

# RMAP Performance Measures

Transportation Planning Committee

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Pima Association of Governments

# »» Overview of the Performance Measures Program

- History and background
- Current practices and uses
- Insight into development and adoption
- Steps to refine and improve





## FAST Act National Performance Goals



Reduce traffic fatalities and serious injuries



Maintain highways in a state of good repair



Reduce traffic congestion



Improve the efficiency of the transportation system



Improve the national freight network



Protect and enhance the environment



Reduce project delivery delays

### FAST Act Program:

- Separate from RMAP
- MAP-21 legislation
- Federal requirement
- 21 performance measures
- ADOT targets



# Developing Performance Measures

- Catalog of performance metrics
- Criteria for selection
  - Data: type, source, accuracy, reliability, cost, accessibility
  - Relevance, meaningfulness, usefulness
- Process for evaluation
  - PAG's technical and planning staff collaboration
  - Public engagement and feedback





**System Maintenance:** Roadways, bike and pedestrian infrastructure, and transit systems that are rehabilitated, complete, and maintained in a state of good repair

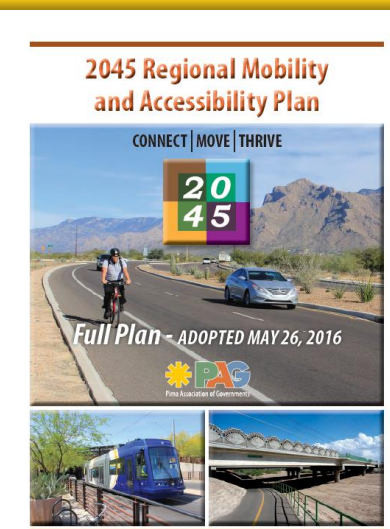
Objective	Performance Measure	Current	2020 Benchmark	2045 Plan Target
Improve the condition of roadways in the Tucson region	Percentage of federal-aid roadways rated in "poor" condition based on International Roughness Index	37% in poor condition	Under 30% in poor condition by 2020	Below 20% poor by 2045
Maintain the share of structurally deficient bridges	Percentage of bridges rated as structurally deficient	8%	8%	Maintain below 10%
Maintain the regional transit fleet in a state of good repair	Average age of buses	6.5 years	6.5 years	Maintain under 7 year average age

### System Maintenance Strategies

- 1) *Develop and support uniform system performance planning tools that assist local agencies and establish consistent reporting standards region-wide.*
- 2) *Incorporate best practices in pavement management systems and encourage communication across jurisdictions about successful strategies.*
- 3) *Encourage the programming of regional funding for pavement preservation.*
- 4) *Explore sustainable local funding solutions to maintain the region's transportation assets.*

## Current Program, 2045 RMAP

- Goal areas (7)
- Performance measures (51)
- 2045 targets (38)
- Strategies (79)



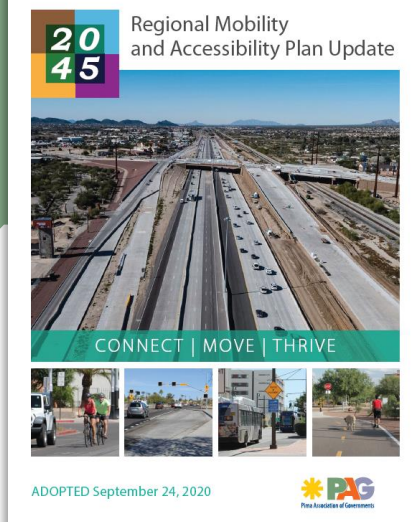


Performance Measure	Description	2015 Baseline	Current	2020 Benchmark	2025 Benchmark	2045 Target	Desired Trend	Status
<b>System Maintenance</b>								
Federal-Aid Pavement in Poor Condition	% of centerline miles	37.0%	32.1%	34.2%	29.0%	20.0%	decrease	on pace
Public Bridges in Poor Condition	% of all bridges	9.1%	5.4%	8.4%	6.6%	10.0%	maintain	on pace
Average Age of Public Buses	years in service	6.5	7.4	6.5	7.3	7.0	maintain	behind pace
<b>Safety</b>								
Total Fatalities	5-year average	95.8	105.8	95.8	97.8	75.0	decrease	trending away
Fatality Rate	per 100 million VMT	1.12	1.10	1.11	0.98	0.66	decrease	on pace
Total Serious Injuries	5-yr average	581.4	481.2	557.2	469.5	436.1	decrease	on pace
Serious Injury Rate	per 100 million VMT	6.8	5.4	6.3	5.0	3.7	decrease	behind pace
Total Pedestrian Fatalities	5-yr average	21.2	24.4	20.0	21.7	14.0	decrease	trending away
Pedestrian Fatality Rate	per 10,000 walk commutes	20.7	24.7	18.3	19.9	6.2	decrease	trending away
Total Pedestrian Serious Injuries	5-yr average	53.4	55.0	50.5	50.0	35.8	decrease	behind pace
Pedestrian Serious Injury Rate	per 10,000 walk commutes	52.1	55.8	46.0	45.4	15.6	decrease	trending away
Total Bicycle Fatalities	5-yr average	4.4	5.8	4.2	5.0	2.9	decrease	trending away
Bicycle Fatality Rate	per 10,000 bike commutes	5.9	8.2	5.2	6.5	1.8	decrease	trending away
Total Bicycle Serious Injuries	5-yr average	31.0	29.0	29.3	26.9	21.0	decrease	on pace
Bicycle Serious Injury Rate	per 10,000 bike commutes	41.3	41.0	36.5	33.6	12.4	decrease	behind pace
Transit Crash Rate	per 100,000 service miles	1.9	2.5	1.9	2.2	1.5	decrease	trending away
<b>Multimodal Choices</b>								
Walk, Bike, or Transit to Work Rate	% of population	6.8%	6.7%	7.3%	7.6%	10.0%	Increase	trending away
Walk, Bike, and Transit Mode Share, All Trips	% of population	16.3%	16.4%	17.0%	17.3%	20.0%	Increase	behind pace
Total Transit Trips	millions per year	21.3	16.7	22.1	21.26	34.4	Increase	trending away
Average Transit Travel Time	minutes	50.8	55.1	50.7	53.93	50.0	decrease	trending away
Average Transit Speed	miles per hour	13.3	14.2	13.5	14.38	15.0	Increase	on pace
Total Miles of Pedestrian Facilities		442	582	568	742	1200	Increase	on pace
Total Miles of Bicycle Facilities		1010	1068	1128	1237	1720	Increase	on pace
<b>System Performance</b>								
Daily Vehicle Hours Traveled per Capita	minutes	32.3	32.2	32.0	31.9	30.6	decrease	behind pace
Daily Vehicle Miles Traveled (VMT) per Capita		20.6	20.8	20.3	20.3	18.5	decrease	behind pace
Travel Time Index, PM Peak		1.44	1.43	1.46	1.46	1.58	maintain	on pace
Percent of Peak-Hour VMT under Severe Congestion	level of service E or F	0.012	0.0110	0.013	0.013	0.018	maintain	on pace
<b>Environmental Stewardship</b>								
On-Road Greenhouse Gas Emissions per Capita	metric tons per year	3.3	3.2	3.1	3.0	2.3	decrease	behind pace
Weekday Metric Tons of NOx Emissions		22.8	15.4	22.8	12.9	4.6	decrease	on pace
Weekday Metric Tons of VOC Emissions		18.4	10.1	18.4	8.8	4.6	decrease	on pace
Weekday Metric Tons of CO Emissions		164.4	123.9	164.4	106.7	49.3	decrease	on pace
Weekday Metric Tons of PM 2.5 Emissions		0.5	0.2	0.5	0.3	0.5	maintain	on pace
Weekday Metric Tons of PM 10 Emissions		1.3	0.9	1.3	1.0	1.3	maintain	on pace
<b>Land Use and Transportation</b>								
Regional Jobs Reachable by Auto within 30 Minutes		240,242	228,558	258,238	256,195	348,320	Increase	behind pace
Regional Jobs Reachable by Transit within 45 Minutes		26,332	25,157	28,526	28,466	39,498	Increase	behind pace
Job Accessibility Index for All Modes		57.1	52.4	58.6	55.5	65.7	Increase	behind pace
Jobs within Quarter Mile of Transit Stop	% of all jobs	58.6%	57.7%	59.1%	58.2%	60.0%	Increase	behind pace
Population within Quarter Mile of Transit Stop	% of population	42.5%	40.6%	43.0%	41.6%	45.0%	Increase	behind pace

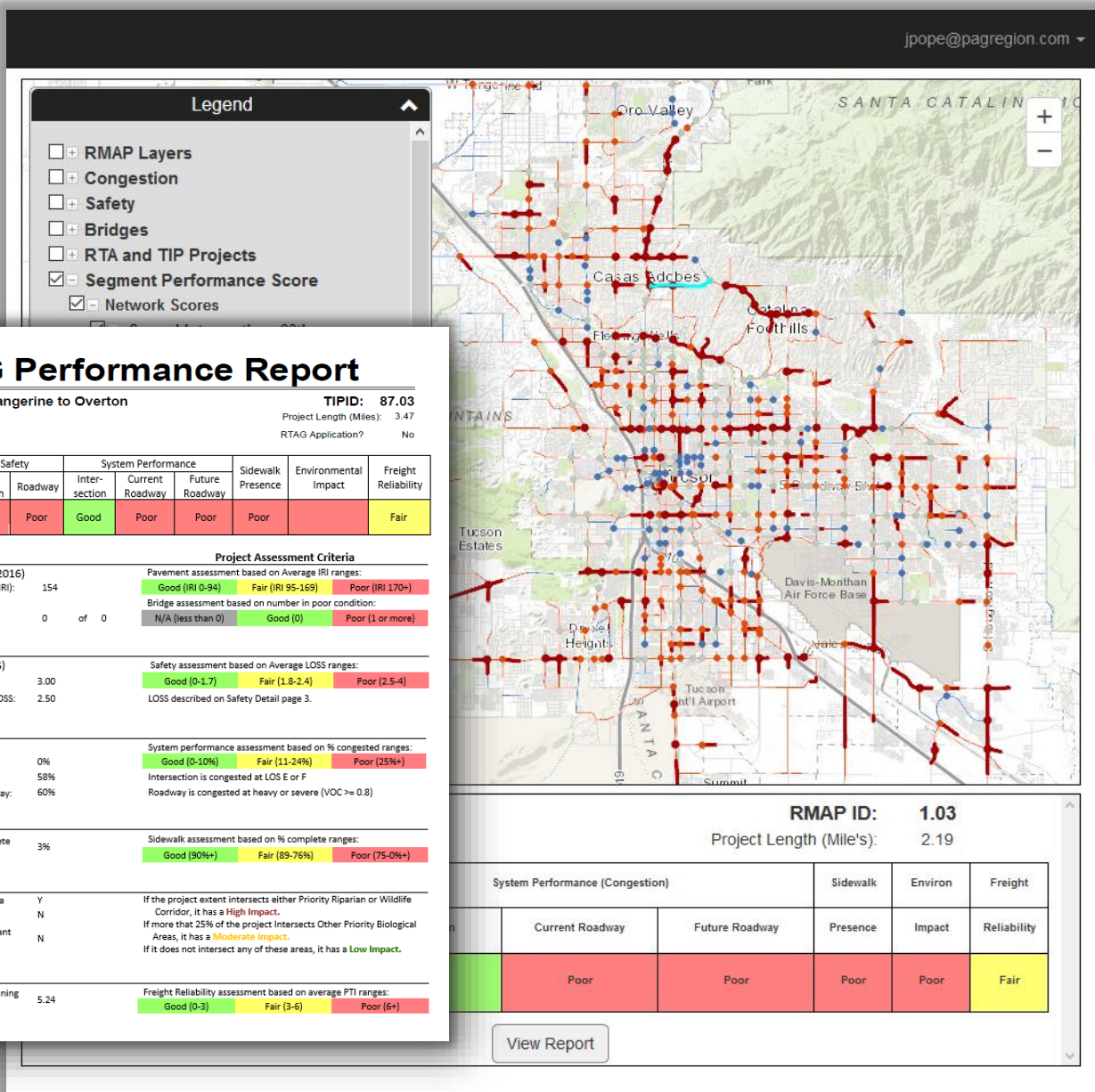
Figure AA.2 RMAP Performance Measure Progress Report

## First performance report, 2045 RMAP Update:

- 5 years of data
- Evaluated progress to achieve targets







## TIP Integration:

- Performance conditions in Project Explorer (2018)
- Performance assessment report (2019)



# >> 2055 RMAP

- Opportunity to refine the performance measures program
- Considerations:
  - What will be the performance goal areas of the new plan?
  - Which measures to continue or discontinue using?
  - Are there new metrics and measures that can be used?
  - How will targets be set?





# Questions and Discussion

Thank you.

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