

Current MAP-21 Pavement Performance by Business Plan Network (Based on Total PA Miles)

Business Plan Network	MAP-21 Pavement Performance Measure											
	Good				Fair		Poor				Missing (Max 5%)	
	Miles	%	2019 Target	2021 Target	Miles	%	Miles	%	2019 Target	2021 Target	Miles	%
Interstate	67.5	49.32%	-	31%	69.3	50.61%	0.1	0.07%	-	2%	18.3	11.79%
NHS, Non-Interstate	223.5	15.56%	12%	11%	1,159.5	80.72%	53.4	3.72%	6%	9%	118.8	7.64%

- MAP-21 pavement performance measures required for FHWA reporting include four distress components which translate to good, fair, or poor condition scores. See table on reverse of this page for distresses and thresholds. Three conditions apply to each pavement type. A pavement segment is considered in good condition if all three distress components are rated as good. A pavement segment is considered in poor condition if two or more of its three distress components are rated as poor.
- FHWA requires that no more than 5 percent of a state’s NHS Interstate lane-miles be in poor condition. Additionally, state DOTs are required to establish targets.
- FHWA has not established a minimum condition for NHS non-Interstate roadways, but requires the state DOT to establish targets.
- FHWA requires that no more than 5 percent of a state’s mileage be unreported or missing.
- Conditions are assessed and analyzed for pavement "sections" that cannot exceed 0.10 miles in length, which differs from PennDOT's historic segment level data.
- MAP-21 performance measures apply to all Interstate and NHS Non-Interstate miles in PA, regardless of ownership. Therefore, PA Turnpike and local-owned miles are in Statewide totals, but not in each District's totals. Local-owned miles are included in MPO/RPO totals as appropriate.
- MAP-21 rulemaking requires that states develop and implement a risk-based asset management plan to achieve and sustain a state of good repair over the life cycle of transportation assets and to improve or preserve the condition of the NHS. Asset Management encompasses two related means of doing so: making infrastructure last as long as reasonably possible, and keeping up on preservation activities to minimize costlier major repairs. Together, these practices extend the life of assets and reduce the cost of maintaining them in the desired state of good repair. This is known as operating the network at the lowest life-cycle cost (LLCC).
- MAP-21 performance measures are not to drive planning and programming, but rather be an indication of performance achieved by states operating at the LLCC.

Current Pavement Smoothness (IRI) Summary by Business Plan Network (Based on PennDOT Miles)

Business Plan Network	Excellent		Good		Fair		Poor		Median	Tested Seg-Mi
	Seg-Mi	%	Seg-Mi	%	Seg-Mi	%	Seg-Mi	%	IRI	
Interstate	32.3	18.03%	60.8	33.88%	59.8	33.32%	26.5	14.76%	99	179.4
NHS, Non-Interstate	67.4	4.46%	401.6	26.54%	578.1	38.21%	465.9	30.79%	143	1,512.9
Non-NHS, ≥ 2000 ADT	61.8	3.42%	470.9	26.08%	625.0	34.61%	648.2	35.89%	175	1,806.0
Non-NHS, < 2000 ADT	26.8	4.30%	132.5	21.21%	170.0	27.21%	295.3	47.28%	214	624.6
Total - Roadway	188.4	4.57%	1,065.8	25.85%	1,432.8	34.75%	1,435.9	34.83%	165	4,122.8

Current Overall Pavement Index (OPI) Summary by Business Plan Network (Based on PennDOT Miles)

Business Plan Network	Excellent		Good		Fair		Poor		Median
	Seg-Mi	%	Seg-Mi	%	Seg-Mi	%	Seg-Mi	%	OPI
Interstate	11.7	7.91%	90.9	61.51%	42.5	28.76%	2.7	1.83%	88
NHS, Non-Interstate	45.9	3.08%	805.0	53.98%	463.6	31.08%	176.9	11.86%	82
Non-NHS, ≥ 2000 ADT	108.0	5.98%	480.0	26.59%	958.5	53.09%	258.8	14.33%	76
Non-NHS, < 2000 ADT	55.9	8.95%	241.1	38.61%	213.9	34.25%	113.6	18.20%	69
Total - Roadway	221.4	5.44%	1,617.1	39.74%	1,678.5	41.25%	552.1	13.57%	78

Total Miles

PennDOT Seg-Mi	PA Miles
186.5	155.2
1,590.7	1,555.2
1,858.4	
634.3	
4,269.9	

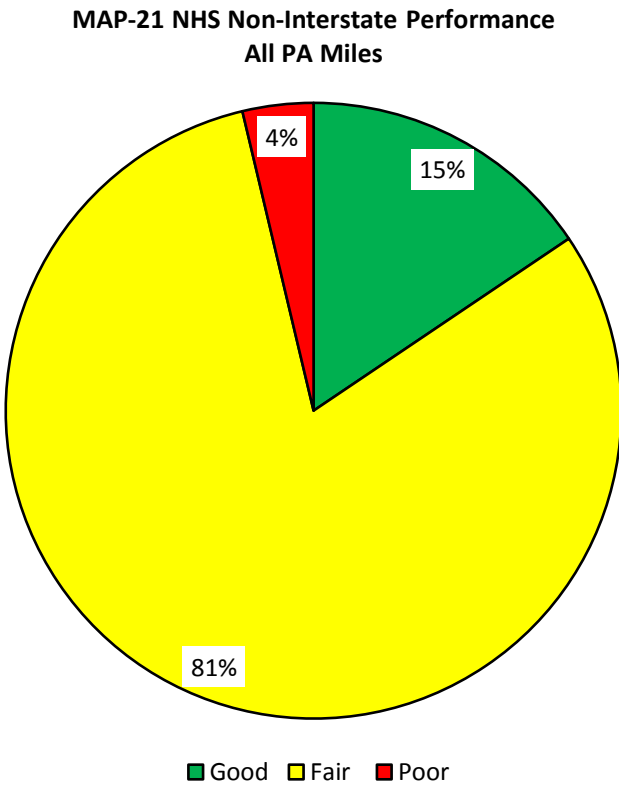
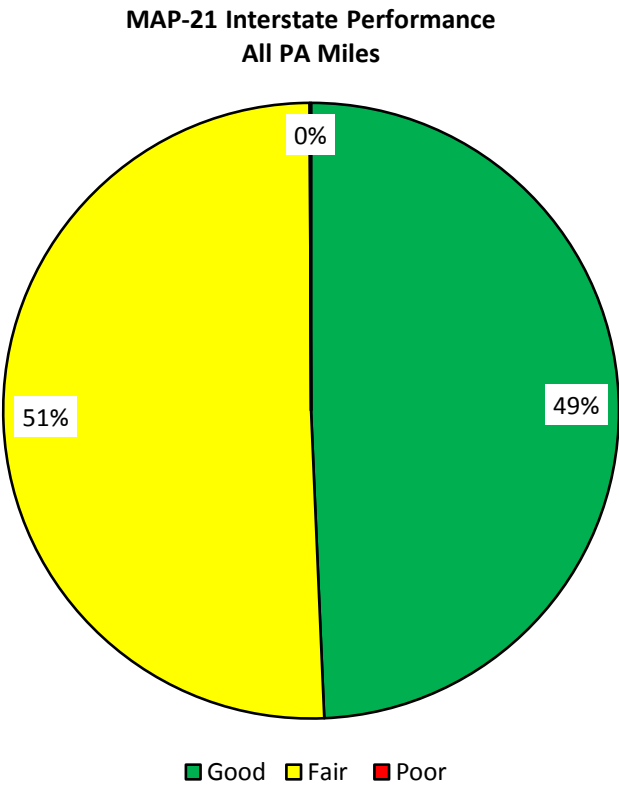
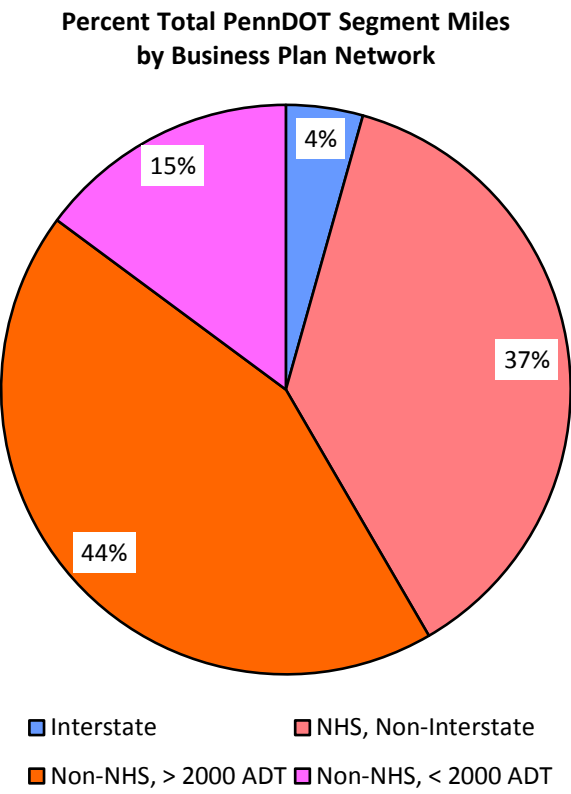
- The IRI and OPI data presented herein is segment level.
- For the Interstate and NHS, Non-Interstate Business Plan Networks, the IRI and OPI data is for 2017. For the Non-NHS Business Plan Networks, the IRI and OPI data for recent year captured, either 2016 or 2017.
- PennDOT has historically classified Good Interstate IRI as ≤100, and Poor Interstate IRI as >150; for NHS Non-Interstate, Good is ≤120 and Poor is >170. This practice is maintained in the IRI data presented herein, but differs from the MAP-21 definitions defined in the table on the reverse of this page.

Current Out-Of-Cycle (OOC) Assessment by Business Plan Network (Based on PennDOT Miles)

Business Plan Network	High Level Bituminous		Low Level Bituminous				Concrete				Potentially Past DSL
	Seg-Mi	OOC Mi ¹	Seg-Mi	OOC Mi ²	OOC Mi ³	Total	Seg-Mi	OOC Mi ⁴	OOC Mi ⁵	Total	Seg-Mi
Interstate	152.38	39.22	0.00	0.00	0.00	0.00	21.52	0.41	0.87	1.01	24.10
NHS, Non-Interstate	1,556.85	442.91	0.00	0.00	0.00	0.00	169.74	104.19	58.53	109.91	513.78
Non-NHS, ≥ 2000 ADT	1,690.31	701.52	161.34	96.31	25.15	96.40	9.78	8.10	5.28	8.10	
Non-NHS, < 2000 ADT	63.88	28.74	574.21	315.90	125.62	507.37	3.62	1.47	1.13	1.56	
Total - Roadway	3,463.42	1,212.38	735.55	412.21	150.78	603.78	204.66	114.17	65.82	120.58	

- Out-Of-Cycle Categories:
 - 1 - High Level Bituminous Pavement with Age > 12 Years or > 17 Years with Interim Surface Seal
 - 2 - Low Level Bituminous Surface with Age > 7 Years
 - 3 - Low Level Bituminous Pavement with Age > 20 Years or no Structural Layers
 - 4 - Concrete Pavements with Age > 30 Years
 - 5 - Concrete Pavements with Age > 20 Years and No Concrete Pavement Restoration (CPR)
- Total Low Level OOC represents the miles that are OOC for either Category 2 or 3. Segments that are OOC for both categories are not double counted. Total Concrete OOC represents the miles that are OOC for either Category 4 or 5. Segments that are OOC for both categories are not double counted.
- Pavement Potentially Past Design Service Life is defined a pavement structure age greater than 40 years, and OOC according to any of the categories. This indicates that, even though the surface is OOC, the pavement may be in need of more than resurfacing or CPR due to it's overall age.

· The IRI miles and Total PennDOT miles include bridge lengths.
The Total PA miles, used for MAP-21, do not include bridge lengths.
The Treatment Network miles do not include bridge lengths.



MAP-21 Pavement Conditions and Thresholds

Rating	Good	Fair	Poor
IRI (inches/mile)	<95	95–170	>170
Cracking Percentage	<5	CRCP: 5–10 Jointed: 5–15 Asphalt: 5–20	CRCP: >10 Jointed: >15 Asphalt: >20
Rutting (inches)	<0.20	0.20–0.40	>0.40
Faulting (inches)	<0.10	0.10–0.15	>0.15

