

## Job Opportunities

**Job Code:** DTP-1608  
**Job Title:** Transportation Engineer II  
**Job Type:** Full-time job  
**Department:** Dept. of Transportation Planning  
**Salary:** \$56,456 - \$82,144  
**Normal Work Schedule:** Monday-Friday  
**Date Posted:** 6/24/2016  
**Description: Agency and Context**

Transportation planning at the regional level in the Washington, D.C. metropolitan area is coordinated by the National Capital Region Transportation Planning Board (TPB). The TPB is the federally designated Metropolitan Planning Organization (MPO) for the metropolitan area and also plays an important role as the regional forum for transportation planning. The TPB coordinates regional transportation planning activities and develops the long-range transportation plan in order for federal-aid transportation funds to flow to the Washington region. The TPB includes representatives of local governments; state transportation agencies; the Maryland and Virginia general assemblies; transit agencies; and non-voting members from the airports authority and federal agencies. The TPB is staffed by the Metropolitan Washington Council of Governments' Department of Transportation Planning (DTP).

### The Position

The Department of Transportation Planning is seeking a Transportation Engineer II to assist in carrying out the region's Congestion Management Process (CMP) and to facilitate the use of technology-generated enterprise/big data for transportation planning. The CMP is a federal mandate for large metropolitan areas. It uses a number of analytic tools to define and identify congestion within a region, corridor, and activity center or project area, and to develop and select appropriate strategies to reduce congestion or mitigate the impacts of congestion. The Fixing America's Surface Transportation (FAST) Act calls for potential development of Congestion Management Plan that can help to prioritize transportation investments and increase job access opportunities. You would work on all aspects of the CMP especially strategy identification and preparation of the anticipated Plan with multidisciplinary opportunities to interface with a wide range of internal staff and external stakeholders. The transportation industry is entering a big data era and the TPB has been a pioneer in using technology-generated enterprise data for systems performance evaluations to support planning for operations. You would have the opportunity to analyze real-world big data and be part of or even accelerate the transformation of the transportation industry energized by disruptive technologies. The job opening is to establish a transportation analyst with data science insights and data engineering skills, as part of the Systems Performance Planning Team, to assist senior staff in executing the CMP and improve the TPB's capabilities in utilizing big data for planning purposes.

### Examples of Work

The successful candidate will undertake both analytical tasks and planning activities to address the Congestion Management Process requirements and utilize transportation

data especially big data for planning purposes. Activities are likely to include:

- Collect, process and integrate a broad range of traditional and technology-generated data from both public-sector and private-sector to assess multimodal transportation congestion and reliability.
- Analyze and identify transportation demand management, operational management and job access strategies in congestion reduction and mitigation.
- Harness the opportunities of big data and open data for transportation planning; develop database and analytical tools to facilitate the use and communication of such data.
- Communicate results through such means as presentations, memoranda, reports, regional planning documents, websites or online “dashboards”.
- Interface with state, regional, and local agencies and other stakeholders regarding the development of the Congestion Management Plan and implementation of CMP strategies.

### **Minimum Qualifications**

- Transportation Engineer II - Either:
  1. A Master’s degree in transportation engineering, transportation planning, or a closely related field and one year’s experience, or
  2. A Bachelor’s degree and three to four years applicable experience. Any equivalent combination of experience and training which provides the required knowledge, analytical and writing skills, and abilities will be considered.
- Excellent statistical analysis and related quantitative analysis and software (e.g. SAS) skills, including a desire to devote a significant portion of work time to data mining, analysis, and presentation of results.
- Expertise in using geographic information system (GIS) applications, experience in developing web-based tools is a plus.
- Ability to work cooperatively in a team environment.
- Strong analytical and problem-solving skills, with a good knowledge of research methods.
- Solid verbal and written communications skills.
- Familiarity with the transportation planning process and theory.

### **Ideal Candidate**

- Familiarity and experience with private-sector enterprise/big data, such as vehicle probe data (e.g. INRIX, HERE, TomTom, and the National Performance Management Research Data Set), experience with social media-generated data (e.g., Waze) and shared mobility data (e.g., Uber and Lyft) is a plus.
- Familiarity of database management tools (e.g. SQL, MS Access), open data concepts and applications, and business intelligence and visualization tools (e.g., Tableau).
- Familiarity with federal, state and regional transportation institutions and policies, and principles of transportation planning.
- Experience in communicating data to audiences. (Please describe in your cover letter.)

**Starting Salary**

- Transportation Engineer II (Grade 7): \$56,456 to \$82,144, depending on qualifications.