Mobility Performance Measures Outreach

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Recognized as THE

Premier Mobility Program

in the nation
Consensus in approach and measures
Perceived Keys to Success in Florida

Our (FDOT/MPO) joint coordination with a common approach

We (FDOT & MPOs) will comply with ultimate federal requirements

FDOT/MPOs can “use their own measures in performance-based planning”
- Florida can use measures and calculation techniques most relevant to us
  - Travel time reliability
  - Congestion
  - Multimodal
  - Other

Target establishment (conservative approach)

FDOT/ MPOs submit consistently and together

FDOT supply every MPO
- Federally required measures
- MPOAC agreed upon additional measures

FHWA Headquarters quote
Status of MAP-21 (FAST Act) Performance Measures Requirements
(Mobility-Related) Federal Measures and Coverage

**NHS**
- % of the Person-Miles Traveled on the Interstate That Are Reliable
- % of the 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 *(Delayed)*

**Freight**
- Truck Travel Time Reliability Index

**CMAQ (Not applicable in Florida)**
- Annual Hours of Excessive Delay Per Capita
- Percent of Non-SOV Travel
- Total Emission Reductions
Travel Time Reliability Understanding
Travel Time Reliability

There are two general types of travel time reliability performance measures:

- Percent of trips that “succeed”
- Comparison of variability in travel times

<table>
<thead>
<tr>
<th>#Trips</th>
<th>Travel Time</th>
<th>Success Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free flow time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80th percentile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>95th percentile</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comparison of variability in travel times:

- Free flow time
- 80th percentile
- 95th percentile
## Level of Travel Time Reliability (LOTTR)

### GENERAL (1)

<table>
<thead>
<tr>
<th>Metric for analyzing travel time reliability</th>
<th>Has not been discussed in the travel time reliability literature or research</th>
<th>Not easily understood - does not resonate with public and elected officials</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Specifically for system performance</td>
<td>• Numerous SHRP2 projects</td>
<td>• Reliable travel to highway users is a LOTTR of 1.50; &gt;1.50 represents less than acceptable travel time reliability</td>
</tr>
<tr>
<td>• Implied for freight movement</td>
<td>• HCM</td>
<td>• A 1.50 or above LOTTR means the 80th percentile travel time is 50% longer then the 50th percentile travel time</td>
</tr>
</tbody>
</table>
**Level of Travel Time Reliability (LOTTR)**

**GENERAL (2)**

Comparison (ratio) of the 80th percentile travel time of a reporting segment to the “normal” (50th percentile) travel time of a reporting segment occurring throughout a full calendar year.

<table>
<thead>
<tr>
<th>Travel Time</th>
<th>50th percentile</th>
<th>80th percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td># Trips</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Calculated annually by State for all reporting segments for 4 time periods:

- **Weekdays**
  - 6:00 a.m. – 10:00 a.m.
  - 10:00 a.m. - 4:00 p.m.
  - 4:00 p.m. – 8:00 p.m.

- **Weekends**
  - 6:00 a.m. – 8:00 p.m.
## Level of Travel Time Reliability (LOTTR)

### CONCERNS

**Not easily understood**
- Not a recognized approach - has not been discussed in the travel time reliability literature or research
- Does not resonate with public and elected officials

**Calculation issues**
- Values in numerator (80\(^{th}\) % TT) and denominator (50\(^{th}\) % TT) will **change yearly** creating instability (problem recognized with the buffer time index)
- Being calculated for “reporting segments” (typically < 0.5 mi.)

**FHWA doesn’t take a position reflecting traveler perception (95\(^{th}\) %), rather (according to FHWA) the ability of agencies to address through operational and other strategies (80\(^{th}\) %)
- Same value applied to all facility types (freeways, generally uninterrupted flow highways, signalized arterials)

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**Numerous SHRP2 projects**

**HCM**
### Truck Travel Time Reliability (TTTR) Index

#### GENERAL (1)

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<td>• Compares 95th percentile travel time with 50th percentile travel time</td>
<td>• Similar to vehicular TTR measure, but instead of having a pass-fail criteria of 1.50, it is computed as an index</td>
<td>• Index reflects an average for the applicable area.</td>
</tr>
</tbody>
</table>
Establishment of the Right Type of Targets

- Aspirational
- Stretch
- Realistic
- Conservative
- Minimum

Statutory/legislative requirements

(don’t be concerned about the terms; no right answer)
Preliminary Recommendation (federal reporting requirements)

for Map-21 Purposes

Allows FDOT and MPOs most **flexibility** to use our current/evolving (😊)

“Keep the Feds out of our business”; “set our internal targets to strive to do better”

Use our own existing performance based planning processes

Highway and multimodal mobility performance measures

Allows more time to get our “feet wet”
Mobility Performance Measures MPOs Would Like FDOT to Supply
FDOT will calculate and supply **all** federally required measures to each MPO

**FDOT**

- Supply additional measures to each MPO as MPOs agree upon through MPOAC
  - Up to 15 total
  - Up to 8 annually
  - Some measures, not annually