

# PLANNING

**Presented by:**

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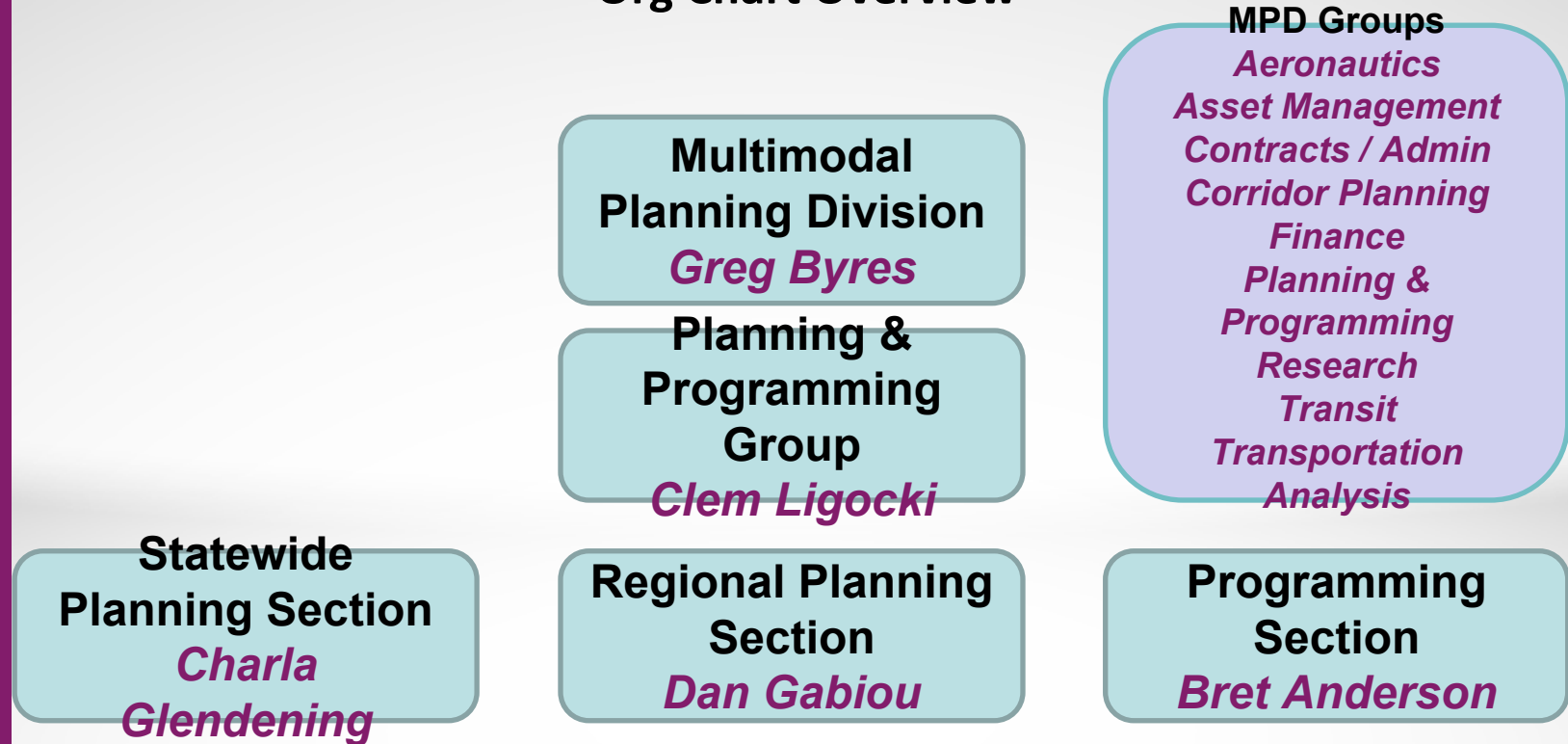
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# PROJECT DELIVERY ACADEMY

## MODULE 1: Planning and Programming

### Org Chart Overview



**MODULE 1: Planning and Programming**

- ***What we do in Planning...***

***Statewide Planning***

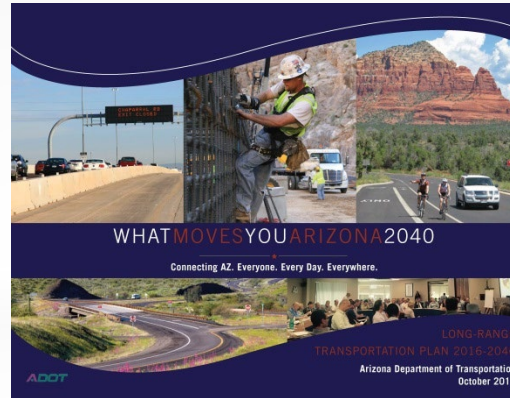
- Long Range Planning
- Freight & Rail Planning
- Tribal Coordination
- Bike & Pedestrian Planning

***Regional Planning***

- Planning to Programming (P2P)
- COG/MPO Oversight
- Planning Studies Program
- Planning Environmental Linkages (PEL)
- Planning Studies

# WHAT MOVES YOU ARIZONA 2040

## Long-Range Transportation Plan 2016-2040



**Project Delivery Academy**  
July 2021

# Long Range Transportation Plan

## *Why Do We Have a Plan?*



- **Federal Transportation Bill – Fixing America’s Surface Transportation Act (FAST Act)**
- **Signed by President Obama December 4, 2015**
- **Authorized \$305 Billion over 5 years – expires December 2020**
- **Arizona Revised Statutes**
- **Use of Federal Funds mandates that States have Long Range Plans**

# Long Range Transportation Plan

## *What Does This Plan Do?*



- Provides strategic direction to guide future investments in transportation
- Defines Goals, Objectives & Performance Measures
- Identifies long term (25 year planning horizon) Needs & Revenues Forecasts
- Stakeholder Outreach
- Sets Recommended Investment Choices: Expansion, Preservation, and Modernization

# Long Range Transportation Plan

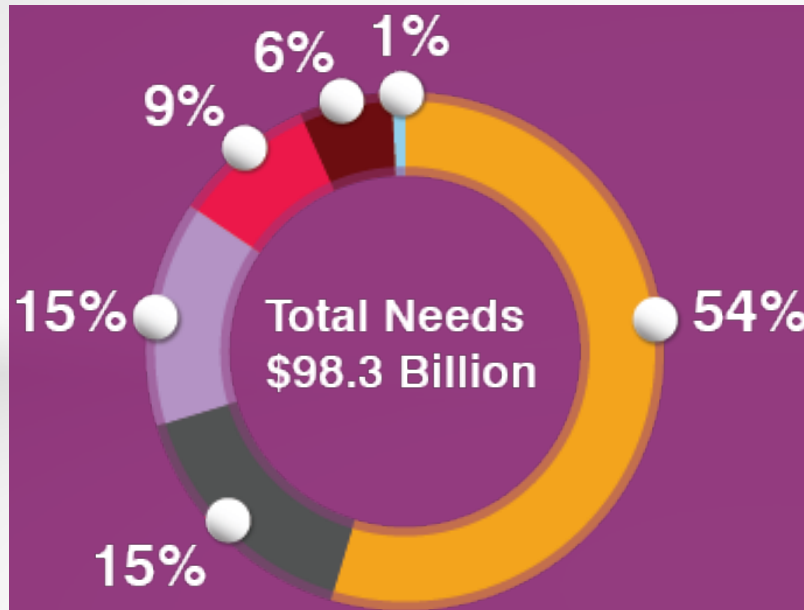
## Performance: FHWA Goals



- ***Safety:*** Reduce fatalities and serious injuries
- ***Infrastructure Conditions:*** NHS in state of good repair
- ***Congestion Reduction:*** On NHS, in particular
- ***System Reliability:*** Surface transportation efficiency
- ***Freight Movement & Economic Vitality:*** Access to markets
- ***Environmental Sustainability:*** Protect/enhance environment

# Long Range Transportation Plan

## Needs – All Modes





# Long Range Transportation Plan

## Citizen & Stakeholder Input



**400+**  
MEETING  
ATTENDEES



**14,347**  
WEBSITE  
HITS



**312,428**  
FACEBOOK  
REACHES



**5,958**  
SURVEY  
RESPONDENTS

# Long Range Transportation Plan

## Citizen Survey Results



- Preference for System Preservation
- Expansion focus stronger in large Metro Areas
- All projects promote Safety

### How Stakeholders Think ADOT Should Allocate Funding

PER \$100

Preservation & Maintenance



Expansion



Safety



Technology



Accessibility



= \$5      \$15      \$25      \$35      \$45

# Long Range Transportation Plan

## Categories of Highway Need/Investment

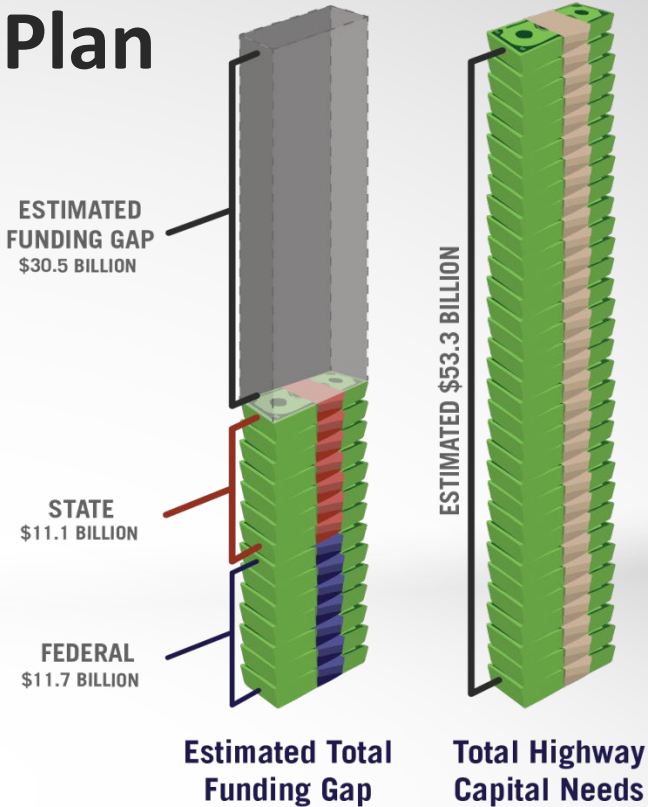


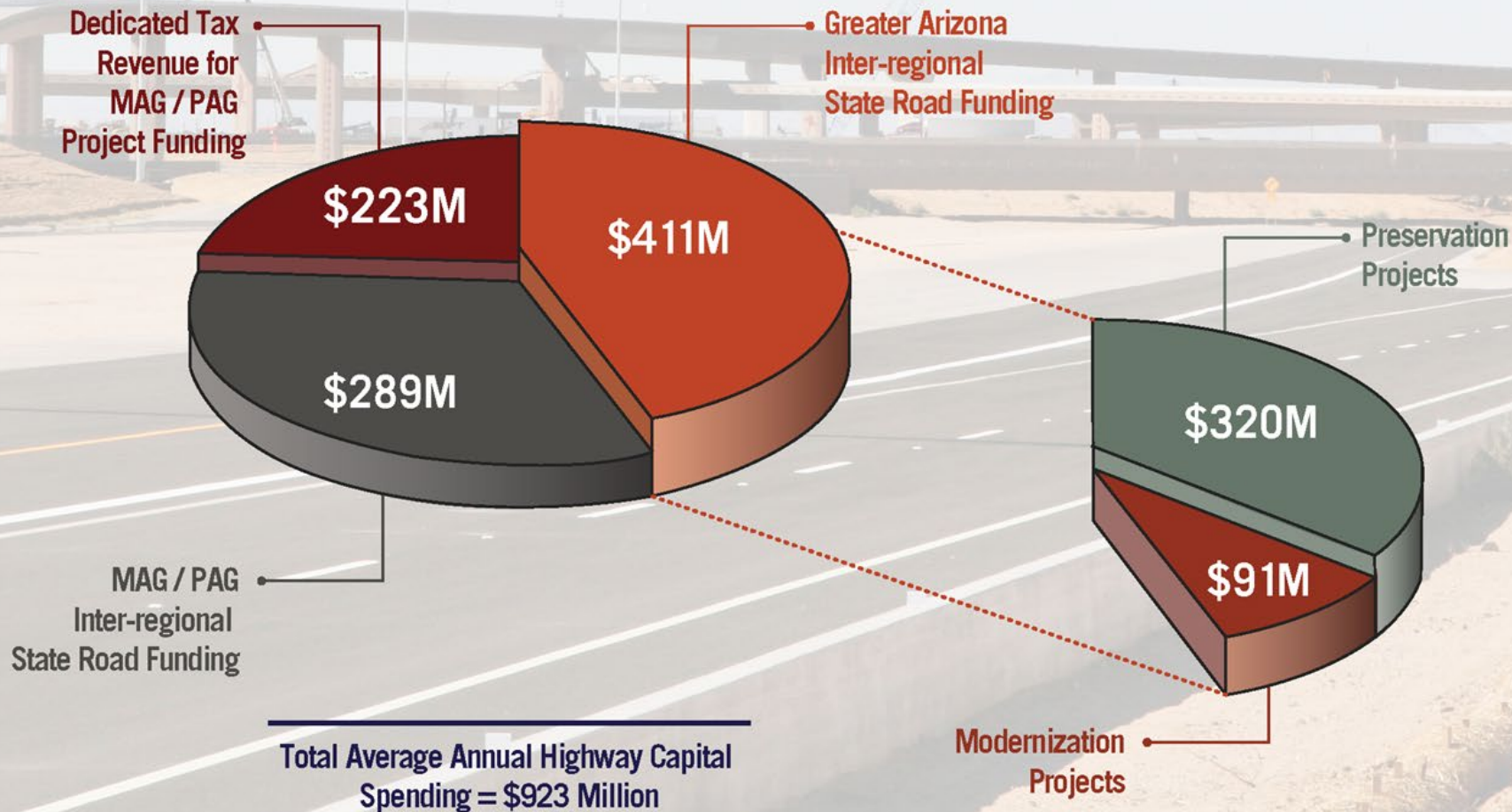
- ***Preservation:*** Investment to keep pavement smooth and maintain bridges
- ***Modernization:*** Non-capacity investment that improves safety & operations (e.g. adding shoulders or smart technology)
- ***Expansion:*** Investment that adds capacity to the highway system (e.g. new roads, added lanes or new interchanges)

# Long Range Transportation Plan

## 25-Year Highway Needs

- Preservation = \$9.236 B
- Modernization = \$9.962 B
- Expansion = \$34.054 B
- **Total = \$53.3 B**

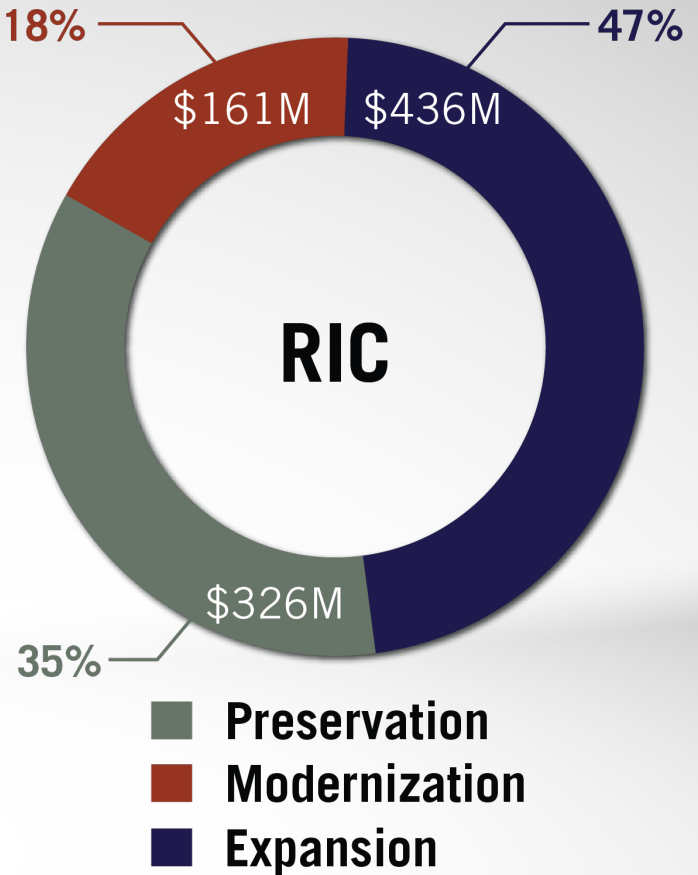




# Long Range Transportation Plan

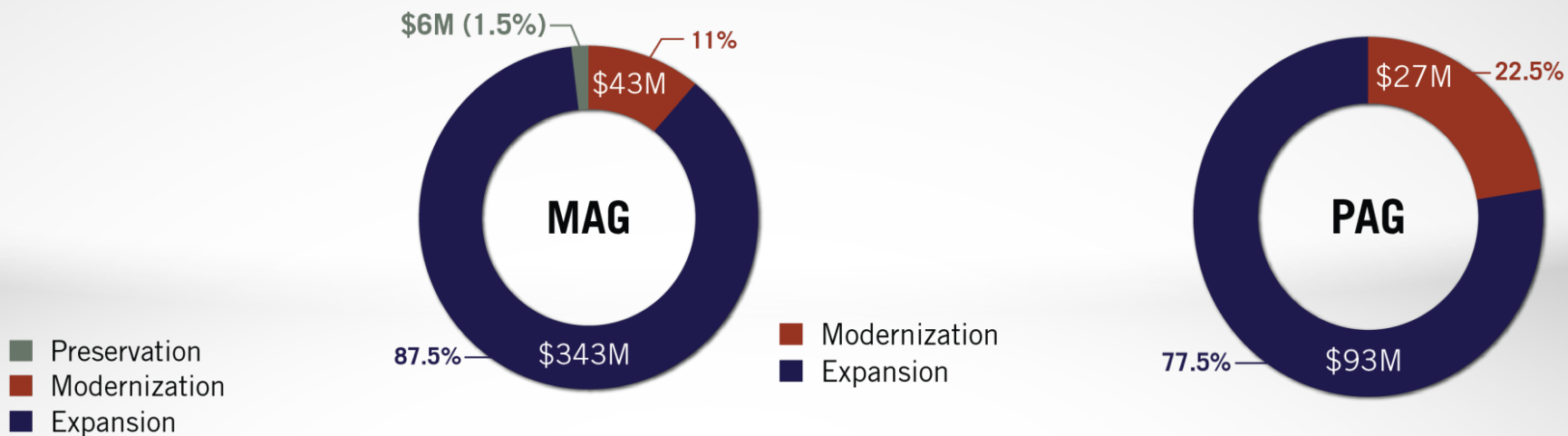
## Recommended Investment Choice - Statewide

- System Preservation Needs Statewide
- Expansion focus in large Metro Areas
- Safety remains a priority



# Long Range Transportation Plan

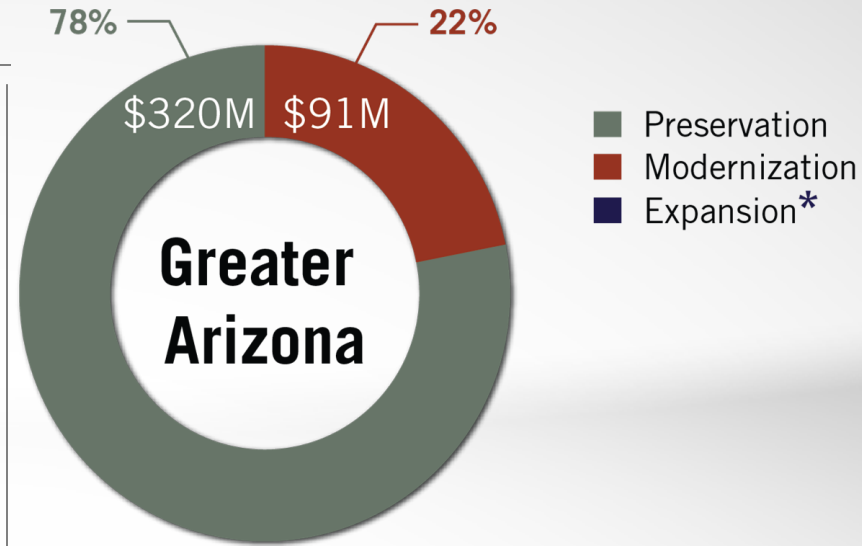
## RIC – MAG and PAG – Expansion Focus



# Long Range Transportation Plan

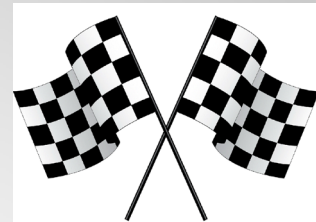
## Recommended Investment Choice – Greater Arizona

- **System Preservation is Priority**
- **Fund the Highway Safety Improvement Program and Avoid System Obsolescence**
- **\* Up to 5% of funding reserved for Expansion *only* to match federal grants or leverage third party contributions (*or* if Revenues incr.)**





# Long Range Transportation Plan Summary and Recommendation



- **Greater Arizona:** Focus on Preservation of state highways and bridges, and keep safety a high priority; work with MPOs/COGs
- **MAG and PAG:** Respect their federal designation as leads for metropolitan area planning; preserve state highways as appropriate
- **Projects:** Use this Plan framework to guide ADOT project recommendations to the Board thru Five-Year Program process
- **Board Action:** Plan Approved February 16, 2018

# Planning to Programming

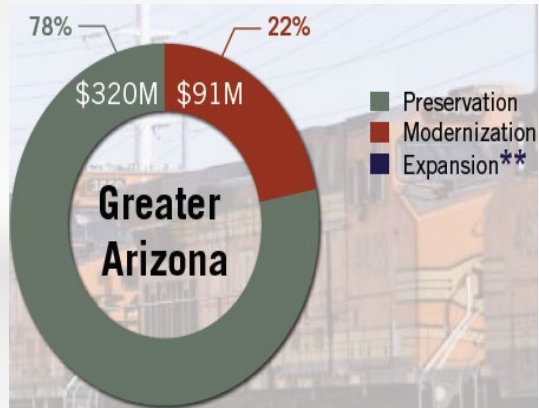
## Overview



Project Delivery Academy

# What is P2P?

## Long Range Transportation Plan



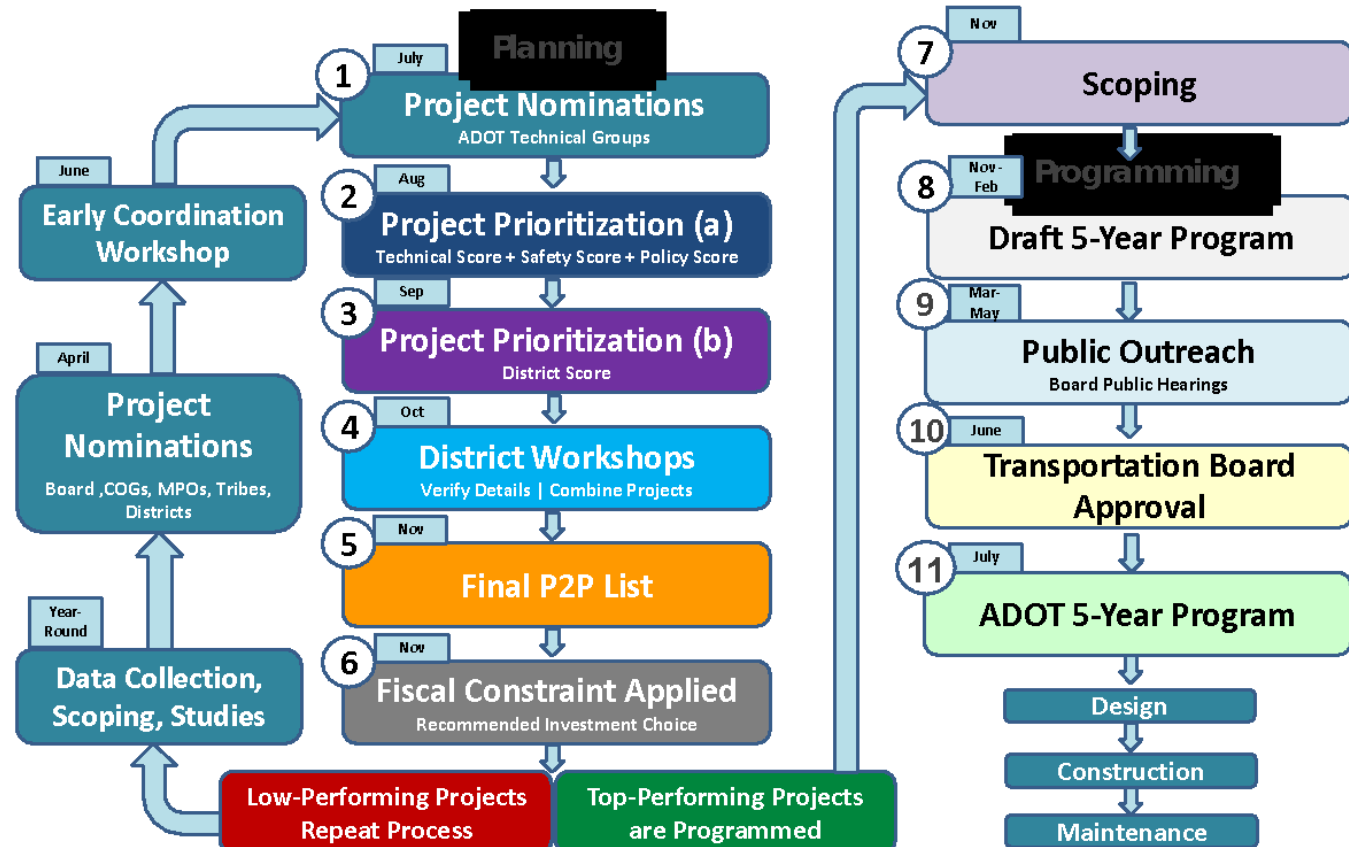
## Five-Year Construction Program



# Why P2P?

- ❑ **Performance-Based Planning to Programming is the Law**
- ❑ Federal Regulation (FAST Act)
  - 23 USC Section 135(d)(2), and 49 USC Section 5304(d)(2)
- ❑ State Statute
  - ARS Title 28, Chapter 2, Article 7 (§ 28-501 through § 28-507)
- ❑ **Financial Stewardship**
  - Maximize Use of Public Funds

# ADOT P2P Process Flowchart



# P2P Scoring Overview

## Pavement Preservation

Annual Investment  
Target:  
\$260M

Scoring:  
Technical = 45%  
District = 45%  
Policy = 10%

## Bridge Preservation

Annual Investment  
Target:  
\$60M

Scoring:  
Technical &  
Safety = 60%  
District = 30%  
Policy = 10%

## Modernization

Annual Investment  
Target:  
\$91M

Scoring:  
Technical = 35%  
District = 30%  
Safety = 25%  
Policy = 10%

## Expansion

Annual Investment  
Target:  
\$0M

Scoring:  
Technical = 50%  
District = 25%  
Safety = 15%  
Policy = 10%

# P2P Scoring Breakdown Pavement Preservation

## PRESERVATION (PAVEMENT)

Activities that improve or sustain the condition of the transportation facility to a state of good repair

P2P - Pavement Preservation Scoring			
Technical (45%)	Performance Target	Measure	Weighting
	% Interstate Good Condition = 44%	Pavement Condition: IRI, Cracking, & Rutting Deterioration Factors Lifecycle Factors	45%
	% Interstate Poor Condition = 2%		
	% Non-Interstate Good Condition = 28%		
	% Non-Interstate Poor Condition = 6%		
Total Technical Score			45%
District (45%)	Performance Target	Measure	Weighting
	N/A	District Engineer Evaluation	45%
Total District Score			45%
Policy (10%)	Performance Target	Measure	Weighting
	Freight Reliability on Interstate = 1.35	Freight Percentage (T-Factor)	3%
	N/A	Functional Classification	3%
	N/A	External Funding Contribution	4%
Total Policy Score			10%
Subject to Change			100%

## Work Types

### Maintenance

- ✓ Concrete repair
- ✓ Flush shoulder /shoulder edge repair
- ✓ Leveling with premix
- ✓ Patching / blade laying
- ✓ Pothole repair
- ✓ Slide removal and rock patrol
- ✓ Spot filling cracks / crack seal
- ✓ Spot pavement profiling / AC grinding

### Preservation

- ✓ AC grinding / milling
- ✓ Cape seal
- ✓ Chip seal
- ✓ Crack seal / fill
- ✓ Fog seal / flush
- ✓ Friction coarse (AR-ACFC / ACFC) / mill & fill or overlay of friction coarse
- ✓ Micro surface
- ✓ PCCP cross stitching
- ✓ PCCP dowel-bar retrofit (DBR)
- ✓ PCCP diamond grinding
- ✓ Slurry seal
- ✓ Spot repair
- ✓ Thin bonded overlay

### Rehabilitation

- ✓ Major AC overlays
- ✓ Mill & fill (existing AC)

### Reconstruction

- ✓ Removal and replacement of existing roadway section
- ✓ Spot reconstruction

# P2P Scoring Breakdown

## Bridge Preservation

### PRESERVATION (BRIDGE)

Activities that improve or sustain the condition of the transportation facility to a state of good repair

### Work Types

#### Maintenance

- ✓ Approach overlay
- ✓ Barrier repair
- ✓ Drainage / hydrovac
- ✓ Channel work
- ✓ Cleaning
- ✓ Minor crash repair
- ✓ Pipe / culvert repair
- ✓ Scour repair (existing)
- ✓ Spall / pothole repair
- ✓ Structure maintenance
- ✓ Washing

#### Preservation

- ✓ Cyclical Maintenance Activities
- ✓ Deck joint / seal replacement
- ✓ Deck overlay
- ✓ Deck seal
- ✓ Major channel repair
- ✓ Painting (steel)
- ✓ Scour retrofit
- ✓ Seismic retrofit
- ✓ Slab jacking

#### Rehabilitation

- ✓ Major bridge element rehab / replacement
- ✓ Major crash repair
- ✓ Superstructure replacement

#### Reconstruction

- ✓ Bridge / culvert (over 20') replacement

### P2P - Bridge Preservation Scoring

	Performance Target	Measure	Weighting
<b>Technical &amp; Safety (60%)</b>	% NHS Bridges Good Condition = 52%	Bridge Condition: Deck, Superstructure, Substructure, Culvert, Scour	60%
	% NHS Bridges Poor Condition = 4%	Lifecycle Factors	
<b>Total Technical Score</b>			<b>60%</b>
	Performance Target	Measure	Weighting
<b>District (30%)</b>	N/A	District Engineer Evaluation	30%
<b>Total District Score</b>			<b>30%</b>
	Performance Target	Measure	Weighting
<b>Policy (10%)</b>	Freight Reliability on Interstate = 1.35	Freight Percentage (T-Factor)	3%
	N/A	Functional Classification	3%
	N/A	External Funding Contribution	4%
<b>Total Policy Score</b>			<b>10%</b>
<b>Subject to Change</b>			<b>100%</b>



# P2P Scoring Breakdown Modernization

Modernization Scoring			
Technical (35%)	Performance Target	Measure	Weighting
	Varies	Technical Group Project Ranking (Statewide)	35%
Total Technical Score			35%
District (30%)	Performance Target	Measure	Weighting
	N/A	District Engineer Evaluation	30%
Total District Score			30%
Safety (25%)	Performance Target	Measure	Weighting
	Fatalities = 1% increase Fatality Rate = 0% increase Serious Injuries = 4% decrease Serious Injury Rate = 6% decrease Non-Motorized = 2% increase	Crash Rate	25%
Total Safety Score			25%
Policy (10%)	Performance Target	Measure	Weighting
	Freight Reliability on Interstate = 1.35	Freight Percentage (T-Factor)	3%
	N/A	Functional Classification	3%
	N/A	External Funding Contribution	4%
Total Policy Score			10%
Subject to Change			100%

## MODERNIZATION

Improvements that upgrade efficiency, functionality, and safety without adding capacity

### Work Types

- ADA / pedestrian
- Bicycle lane / shoulder
- Climbing / passing Lanes
- Drainage
- Fence (new / replacement)
- Guardrail (new / replacement)
- Intersection / interchange enhancement
  - o New intersection
  - o Reconfiguration
  - o Roundabout
  - o Ramp
  - o Signal
  - o Turn lanes
- Intelligent Transportation Systems (ITS)
- Pedestrian crossings
- Retrofit / correct functional obsolescence
- Rockfall mitigation
- Safety modifications / enhancements
- Stormwater
- Tree removal / recovery area
- Traffic control and management
- Widening existing lanes / shoulders
- Wildlife crossings or mitigation

# P2P Scoring Breakdown Expansion

## EXPANSION

Improvements that add capacity by adding new facilities

## Work Types

- New grade-separated overpass / underpass (if adding lanes)
  - Railroad X-ing
  - Interchange
  - DHOV Ramp
- New lanes
- New rail
- New routes / bypass

Expansion Scoring			
Technical (50%)	Performance Target	Measure	Weighting
	N/A	Level of Service (LOS)	10%
	N/A	Average System Speed	5%
	Travel Time Reliability (TTR) Interstate = 85.8% TTR Non-Interstate NHS = 74.9%	System Reliability	10%
	Freight Reliability on Interstate = 1.3 5	System Reliability (freight)	10%
	N/A	Cost Effectiveness	10%
	N/A	New Permanent Jobs Created	5%
Total Technical Score			50%
District (25%)	Performance Target	Measure	Weighting
	N/A	District Engineer Evaluation	2 5%
Total District Score			25%
Safety (15%)	Performance Target	Measure	Weighting
	Fatalities = 1% increase Fatality Rate = 0% increase Serious Injuries = 4% decrease Serious Injury Rate = 6% decrease Non-Motorized = 2% increase	Level of Safety Service (LOSS)	7.5%
		Safety Benefit	7.5%
	Total Safety Score		
Policy (10%)	Performance Target	Measure	Weighting
	Freight Reliability on Interstate = 1.3 5	Freight Percentage (T-Factor)	3%
	N/A	Functional Classification	3%
	N/A	External Funding Contribution	4%
Total Policy Score			10%
Subject to Change			100%

Expansion now prioritized on a Five-Year Cycle, concurrent with LRTP  
Next LRTP Update to begin FY 2022

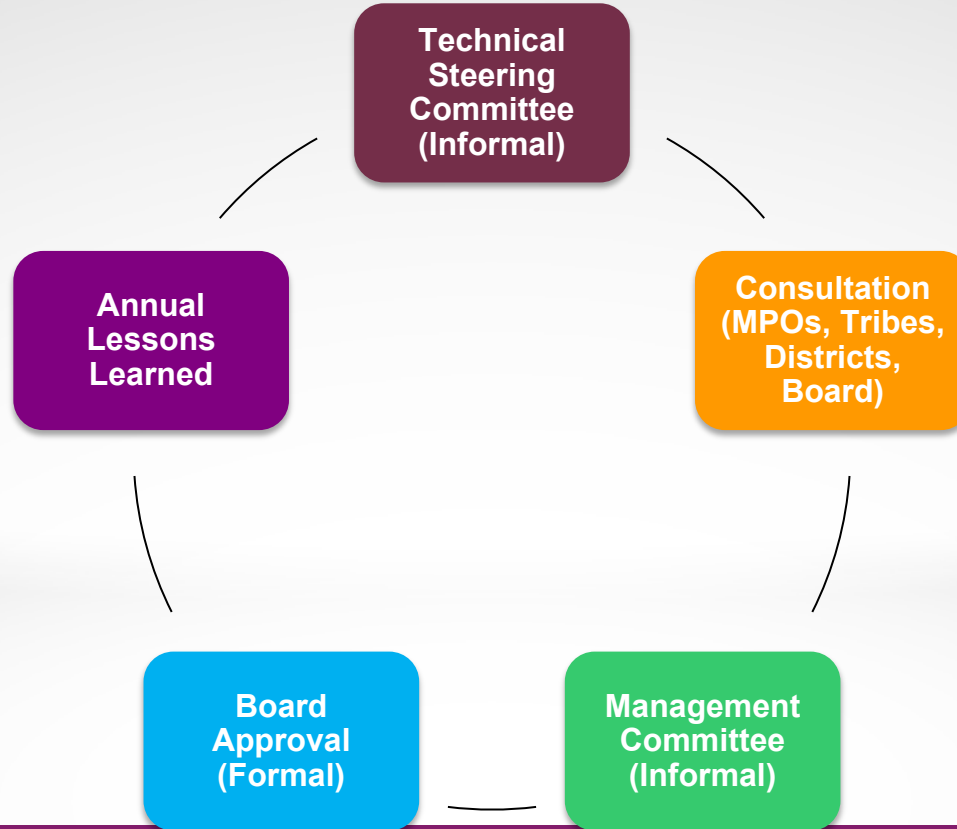
# P2P Scoring Guidebook

P2P Scoring Guidebook Link:

<https://www.azdot.gov/planning/transportation-programming/planning-to-programming>



# Continuous Improvement



# Questions / Comments

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# PROJECT DELIVERY ACADEMY

## MODULE 1: Planning and Programming

# QUESTIONS?

**PROJECT DELIVERY ACADEMY**

**MODULE 1: Planning and Programming**

**THANK YOU**