

Welcome to the

Turner-Fairbank

Highway Research Center

The Federal Highway Administration (FHWA) plays a key role in leading the national transportation research necessary to meet current and future challenges.

Collaborating with partners around the world, FHWA research and development (R&D) conducted at Turner-Fairbank Highway Research Center (TFHRC) improves the roads and bridges we travel on every day, saving lives, reducing congestion, and advancing economic growth.

As the research center for FHWA, TFHRC coordinates and conducts an ambitious program of innovative highway research and development to address the critical needs of the Nation's highway system.

The value of research is evident in the development of innovations in materials, designs, policies, operations, and safety on the highway system. Deployment of these innovations enables the highway system to move people and freight efficiently and contributes to the economic success of the United States.

What was once dreamed of as the highway of the future is becoming reality today. From connected vehicles and vehicle-to-infrastructure communications, to road and bridge design, to policy decisions requiring quality transportation data, and to human factors and environmentally sustainable roads—we are moving toward solutions that will positively impact the transportation system of tomorrow.

Come See Us

Each year, hundreds of people visit TFHRC and participate in scheduled group tours of our laboratories.

Whether you visit us in person or via the Internet, you will see FHWA's commitment to an exciting, vital research and service program that is innovative and indispensable to America's growing transportation needs.

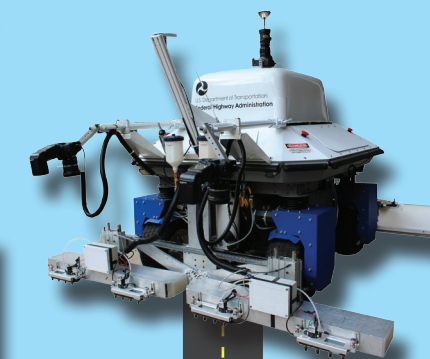
Turner-Fairbank Highway Research Center

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<http://www.fhwa.dot.gov/research/>

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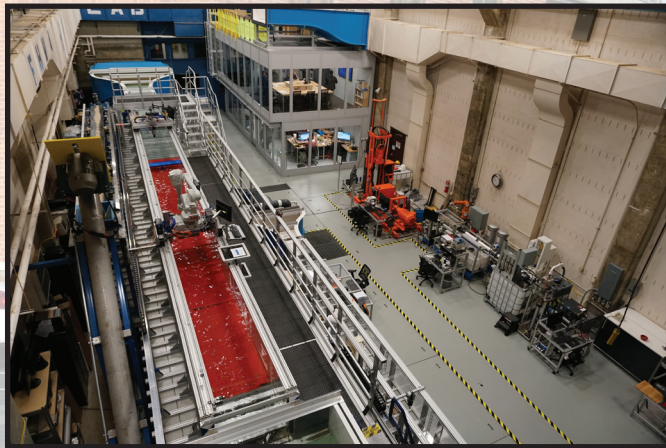


U.S. Department of Transportation
Federal Highway Administration

Infrastructure

The Office of Infrastructure R&D focuses on necessary research and development with an appropriate Federal role because of national needs, scope, duration, or risk. This role is reflected in the following six overarching strategies:

1. Long-term infrastructure performance
2. Durable infrastructure systems
3. Accelerated highway construction
4. Sustainable highway infrastructure
5. Performance-based specifications
6. Comprehensive and integrated infrastructure asset management.



Although the fundamental structure and components of pavements and bridges are quite distinct, the program's approach emphasizes interdisciplinary collaboration and strong stakeholder involvement; some research and development needs are common to both.

By using all facilities and assets available, and by working collaboratively with counterparts in other FHWA offices and with stakeholders throughout the highway community, highway needs and issues in the near and long term will be addressed.

Safety

The Office of Safety R&D focuses on strategically managing safety, preventing and mitigating roadway departures, improving intersections, protecting pedestrians, and managing speeds.

Featuring state-of-the-art laboratories, Safety R&D provides transportation practitioners with improved safety assessment and decision-support tools, new technologies and designs, and enhanced understanding of the human factors and safety impacts of highway improvements.

Examples of safety assessment and decision-support tools include the Highway Safety Information System, the Evaluation of Low-Cost Safety Information Pooled Fund Study, and the Interactive Highway Safety Design Model. Technologies that support highway safety management and design include advanced crash analysis and simulation and highway driving simulators.

Access to Naturalistic Driving Study data via the Safety Training and Analysis Center will enable new safety countermeasures.



Advanced research focuses on human factors and visibility, intelligent transportation systems, and the feasibility of an integrated active transportation system.

Operations

The Office of Operations R&D conducts research on the application of Intelligent Transportation Systems and other cutting edge technologies to move people and goods more efficiently, quickly, and safely.

This research explores concepts and develops prototype technologies and algorithms for optimizing transportation systems, promoting smoother and safer traffic flow, reducing travel times, and decreasing fuel consumption.

Operations R&D's Saxton Laboratory houses state-of-the-art modeling and simulation tools, prototype semiautonomous vehicles, intelligent infrastructure, and advanced communication technologies including dedicated short-range communication and 4G LTE (fourth generation long-term evolution).

The Office of Operations R&D also promotes interagency coordination by forging partnerships with other on and off-road testing facilities (i.e., living laboratories) throughout the United States, including those operated by the Virginia Department of Transportation, the Department of Homeland Security, the Department of Defense, and many others.

