



6/21/18

Now hiring: Transportation Engineer I or II

AGENCY

The Metropolitan Washington Council of Governments (MWCOCG or simply COG) is an independent, nonprofit association that brings area leaders together to address major regional issues in the District of Columbia, suburban Maryland, and Northern Virginia. The National Capital Region Transportation Planning Board (NCRTPB or simply TPB) is the federally designated Metropolitan Planning Organization (MPO) for the Washington, D.C. metropolitan area. The TPB is also one of several policy boards that operate at COG. COG is the administrative agent for the TPB, and the TPB is staffed by COG's Department of Transportation Planning (DTP). COG has a staff of about 120 employees, half of whom work in the DTP. COG was founded in 1957. The TPB was created in 1965 and became associated with COG in 1966.

CONTEXT

COG's DTP is divided into five teams. The largest of these teams is the Travel Forecasting and Emissions Analysis team, which currently has 15 people and is responsible for developing, maintaining, applying, and improving the TPB's family of regional travel demand forecasting models. At any given time, the TPB staff maintains at least two models:

- The adopted, production-use travel model
- One or more developmental travel models (for potential future production use)

The team is currently divided into two groups: Model Development and Model Application. The mission of the Travel Model Development group is to develop, maintain, and improve the TPB's regional travel demand forecasting models. The mission of the Travel Model Application group is to apply the production-use model to regional and corridor studies, including the development of the region's Long-Range Transportation Plan (LRTP) and an assessment of air quality impacts of the LRTP. Transportation networks are an important input to the regional model, and both groups support network development.

JOB OFFER

COG/TPB seeks to hire a transportation engineer to work in its Travel Model Development group. This opening can be filled at one of two levels (Transportation Engineer I or Transportation Engineer II), depending on qualifications (see below). This should be an exciting time to join the COG/TPB staff, since we have just begun the process to solicit, through a Request for Information (RFI), vendor ideas about the development of our next-generation travel demand forecasting model, referred to as the Generation-3, or Gen3, model. We are seeking someone who is passionate about learning, improving technical skills, public service, and making significant contributions that will improve the agency and the region. We offer a friendly, collegial work environment, challenging technical work, with competitive pay and benefits, in the Nation's Capital.

Minimum Qualifications

- **Transportation Engineer 1:** Either 1) Bachelor's degree in transportation engineering, civil engineering, transportation planning, urban planning, computer science, or a related field. OR 2) Bachelor's degree in a non-related field and one year of applicable work experience. OR 3) Any combination of education, experience, and training that is equivalent to one of the two preceding qualifications.
- **Transportation Engineer 2:** Either 1) Master's degree in transportation engineering, civil engineering, transportation planning, urban planning, computer science, or a related field. OR 2) Bachelor's degree in a related or non-related field and two years of applicable work experience. OR 3) Any combination of education, experience, and training that is equivalent to one of the two preceding qualifications.
- Ability to work cooperatively in a team environment.
- Strong analytical and problem-solving skills.
- Solid verbal and written communications skills.
- Familiarity with the theory behind regional travel demand forecasting models.
- Interest in regional planning and travel demand modeling.

Ideal Candidate (one or more of these)

- Passionate about learning, improving technical skills, public service, and making significant contributions that will improve the agency and the region.
- Ability to be a change agent, particularly regarding technical methods.
- Familiarity with both trip-based and activity-based travel demand forecasting models.
- Experience with travel demand forecasting software, such as Cube Voyager.
- Experience with statistical estimation software, such as R, SAS, Alogit, NLOGIT, Biogeme.
- Experience with geographic information system (GIS) software, such as ArcGIS or QGIS.
- Experience with one or more computer programming languages, such as with R, Python, and Visual Basic .NET (VB.NET)
- Experience with software development principles
- Experience with version control software and/or bug-tracking software
- Knowledge of database management systems (DBMSs).

Examples of Work

- Creates, updates, and maintains data associated with inputs to the regional travel demand model, such as transportation networks and land use/demographic data;
- Compiles information from state and local governments needed to develop a long-range transportation plan (LRTP);

- Prepares analyses of key data sets, such as the household travel survey or on-board transit surveys;
- Assists with running, developing, maintaining, and/or improving the regional travel model;
- Assists with estimating, calibrating, and/or validating the regional travel model;
- Drafts reports, technical memoranda, charts and graphics;
- Plans and oversees the compilation of data about the transportation system;
- Oversees the conduct of survey and other data collection activities;
- Supporting the staffing and running of a technical subcommittee, such as the Travel Forecasting Subcommittee (TFS);
- Prepares projects and maps using geographic information system (GIS) software.

Starting Salary Ranges (FY 18)

- Transportation Engineer 1 (Grade 6): \$55,561 to \$80,731, depending on qualifications
- Transportation Engineer 2 (Grade 7): \$61,673 to \$89,611, depending on qualifications

ADDITIONAL INFORMATION

Application Instructions

To apply for this position, please prepare the following items:

- Cover letter
- Resume
- Salary requirements
- Answers to the supplemental questions

These items can be either emailed, faxed, or mailed to MWCOG:

Metropolitan Washington Council of Governments
777 North Capitol Street, N.E.
Suite 300, **Attention OHRM**
Washington, DC 20002

Further information can be found on MWCOG's Human Resources webpage
(<https://www.mwcog.org/about-us/human-resources/>).

MWCOG is an Equal Employment Opportunity (EEO) employer. We do not discriminate on the basis of race, religion, color, sex, age, national origin, disability, sexual orientation or any other class protected by state or federal laws in admission or access to our programs, services, activities, hiring, and employment practices.

Identification/Right to Work

The Metropolitan Washington Council of Governments is committed to compliance with federal and state laws requiring that MWCOG only hires workers who are lawfully entitled to work in the United States (U.S. citizens or nationals and non-citizens with valid work authorization) without discrimination. MWCOG does not sponsor Visas of any type. All persons employed by Metropolitan Washington Council of Governments are required to comply with the Immigration Reform and Control Act of 1986 by presenting documents to verify identity and authorization to work in the United States.

Acceptable forms of identification are listed by the Department of Homeland Security / U. S. Citizenship and Immigration Services on Form I-9, Employment Eligibility Verification.

Supplemental Questions for the Position of Transportation Engineer I or II

Your answers to the Supplemental Questions may be reviewed to help determine if you meet the required skills and how you meet the requested skills for the position to which you have applied. This review may include an automated scoring process and/or a manual review of all or some of the responses.

Note: The specific questions and scoring process used are determined by each hiring authority. Only those individuals who meet the required skills and most closely match the requested skills will be invited to an interview.

1. Are you eligible to work in the United States without sponsorship of a work visa, both now and in the foreseeable future? *
☐ Yes
☐ No If "No," please explain:
2. Describe your experience working with travel demand forecasting models. *
3. Describe your experience working with statistical estimation software, such as R or SAS. *
4. Describe your experience working with database management systems (DBMS) and/or GIS.*
5. Describe your experience working with computer programming languages, such as Python or Visual Basic, and software development principles. *
6. Describe your experience working with version control software and/or bug-tracking software.
7. Where did you hear about this job? (Check one or more categories) *
☐ I'm a COG employee (internal applicant)
☐ MWCOG webpage
☐ Social media (e.g., Facebook, Twitter, LinkedIn)
☐ Indeed.com
☐ Printed publication or newspaper
☐ Job fair or career event
☐ Word of mouth (friend, family, colleague)
☐ Radio

- ☐ Email
- ☐ Professional association job board
- ☐ College/university job board
- ☐ Other website
- ☐ Other

8. Specifically, where did you hear about this job? (Write the name) *

* Required question