Time-of-Day Ad Hoc Committee Notes

November 9, 2009
8:30 AM – 10:00 AM
Orlando, FL

MEETING NOTES

Attendees List:

Name	Agency/Firm
Dave Schmitt	AECOM
Daniel Miller	BCC Engineering
Keli Paul	Cambridge Systematics
Tom Rossi	Cambridge Systematics
Rob Schiffer	Cambridge Systematics
Krishnan Viswanathan	Cambridge Systematics
Robert Boggs	City of Palm Coast
Dean Munn	Corradino
Milton Locklear	FDOT District 2
Linda Little	FDOT District 3
Shi-Chiang Li	FDOT District 4
Fawzi Batar	FDOT District 7
Mohammed Hadi	FL International University

Name	Agency/Firm
Kasey Cursey	Gannett Fleming
Eric Heinz	Gannett Fleming
Chunyu Lu	Gannett Fleming
Mike Neidhart	Gannett Fleming
Franco Saraceno	Gannett Fleming
Myung Sung	Gannett Fleming
Yongqiang Wu	Gannett Fleming
Steve Infanti	Grimail Crawford, Inc.
Ming Ma	North Florida TPO
Siva Srinivasan	University of Florida
Kazem Oryani	Wilbur Smith Associates

Introductions

Siva Srinivasan, University of Florida, Panel Chair

- Implementing time-of-day models in Florida became a top priority for the MTF as a result of the MTF priorities survey that was conducted recently. The survey included eleven short-term priorities identified by the committees and MTF Leadership last Fall that were circulated to modelers throughout Florida to prioritize further.
- A scope of work has been developed for implementing time-of-day procedures.
- An objective of this panel discussion is to get a list of action items and priorities relative to the draft scope to begin implementing time-of-day models in Florida.

Time-of-Day Scope

Krishnan Viswanathan, Cambridge Systematics
Tom Rossi, Cambridge Systematics

- All PowerPoint presentations are now available online at www.fsutmsonline.net
- Discussion items
    - Design traffic volumes
        - Myung-Hak Sung noted that FDOT design traffic volumes are derived applying factors to the model outputs on the highway side; As a result, we need to revisit the technical purpose of how we use the model for design traffic volumes and make sure it is consistent, while at the same time, making sure that peak period speeds are captured accurately for the purpose of travel time benefit analyses for the Federal Transit Administration (FTA).
        - Shi-Chang Li responded that FDOT District 4 has a TOD model but also comes up with the daily volume and applies a standard K factor to get design traffic volumes. It's a challenge to determine what is the ratio to convert from peak period to peak hour as we do not always know how many hours are in the peak period. As a result, daily volumes are used and K factors are applied to get hourly volumes for design traffic.
        - Siva Srinivasan noted that constant TOD factors would be similar to a K factor for local regions to come up with allocations of trips by TOD.

- Speed data
  - Myung-Hak Sung wanted to make sure that speed data is included in the list of data requirements for implementing TOD models as it is necessary to meet FTA New Starts transit modeling requirements. Tom Rossi noted that the travel time requirement listed in the presentation includes speed data.
  - Dave Schmitt noted that the validation of speeds within the models should be added to the scope. Speed relationships on both the auto and transit side both need to be correct.
- Econometric variables
  - It was asked what econometric variables are being considered.
  - Tom Rossi responded that any variables that affect peoples choice of when to travel will be considered, whether that be income level, household structure, land use variables, travel time, schedule delay, socioeconomic data, etc. They may also be disaggregated by trip purpose where appropriate. In addition, very congested situations result in peak spreading. Our TOD models will need to be sensitive to the types of policies and projects that we want to analyze, such as varying TOD pricing where the model has to be sensitive to the cost.
- Count data
  - Myung-Hak Sung noted that in the past, the MTF has discussed that 15-minute interval counts are necessary for TOD models. Mr. Sung asked if State count data is good enough for validation purposes as it is difficult to get local count data. Dr. Srinivasan responded that we need to get in touch with the MPOs and Districts to determine what count data is available in 15-minute intervals.
- Geography
  - Tom Rossi clarified that FDOT is not going to come up with one set of statewide TOD factors, as FDOT recognizes that TOD peaking varies in different areas throughout the state.
  - Mr. Sung asked if FDOT could determine if there is any research on peaking by facility type that can be utilized.
  - The goal is to work with Citilabs to implement the TOD model into FSUTMS and it will be different for smaller areas versus larger areas. Not only will the TOD factors vary by geography, but the TOD procedures will as well.
- TOD Scope comments
  - When to apply TOD factors
    - Dave Schmitt noted that the current scope applies TOD factors after Trip Distribution. However, it is required by FTA to have TOD factors applied after Trip Generation in areas that include transit.
  - TOD factors by trip purpose
    - Mr. Schmitt noted that speed data from Florida transit agencies indicates no congestion throughout the day as there is built-in break time for the drivers. Around malls and airports, there is a significant amount of false congestion as the schedules are off. Therefore, we need to make sure that the TOD factors go beyond the standard trip purposes in order to capture the impact of these other trip purposes on the equilibrium closure assignment. He suggested that Orlando, Jacksonville, Tampa, and southeast Florida are unique enough that they deserve their own TOD factors and then maybe categorize others by university dominated cities (i.e. Gainesville) and tourism cities (i.e. Panama City).
  - Schedule for TOD factors

- Mr. Schmitt requested that the TOD factors developed as part of Phase 1, Task 1 in the draft scope be completed in the next three to four months. Mr. Rossi responded that Phase one is scheduled for completion by December 2010, however, it includes three tasks. The release of the NHTS data will impact the schedule.

- TOD factors by geography
  - Mr. Schmitt noted that Counties are on completely different schedules with different behavioral patterns which will be a very big challenge and suggests adding language to the scope reflecting that.
- Peak spreading
  - Mr. Schmitt asked if there is a plan on how to implement peak spreading as he has found that land use itself can distort travel time representation substantially as there can be a significant amount of population growth but not much employment growth so people travel longer to get to work resulting in peak spreading. Mr. Schmitt also noted that CONFAC values will change with peak spreading and inquired as to whether or not changing the CONFAC values is going to be included in the scope. Additionally, with peak spreading, there would be at least one major feedback iteration in congested areas which will be a time consuming consequence and should be noted.
- Travel time skims
  - Dave Schmitt asked Tom Rossi and Krishnan Viswanathan to elaborate on Phase 1, Task 3 relative to the computation of travel time skims. Mr. Viswanathan responded that the scope includes developing the relationships between what people are reporting as their travel times in order to develop skims using regression methods to relate to the time periods. Mr. Rossi further explained that CS conducted a FHWA project in San Francisco that included the evaluation of observed versus estimated skims, as people severely round their travel times when they report them (i.e. 15 v. 12 minutes).
- Time periods
  - As part of the FHWA San Francisco project, CS needed to get speeds by half-hour time slots using the household travel survey data. A decision on time increments (half-hour versus hour) for this scope has not been determined yet, nor has the number of time periods. FDOT must first review the data to make sure it can support the number of time periods.
  - For transit modeling, half-hour increments may be adequate. However, will it be sufficient for evaluating High Occupancy Toll (HOT) lanes?
- Schedule
  - FDOT wants the TOD models in place before the next LRTP update cycle. With LRTPs due for adoption by December 2014, Florida models need to be calibrated and validated by December 2012. The current schedule reflects TOD models being implemented by December 2011, which would occur in time for next LRTP update cycle.
  - The panel will be provided with a more detailed schedule by task.
  - The next step is to finalize the TOD scope in order to get started and hope that the National Household Travel Survey (NHTS) data will be released shortly.

Time-of-Day Ad-Hoc Committee Notes

November 9, 2009

Action Items

- Revise TOD scope to reflect the following:
    - Develop and distribute TOD factors in the next 3-4 months if feasible.
    - Apply TOD factors after Trip Generation instead of after Trip Distribution.
    - Develop individual TOD factors for Orlando, Tampa, Jacksonville, and southeast Florida, as well as for university and tourist dominated areas.
    - Provide TOD factors by expanded number of trip purposes.
    - Determine number of time periods.
    - Include development of new CONFAC values as a result of peak spreading.
- Finalize scope and proceed with project.
- The panel will be provided with a more detailed schedule by task.

Meeting Adjourned at 9:45 AM