



# Time of Day in FSUTMS



*presented to*  
**MTF**

*presented by*  
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# Outline

- Scope
- Time of Day Subcommittee
- NHTS Data Analysis
- Development of CONFACs
- Next Steps





# Time of Day Subcommittee



- **Siva Srinivasan, Chair**

- **Members**

- Dan Beaty
- Ken Kaltenbach
- Santanu Roy
- Dave Schmitt
- Daniel Miller
- Kazem Oryani
- Yongqiang Wu
- Steve Infanti
- Robert Boggs
- Milton Locklear
- Linda Little
- Shi-Chiang Li
- Fawzi Bitar



# Scope

- **Two phase project**
  - **Phase 1 – Develop and implement factors from NHTS and count data**
  - **Phase 2 – Econometric models for incorporating into FSUTMS**
- **Three tasks in Phase 1**
  - **Develop and implement constant Time of Day factors**
    - **Develop new CONFAC**
    - **2009 NHTS data for TOD factors**
  - **Identify data elements for econometric approach**
  - **Develop empirical methods to calculate travel skims**

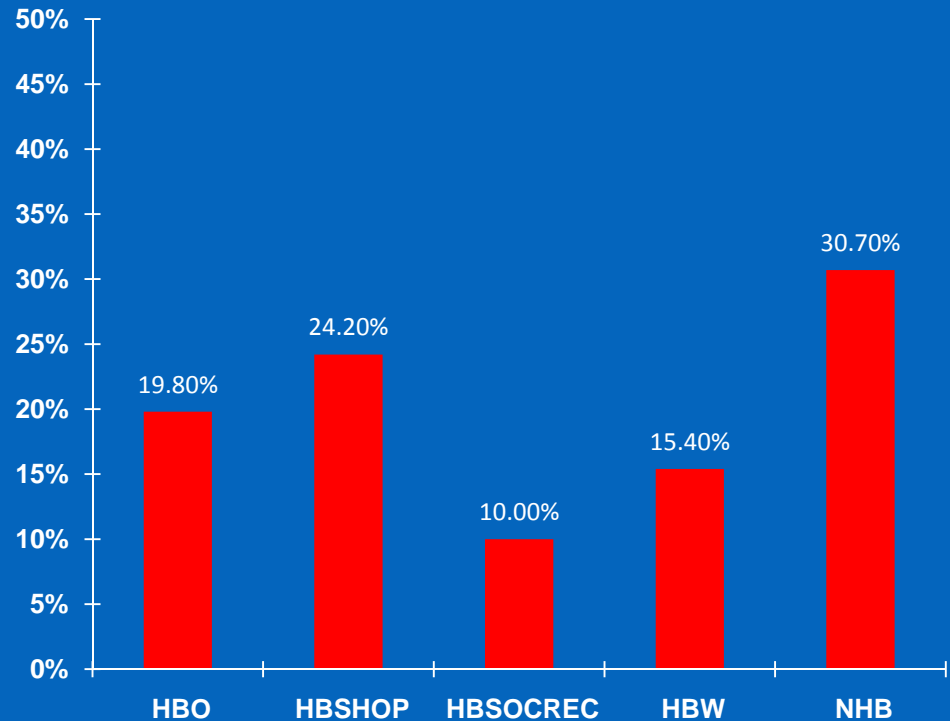
# NHTS Data Analysis

## ● 2009 NHTS Data Used

- 15,884 Households
- 30,992 Persons
- 114,910 Person Trips

## ● All analysis done using mid point of trip

## ● Trips into 24 one-hour periods



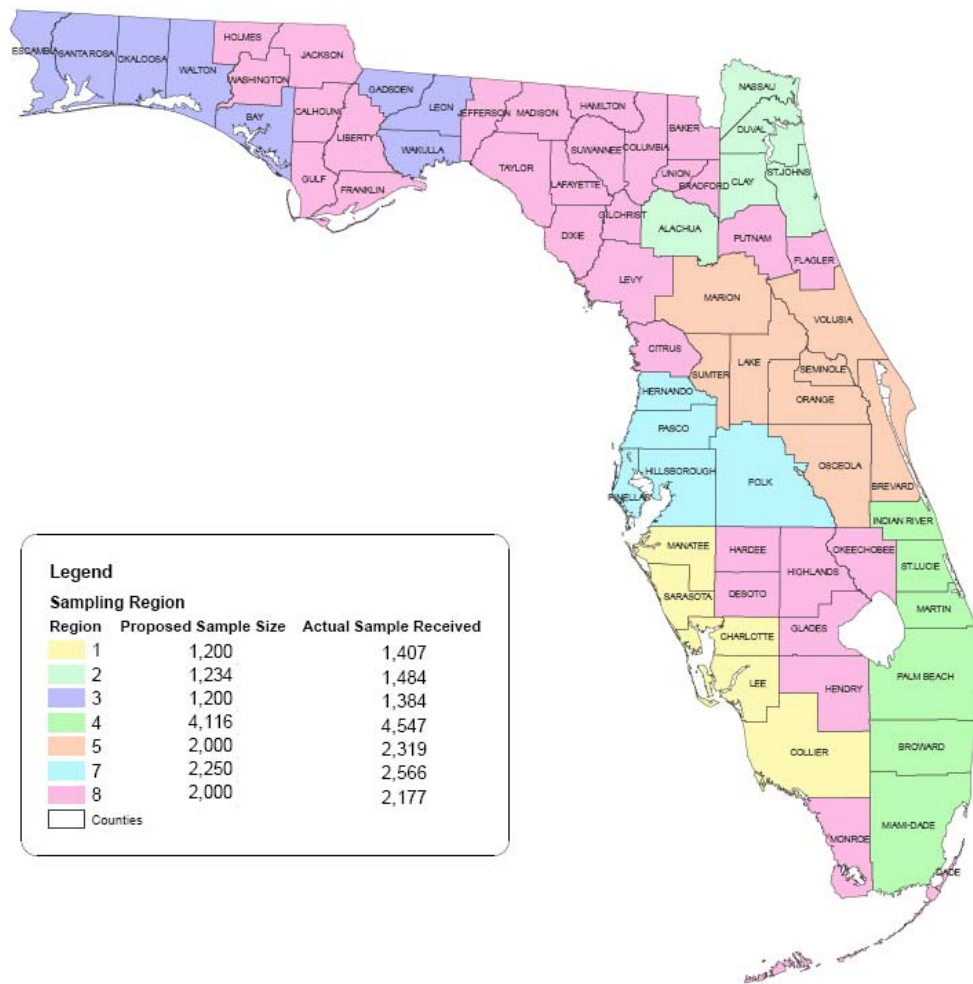


# NHTS Data Analysis

- Compare across sampling regions
- Compare across urban areas by population
- Compare across Orlando, Tampa, Jacksonville, SE Florida
- Compare across resort areas
- Compare by retirees and snowbird population
- ?????

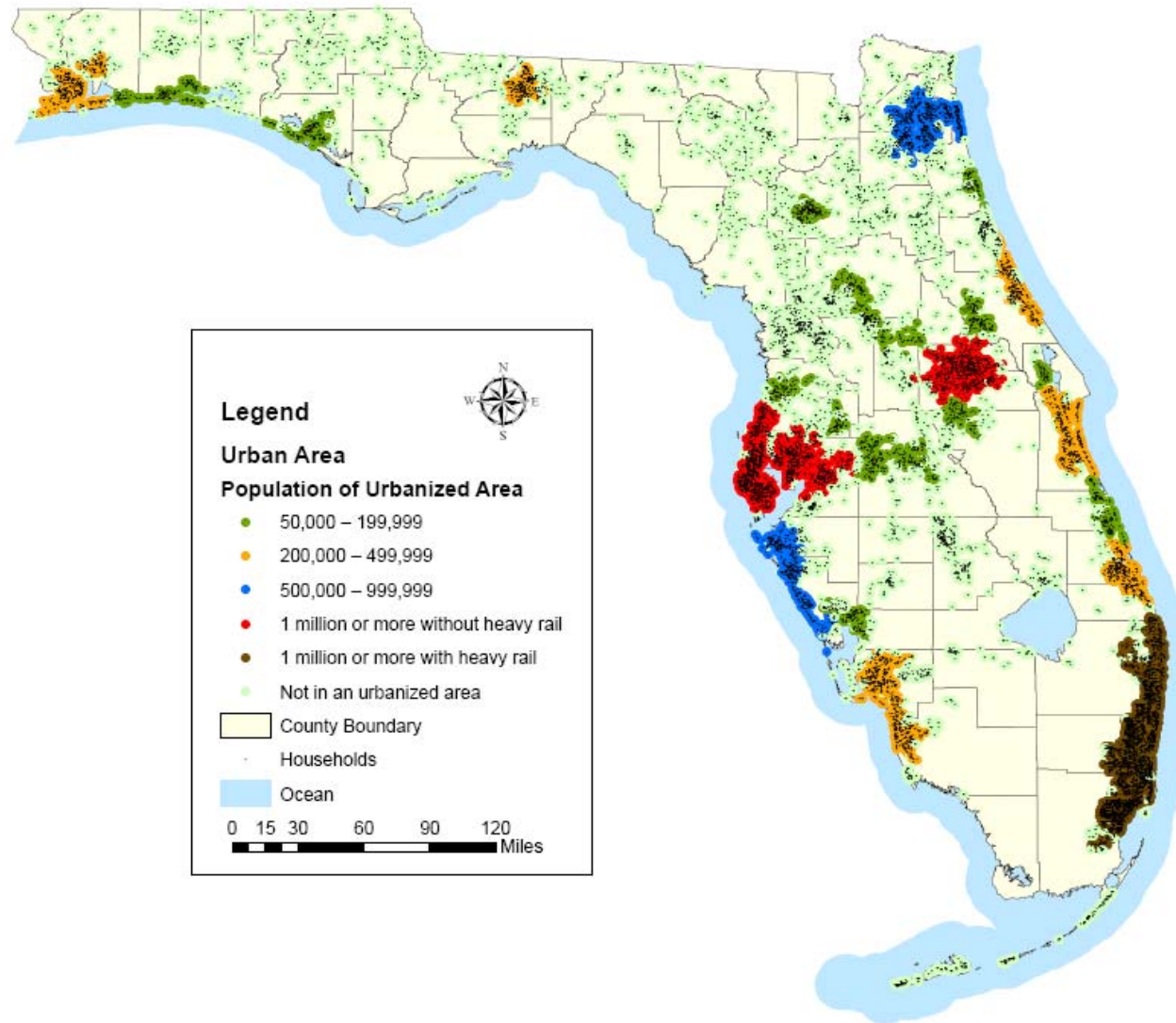


# Sampling Region Segmentation





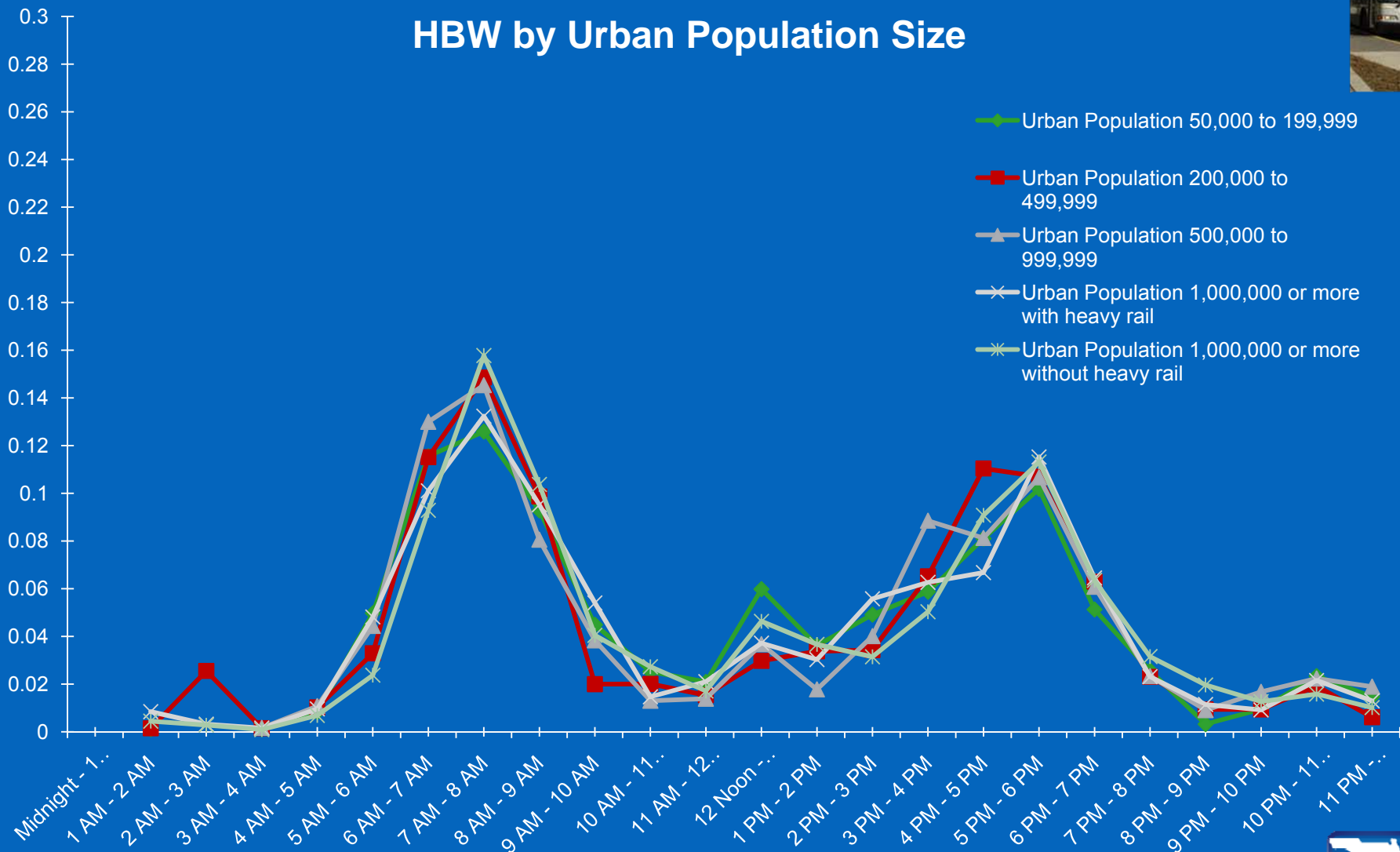
# Urban Size Segmentation





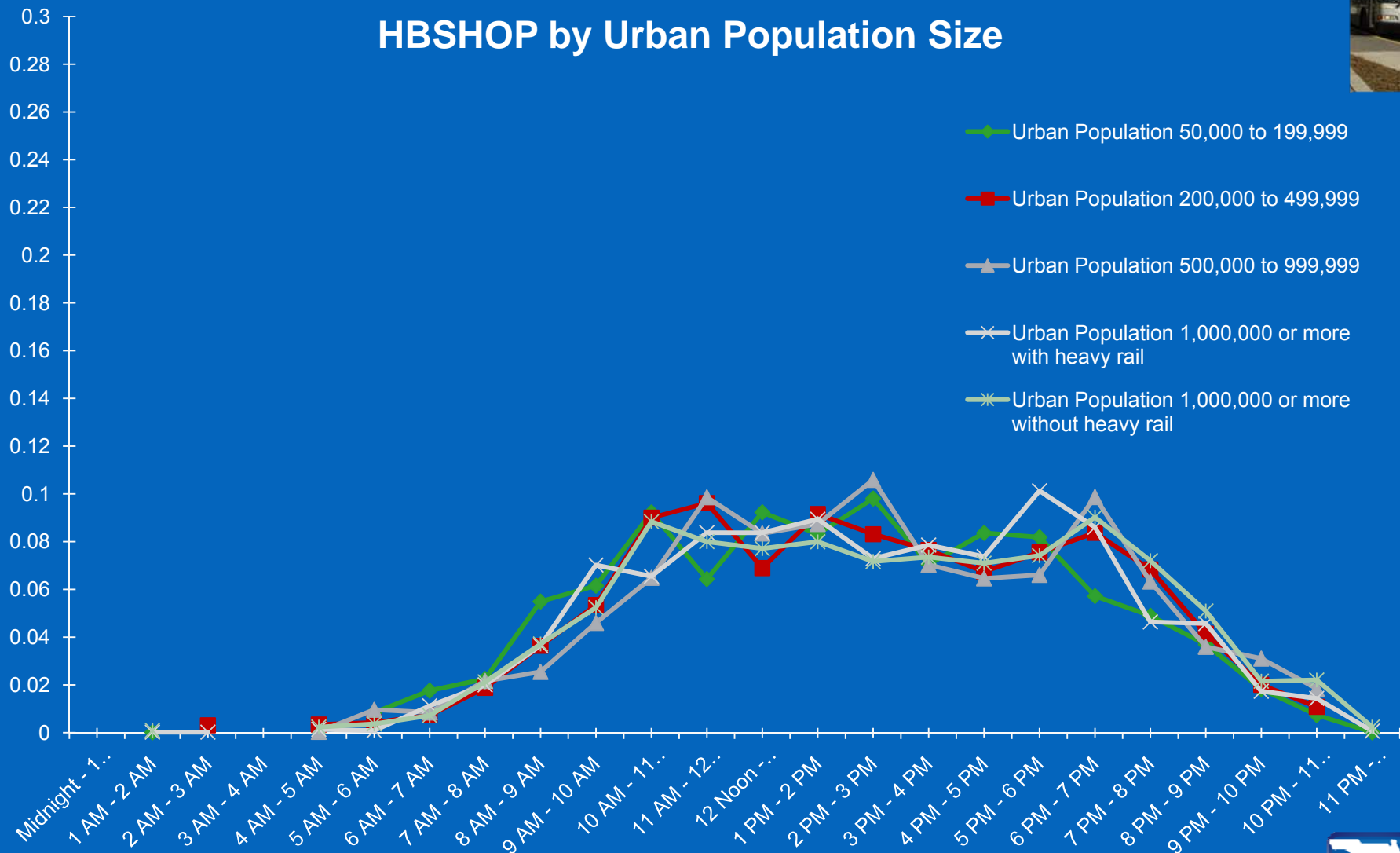
# Comparison Across Urban Population

## HBW by Urban Population Size



# Comparison Across Urban Population

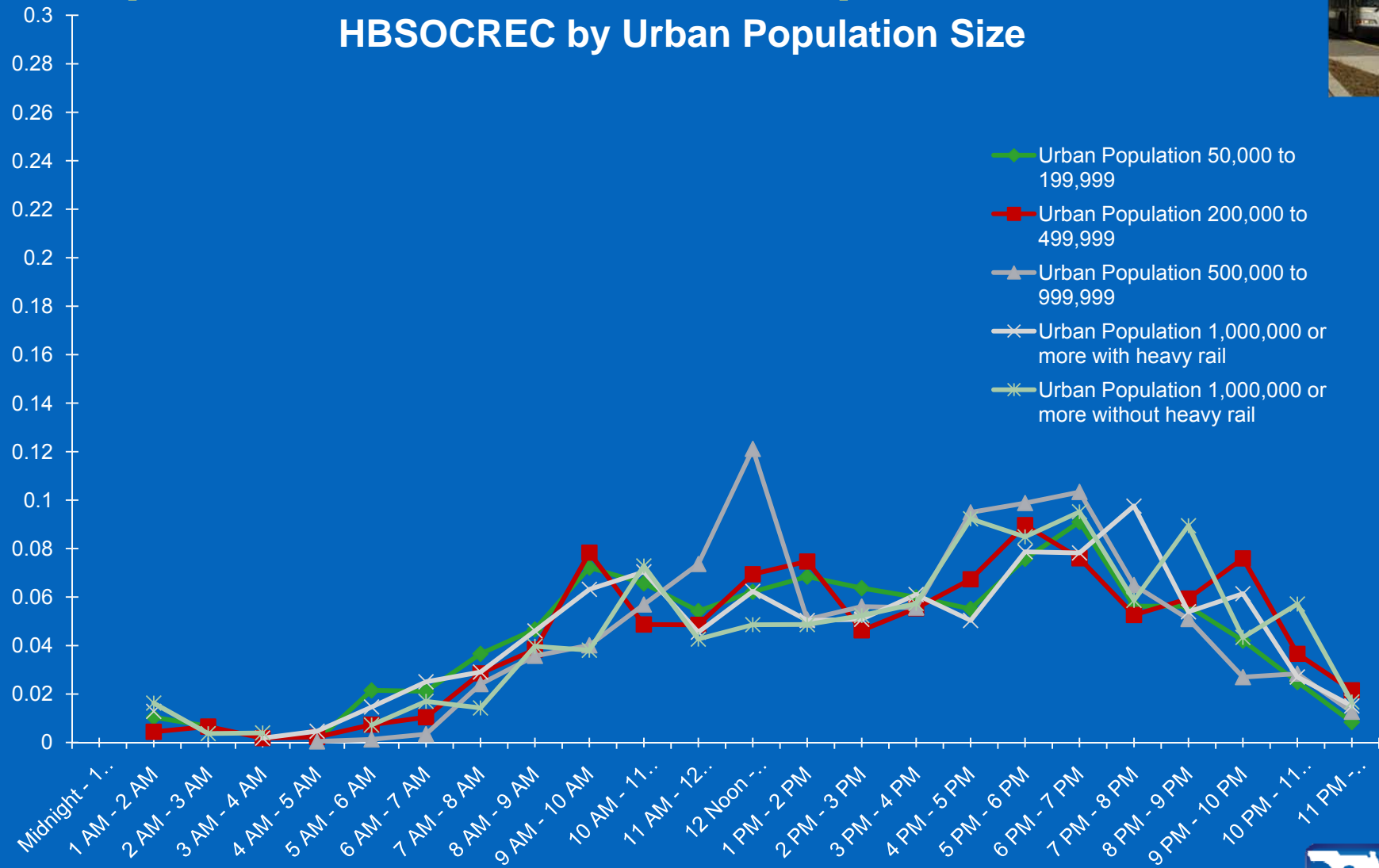
## HBSHOP by Urban Population Size





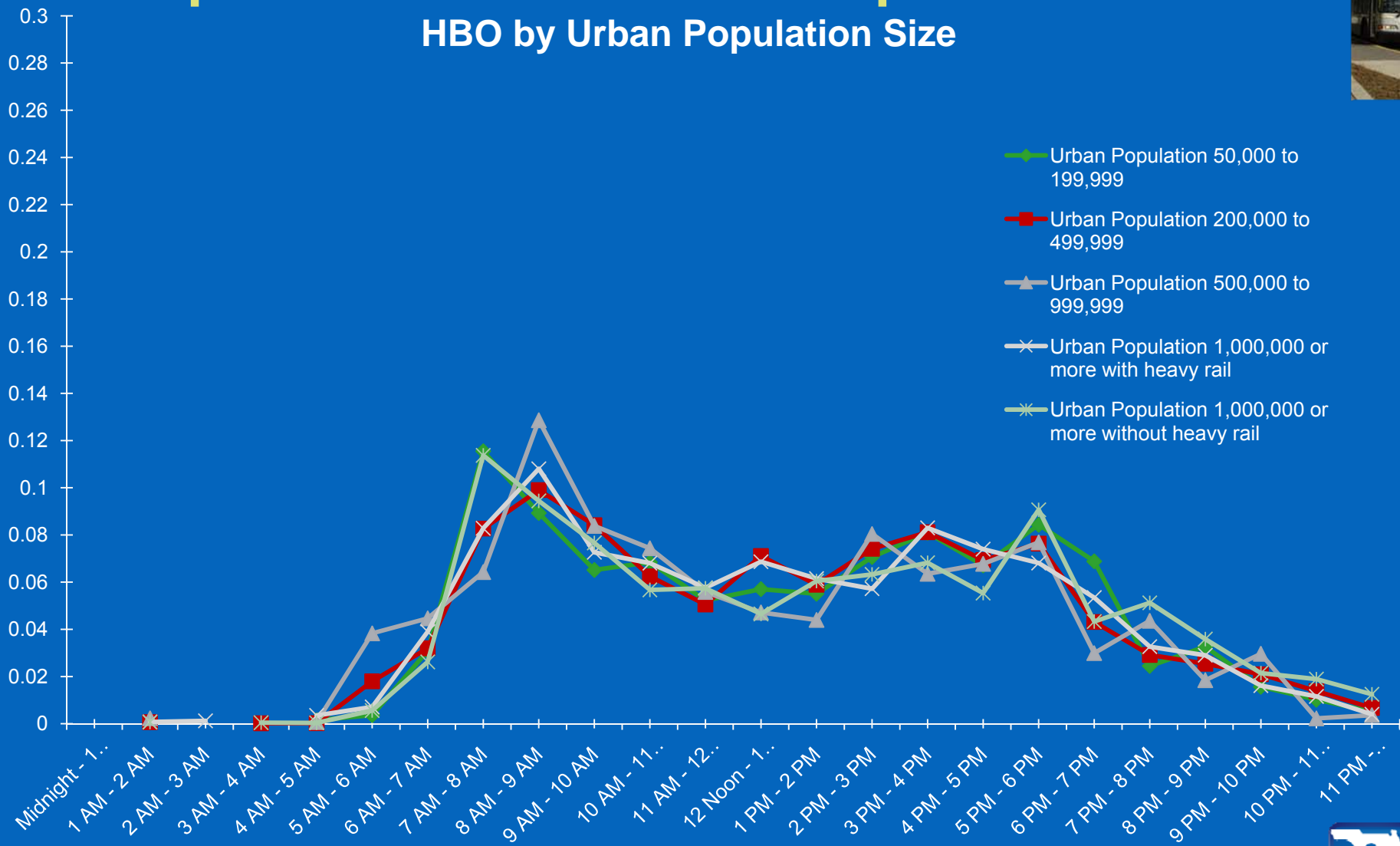
# Comparison Across Urban Population

## HBSOCREC by Urban Population Size



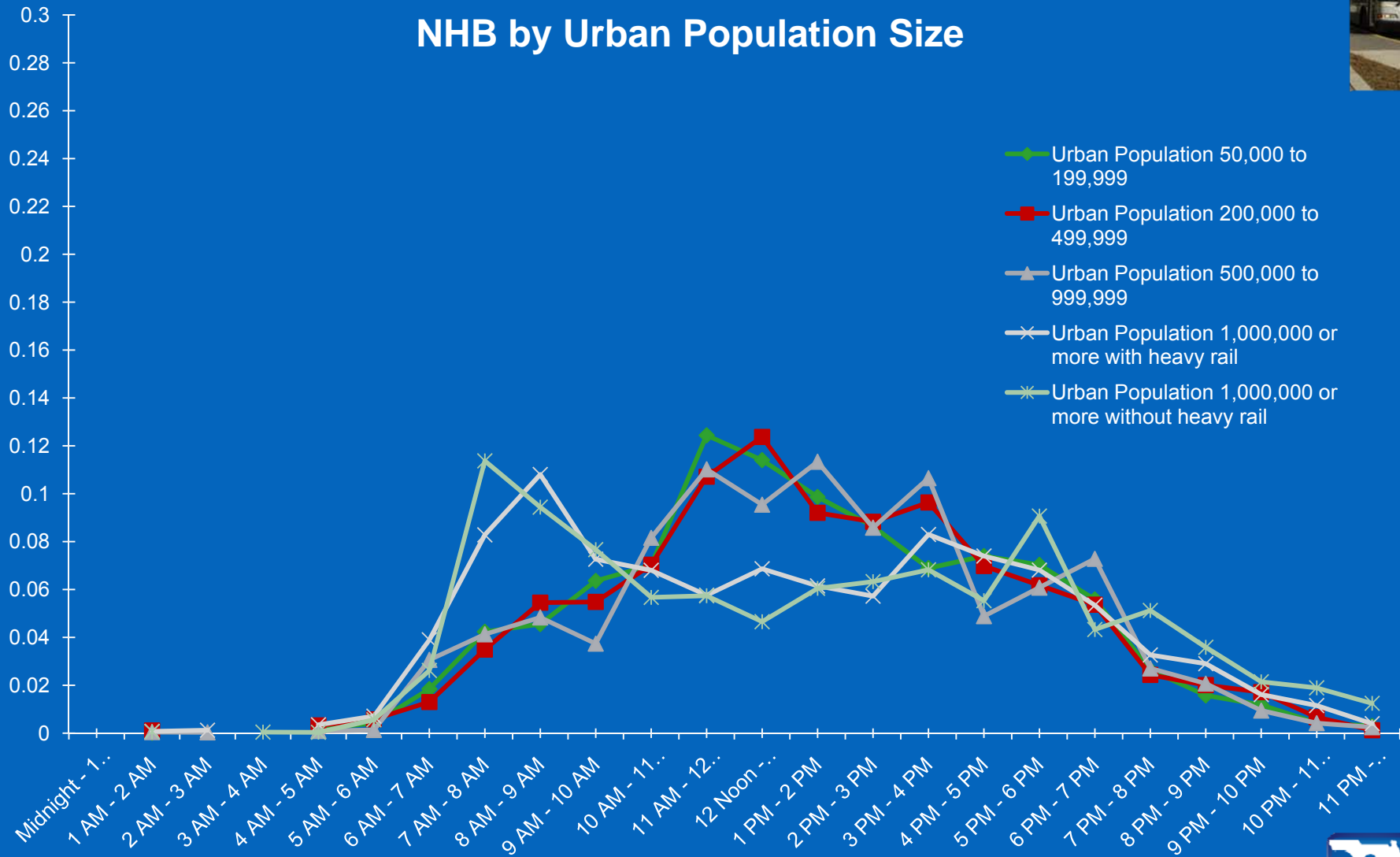
# Comparison Across Urban Population

## HBO by Urban Population Size



# Comparison Across Urban Population

## NHB by Urban Population Size





## Development of CONFACs

- CONFAC is a factor used to convert peak hour capacity (as found in SPDCAP file) to daily capacity (as in loaded network)
- In the absence of data, values in the typical range of 0.08 to 0.12 have been assumed for regional CONFAC settings
- 2008 traffic count data were used to develop CONFACs
- Eleven different roadway classifications are available in the 2008 traffic count data. CONFACs were developed based on urban area population and roadway functional classifications



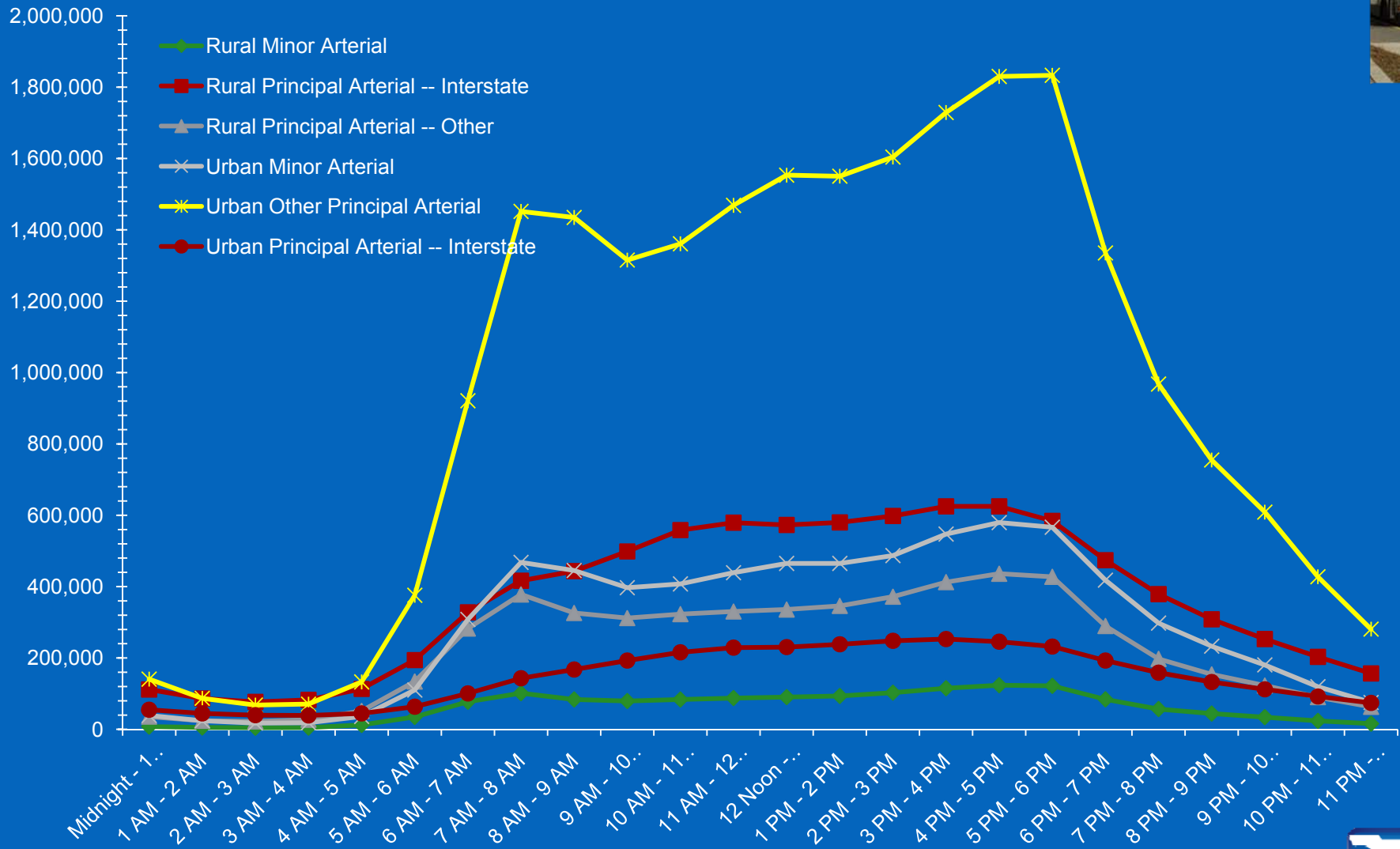


## Development of CONFACs

- For FSUTMS purposes, CONFAC values are needed for each facility type in order to be entered into the VFACTORS file
- This will require either an equivalency table between facility types and functional classifications or conflating facility type data from FSUTMS networks to the 2008 traffic count database

# Time of Day Distribution

## Urban Population – 50,000 to 199,999



# CONFAC Values

## Urban Population – 50,000 to 199,999

Time Period	Rural Minor Arterial	Rural Principal Arterial -- Interstate	Rural Principal Arterial -- Other	Urban Minor Arterial	Urban Other Principal Arterial	Urban Principal Arterial -- Interstate
7:00 AM to 9:00 AM	0.55	0.52	0.54	0.51	0.50	0.54
3:00 PM to 7:00 PM	0.28	0.27	0.28	0.27	0.27	0.27
9:00 AM to 3:00 PM	0.19	0.18	0.18	0.18	0.18	0.18
7:00 PM to 7:00 AM	0.24	0.17	0.23	0.21	0.20	0.17



## Next Steps and Schedule

- **Finish analysis of urban area segmentations for Time-of-Day factors from NHTS**
- **Finalize CONFAC Tables**
- **Develop Guidelines for:**
  - Time of day into Transit modeling
  - Validation and calibration
- **Finish Subtasks 2 and 3**