National Capital Region
Transportation Planning Board

TPB TRAVEL FORECASTING SUBCOMMITTEE

HIGHLIGHTS OF THE JULY 18, 2025 MEETING, 9:30 AM TO 12:00 PM

Meeting was held virtually via web conferencing software. There was no on-site meeting.

MEETING ATTENDEES

MEMBERS, ALTERNATES, AND PARTICIPANTS

- Kevin Chai (Fairfax County)
- Xiao Cui (VDOT)
- Ali Etezady (RSG, Inc.)
- Joel Freedman (RSG, Inc.)
- Adrita Islam (Fehr & Peers)
- Li Li (Whitman, Requardt & Assoc.)
- Tom Li (ASRI)
- Feng Liu (Cambridge Systematics)
- Meredith Milam (Fehr & Peers)
- Rakesh Mora (RK&K)

- Kelli Raboy (WMATA)
- Mark Radovic (Gannet Flemming)
- Mushtaqur Rahman (Baseline Mobility Group)
- Harun Rashid (NVTA)
- Andrew Rohne (Caliper)
- Elham Shayanfar (MDOT)
- Bill Thomas (Michael Baker, Inc.)
- Steve Weller (Atlas Arteria)
- Jun Yang (M-NCPPC, Montgomery Co.)

COG STAFF

- Timothy Canan
- Robert d'Abadie
- Nazneen Ferdous
- Pierre Gaunaurd
- Kenneth (Ken) Joh
- Glenn Lang

- Jan Mou (James) Li
- Mark Moran
- Ray Ngo
- Wanda Owens
- Jinchul (JC) Park
- Meseret Seifu

- Bahar Shahverdi
- Dusan Vuksan
- Feng Xie
- Zhuo Yang

1. OPENING: MEETING ROLES, RULES, AND ROLL CALL OF PARTICIPANTS

Mark Moran opened the meeting by discussing the roles of the meeting participants (e.g., chair, host, technical host, note taker), meeting rules, and performing a roll call of participants. This meeting of the TFS was chaired by Kelli.

2. APPROVAL OF MEETING HIGHLIGHTS FROM THE PREVIOUS MEETING

The highlights of the May 16, 2025 meeting of the TFS were approved without any changes.

3.   COG/TPB GEN3 TRAVEL MODEL: STATUS REPORT FROM COG/TPB STAFF

This item was presented by Dr. Feng Xie, who spoke from a set of presentation slides. In his presentation, Feng provided a regular status report on the Phase 3 development of COG/TPB's Gen3 Travel Model. He first provided an update on the recent model enhancements and bug fixes, where he mentioned that TPB staff investigated the current toll setting process in the Gen3 Model and recommended keeping it despite the underestimation of tolls compared to limited empirical data. He also explained that TPB staff successfully implemented ActivitySim ver. 1.3.4 in the Gen3 Model, which reduced the ActivitySim runtime by around 20% through explicit chunking (management of memory). Feng then discussed the progress on the Gen3 Model usability testing. He provided an overview of the updated 2025 and 2050 scenarios conducted using the Gen3/Ver. 1.0.4 Model and briefly went through the results from additional sensitivity tests, emissions modeling, and Visualize 2050 performance analysis. Feng concluded his presentation with the next steps.

There were no questions for Feng, however, Mark commented that the scheduled beta release of the Gen3 Model this Fall would be a large milestone for the development of the Gen3 Model. He further explained that there will be a presentation at the October 3 TPB Technical Committee meeting regarding the Gen3 Model, including mention of the beta release. If the model is ready before that, an earlier announcement may be made to the TFS by email.

4.   COG/TPB GEN3 TRAVEL MODEL: TELECOMMUTE SENSITIVITY TESTS

This item was presented by Ray Ngo, who spoke from a set of presentation slides. Ray reported on the results of a telecommuting sensitivity test conducted using the Gen3/Ver. 1.0.4 Model, which was carried out as part of the Gen3 Model usability testing. He explained that this analysis examined the impacts of increased telecommuting frequency for workers working in the TPB Planning area and compared the results of the Gen3 Model to those of the Gen2/Ver. 2.4.6 Model. Ray proceeded by explaining how the scenarios were represented in both models and highlighted key differences in the modeling methodologies of the Gen2 and Gen3 models. Ray then presented aggregate data results and discussed the responses of both models to increased telecommuting. In particular, he emphasized the greater drop in nighttime (NT) travel in the Gen3 Model, compared to the Gen2 Model. He explained that the modeled behavior in the Gen3 Model was partially due to a limitation of the ActivitySim software, where workers working from home do not have blocked-off time windows during the day, so instead are open to having activities scheduled when they should be working. He concluded his presentation by showing disaggregate data results for the Gen3 Model and by summarizing key insights from the sensitivity test.

After the presentation, Adrita Islam referenced post-COVID surveys suggesting that telecommuters may increase the regional trip total through home-based other (HBO) trips and asked Ray whether this behavior was reflected in the Gen2 scenario. Ray clarified that, in order to create a comparable scenario between the Gen2 and Gen3 models, staff reduced only home-based work (HBW) trips in the Gen2 Model to match the reduction seen in the Gen3 Model. However, he highlighted that the Gen3 Model results indicated a shift in some trips toward the midday period. He further noted that the household travel surveys used for both the Gen2 and Gen3 Models are based on pre-COVID data and,[1] therefore, do not capture travel behavior changes that occurred during or after the pandemic.

5.   UPCOMING COG/TPB SURVEY EFFORTS IN FY 2026

Dr. Ken Joh presented this item to the subcommittee using a set of presentation slides. He provided an overview of survey activities that will be undertaken as part of the FY 2026 work program, including

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[1] The 2007/2008 Household Travel Survey was used to calibrate the Gen2 Model and the 2017/2018 Regional Travel Survey was used to calibrate the Gen3 Model.

the 2025/2026 Regional Travel Survey, Regional Air Passenger Survey, State of the Commute Survey, and the Coordination of Transit On-Board Surveys. For each survey, Ken gave a brief overview of the methodology and timeline. He also highlighted how COG/TPB surveys are incorporating best practices in survey methodology including mixed-methods surveys, creative use of survey incentives, and innovative sampling approaches.

No questions were asked by the subcommittee.

6. REVIEW OF TRAVEL DEMAND MODELS ACROSS CALIFORNIA FOR CALTRANS PROJECT ANALYSIS

This item was presented by Adrita Islam, who spoke from a set of presentation slides. She provided a review of regional travel demand forecasting models (TDFMs) used across California, where their suitability for project-level applications, particularly in Caltrans projects, was assessed. She explained that the study examined the regulatory framework governing TDFM use, including federal and state guidance, and that the research involved three key components: a statewide survey, follow-up interviews, and a detailed review of six regional models. Adrita then discussed the findings of this study, highlighting that significant challenges were identified, including limited or outdated documentation, inconsistent induced VMT forecasting, and inadequate representation of post-pandemic trends. She further emphasized that many models were calibrated for regional rather than project-specific needs, and that stochastic variability in activity-based models often went unaddressed. Additionally, she explained that project reviews of four recent Caltrans studies echoed these issues, showing frequent mismatches between model assumptions and project purpose, limited transparency, and questionable alignment with California Environmental Quality Act (CEQA) requirements. Adrita concluded her presentation by highlighting recommendations brought to light by the study, including the development of district-level or project-focused models and updating induced travel calculation methods using California-specific data.

After the presentation, Mark expressed the challenge associated with updating regional TDFMs for post-COVID conditions, given the lack of updated travel survey data, and asked about what other regions may be doing to overcome this challenge. Adrita explained that some agencies have explored the use of Big Data and local surveys to approximate COVID-related behavioral shifts. Harun then asked about the apparent absence of a standard practice on modeling induced demand and Adrita confirmed that no consistent method is being used. She further recommended that Caltrans invest in developing off-model estimation tools, such as those from the National Center for Sustainable Transportation (NCST).[2] Harun then requested guidance on validating Dynamic Traffic Assignment (DTA), for which Adrita agreed to share any existing resources via email to Mark. Dusan Vuksan then questioned the reliability of using un-modified regional models for corridor-level roadway studies and warned that sub-area validation is often skipped and key assumptions oversimplified. Adrita agreed, emphasizing the need for validation, clearer documentation, and enforceable modeling guidance.

Due to time considerations, Feng deferred his question for Adrita to an email, where he asked about the use of activity-based models (ABMs) for project-level analysis in California. Adrita noted that ABMs are widely used and that three out of the four Caltrans projects they reviewed relied on them. However, she emphasized that their structure and resolution often limit their usefulness for corridor-level detail without sub-area validation or post-processing.

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[2] NCST California Induced Travel Calculator. https://travelcalculator.ncst.ucdavis.edu/about.html

7. ROUNDTABLE DISCUSSION OF CURRENT MODELING EFFORTS AROUND THE REGION

Jun Yang briefly announced that M-NCPPC is working on updating its current TDFM, called Travel/4, with help from Cambridge Systematics. He further explained that this model is based on the COG/TPB Gen2 Model and that the purpose of this work is to bring their model in line with the latest Gen2 Model, as well as validating it with 2018 data.

8. NEXT MEETING AND OTHER BUSINESS

Mark first explained that the September 19, 2025, TFS meeting will be canceled due to a scheduling conflict with the 2025 AMPO Annual Conference, which is being held in Providence, Rhode Island, Sep. 15-19, 2025.[3] Correspondingly, he announced that the next TFS meeting will be held on November 21, 2025. Mark then proceeded to announce that COG/TPB plans to release the beta version of the Gen3 Model this fall (possibly October) and that he will be sending out information to the members of the subcommittee on how to gain access to the model. He further explained that COG/TPB will be offering training on how to use the Gen3 Model, though such training would likely be after the beta version has been tested by some external users. Finally, he highlighted that there would be a presentation on the Gen3 Model at the October 3 TPB Tech Committee meeting.

Mark announced the following regarding the upcoming November TFS meeting:

i. COG/TPB Gen3 Travel Model: Status report from COG/TPB staff (Feng Xie)
ii. 2025 Long-Range Transportation Plan, Visualize 2050: Results from the performance analysis of the plan (Sergio Ritacco)
iii. Leveraging connected car data to improve travel demand modeling (Dr. Shanjiang Zhu, Associate Professor, George Mason University)
iv. Possible presentation by Bentley Systems, Inc. (Katie Brinson)
v. Thanking the outgoing chair of the TFS and announcement of new chair for CY 2026 (Mark Moran)

9. Adjourn

The meeting was adjourned at about 12:00 PM.

Attribution: This meeting summary was developed using a variety of sources, including notes from participants, a recording of the meeting, presentation slides, and a meeting summary generated by artificial intelligence (AI), via Webex and ChatGPT. Any sections of the meeting summary based on AI-generated content were reviewed and edited for accuracy by humans. The primary authors of the meeting summary were the meeting presenters, Glenn Lang, and Mark Moran.

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[3] AMPO Annual Conference, 2025. https://ampo.org/news-events/ampo-annual-conference/2025-ampo-annual-conference/