

# Time of Day Modeling

*presented to*

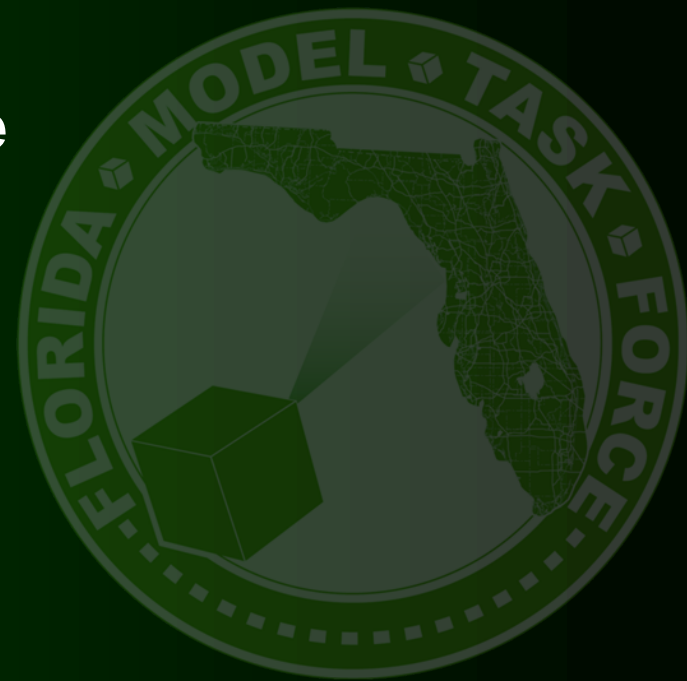
**MTF Model Advancement Committee**

*presented by*

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# Agenda

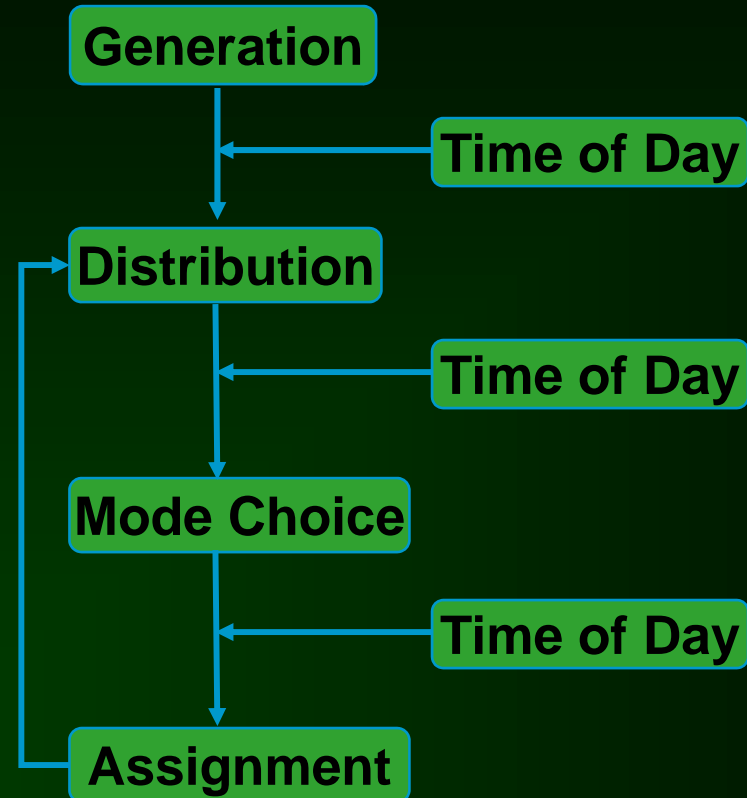
- Study Background
- Proposed Modeling Approach
- Data Needs
- Schedule



# Study Background

- **MTF priorities survey**
  - Eleven short term priorities
  - Surveyed MTF mailing list ~ 200 members
  - 45 completed responses
- **Incorporating Time of Day (TOD) into FSUTMS found to be the highest priority**
- **MTF leadership tasked Florida DOT to develop scope of work to incorporate TOD into FSUTMS**

# Study Background





# Proposed Modeling Approach

- **Florida DOT research report is basis for implementation**
- **Major objectives include**
  - **Develop procedures to implement TOD into the FSUTMS framework**
  - **Develop econometric models that account for passive and active peak spreading**
  - **Implement TOD into the FSUTMS framework**
- **Two phase process**



# Proposed Modeling Approach

- **Phase 1, Task 1 – Implementation of Constant TOD Factors**
  - Use 2008 NHTS data for peak period and peak hour factors
  - Guidance to calibrate TOD factors
  - Document issues and propose solutions with using constant TOD factors
  - Task outcome – TOD factors for the peak period and peak hour that MPOs can use for daily modeling needs



# Proposed Modeling Approach

- **Phase 1, Task 2 – Understand, develop and identify data elements for an econometric model-based approach**
  - **Develop methodology for incorporating an econometric model into FSUTMS**
  - **Identify data elements from the NHTS and other data sources for model development**
  - **Develop model specifications**
  - **Develop empirical methods to relate reported travel time to model derived peak and off-peak skims**
  - **Identify and propose solutions for model transferability**



# Proposed Modeling Approach

- **Phase 1, Task 3 – Development of empirical methods to compute travel time skims**
  - Synthesize travel time for large number of time periods
  - Feasibility of using STEWARD database
- **Phase 2, Task 1 – Estimate and Calibrate TOD econometric models**
  - Estimate and calibrate TOD econometric models
  - Methods to transfer parameters to meet local needs





# Proposed Modeling Approach

- **Phase 2, Task 2 – Implementation of TOD econometric models into FSUTMS**
  - Implement econometric models into FSUTMS framework and test it with one test model
  - Test how well model transfers from one area to another and test model's sensitivity
- **Phase 2, Task 3 – Final Report and Model Code**
  - Final report will be designed to serve as a self study reference guide
  - Florida DOT will have the final model code



# Data Needs

- **Travel Time data**
  - From NHTS
  - From Models
- **Socioeconomic data**
  - From NHTS
- **Historical Count Data**
  - From Florida DOT Transportation Statistics Office



# Schedule

- Phase 1 – Complete by December 2010
- Phase 2 – Starts July 2010 and completes June 2011