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# Mobility Performance Measures Update

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Forecasting and Trends Office



# Infographic

Performance analysis within the boundaries of each MPO

One-year analysis; future efforts to include trends

## Broward Metropolitan Planning Organization

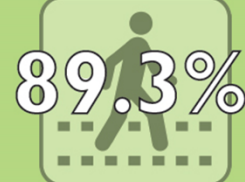
Average Job Accessibility within 30 Minute Car Trip



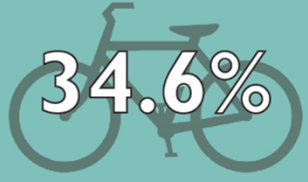
Average Job Accessibility within 30 Minute Transit Trip



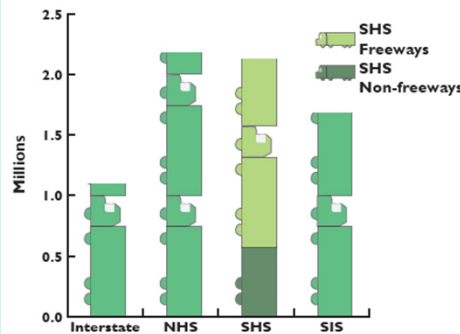
Percent Sidewalk Coverage



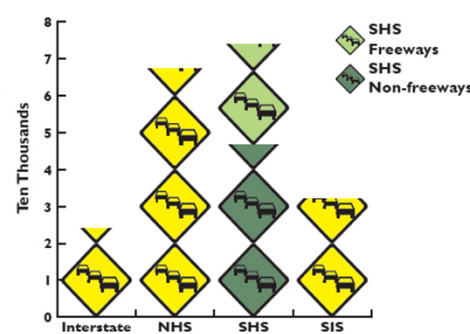
Percent Bicycle Lane Coverage



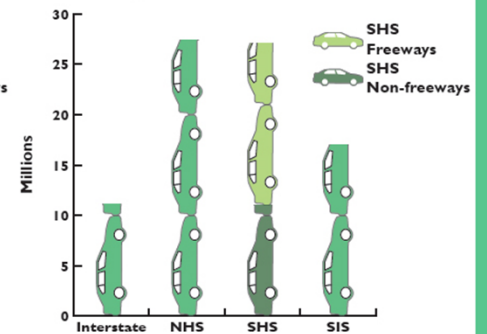
Daily Truck Miles Traveled



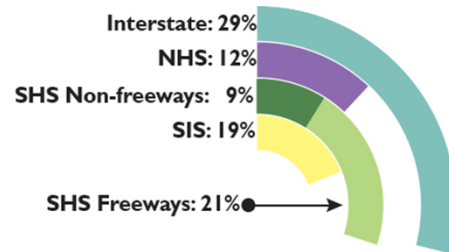
Daily Vehicle Hours of Delay



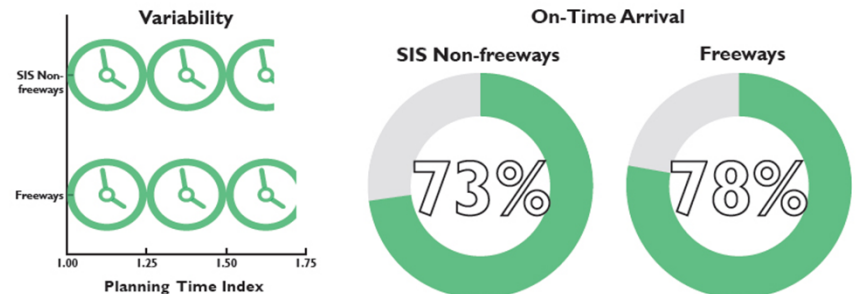
Daily Vehicle Miles Traveled



Percent Miles Heavily Congested



Travel Time Reliability



# Definitions

## FDOT Definitions

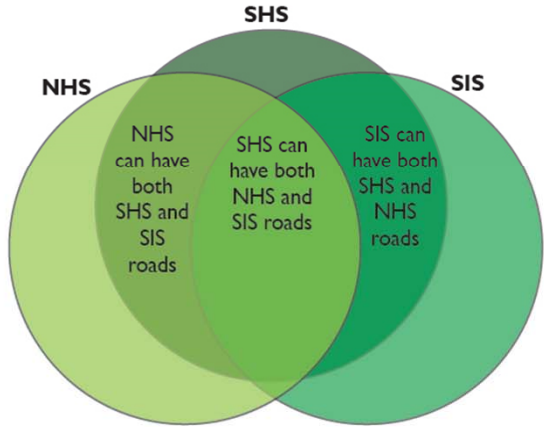


**Daily Vehicle Hours of Delay:** Delay is the product of directional hourly volume and the difference between travel time at “threshold” speeds and travel time at the average speed. The thresholds are based on LOS B as defined by FDOT.



**Heavy Congestion:** Heavy congestion is a situation in which average travel speeds are in the range from 20-44 mph for freeways and equal to or worse than the LOS standards for arterials and highways.

**Level of Service (LOS):** A quantitative stratification regarding the quality of service to a typical traveler of a service or facility into six letter grade levels, with “A” describing the highest quality and “F” describing the lowest quality.



**Travel Time Reliability (On-Time Arrival):** Travel time reliability (TTR) metric for highways is the percentage of trips traveling at greater than or equal to 5 mph below the posted speed limit. TTR metric for arterials is the percentage of trips traveling greater than or equal to 20 mph. TTR metric for freeways within the seven largest MPO urbanized areas is the percentage of travel greater than or equal to 45 mph; for all other freeways, TTR is defined as the percentage of trips traveling at greater than or equal to 5 mph below the posted speed limit.



**Travel Time Reliability (Variability):** Travel time variability is the 95th percentile travel time index, which is the 95th percentile travel time divided by free flow travel time.



**Truck Miles Traveled** (for all trucks class 4 through 12): The total number of miles traveled by trucks using a highway system.



**Vehicle Miles Traveled:** The total number of miles traveled by vehicles using a highway system.

Data Sources: FDOT Traffic Characteristics Inventory, FDOT Roadway Characteristics Inventory, and HERE vehicle probe speed



## FDOT Supplied MPO Mobility Performance Measure Analyses for 2015 (Broward MPO)

### Broward (Urbanized Area)

Networks/Measures	A: Daily vehicle miles traveled (Millions)	B: Daily truck miles traveled (Millions)	C: Travel time reliability in the peak hour	D: Travel time variability	E: Daily vehicle hours of delay (Thousands)	F: Percent miles heavily congested	G: Percent sidewalk coverage	H: Percent bicycle lane coverage
A: National Highway System	26.6	2.1			66.9	13%		
B: Interstate	10.5	1.0	70%	1.94	23.6	42%		
C: Strategic Intermodal System <sup>1</sup>	16.2	1.6	69%	1.83	31.5	25%		
D: State Highway System	26.3	2.0			73.5	14%		
E: Freeways	15.5	1.5	77%	1.76	26.8	26%		
F: Non-freeways (SHS)	10.8	0.5			46.7	9%	89.3%	42.7%

### Broward (MPO/TPO Boundary)

Networks/Measures	A: Daily vehicle miles traveled (Millions)	B: Daily truck miles traveled (Millions)	C: Travel time reliability in the peak hour	D: Travel time variability	E: Daily vehicle hours of delay (Thousands)	F: Percent miles heavily congested	G: Percent sidewalk coverage	H: Percent bicycle lane coverage	I: Average job accessibility within 30 minute car trip (Millions)	J: Average job accessibility within 30 minute transit trip (Thousands)
A: National Highway System	27.4	2.2			67.4	12%			1.1	8.9
B: Interstate	11.2	1.1	71%	1.85	24.0	29%				
C: Strategic Intermodal System <sup>1</sup>	17.0	1.7	73%	1.65	32.0	19%				
D: State Highway System	27.1	2.1			74.0	12%				
E: Freeways	16.2	1.6	78%	1.72	27.2	21%				
F: Non-freeways (SHS) <sup>2</sup>	11.0	0.6			46.8	9%	89.3%	34.6%		

### Broward (County Boundary)

Networks/Measures	A: Daily vehicle miles traveled (Millions)	B: Daily truck miles traveled (Millions)	C: Travel time reliability in the peak hour	D: Travel time variability	E: Daily vehicle hours of delay (Thousands)	F: Percent miles heavily congested	G: Percent sidewalk coverage	H: Percent bicycle lane coverage	I: Average job accessibility within 30 minute car trip (Millions)	J: Average job accessibility within 30 minute transit trip (Thousands)
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<sup>1</sup> SIS travel time reliability and travel time variability excludes freeways

<sup>2</sup> Percent sidewalk coverage is limited to the urbanized areas



# Areas

**Broward (Urbanized Area)**

Networks/Measures	A: Daily vehicle miles traveled	B: Daily truck miles traveled	C: Travel time reliability in the	D: Travel time	E: Daily vehicle hours of delay (thousands)	F: Percent miles heavily congested	G: Percent sidewalk coverage	H: Percent bicycle lane coverage								
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**Broward (MPO/TPO Boundary)**

Networks/Measures	A: Daily vehicle miles traveled	B: Daily truck miles traveled	C: Travel time reliability in the	D: Travel time	E: Daily vehicle hours of delay	F: Percent miles heavily	G: Percent sidewalk coverage	H: Percent bicycle lane coverage	I: Average job accessibility within 30 minute car trip (Millions)	J: Average job accessibility within 30 minute transit trip (Thousands)							
A: National Highway System	<b>MPO/TPO Boundaries</b>																
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**Broward (County Boundary)**

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# Primary and Secondary Measures

Daily VMT	Daily Truck miles traveled	Travel Time Reliability	Travel Time Variability	Daily vehicle hours of delay	Percent miles heavily congested	Percent sidewalk coverage	Percent bicycle lane coverage	Average job accessibility (Auto)	Average job accessibility (Transit)
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## Broward (MPO/TPO Boundary)

Networks/Measures	A: Daily vehicle miles traveled (Millions)	B: Daily truck miles traveled (Millions)	C: Travel time reliability in the peak hour	D: Travel time variability	E: Daily vehicle hours of delay (Thousands)	F: Percent miles heavily congested	G: Percent sidewalk coverage	H: Percent bicycle lane coverage	I: Average job accessibility within 30 minute car trip (Millions)	J: Average job accessibility within 30 minute transit trip (Thousands)
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In 2018:

Daily VMT	Daily Truck miles traveled	Travel Time Reliability	Travel Time Variability	Daily vehicle hours of delay	Percent miles heavily congested	Person miles traveled	Truck Travel Time Reliability	Average Travel Speed	Percent of travel meeting LOS criteria
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# Future Activities

Feedback &  
Continued  
Support

Pilot Maps /  
Visualization



# MAP-21/FAST Act Mobility Performance Measures



# MAP-21 Mobility Measures

## NHS



- % of Person-Miles Traveled on the Interstate That Are Reliable
- % of Person-Miles Traveled on the Non- Interstate NHS That Are Reliable
- % Change in Tailpipe CO2 Emissions on the NHS Compared to the Calendar Year 2017 Level ([repeal rulemaking in progress](#))

## Freight



- Truck Travel Time Reliability Index



# FDOT & MAP-21

FDOT provides all  
MAP-21 measures

For the **state** as a  
whole & each **MPO**

Areawide groupings

- Urbanized boundaries
- Planning boundaries
- County boundaries
- Regional boundaries



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# Thank you!

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