

# RFP SEEKING CONSULTANT ASSISTANCE TO DEVELOP COG/TPB GEN3 MODEL

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**Pre-Proposal Meeting**

**May 28, 2019**



# Overview

- RFP status report
- Purpose and need
- Planning issues in our region
- Strategic plan for improving the TPB travel modeling methods
- Planned work tasks and timeline
- Next steps

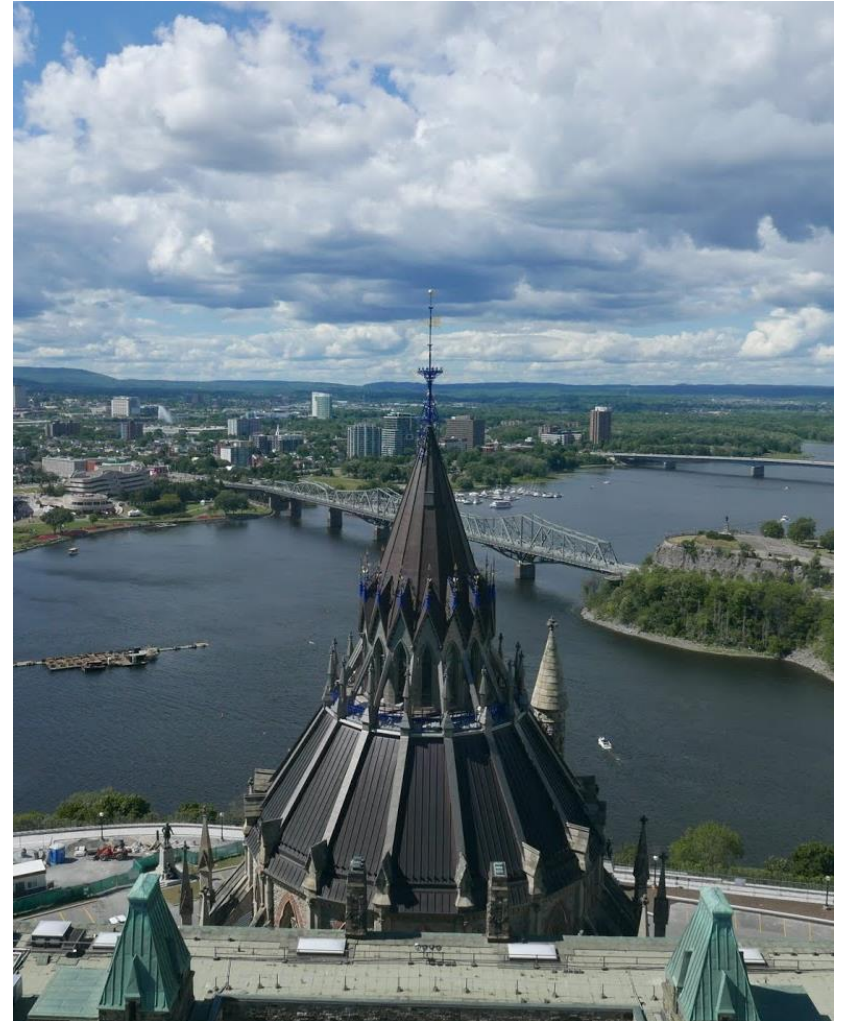


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# Development of TPB's Gen3 Model: Status report

- RFP advertisement period began May 15
- Consultant assistance sought for the following:
  - Development of COG's next-generation regional travel demand forecasting model, known as the Generation-3 or Gen3 Model
  - Model estimation, calibration, validation, and sensitivity testing, leading to a final model application package that is useable by TPB staff
  - Documentation and training

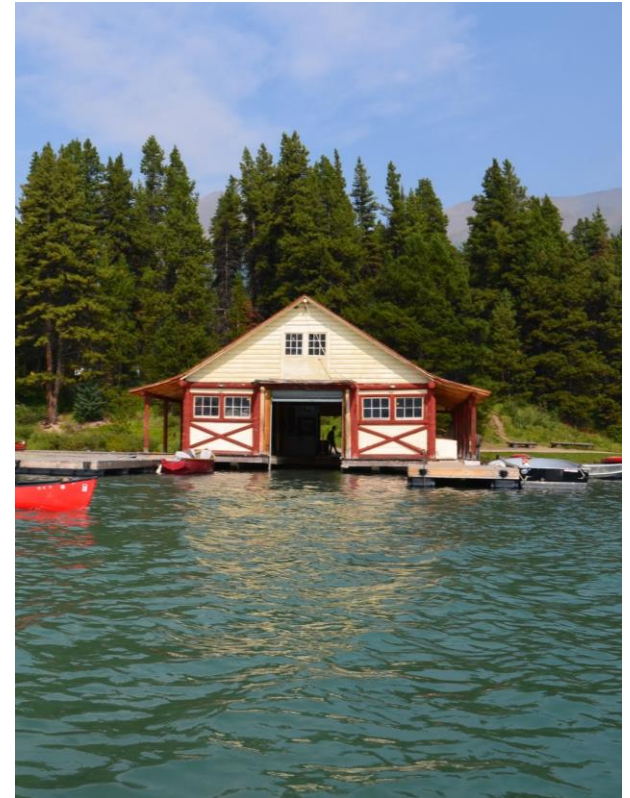


Image credit: Mark Moran



# Development of TPB's Gen3 Model: Status report

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- This is planned as a three-year, \$900,000 project
- Please consult COG RFP 19-015, which can be found here:  
<https://www.mwcog.org/purchasing-and-bids/cog-bids-and-rfps/2019/05/15/rfp-19-015---generation-3-model/>
- Key Dates
  - Pre-proposal meeting: Tuesday, 5/28/19 at 2:00 PM
  - Questions deadline: Wednesday, 6/12/19 at 12:00 noon
  - Proposals deadline: Friday, 6/21/19 at 2:00 PM
- Technical and procedural questions concerning the RFP must be submitted in writing to [purchasing@mwkog.org](mailto:purchasing@mwkog.org)
- RFP advertisement period: 5/15/2019 - 6/21/2019



# Purpose and need

- To ensure that the COG/TPB travel demand forecasting methods are either state of the practice or state of the art with respect to the modeling practices of our peer MPOs.
- To address current shortcomings with the TPB's adopted, production-use travel demand model (currently the Ver. 2.3 Model).
- To ensure that the new model has the capability to address all the pressing regional transportation planning issues in the metropolitan Washington region.



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# Planning issues in our region

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- Modeling of transit and transit sub-modes (e.g., bus versus light rail)
- Modeling highway travel (including toll, HOV, & HOT)
- Modeling non-motorized modes (walk and bike)
- Assessing the effect of land development patterns and job/housing balance on transportation system performance
- Modeling the effect of travel time unreliability, including on transit (e.g., maintenance closures, such as Metrorail's SafeTrack)
- Estimating the impacts of infill development on mode share/choice, particularly with regards to walk and bike modes
- Modeling the effect of the employer-based transit subsidies
- Telework
- Increasing use of transportation network companies (TNCs) and other shared-mobility modes
- Visitor/tourist travel



# Strategic Plan for Model Improvement

- Three phases over 9 years

Phase	Description	Duration (Years)	Fiscal Years
1	Updates to the existing four-step model (Gen2, Ver. 2.3 => Ver. 2.5)	4	2016-2019
2	Development of a next-generation (Gen3) model with existing data*	4	2019-2022
3	Development of a Gen4 model with new data*	2	2023-2024

\* Data collection for the 2017/2018 Regional Travel Survey is scheduled to finish in Dec. 2018. Based on the experience of the previous survey (2007/2008), data cleaning and factoring could take one to two years, which means that the survey data would likely be ready for use in 2020 (FY 2020 or 2021).



# Planned work tasks: Overview (1 of 4)

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## First 1.5 years

1. Project management plan
2. Investigations (consultant)
3. Decisions (TPB staff)
4. Development of the Gen3 Model (consultant, with assistance by TPB staff)

## Second 1.5 years

4. Second round of model calibration and validation
5. Final testing of Gen3 Model by TPB staff & decision about its readiness for production work
6. End of contract





# Investigations (2 of 4)

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1. Strengths and weakness of current travel model
2. Recommended model form, including delineation of data sets to be used for current effort and to be collected for future work
3. Recommended approach for traffic and transit assignment
4. Quality control and quality assurance (QC/QA)
5. Recommended software

(Following the consultant reports, decisions would be made by TPB staff)



# Development of the Gen3 Model (3 of 4)

1. Model specification
2. Model estimation
3. Model implementation
4. Model calibration
5. Model validation
  1. Validation tests
  2. Sensitivity tests
6. Draft model documentation
7. Delivery of draft Gen3 Model to TPB staff and training



Image credit: Mark Moran



# 2<sup>nd</sup> round, model calibration & validation (4 of 4)

1. Model re-estimation
2. Model re-calibration
3. Model re-validation
  1. Validation tests
  2. Sensitivity tests
4. Final model documentation
5. Delivery of final Gen3 Model to TPB staff and training

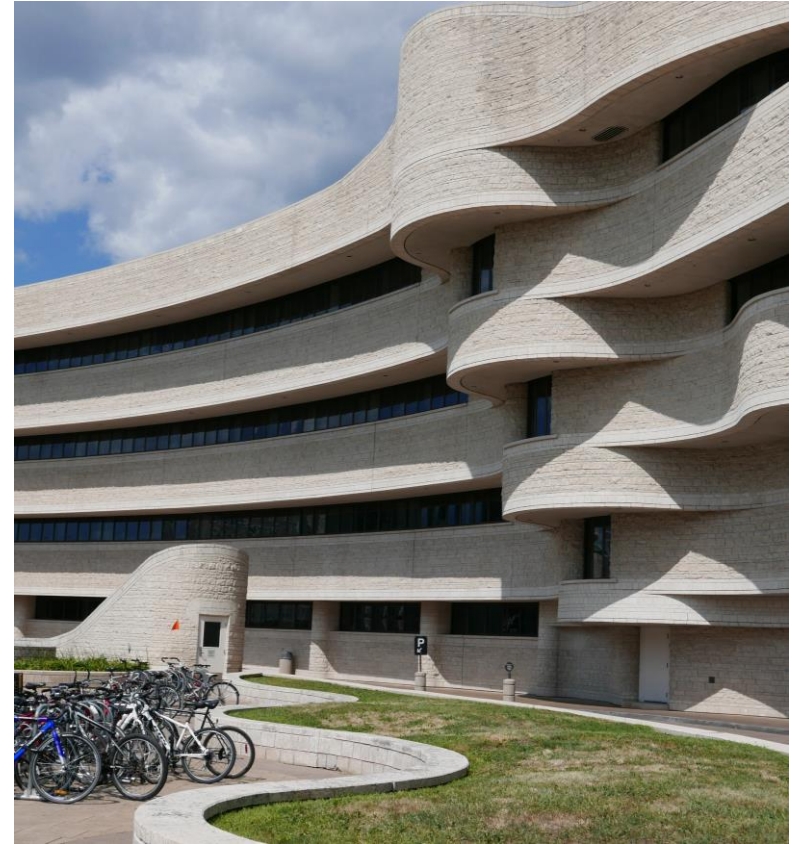


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# Next steps

- Pre-proposal meeting: Tue., 5/28/19 at 2:00 PM
- Questions deadline: Wed., 6/12/19 at 12:00 noon
- Proposals deadline: Fri., 6/21/19 at 2:00 PM
- Convene Technical Selection Committee (TSC)
  - Review & score proposals (ca. 6/24 – 7/15)
- Start of contract: Sept. 2019
- Issue initial task order to begin work

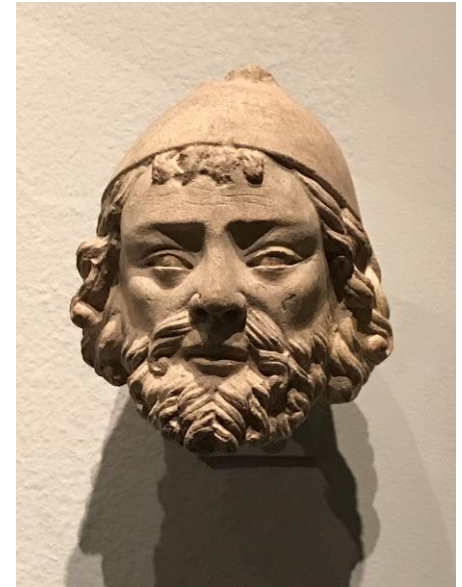


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# Acknowledgements

- Thanks to those who reviewed the RFP:
  - Kanti Srikanth, Ron Milone (contractor), Meseret Seifu, Ray Ngo, Sanghyeon Ko, Jim Yin, Dusan Vuksan, Feng Xie, Jane Posey, Tim Canan, Paul DesJardin, Greg Goodwin, Rick Konrad and Gail Crichlow



Image credit: Mark Moran



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