SANDAG

Senior Transportation Modeler

Annual Salary Range: $104,049 to $161,276
First Review of Applications: September 16, 2022
Expected Start Date: October 2022

Role

The Transportation Analysis and Modeling group has two types of roles available that support model development and model application.

The Model Development team members maintain and improve a suite of models including Activity Based Model (ABM), Rapid Strategic Model (RSM), Commercial Vehicle Model (CVM), Crossborder Model (CBM), and other special market models. Key focus areas include the addition of new features related to emerging technologies, transformative transportation modes, and shared mobility. The Model Development team also support model applications in key agency projects, including regional, local, and border-related projects.

The Model Application team members apply the ABM in support of regional, local, and border-related projects. They prepare transportation networks, perform model runs, interpret and analyze results, and communicate model outputs through a wide range of data and mapping presentation formats.

Overview of the Data Science Department

As a premier multi-modal planning and project implementation agency, SANDAG relies on the quality and capacity of our Transportation, Demographic, Economic, and Land Use Modeling programs. A team of highly skilled professionals support a variety of projects including long-range coordinated transportation, economic, and land use plans, corridor studies, major transit investment studies, infrastructure and air quality plans.
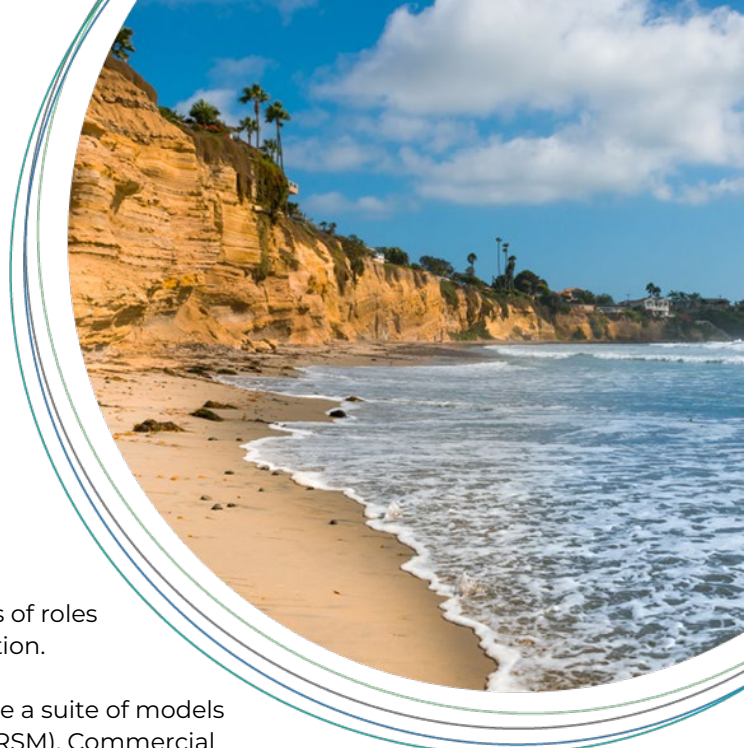
As regional planning needs, travel behavior, and socioeconomic conditions change, the demands and expectations of our modeling program have increased. To meet these challenges, SANDAG has committed the resources necessary to develop and maintain a robust, agile, and integrated modeling infrastructure to support policy development and decision making. SANDAG has developed a nationally recognized and highly sophisticated ABM. As the future transportation system transforms, SANDAG will be updating its ABM, RSM, CVM, and CBM to respond to the impact of emerging transportation technologies, transformative travel modes, and shared mobilities used for regional planning.

Benefits

SANDAG offers comprehensive benefits, to include health, dental, and vision insurance as well as employee assistance, wellness, and work/life balance programs. Additionally, SANDAG offers the following:

- Hybrid (three days onsite in office) and 9/80 flexible work schedule (every other Monday off)
- Pay-for-performance merit increases
- CalPERS pension plan with employer and employee contributions
- Excellent health insurance options for employees and their eligible dependents
- Free dental and vision insurance for employees and their eligible dependents
- Education Assistance of up to $5,250 a year for regular employees
- Free transit pass for use throughout the San Diego region, Rapid Express, Trolley, and COASTER
- Paid time off including 12 paid holidays, 2 floating holiday days, generous paid time off (PTO) per year

Job Responsibilities

- Develop, maintain, and improve SANDAG's transportation models.
- Perform research and participate in the development of modeling features related to emerging transportation technologies, transformative modes, and shared mobilities.
- Develop and maintain custom software applications to support transportation modeling.
- Ensure transportation modeling tools and analytical capabilities are credible and effective for policy analysis; participate in quality assurance and quality control processes.
- Maintain GIS networks of current and future roadway, transit, and active transportation projects
- Coordinate, support and participate in project matrix teams assembled for transportation modeling analysis required for long-range regional plans and highway and transit investment studies.
- Analyze and understand model run forecasts including performance metrics and mapping, travel behavior and impacts.
- Coordinate the integration of transportation and land use models; coordinate with economic and demographic research staff to determine data interactions.
- Coordinate with the Data Solutions team to maintain transportation databases; ensure current and accurate traffic and passenger count data are being used.
- Prepare and present reports to policy and stakeholder committees, member agencies, community groups, private organizations, and members of the public.
- Develop Requests for Proposals, scopes of work, and project budgets; evaluate competitive project proposals and make recommendations for consultant selection; manage project consultants and ensure projects are completed on schedule, within budget, and with a high-level of effectiveness.
- Supervise, mentor, train, and provide career development opportunities for a small team of professional staff with expertise in transportation modeling.

Experience and Qualifications

- A bachelor's degree in transportation modeling, computer science, mathematics, statistics, engineering, or a related field.
- Five years of career development that include the types of career experience listed below. Lead or supervisory experience is required.
- Knowledge of the principles and practices of travel demand modeling and forecasting; experience in development and/or the application of activity-based models is desirable.
- Experience programming in languages such as Java, Python, R, and SQL; experience developing and maintaining custom software applications to support modeling functions.
- Experience using modeling software such as EMME to support large, complex model development and applications projects.
- Experience with big/passive data and applications in travel demand modeling is preferable; research and/or modeling autonomous vehicles, transformative modes, and shared mobilities are desirable.
- Experience with data acquisition, compilation, and quality assurance/quality control methods; experience with relational databases such as SQL Server is desirable.
- Experience with ESRI software to include feature creation, scripting, mapping, and spatial analytics; knowledge of transportation network coding principals is preferred.

How to Apply

Interested candidates may apply for this position by completing a SANDAG Employment Application at sandag.org/careers.

In compliance with the Americans with Disabilities Act (ADA), SANDAG will accommodate persons who require assistance in order to apply for a position at SANDAG. Applicants requiring an accommodation due to a disability during any stage of the recruitment and selection process, including requesting this document and related application materials in an alternative format, should make their needs known by contacting Human Resources at hr@sandag.org, (619) 699-1900, (619) 699-1904 (TTY), or fax (619) 699-6905.

Further Information

In compliance with the Immigration Reform and Control Act of 1986, applicants hired by SANDAG must show acceptable proof of identity and evidence of authorization to work in the United States.

The selected candidate can anticipate a driving record check upon hire, and approximately annually thereafter. The results of the check may determine whether the selected candidate will be permitted to drive for SANDAG business.

SANDAG requires all new employees to be fully vaccinated for COVID 19 within 45 days of hire.

SANDAG employees are expected to work in-person in our San Diego office; there are telework options available, as well as a 9/80 work schedule (every other Monday off).

Contact Us

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📞 (619) 699-1900 | TTY/TDD: (888) 722-4889

🌐 sandag.org

✉ hr@sandag.org

SANDAG is an Equal Opportunity Employer