

Congestion Performance Measures

Fresno COG CMP Steering Committee Meeting

Sept. 2, 2015



∞ Cause of Congestion:

- Traffic demand
- Traffic influencing events
- Physical highway features (such as bottleneck)

∞ Type of congestion:

- Reoccurring
- Non-reoccurring

- ∞ Travel time is the basis of congestion monitoring
- ∞ Temporal aspect of congestion: time of day and day of week
- ∞ Spatial aspect of congestion: corridor level and system level

∞ Travel Time Index:

- Ratio of actual (average) travel time to the free-flow travel time
- Reflects average travel/congestion condition

∞ Why is Travel Reliability Important:

- Reflects unexpected incidents
- Represents both reoccurring and non-reoccurring congestion

∞ Planning Time Index:

- Ratio of 95th percentile travel time to the free flow travel time

∞ Delay:

- ASSHTO recommended congestion performance measure for MAP-21
- Requires volume information
- Big Data does not provide volume; might need to look into alternative data source such as Caltrans' PeMS

∞ Recommendation for Congestion Performance Measures:

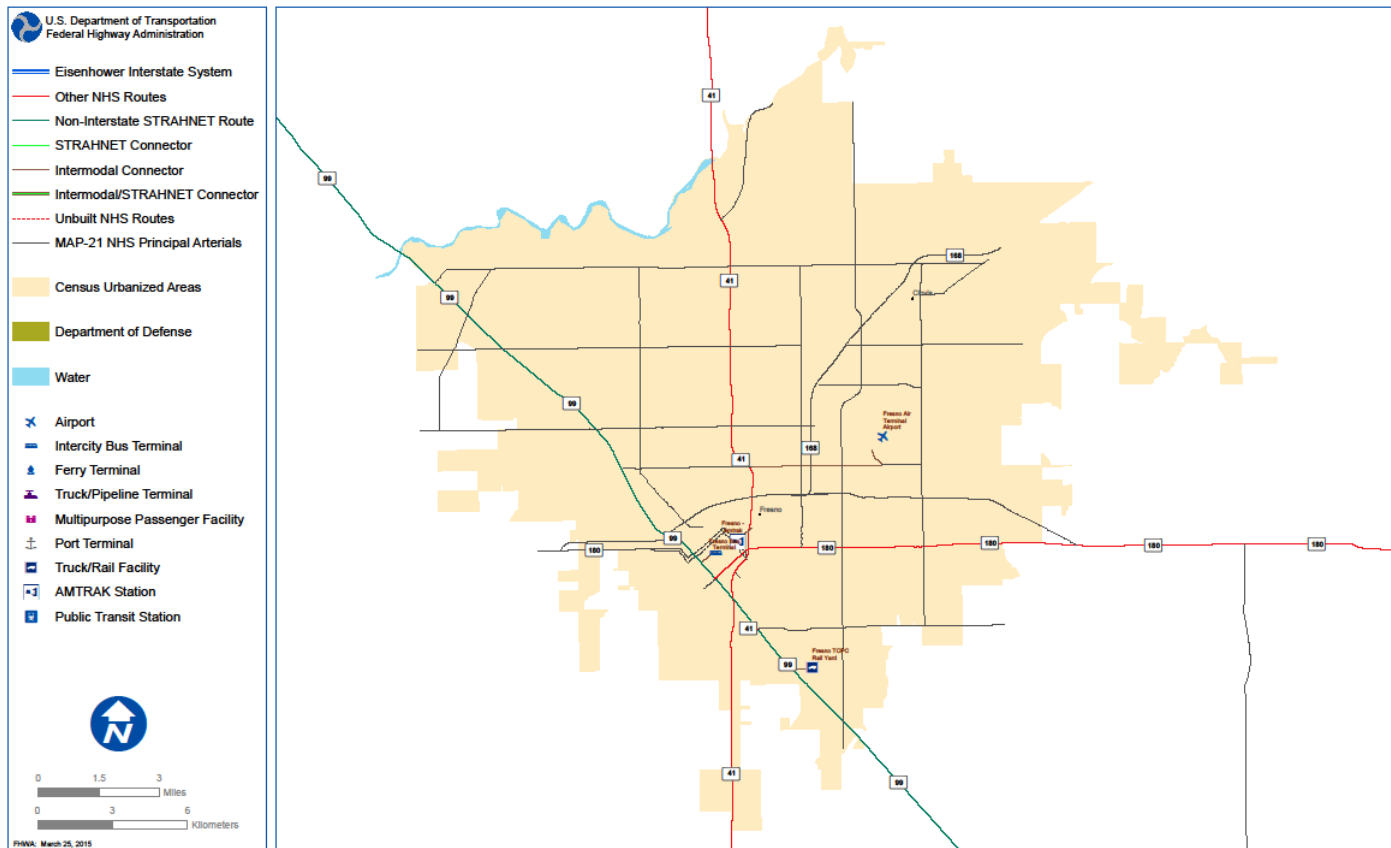
- Delay
- Travel Time Index
- Planning Time Index

- ⌘ Big Data provides speed information through processed cell phone data
- ⌘ Big Data can be purchased for the entire region or is available for the Nation Highway System (NHS) in Fresno County through the National Performance Management Research Data Set (NPMRDS)

∞ Data acquisition:

- NPMRDS data, free to Fresno COG
- Freight information contained in the NPMRDS

National Highway System: Fresno, CA



∞ Next Steps:

- Draft RFP
- Committee to review the draft RFP and provide comments
- Issue RFP