation | 18,000 | |
| I | 8 | F009201C | Avenue 36E - MP 46 | 8.91 | Pavement Rehabilitation | 17,500 | |
| SR | 77 | H891901C | River Rd - Calle Concordia | 5.3 | Pavement Rehabilitation | 11,446 | |
| SR | 77 | F024801C | Jct I-10 - River | 4.15 | Pavement Rehabilitation | 9,645 | |
| SR | 64 | F008901C | Pipeline Rd - Air Park | 8 | Pavement Rehabilitation | 7,500 | |
| SR | 73 | F011701C | W of Rim Tank - W of Canyon Day | 6 | Pavement Rehabilitation | 3,661 | |
| SR | 77 | F024801C | Jct I-10 - River | 4.15 | Pavement Rehabilitation | 1,870 | |

FY 21 Program for Pavement Rehab



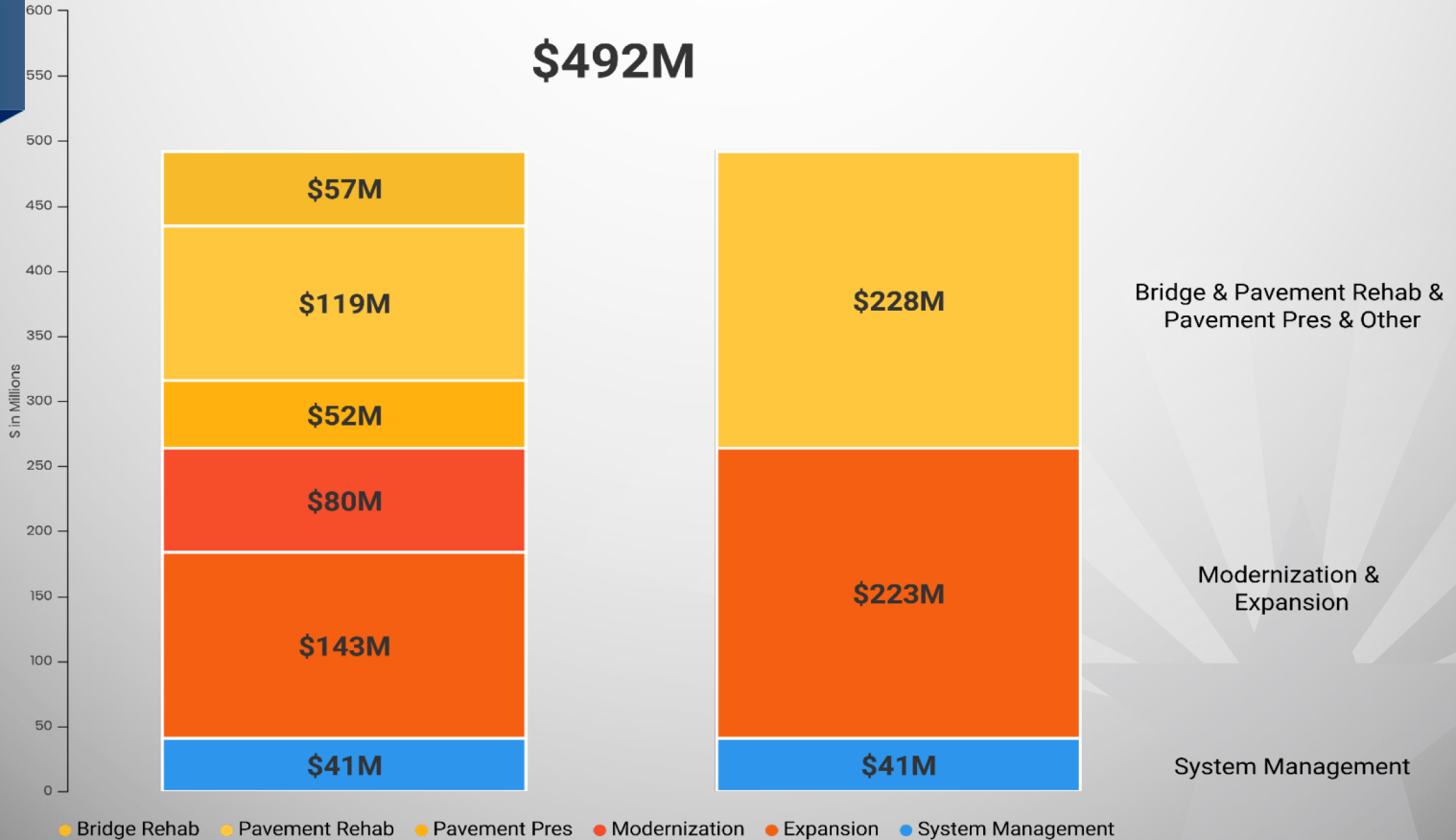
| | | | | 7 (Count) | 86.9 | | \$116,521 |
|-----|-----|----------|---------------------------------------|-----------|------------------------------|-------------|-----------|
| USI | RT | TRACS | LOCATION | LENG | TypeOfWork | COST(\$000) | |
| I | 10 | F020501C | Benson Bypass | 4.66 | Pavement Rehabilitation | 7,000 | |
| I | 10 | F020501C | BENSON BYPASS | 4.66 | Pavement Rehabilitation | 2,800 | |
| I | 10 | F023301C | Avondale Blvd - I-17 | 13 | Pavement Rehabilitation | 14,600 | |
| I | 17 | F020701C | SB County Line - McConnel Bridge | 29 | Pavement Preservation | 35,900 | |
| I | 40 | F018501C | I-17 - Walnut Canyon Rd | 10.2 | Spot Pavement Rehabilitation | 21,453 | |
| US | 60 | Fxxxx01C | FH 300 Apache - Sitgreaves - 40th St. | 8 | Pavement Rehabilitation | 13,000 | |
| US | 160 | F014401C | LONG HOUSE VALLEY - KAYENTA | 17 | Pavement Rehabilitation | 15,000 | |
| SR | 260 | F020101C | Church Street - Knottingham Ln | 5 | Pavement Rehabilitation | 6,768 | |

FY 20 & FY 21 Program for Rehabilitation

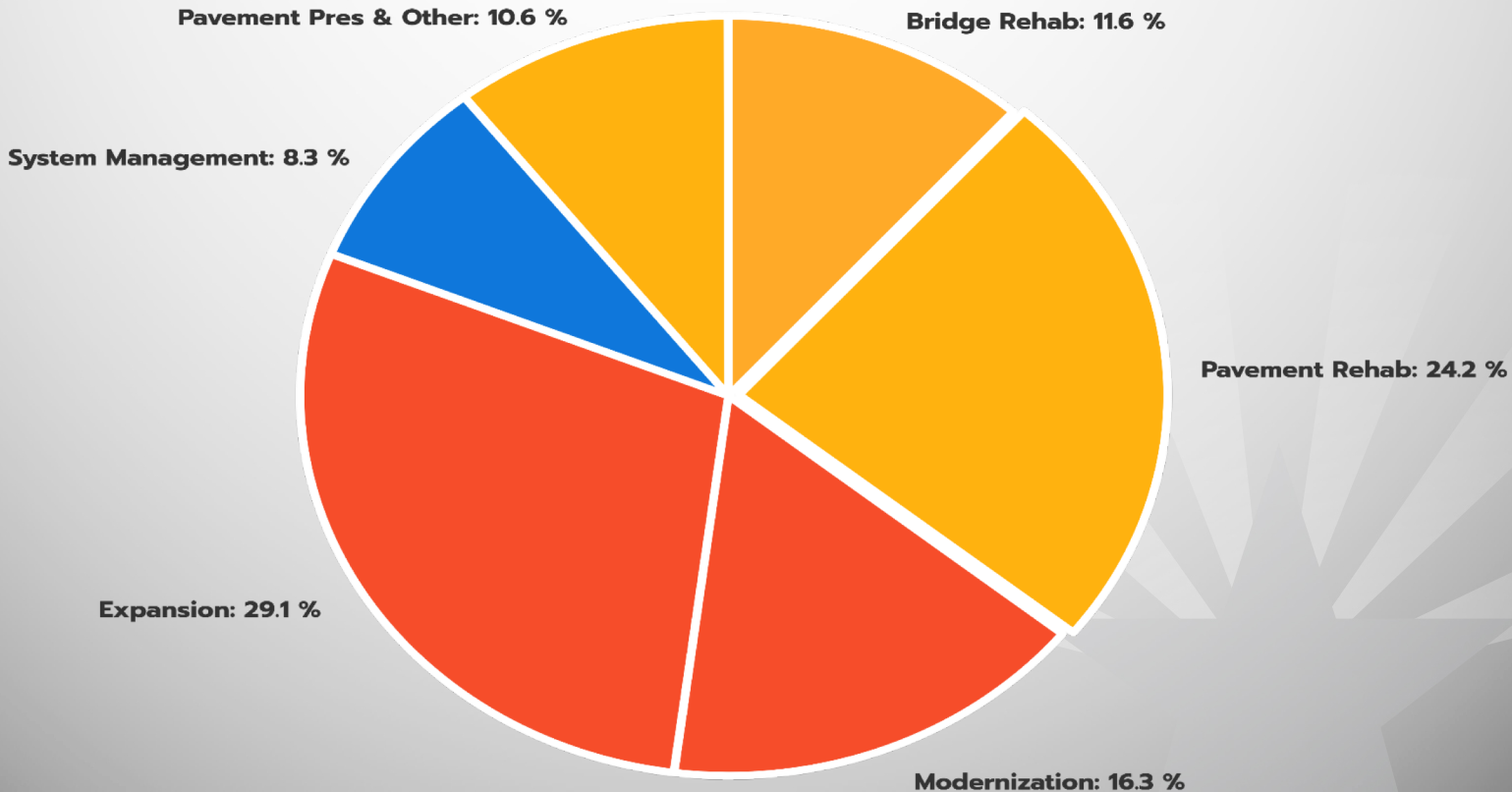


| Year | Type | # of Projects | Cost (M) | Miles |
|------|----------------|---------------|----------|-------|
| 2020 | Bridge Rehab | 16 | \$56.9 | NA |
| 2021 | Bridge Rehab | 8 | \$102.6* | NA |
| 2020 | Pavement Rehab | 9 | \$119.6 | 65 |
| 2021 | Pavement Rehab | 8 | \$116.5 | 87 |

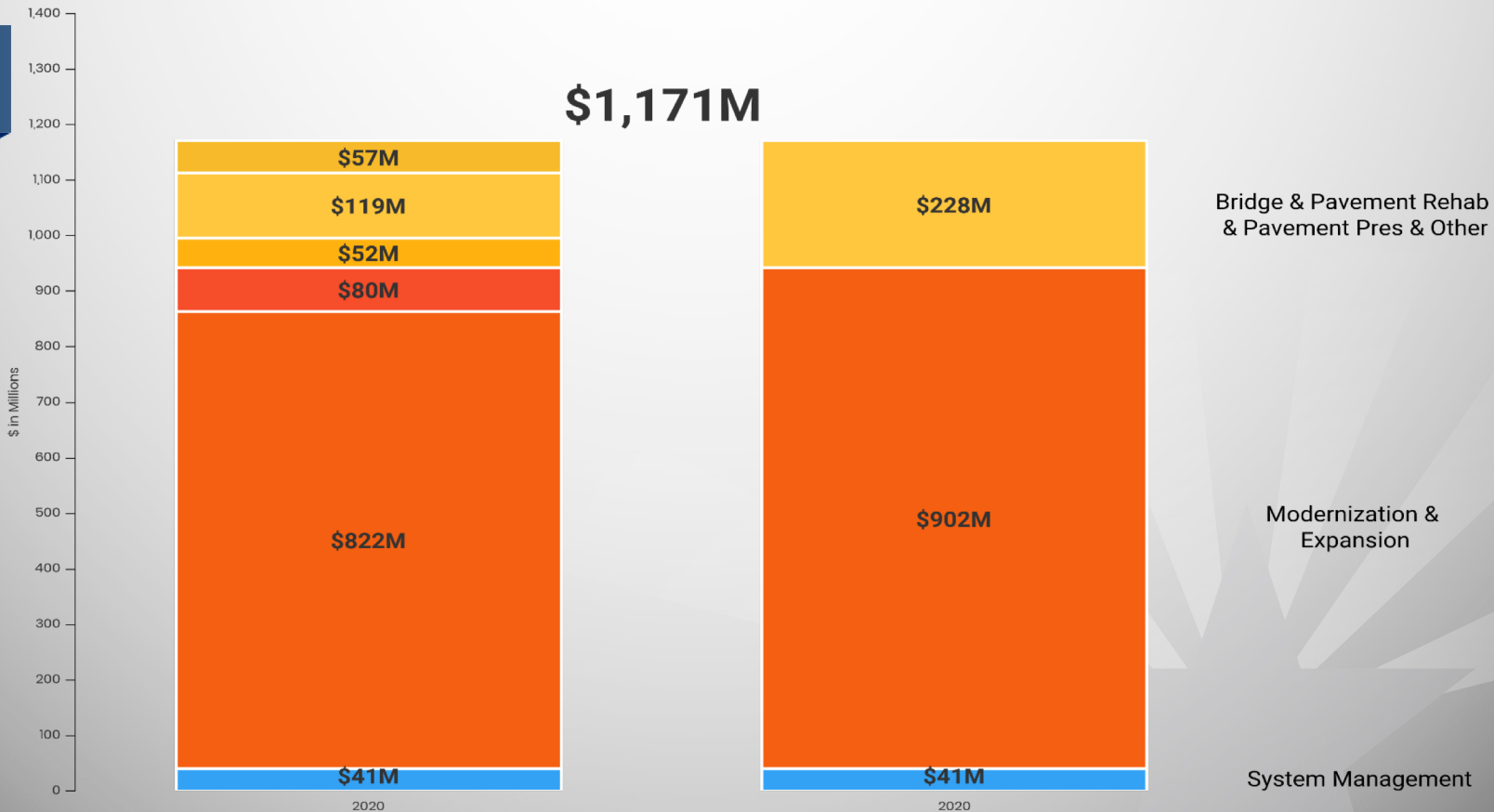
* 80M is on I-15 VRB #1 and US 60 Queen Creek



\$492M



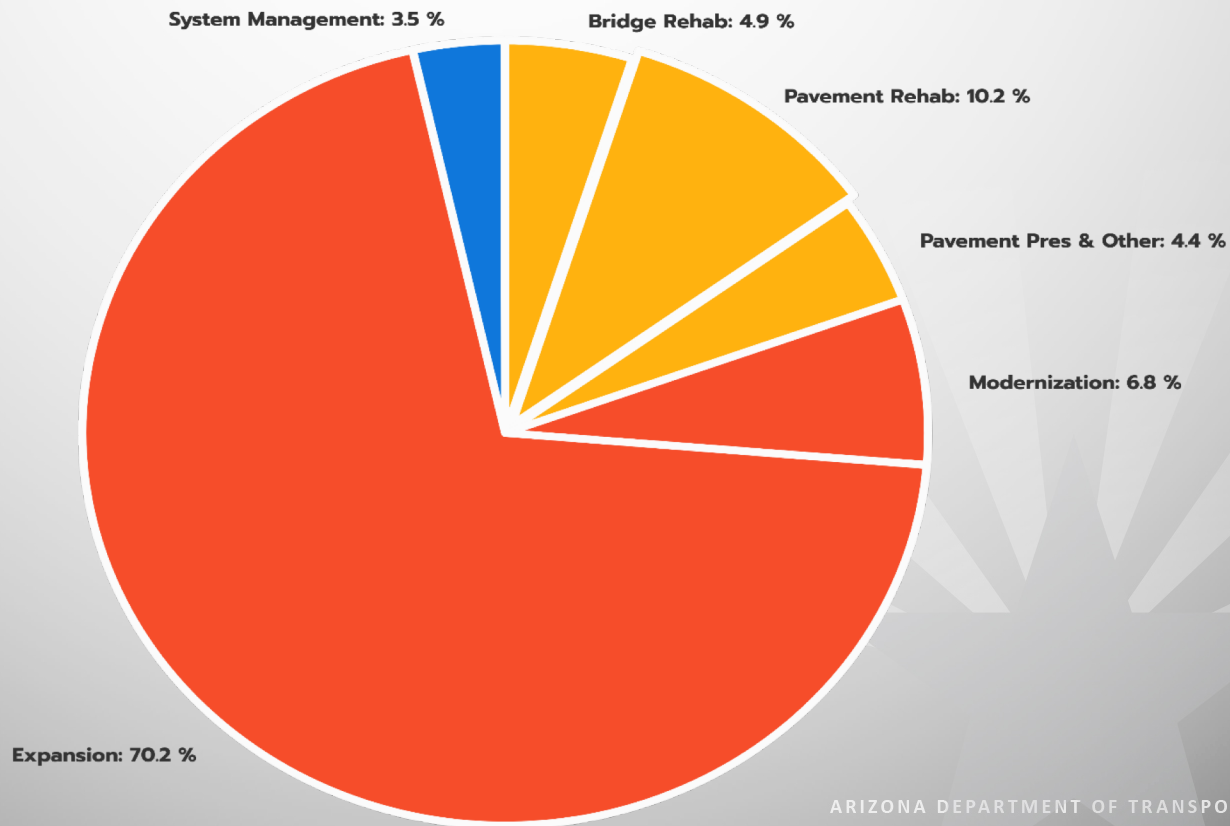
2020 Program with MAG/PAG



2020 Program with MAG/PAG

\$1,171M

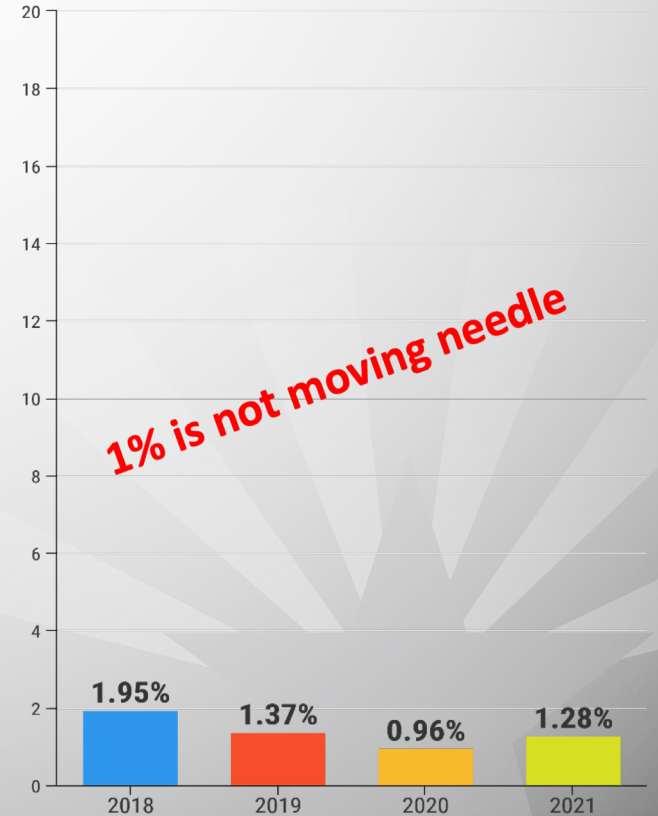
ADOT



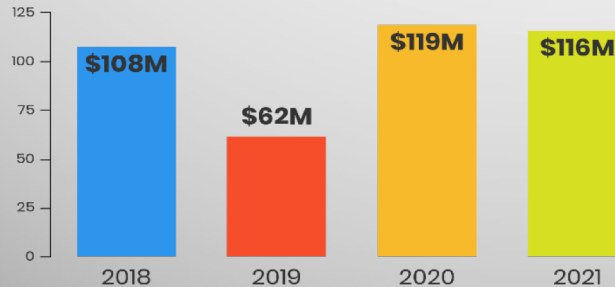
Pavement Rehabilitation for FY 18 - FY 21

| Year | # of Projects | Centerline Miles | Dollars |
|------|---------------|------------------|---------|
| 2018 | 17 | 132 | \$108M |
| 2019 | 12 | 93 | \$62M |
| 2020 | 8 | 65 | \$118M |
| 2021 | 7 | 87 | \$116M |

% of Centerline Miles (6,780) Rehabbed



Pavement Rehab per Year



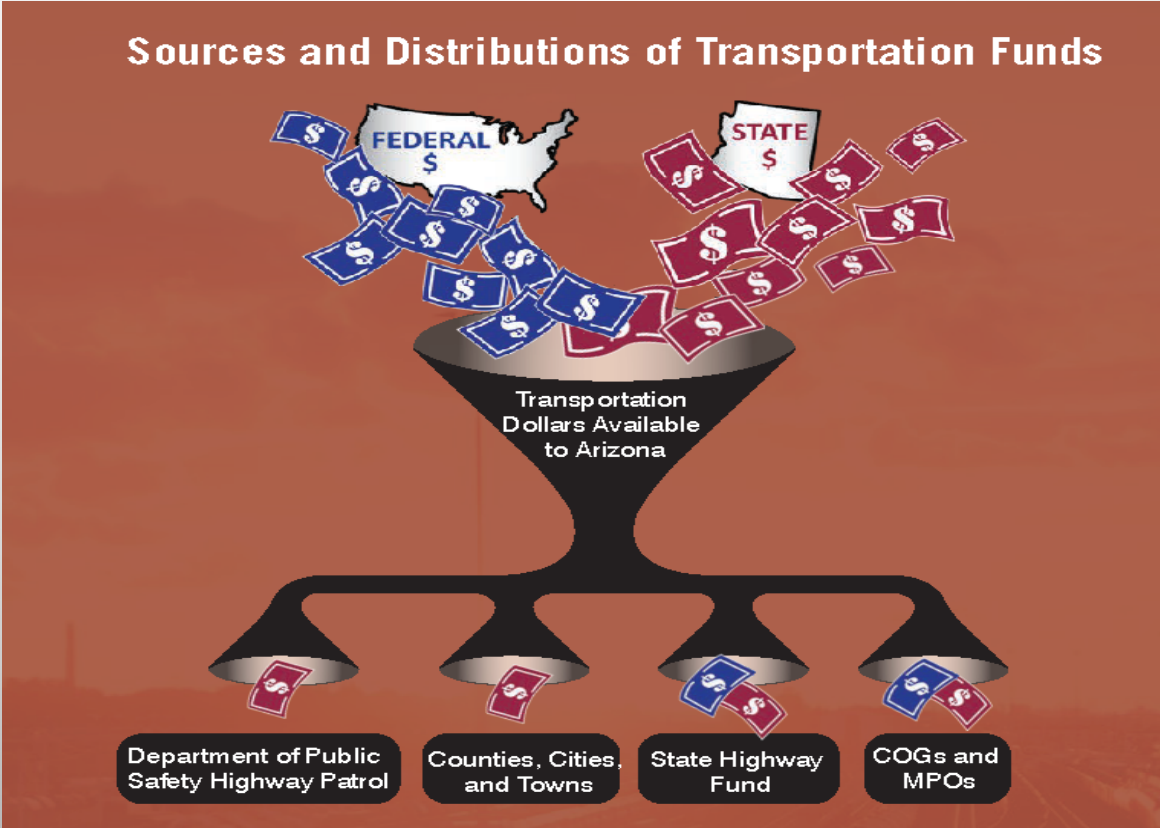
Pavement & Bridge Rehabilitation Conclusions:

1%

- 1% of centerline miles rehabilitated per year is not moving needle on pavement condition.
- Outside of the Urban Areas of Phoenix and Tucson, a large majority of transportation infrastructure was constructed in the 60's or prior-meaning it is reaching past service life.

Revenue Sources

Sources and Distributions of Transportation Funds

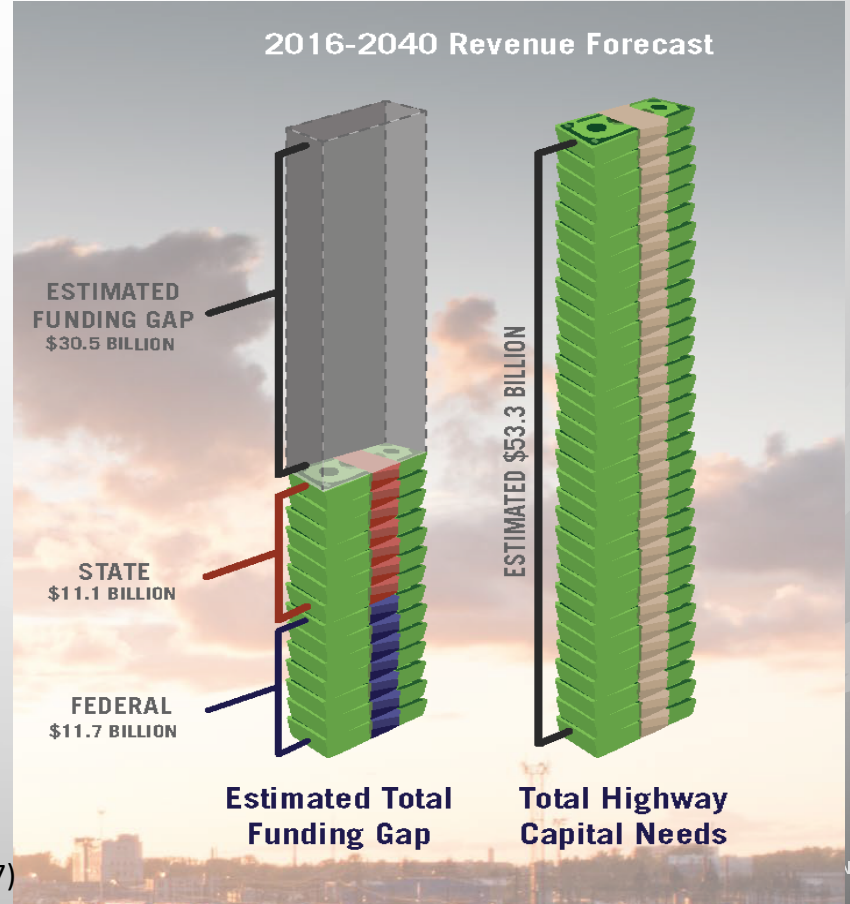


Revenue Needs

ADOT

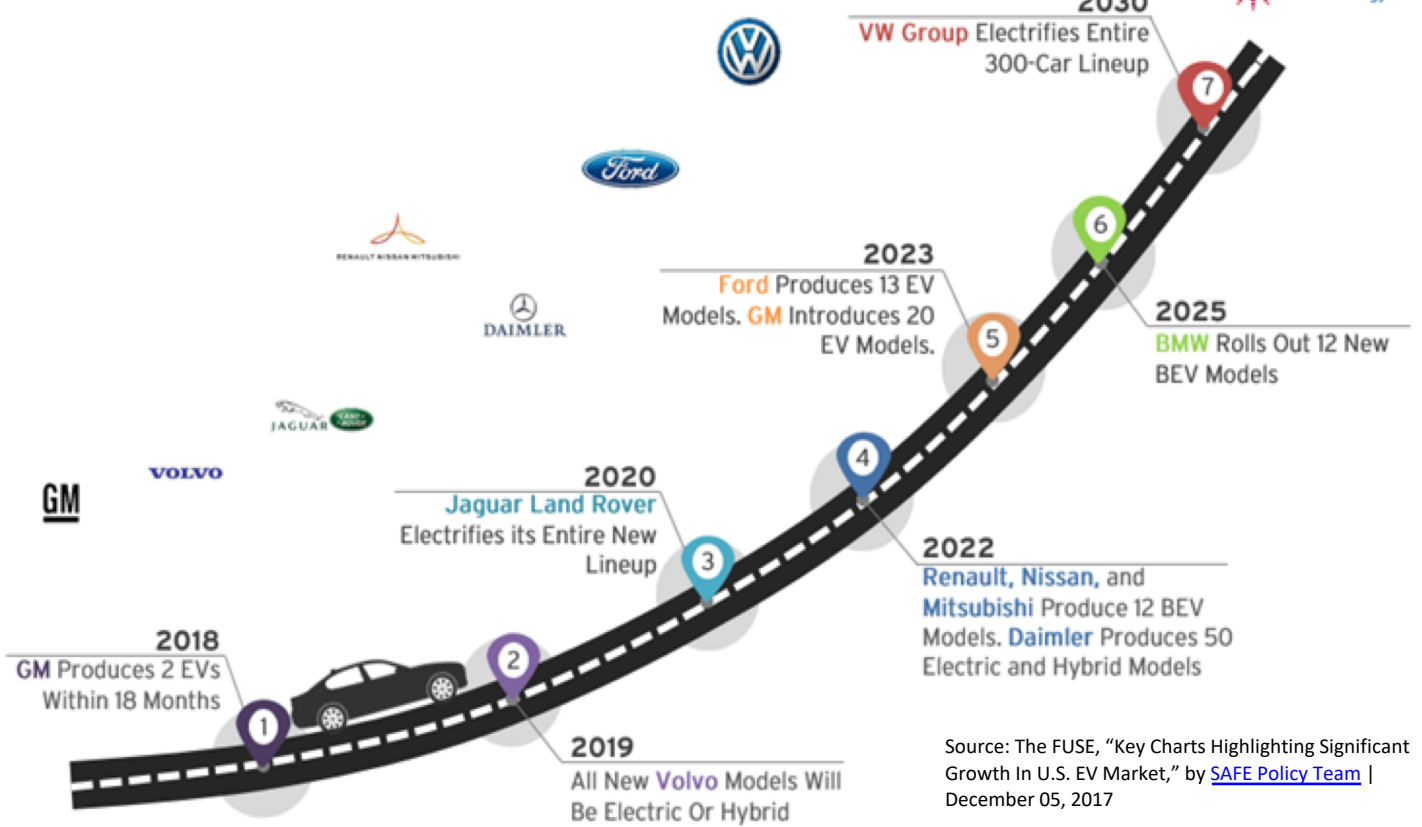
\$30 B
Gap

Source: ADOT Long Range Transportation Plan (2017)



User Fee Challenges

Automakers Commit to All-Electric Future

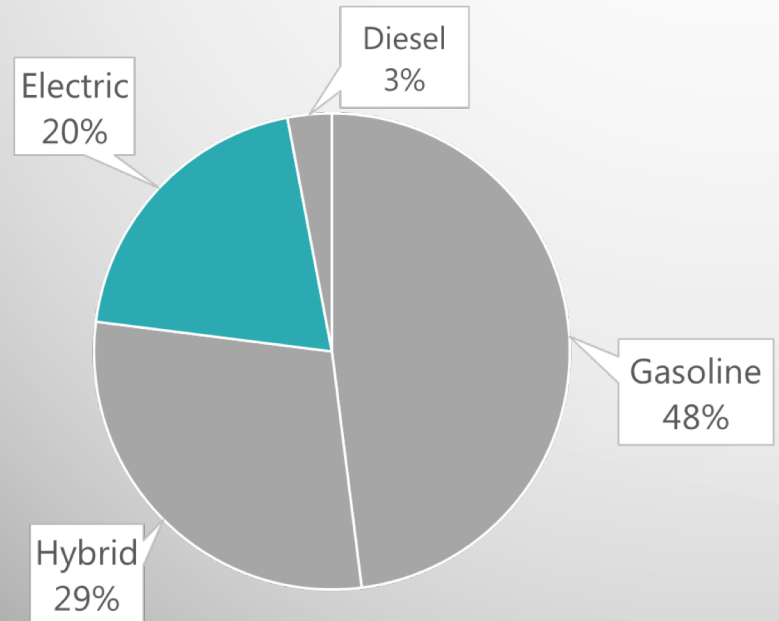


Source: The FUSE, "Key Charts Highlighting Significant Growth In U.S. EV Market," by [SAFE Policy Team](#) | December 05, 2017

User Fee Challenges



Projected US Auto Sales 2030



20%

Electric Vehicle New Car Market Share

Source: Maricopa Association of Governments

Source: "The Electric Car Tipping Point," The Boston Consulting Group, January, 2018.

User Fee Challenges

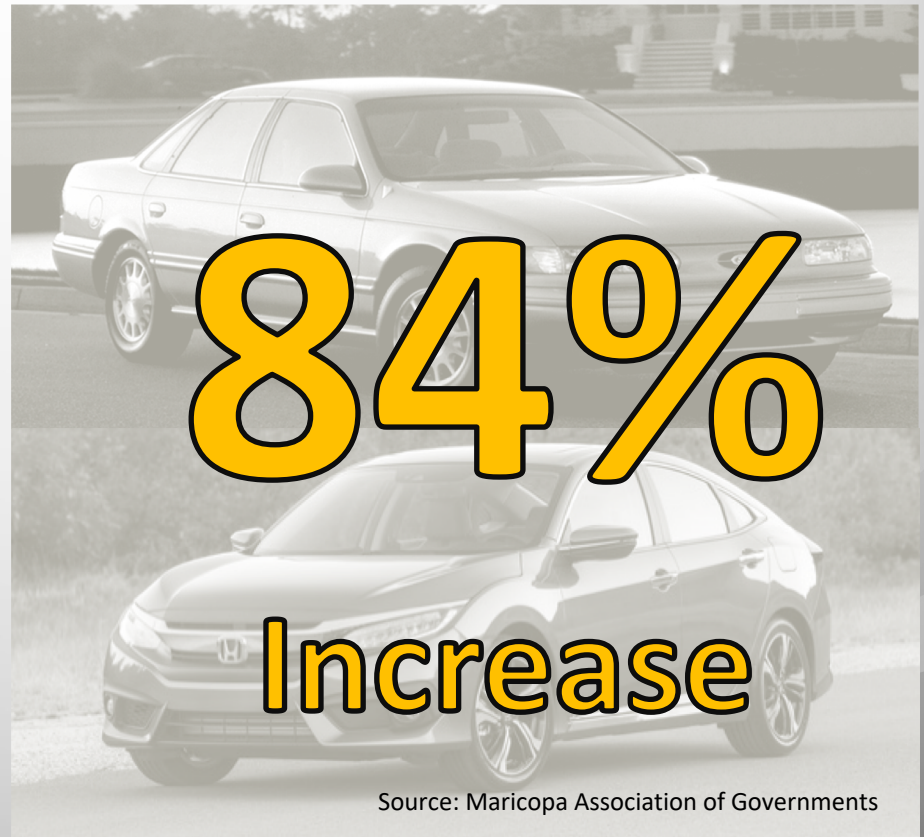
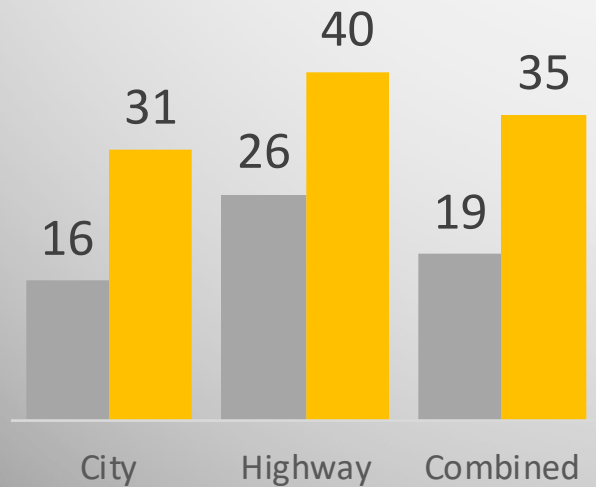
ADOT

Miles Per Gallon

Best Selling Cars

1991 – Ford Taurus

2018 – Honda Civic



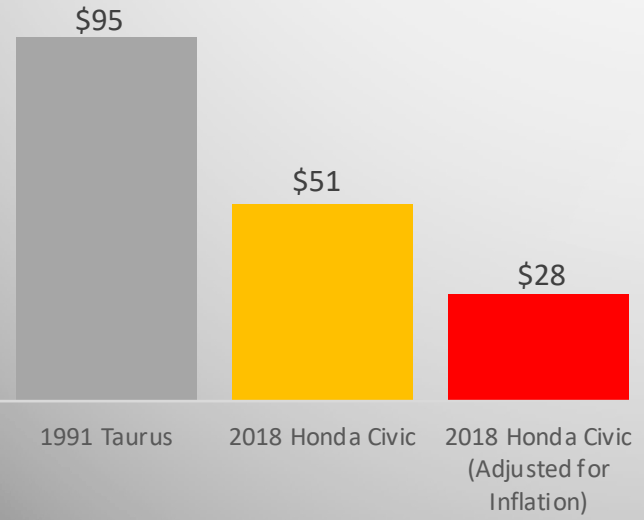
Source: Maricopa Association of Governments

User Fee Challenges

ADOT

Revenue Generated (10,000) miles driven

1991 – Ford Taurus
2018 – Honda Civic



User Fee Challenges - Disruption

ADOT



User Fee Challenges - Disruption

ADOT



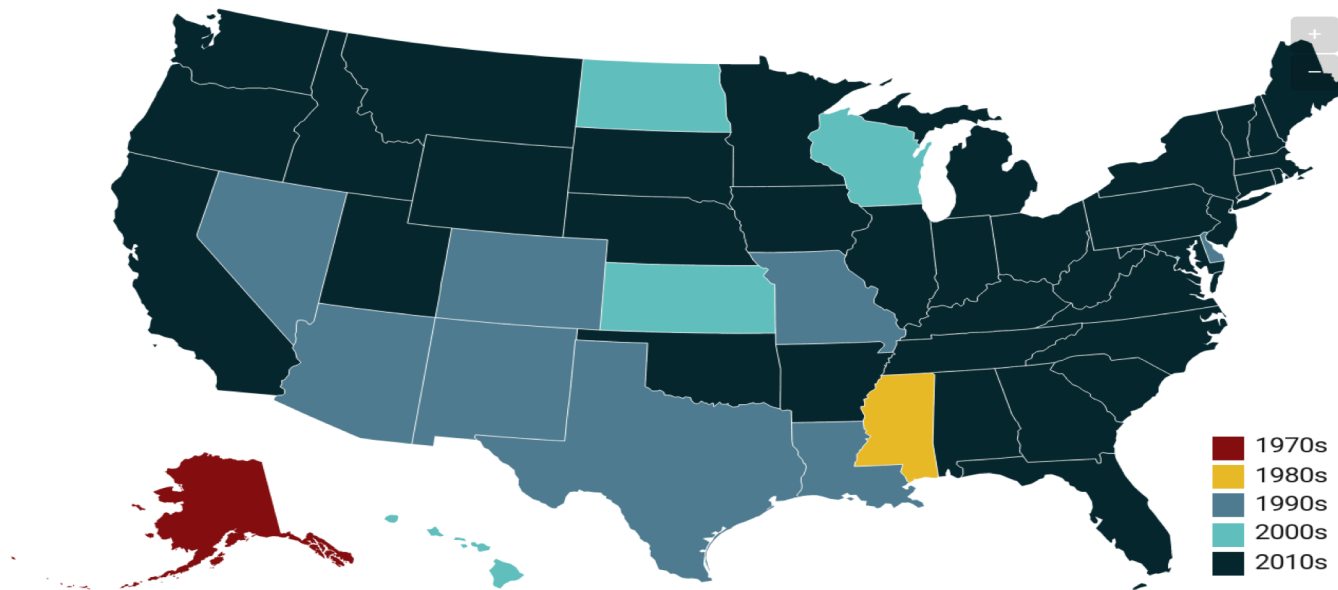
2021 Ford Mustang Mach E GT

User Fee Challenges

How Long Has It Been Since Your State Raised Its Gas Tax?

10 states to have gone two decades or more without a gas tax increase.

36 states have raised or reformed gas taxes since 2010.



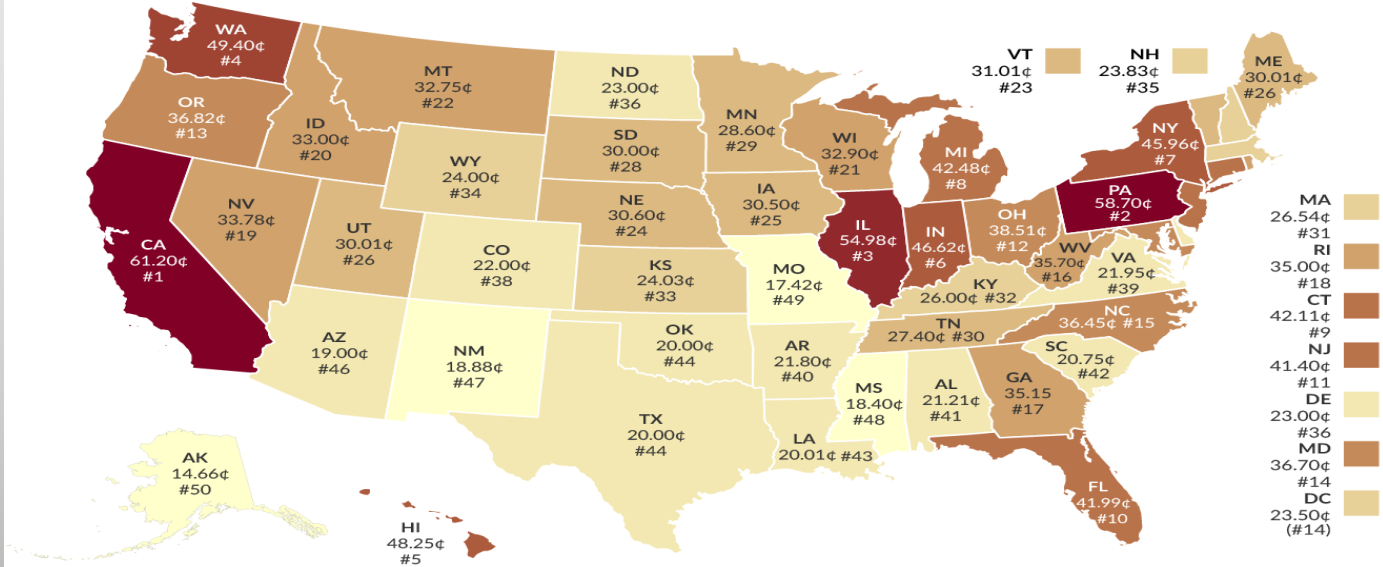
Map shows gas tax increases in effect as of Oct. 1, 2019. Hawaii, Illinois, Indiana, and Michigan apply their general sales taxes to gasoline and thus see ongoing changes in their overall gas tax rates based on changes in the price of gas. This chart excludes these price-based fluctuations in the sales tax and instead looks only at these states' excise taxes on gasoline.

Source: Institute on Taxation and Economic Policy (ITEP), September 2019 • Created with Datawrapper

User Fee Challenges

How High Are Gas Taxes in Your State?

Total State Taxes and Fees on Gasoline, as of July 2019 (cents per gallon)



Note: These rates do not include the 18.40 cent/gallon federal excise tax rate on gas. The American Petroleum Institute has developed a methodology for determining the average tax rate on a gallon of fuel. Rates may include any of the following: excise taxes, environmental fees, storage tank taxes, other fees or taxes, and general sales taxes. In states where gasoline is subject to the general sales tax, or where the fuel tax is based on average sale price, the average rate determined by API is sensitive to changes in the price of gasoline. States that fully or partially apply general sales taxes to gasoline are California, Connecticut, Georgia, Illinois, Indiana, Michigan, and New York.D.C.'s rank does not affect states' ranks, but the figure in parentheses indicates where it would rank if included.

Source: American Petroleum Institute, "State Motor Fuel Taxes by State (July 2019)"



User Fee Challenges

ADOT

1991

#46

| | |
|-------------|-------------|
| 1991 | \$95 |
| 2018 | \$28 |

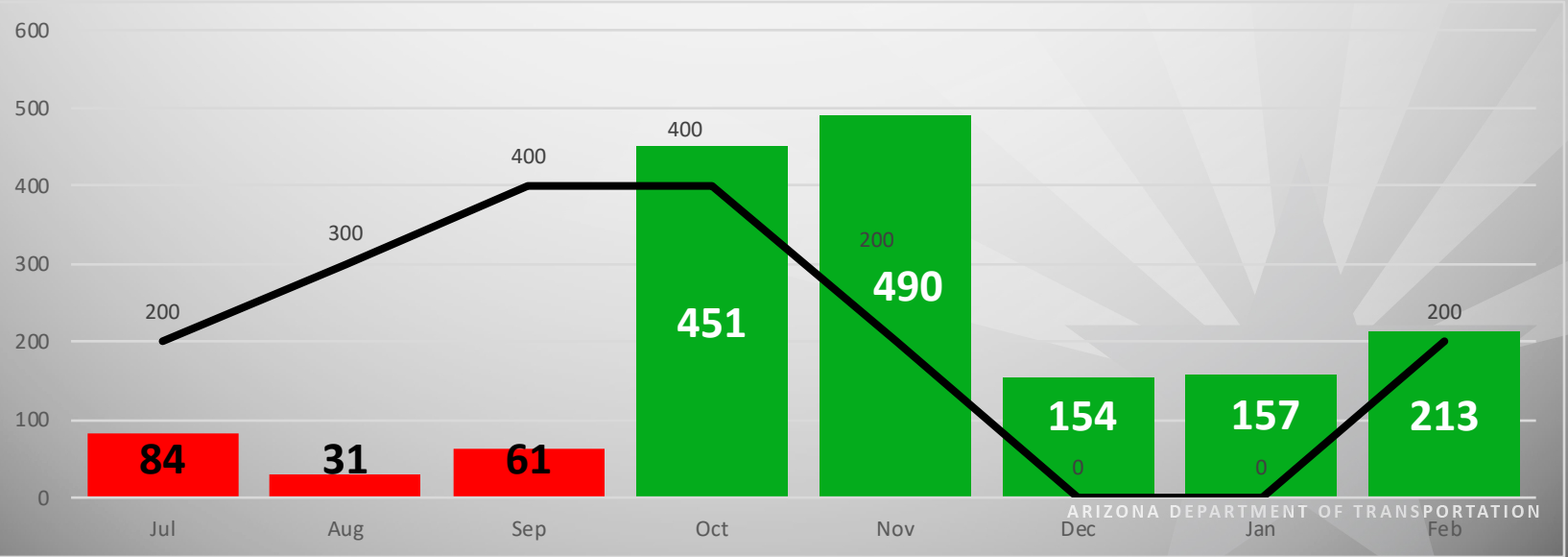
Good Good Program

ADOT

- Crack Sealing
- Flushes



FY 2020
Goal is 4200 Lane Miles



Fog (Preservation)

ADOT



Fog (Preservation)

ADOT



Travel ID

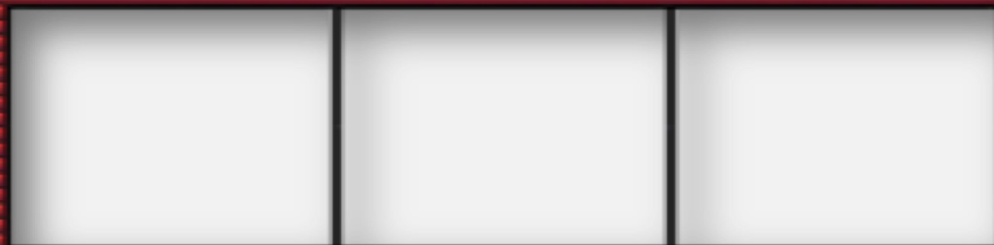
1. Who Travels in this room by flying commercially?
2. Who is aware of deadline to receive travel ID?
3. Were you aware you could schedule an appointment?

Effective October 1, 2020, only the Arizona Travel ID and Arizona Travel Driver License, a U.S. passport, and other federally approved identification will be accepted at TSA airport security checkpoints for domestic travel.

<https://apps.azdot.gov/mvd/Application/ApplicationForm.aspx>

JACKPOT

SLOT MACHINE



RESET

PAY
TABLE

BET
ONE

BET
MAX

SPIN



Engagement Questions

1. When was last time State gas user fee (tax) was raised? **1991**
2. What percentage of centerline miles are being rehabilitated (Mill and Fill) **1%**
3. What may be the new disruption in the EV world? **Mustang Mach-E**
4. Besides a Snow Plow, how else do ADOT forces remove snow? **Snow Blaster**
5. What is ADOTs 3-year Construction Cost Index? **47%**

Questions?

Steve Boschen

Assistant Director

Infrastructure Development and Operations (IDO) Division