# Travel Demand Modeling Manager

# Boston Region Metropolitan Planning Organization

# Central Transportation Planning Staff

## Description

The Central Transportation Planning Staff (CTPS) of the Boston Region Metropolitan Planning Organization (MPO) seeks an experienced travel demand modeler to oversee the maintenance, support, and ongoing enhancements to the agency’s travel demand modeling tools for the Boston region. The agency has been reimagining the purpose and role of modeling tools in the planning process and is developing the next generation of its modeling tools to allow the MPO staff to provide more efficient and meaningful insights for the MPO and our partner agencies. The Travel Demand Modeling Manager will oversee the rollout of these next generation tools and ensure that legacy tools are well organized and archived for reference.

The Travel Demand Modeling Manager will report to the Director of Modeling and Analytics and assist in mentoring staff in the Model Development group.

## Responsibilities

The Travel Demand Modeling Manager will be responsible for designing, implementing, and maintaining a robust process to version, document, maintain, and enhance travel demand modeling tools at CTPS. Successful candidates in this role will have skills in programming and travel demand modeling, an aptitude for process development and maintenance, and a preference to work in a team environment that promotes growth opportunities to all members. Specific responsibilities include the following:

* Organize, document, and maintain the version for all aspects of a travel demand model, including scripts, networks, parameters, and zonal data inputs
* Communicate changes between versions to stakeholders and demonstrate the impact of the changes on model capabilities and results
* Define update procedures, conduct validation tests, and oversee calibration activities on each new model version
* Identify, design, scope, implement, and prioritize enhancements to the travel demand model’s functionality, inputs, and outputs through collaboration with the Director of Modeling and Analytics, Model Development group, and other stakeholders
* Develop training, documentation, and other support materials related to travel demand modeling
* Foster a supportive workplace for modeling staff to promote rapid training and skill development and maintain a robust skill set in a competitive market for programming and data analysis resources

## Qualifications

While the following sections describe required and desirable qualifications, CTPS is open to candidates who believe that their particular experience and skills fulfill the requirements.

### Required

* Demonstrated ability to think logically and algorithmically in clear, cogent software design and well-documented code in one or more programming languages
* Ease with version control software and workflows
* Ease with data management, procedure development, and data visualization in either R or Python (preferably both)
* Excellent problem solving and analytical skills
* Effective work prioritization, delegation, and planning skills
* Solid understanding of econometrics and demand modeling
* Familiarity with GIS and experience working with and visualizing spatial data
* A master’s degree in engineering, transportation, business, computer science, mathematics, or a related field, and at least three years of project and/or staff management experience; or a bachelor’s degree in the fields listed above plus five years of project and/or staff management experience
* At least five years of experience developing and/or using travel demand models to produce insights into transportation planning and policy needs

### Preferred

* A desire to help build an equitable, sustainable, and resilient transportation system for the Boston region
* Experience developing in Caliper’s GISDK
* Demonstrated ability to develop software as part of (including as the leader of) a team of other developers with varying sets of development skill and experience
* Experience designing, developing, deploying, documenting, and maintaining production-level code, and managing substantial amounts of data (10 GB or more)
* Experience working with data in various formats (e.g., CSV, JSON, or HDF5)
* Understanding of relational databases
* Demonstrated ability to rapidly learn new tools and technologies, such as new scripting languages and analytics platforms

## Additional Information

This a full-time position with a starting salary range of $95,000–$105,000 annually, contingent upon qualifications and experience.

CTPS offers excellent Massachusetts state employee benefits; a flexible, supportive, and family-friendly work environment; and a commitment to ongoing professional development. Our office is located in downtown Boston, in a transit-oriented and bicycle-friendly environment. We are currently working remotely during the COVID-19 pandemic, and the agency will pilot hybrid work schedules once a return to the office is initiated. The return to the office will be based on health indicators and guidance. All employees will be required to provide proof of vaccination status.

Candidates must have legal authorization to work in the United States and a valid driver’s license and/or the ability to arrange transportation to meetings in different parts of the region. A Criminal Offender Record Information (CORI) check must be completed if the position is offered. However, a criminal record is not an automatic bar to employment.

The Metropolitan Area Planning Council (MAPC) is the fiduciary agent for CTPS and legally employs its staff. MAPC and CTPS are Equal Employment Opportunity and Affirmative Action (EEO/AA) employers that take pride in the diversity of their workforces and encourage all qualified persons to apply. MAPC participates in the E-Verify system to confirm employment eligibility.

## About the Central Transportation Planning Staff

CTPS is a passionate group of transportation planners, analysts, modelers, programmers, and engineers working to address the Boston region’s transportation challenges. The deep transportation knowledge and expertise of this close-knit team is a critical asset to the Massachusetts Department of Transportation, the Massachusetts Bay Transportation Authority (MBTA), regional transit authorities, cities and towns within the region, as well as other agencies and stakeholders.

## How to Apply

This position is open until July 1, 2022 and applications will be reviewed on a rolling basis. A review of applications will begin immediately. Interested candidates should submit a cover letter and resume online at [www.ctps.org](http://www.ctps.org) or [www.bostonmpo.org](http://www.bostonmpo.org).