Project Delivery and Current State of Infrastructure

February 5, 2020
Project Delivery and Current State of Infrastructure

February 05, 2019

Steve Boschen
Infrastructure Development and Operations (IDO) Division

Presented to: ACEC Arizona
Thank You
All ACEC-ADOT AMS Partners

ACEC – ADOT Partnership Kick-Off Meeting
January 31, 2020

The Team!

ACEC and ADOT Partnering Champions discuss their expectations with the Team

Having fun and improving communication through team building

Discussing AMS Principles during a Lunch & Learn

Reporting out Team Charter ideas
What does ADOT do?

• 28,000 Maintenance Lane Miles
• 6,800 Centerline Miles
• 4,800 Bridges
Topics for Today:

- Score Card and Project Delivery
- Age of Infrastructure
- Construction Cost Index
- Current Construction Program
- User Fee Challenges
- Good Good Program
- Misc
## IDO Score Card

### Operational / Sustainment Metrics

<table>
<thead>
<tr>
<th>Performance Metric Titles</th>
<th>Custom Field</th>
<th>JOP</th>
<th>YTD</th>
<th>July</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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<tbody>
<tr>
<td>On-Time Construction Delivery Speed</td>
<td>7/1/2019</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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<td>75%</td>
<td>91%</td>
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<td>77%</td>
<td>70%</td>
<td>88%</td>
<td>80%</td>
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<tr>
<td>On-Time Development Delivery Speed</td>
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<td>80%</td>
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<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
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<td>80%</td>
<td>46%</td>
<td>0%</td>
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<td>75%</td>
<td>50%</td>
<td>78%</td>
<td>63%</td>
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<tr>
<td>Pavement Treatments (Miles) Speed</td>
<td>7/1/2019</td>
<td>1800</td>
<td>200</td>
<td>300</td>
<td>300</td>
<td>400</td>
<td>300</td>
<td>300</td>
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<td>120</td>
<td>158</td>
<td>699</td>
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<td>270</td>
<td>112</td>
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<tr>
<td>On-Budget Construction Delivery Cost</td>
<td>7/1/2019</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
<td>95%</td>
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<td>95%</td>
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<tr>
<td></td>
<td>95%</td>
<td>77%</td>
<td>83%</td>
<td>25%</td>
<td>85%</td>
<td>92%</td>
<td>100%</td>
<td>80%</td>
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</table>
Project Delivery – 20-30-30-20

FY 2014 – MAG, PAG, Greater Arizona

85% Delivery in 2nd Half
63% Delivered in 4th Qtr
Project Delivery – 20-30-30-20

FY 2019 – MAG, PAG, Greater Arizona

- **44%** Delivery in 2nd Half
- **25%** Delivered in 4th Qtr
- **7%** Delivered in 2020

1st Qtr: 17%
2nd Qtr: 25%
3rd Qtr: 24%
4th Qtr: 7%
Rollover: 7%
FY 2020 20-30-30-20 Delivery

Legend:
- Planned
- Actual

Quarterly Delivery:
- 1st Quarter: Planned 14%, Actual 10%
- 2nd Quarter: Planned 21%, Actual 22%
- 3rd Quarter: Planned 27%, Actual 29%
- 4th Quarter: Planned 38%, Actual 39%

Forecast:
1. Problem:
   • Hockey Stick at Quarter End

2. Initial Root Causes:
   • Clearances Late (Env, Util, ROW)

3. Real Root Causes
   • Late Scope Creep (While we are here)
   • Incomplete 60% Footprint

4. Countermeasures:
   • Track number of footprint changing plan changes after Stage III (60%) submittal
Current Infrastructure Condition (Pavement & Bridge)
Pavement Condition: Interstates

53% Good

International Roughness Index (2017)
- National Highway System
- Poor
- Fair
- Good

ARIZONA DEPARTMENT OF TRANSPORTATION
Pavement Condition: NHS

- 2010: 68%
- 2011: 67%
- 2012: 68%
- 2013: 63%
- 2014: 56%
- 2015: 54%
- 2016: 53%
- 2018: 35%

- 35% Good
- 62% Fair
- 4% Poor

International Roughness Index (2017)
Pavement Condition: Non-NHS

23% Good


44% 43% 43% 41% 36% 36% 35% 27% 23%

6% 23% 71%

Good Fair Poor

2018 Pavement Condition (ADOT Owned Non-NHS)

Fair
Good
Poor
State Highway System

100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Bridge Condition

- 2010: 78%
- 2011: 75%
- 2012: 75%
- 2013: 69%
- 2014: 64%
- 2015: 63%
- 2016: 65%
- 2017: 65%
- 2018: 59%

59% Good

40% Good

1% Fair

59% Poor
Infrastructure Age

Much of system built in 1960s or prior – **Roads are getting Old**
Many of bridges built in 1960s or prior – **Bridges are getting Old**
ADOT Construction Cost Index

2016 2017 2018 2019

TOTAL INDEX

47% Increase in AZ Market

ARIZONA DEPARTMENT OF TRANSPORTATION
Preservation & Rehabilitation
Focus – What does that mean?
Potholes – SR 260
Potholes – I-10 (Monday Night)

Before

After
### Summary of Dollars ($000) by Long Range Plan

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<tr>
<th></th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
<th>2023</th>
<th>2024</th>
<th>Total</th>
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<td><strong>Statewide</strong></td>
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<td></td>
<td></td>
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<tr>
<td>Expansion</td>
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<td>$141,127</td>
<td>$110,907</td>
<td>$50,000</td>
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<td>Preservation</td>
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<td>$240,146</td>
<td>$214,639</td>
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<td><strong>Total</strong></td>
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<td>$429,267</td>
<td>$342,306</td>
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<td>$89,100</td>
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<td><strong>Subprograms</strong></td>
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<tr>
<td>Modernization</td>
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<td>$23,422</td>
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<td><strong>Total</strong></td>
<td>$79,286</td>
<td>$105,945</td>
<td>$158,612</td>
<td>$375,044</td>
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<td><strong>Total</strong></td>
<td>$491,732</td>
<td>$535,212</td>
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<td>$489,914</td>
<td>$456,571</td>
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FY21 Bridge Rehab includes:
- US 60 Queen Creek - $30M
- I-15 VRB #1 - $50M

FY18 - FY 21 Pavement & Bridge Rehabilitation

2018: $107.9M
2019: $43.9M
2020: $56.9M
2021: $116.5M

* FY21 Bridge Rehab includes:
- US 60 Queen Creek - $30M
- I-15 VRB #1 - $50M
## FY 20 Program for Pavement Rehab

<table>
<thead>
<tr>
<th>USI</th>
<th>RT</th>
<th>TRACS</th>
<th>LOCATION</th>
<th>LENGTH</th>
<th>TypeOfWork</th>
<th>COST($000)</th>
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<tr>
<td>I</td>
<td>8</td>
<td>F009401C</td>
<td>E of Yuma / Maricopa County Line</td>
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<td>H891901C</td>
<td>River Rd - Calle Concordia</td>
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<td>11,446</td>
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<td>SR</td>
<td>77</td>
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<td>Jct I-10 - River</td>
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<td>Pavement Rehabilitation</td>
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<td>Pipeline Rd - Air Park</td>
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<td>SR</td>
<td>73</td>
<td>F011701C</td>
<td>W of Rim Tank - W of Canyon Day</td>
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<td>3,661</td>
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<td>Jct I-10 - River</td>
<td>4.15</td>
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<td>1,870</td>
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## FY 21 Program for Pavement Rehab

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<th>USI</th>
<th>RT</th>
<th>TRACS</th>
<th>LOCATION</th>
<th>LENG</th>
<th>TypeOfWork</th>
<th>COST($000)</th>
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<tbody>
<tr>
<td>I</td>
<td>10</td>
<td>F020501C</td>
<td>Benson Bypass</td>
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<td>Pavement Rehabilitation</td>
<td>7,000</td>
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<td>I</td>
<td>10</td>
<td>F020501C</td>
<td>BENSON BYPASS</td>
<td>4.66</td>
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<td>2,800</td>
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<td>I</td>
<td>10</td>
<td>F023301C</td>
<td>Avondale Blvd - I-17</td>
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<td>17</td>
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<td>SB County Line - McConnel Bridge</td>
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<td>F018501C</td>
<td>I-17 - Walnut Canyon Rd</td>
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<td>US</td>
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<td>FH 300 Apache - Sitgreaves - 40th St.</td>
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<td>US</td>
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<td>LONG HOUSE VALLEY - KAYENTA</td>
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<td>SR</td>
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<td>Church Street - Knottingham Ln</td>
<td>5</td>
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<td>6,768</td>
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## FY 20 & FY 21 Program for Rehabilitation

<table>
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<tr>
<th>Year</th>
<th>Type</th>
<th># of Projects</th>
<th>Cost (M)</th>
<th>Miles</th>
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<td>2020</td>
<td>Bridge Rehab</td>
<td>16</td>
<td>$56.9</td>
<td>NA</td>
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<td>2021</td>
<td>Bridge Rehab</td>
<td>8</td>
<td>$102.6</td>
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<td>2020</td>
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<td>$119.6</td>
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<td>2021</td>
<td>Pavement Rehab</td>
<td>8</td>
<td>$116.5</td>
<td>87</td>
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*80M is on I-15 VRB #1 and US 60 Queen Creek*
2020 Program w/o MAG & PAG

$492M

- Pavement Pres & Other: 10.6%
- Bridge Rehab: 11.6%
- System Management: 8.3%
- Pavement Rehab: 24.2%
- Expansion: 29.1%
- Modernization: 16.3%
2020 Program with MAG/PAG

$1,171M

- Bridge & Pavement Rehab & Pavement Pres & Other: $228M
- Modernization & Expansion: $902M
- System Management: $41M

2020

- Bridge Rehab: $57M
- Pavement Rehab: $119M
- Pavement Pres & Other: $52M
- Modernization: $80M
- Expansion: $822M
- System Maint: $41M
2020 Program with MAG/PAG

$1,171M

- System Management: 3.5%
- Bridge Rehab: 4.9%
- Pavement Rehab: 10.2%
- Pavement Pres & Other: 4.4%
- Modernization: 6.8%
- Expansion: 70.2%
### Pavement Rehabilitation for FY 18 - FY 21

<table>
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<th>Year</th>
<th># of Projects</th>
<th>Centerline Miles</th>
<th>Dollars</th>
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<td>17</td>
<td>132</td>
<td>$108M</td>
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<td>2019</td>
<td>12</td>
<td>93</td>
<td>$62M</td>
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<tr>
<td>2020</td>
<td>8</td>
<td>65</td>
<td>$118M</td>
</tr>
<tr>
<td>2021</td>
<td>7</td>
<td>87</td>
<td>$116M</td>
</tr>
</tbody>
</table>

**% of Centerline Miles (6,780) Rehabbed**

2018: 1.95%
2019: 1.37%
2020: 0.96%
2021: 1.28%

1% per year
Sources and Distributions of Transportation Funds

Transportation Dollars Available to Arizona

- Federal
- State

- Department of Public Safety Highway Patrol
- Counties, Cities, and Towns
- State Highway Fund
- COGs and MPOs
$30 B Gap

Source: ADOT Long Range Transportation Plan (2017)
Automakers Commit to All-Electric Future

- VW Group Electrifies Entire 300-Car Lineup
- BMW Rolls Out 12 New BEV Models
- Jaguar Land Rover Electrifies its Entire New Lineup
- Renault, Nissan, and Mitsubishi Produce 12 BEV Models. Daimler Produces 50 Electric and Hybrid Models
- GM Produces 2 EVs Within 18 Months
- All New Volvo Models Will Be Electric or Hybrid

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

Electric 20%
Hybrid 29%
Gasoline 48%
Diesel 3%

Electric Vehicle New Car Market Share

Source: Maricopa Association of Governments

Miles Per Gallon
Best Selling Cars
  1991 – Ford Taurus
  2018 – Honda Civic

City: 16
Highway: 26
Combined: 19

City: 31
Highway: 40
Combined: 35

Source: Maricopa Association of Governments
User Fee Challenges

Revenue Generated
(10,000) miles driven

1991 – Ford Taurus
2018 – Honda Civic

$95
$51
$28

(Adjusted for Inflation)

Source: Maricopa Association of Governments
User Fee Challenges - Disruption

2021 Ford Mustang Mach E GT
<table>
<thead>
<tr>
<th></th>
<th>1991</th>
<th>2018</th>
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</thead>
<tbody>
<tr>
<td>#46</td>
<td>$95</td>
<td>$28</td>
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</table>
• Crack Sealing
• Flushes

“Good Good” Program
Fog (Preservation)
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
How long has Travel ID been Available? Close to 4 years

Arizona’s Voluntary Travel ID is here, but there’s no rush
3/31/2016
By Ryan Harding / ADOT Communications

We shared this week that Arizona’s Voluntary Travel ID is here. And we also shared that there’s no rush to get one.

In case you’re wondering what a Travel ID is or why there’s no rush, here’s the information you need...

The Voluntary Travel ID is Arizona’s credential that complies with the federal REAL ID Act passed by Congress back in 2005. The federal law set forth minimum security standards for state-issued credentials presented at federal buildings and security checkpoints like airport security.

Identified by a gold star in the top right corner of the ID, the Voluntary Travel ID will ensure you can get through airport security to board your flight or enter federal buildings and military bases.

“But wait,” you say. "I’m flying for vacation or business later this year. Should I come get one right now?"

Nope. There’s no rush. You see, now that we have the Travel ID available, the U.S. Department of Homeland Security has said it will extend the use of current Arizona credentials at airport security and federal buildings until Oct. 1, 2020. So you have some time to decide if and when to get one.

Considering getting one anyway? Then check out our Voluntary Travel ID site.

Also, check out our public service announcement below for a quick overview on the Voluntary Travel ID. You might see it air on local TV stations, but you can tell your friends you saw it here first.
Travel ID

Arizona Travel ID

Get yours before the October 2020 deadline

COUNTDOWN: 239 days 11 hrs. 52 min. 26 sec.

Effective October 1, 2020, only the Arizona Travel ID (driver license or ID card), a U.S. passport and other federally approved identification will be accepted at TSA airport security checkpoints for domestic travel.

What documents should I bring?

Apply For a Travel ID

Target of 1.5 Million by Oct
0.67 Million to Date

Countdown timer
New Law

ARIZONA LAW

DON'T TEXT
JUST DRIVE

FINES APPLY

January 1, 2021
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. How long has Travel ID been available? Almost 4 Years (2016)
5. What is ADOTs 3-year Construction Cost Index? 47%
6. What should you do while driving? Just Drive
Boschen Out
Just .... Drive
Questions?

Steve Boschen
Assistant Director
Infrastructure Development and Operations (IDO) Division