



NICK WOOD, PE
ASSISTANT RESEARCH ASSOCIATE
YEARS OF QUALIFYING EXPERIENCE: 12

Education

- M.S., Civil Engineering, Georgia Institute of Technology
- B.S., Civil Engineering, Rensselaer Polytechnic Institute

Background and Qualifications

Mr. Wood is an Assistant Research Engineer within the System Reliability Division of the Texas A&M Transportation Institute (TTI). His experience is in the areas of transportation operations, managed lanes, and active traffic management.

Mr. Wood has led operational, planning, and policy-related research for a variety of externally-funded sponsors. He was the principal investigator for a multi-year project sponsored by the Texas Department of Transportation to evaluate new methods to communicate traveler information for managed lane networks. On behalf of the Federal Highway Administration, he wrote guidance for implementing active traffic management with respect to using real-time and simulated data for planning and operational purposes. He led a workshop for the Santa Clara Valley Transportation Authority that considered the potential impacts of future technologies and connected vehicles on the Silicon Valley Express Lanes. Mr. Wood was also the primary author of the Planning Considerations Chapter for NCHRP Report 835: Guidelines for Implementing Managed Lanes.

Additionally, Mr. Wood is a member of the Managed Lane Committee and the Transportation Planning Applications Committee for the Transportation Research Board. He is also the Co-chair of the Research Subcommittee for the TRB Managed Lane Committee, leading the development of research needs statements and direction of future research.

Recent Work Experience

Dates	Position(s)	Organization
2010 - Present	Assistant Research Engineer	Texas A&M Transportation Institute
2008 - 2010	Graduate Research Assistant	Georgia Institute of Technology

Accomplishments and Professional Affiliations

- Professional Engineer, Texas, No. 117258
- Co-Chair, Research Subcommittee Transportation Research Board (TRB), Committee AHB35, Managed Lanes.
- Member, Transportation Research Board (TRB), Committee ADB50, Transportation Planning Applications.

Relevant Project Experience

Principal Investigator, Communicating Information for Traveling on Managed Lane Networks (Texas Department of Transportation). Mr. Wood led a multi-year research project to investigate new traveler information systems for managed lane networks. This project assessed suitability of roadway signage whether third-party data providers (e.g. Google Maps, Apple) and connected vehicles could offer alternatives. The project led to a set of specifications for inclusion within a regional concept of operations. These specifications addressed the technical requirements and processes necessary to start and maintain an open data feed for transmitting managed lane traveler information, similar to deploying GTFS for a transit system.

Technical Support, Active Traffic Management (ATM) Implementation Guide (Battelle Memorial Institute/FHWA). Mr. Wood wrote the Planning and Organizational Considerations Chapter for an FHWA guidance document on ATM strategies, published in late 2017. The planning chapter focused on successful practices for scenario planning, using data, managing organizational capability, and modeling and simulation. The guide identified a series of performance measures that could tie to specific objectives and ATM strategies. Mr. Wood also wrote material for the guide that described considerations for safety and mobility analyses, including the use of real-time, longitudinal, and data from various models and simulations.

Principal Investigator, Support Regional Congestion Pricing Workshops (Battelle Memorial Institute/FHWA). Mr. Wood led the development and delivery of workshops for regions considering congestion pricing for the first time. He communicated and collaborated with state and regional agencies to gauge interest for hosting workshops. Mr. Wood tailored agendas and recommended experts that would suit the needs of the hosts. The workshop sessions consisted of topics that addressed public engagement, regional and corridor planning, and starting a concept of operations. Mr. Wood led workshops in Chicago, IL, Pittsburgh, PA and Portland, OR.

Technical Support, Connected Vehicle Pilot Deployment and Program Evaluation (U.S. Department of Transportation). Mr. Wood is a member of a research team tasked with investigating deployed connected vehicle technologies in New York City, Tampa, and Wyoming. He is responsible for drafting sections of evaluation plans concerning the mobility, environmental, and agency efficiency aspects of connected vehicle technology. The various CV applications that are part of the evaluation include lane change/warning assist, speed compliance, wrong way driver systems, and traffic progression technologies. Mr. Wood also developed the Institutional Evaluation Plan that will guide the systematic evaluation across the three CV pilot sites. The Institutional Evaluation will investigate six key factors that comprise topics related to: (1) governance, (2) public partnerships, (3) private partnerships, (4) organizational efficiency, (5) legislation, (6) industrial organization.

Principal Investigator, Anticipating How Future Technologies Could Impact the Silicon Valley Express Lanes (Santa Clara Valley Transportation Authority). Mr. Wood led a project to develop a workshop and draft a white paper for the Santa Clara Valley Transportation Authority (VTA), based in San Jose, CA, that assessed how future technologies could significantly impact the Silicon Valley Express Lanes. He managed two subcontractors who helped to deliver the workshop and solicited participation for a 19-member expert panel that consisted of representatives from large and small technology companies, government agencies, enforcement personnel, project financiers, and media outlets. The topics covered during the workshop included occupancy and toll evasion technologies, active traffic management, mass transit fare collection systems, connected vehicles, and communication systems.

Subject Matter Expert, Guidelines for Implementing Managed Lanes (National Cooperative Highway Research Program). Mr. Wood was the lead author for the chapter on planning considerations for managed lanes. The planning chapter included guidance on regional and corridor-level planning, developing a concept of operations, funding and financing, environmental review, and public engagement. Mr. Wood also contributed guidance for the sections detailing design, signage, and operational components for managed lane systems. The project resulted in the publication of *NCHRP Report 835: Guidelines for Implementing Managed Lanes*.