

Transportation Research Board
Technical Activities Division Revised Committee Structure
Groups, Sections, Topics
June 2019

The list below presents the Group and Section structure developed by the Technical Activities Council based on input from committee, section, and group chairs. The bullet points list the types of **topics** to be covered in each group or section. The specific committee structure is still under development so **there is not a one-to-one relationship between bullets and committees**. (The current group and section structure, with links to the current committees, can be found [here](#).)

Policy and Organization Group

Executive Management Section

- Strategic management issues
- Workforce and Knowledge management
- Performance management and asset management
- Research and innovation, creating innovation organizations
- Communications and engagement with the public & other stakeholders
- Economics revenue, and finance
- Contracting equity

Legal Resources Section

- General law, human resources, civil rights
- Contract, tort liability, and risk management
- Transit, intermodal, rail, and aviation law
- Emerging technology law
- Environmental law

Planning, Methods, and Data Group

Transportation Planning and Analysis Section

- Transportation planning at the metropolitan, regional, and state levels and for other jurisdictional areas such as federal lands and national parks
- Policies, analysis and planning tools and processes, plan development and implementation
- Decision making, programming, performance measurement and management
- Travel survey methods, network modeling, demand forecasting
- Traveler behavior and things that influence behavior
- Development and land use

Data and Information Section

- Data needs to support decision making, including modal investment and policy initiatives, at the national level
- Data and information needs, resources, technologies and methods for state level planning, investment choices, performance assessment, policy setting, and regulation.
- Specialized data needs, resources, and methods at the city level, including travel demand and performance measurement, with emphasis on innovations in data collection and analysis methods.

- Tools for and applications of information technologies to measure and improve system performance and manage impacts.
- Methods and applications of to analyze spatial data, particularly geographic information systems in transportation management, forecasting, and planning.
- Development and applications of artificial intelligence in the field of transportation, advancing the use of these tools to improve operations, management, and decision making.
- Understand, assess, and advance the collection and use of freight data for analysis, problem solving, and decision making in private and public sectors, including the use of new technologies and modalities for collecting real time and long term performance and flow data.
- Development, application, and evaluation of tools and technologies for the visualization of transportation data, including applications to operations, environmental assessment, evaluation and decision support.

Social and Cultural Issues Section

- Equity in transportation, environmental justice, underserved populations, public involvement, community impacts understanding the effects & implications
- Identify emerging women's issues in transportation
- Research and practice pertaining to transportation issues on or near tribal lands and intergovernmental relationships
- Foster transfer of intellectual technology on issues related to transportation in developing countries

Transportation Sustainability and Resilience Group

Transportation and Sustainability Section

- Consider the relationship between the human and natural environment (including ecological, noise, vibration, & air quality) as an integral part of the planning, design, construction, and operation of the transportation system
- Consider impacts to the preservation of historic structures and archaeological materials, information, and cultures within the framework of the transportation planning, design, and construction
- Develop and integrate proactive environmental management systems for solid and hazardous waste remediation, tracking, prevention, reuse, green design
- Consider factors that affect energy efficiency and use in transportation including consumption, security, greenhouse gas emissions, and related public concerns
- Consider institutional, behavioral, environmental, economic, technology, and policy implications associated with use of alternative transportation fuels
- Concerned with the social and macroeconomics effects of transportation infrastructure investments, changing in competitiveness, and measuring effects of transportation investments on economic growth and performance
- Advance the understanding of how transportation and sustainability relate and how transportation can contribute to achieving sustainability for economic growth, social equity, and a healthy environment

Transportation Systems Resilience Section

- Threats posed by potential physical, chemical, biological, and cyber attacks on critical transportation infrastructure

- Security issues including risk assessment, prevention, technology, procedures and applications, emergency preparedness and response.
- Managing and executing transportation and logistical efforts associated with response to and recovery from disasters.
- Disaster relief, supply chain resiliency, business resilience, community resilience, and humanitarian aid logistics
- Planning and execution of emergency evacuations associated with natural or human made hazards.
- Planning and management of military use of U.S. transportation systems.
- Technology, logistics, and inter-jurisdictional relationships relating to integration of military use of the nation's multimodal and intermodal transportation systems.
- Consider threats presented by natural hazards, floods, sea level rise, hurricanes, tornadoes, wildfires, earth quakes and the demands they place on critical transportation infrastructure.
- Collaborate with committees on design and construction to develop a unified approach to assuring the resilience of transportation systems and services.
- Address planning, construction, maintenance, management and rehabilitation of critical infrastructure.
- Disaster response Plan infrastructure systems and services for disaster response.
- Emergency evacuation. Collaborate with operations committees.

Highway Infrastructure Group

Roadway Design Section

- Highway, street, and roadside design elements affecting safe and efficient operations.
- All aspects of low-volume roads
- Landscape and environmental design
- Hydrology and hydraulics related to transportation facilities; drainage, stream crossings, scour protection
- Stormwater quality, facilities, and management
- Interrelationship between transportation systems and utilities.
- Geospatial data acquisition technologies in transportation infrastructure for design and construction.
- Innovative intersections and interchanges

Pavements Section

- Testing of pavement systems: full-scale
- Design and rehabilitation of concrete and asphalt pavement structures.
- Modeling of concrete and asphalt materials for design and performance purposes.
- Structural modeling and evaluation of pavement sections
- Interactions between traveled surfaces and vehicles related to friction, texture, roughness, ride comfort, noise, and rolling resistance.

Bridges and Structures Section

- Physical behavior, service life, economy, appearance, safety, and security of bridges and structures for transportation systems
- Structural design procedures and criteria.
- Performance and behavior of steel and concrete bridges and their components.
- Condition assessment and evaluation of the performance of transportation structures.

- Seismic design, performance, and retrofitting of transportation structures.
- Underground structures and their components.
- Culverts, hydraulic structures, sewers, underground conduits, buried bridges, and other underground facilities associated with transportation facilities.

Construction Section

- Construction management for all types of transportation facilities.
- Integration of construction management in planning, design, and construction.
- Existing and emerging project delivery methods for all modes of transportation.
- Quality management as related to the design, construction, materials, performance, maintenance and rehabilitation of transportation facilities.
- Construction of structures for transportation systems excluding tunnels.
- Construction and rehabilitation of concrete and asphalt pavements.
- Rehabilitation and recycling of asphalt pavements
- Fabrication, manufacturing, and inspection of metal structures.

Materials Section

- Asphalt mixtures and the materials and components of asphalt pavements
- Concrete and its components as related to concrete pavements.
- Pavement construction, constructability, economics, and production
- Nanotechnology, and other emerging technologies.
- Materials used as aggregates in bound and unbound applications.
- Fiber-reinforced polymer (FRP) composites.
- Polymer concrete, adhesives, and sealers.

Geology and Geotechnical Engineering Section

- Assessment and management of geologic features and geomaterials
- Mitigation of natural/human-induced geologic hazards.
- Classification and characterization of geomaterials.
- Engineering properties of soil and rock.
- Physical, chemical, and biological processes and interactions in geo and recycled materials.
- Engineering behavior of natural and synthetic geomaterials
- Mechanics of unsaturated geomaterials in transportation infrastructure
- Design, construction and performance of transportation earthworks
- Instrumentation, monitoring, and modeling
- Behavior, stability, and interaction of structural foundations, and their supporting materials
- Subsurface water and its impact on the performance of transportation facilities.
- Geosynthetics used in transportation facilities.

Roadway Maintenance Section

- Management of highway maintenance and operations
- Personnel policies relative to maintenance and operations
- Roadside maintenance practices, operations, methods, materials and equipment.
- Equipment fleet asset management.
- Snow and ice control on highways.
- Effects of weather on surface transportation.

Infrastructure Management and System Preservation Section

- Asset management and management systems (including for maintenance, geotechnical assets, pavements, structures).
- Pavement deterioration and proper treatments; treatments to extend pavement life.
- Sealants and fillers for joints and cracks.
- Inspection, preservation, repair, rehabilitation of transportation structures.
- Vulnerability assessments, lifecycle cost analysis and management
- Communicating analytical findings with decision makers to take appropriate actions for the design, construction or maintenance of bridges and other structures.
- Preserving and extending the life of bridges.
- Corrosion of metals used in transportation infrastructure.

Safety and Operations Group

Safety Section

- Safety management systems and programs; models of safety delivery systems.
- Highway safety information to support transportation decision-making.
- Crash records and related highway, driver, and vehicle data
- Theories, analytical techniques, and evaluation methodologies for improving the understanding of highway safety
- Driver, vehicle and/or roadway-based treatments that will enhance the safety of the transportation system.
- Safety effects of enforcement activity and other traffic supervision measures.
- Science of occupant protection, in all modes of transportation
- Safety impacts of alcohol and other drugs
- Motor carrier safety.
- Safety of automated and connected transportation

Operations Section

- Innovative congestion pricing of systems and services for all modes of transportation.
- Improving traffic flow through use of transportation demand management techniques.
- Regional transportation systems management
- Integrated decision-making approaches to operations and the harmonization of operations with planning, construction, preservation, and maintenance of transportation facilities.
- Intelligent Transportation Systems (ITS) conceptual system planning, design, and integration including intermodal integration.
- Operational aspects of freeway corridors.
- Traffic management strategic and systems; traffic operations centers; highway traffic monitoring; traffic control devices.
- Traffic operations of automated and connected vehicles.
- Physical and non-physical factors that affect capacity, traffic flow, comfort, convenience, and safety.
- Safe and efficient work zones.
- Access management and its integration into planning, policy, and design processes.
- Paints, durable markings, plastics, and optical elements used in retroreflective signing and marking materials.

Transportation Users Group

- Needs, capabilities, and limitations of vehicle users as they affect the design, operation, and maintenance of personal, commercial and public transportation systems.
- Information exchange between the transportation mode and the user.
- Measurement and prediction of vehicle and operator performance and behavior.
- Visibility in all forms of transportation.
- Educating and training, licensing and relicensing of drivers and operators of surface transportation vehicles, especially high-risk driver groups -- teens and seniors.
- Pedestrians and pedestrian facilities.
- Bicycling, bicyclists, and bicycle facilities.
- Issues relating to the transportation disadvantaged; services that should be provided; assessment of impact and value of programs directed at improving their mobility.
- User issues associated with paratransit systems including dial-a-ride operations, taxis and jitneys in both general and special transit uses, including ADA-complementary paratransit operations.

Public Transportation Group

- Public transportation policy
- Public transportation planning
- Transit management
- Transit safety
- Transit fare policy and collection
- Transit marketing, public information, and customer experience
- Transit operations and maintenance
- Transit equipment, infrastructure, and facilities
- Transit technology
- Integrated mobility and emerging shared-use modes
- Mobility as a Service (MaaS)
- Passenger transportation and human service transportation coordination and mobility management

Rail Group

- Intercity rail passenger systems.
- Non-intercity passenger transportation service on existing railroads; development of new commuter rail service.
- Rail rolling stock and motive power for rail.
- Guided passenger and freight transportation systems.
- Innovative strategies and application of new technologies to enhance and support rail freight, passenger, and transit operation.
- Strategic, economic, institutional, technical, and planning issues related to freight rail transportation.
- Interactions between components of a track structure and its supporting systems all directed toward a better understanding of the performance of the system as a whole.
- Transit right of way infrastructure features.
- Railway fixed plant maintenance.
- Human performance and human factors related to railroad operations.

- Safety, economic considerations, traffic flow and delay, and countermeasures related to highway and rail traffic at points where they intersect at grade.

Aviation Group

- Relations between governments and jurisdictions involved in delivering and regulating aviation services
- Planning for airports, airport systems, and other facilities
- External factors related to aviation, including environmental impacts, security, and safety
- Airport facilities and infrastructure operations and maintenance
- Technologies, procedures, and metrics addressing airspace congestion
- Economics and forecasting for aviation activity, fleets, infrastructure, and workforce
- Identifying and representing new users and uses of shared airspace

Freight Systems Group

- Integrating freight considerations into planning, first- and last-mile impacts, urban freight issues, impacts of modal shift on the freight transportation system and supply chains, specific effects on critical commodities such as agricultural products, food, and energy, and intermodal/ multimodal freight transfer considerations.
- Demand for freight services, the operating costs incurred in transporting freight, demand for current and future freight service, factors that affect the selection of modal alternatives for the movement of freight, including research issues specific to trucking.
- Domestic and international surface freight transportation trends, barriers, economics and regulation - impact of regulation on social, public, and private costs and benefits
- Big data, integrating data, data gaps and sharing barriers, freight modeling, performance measures, freight fluidity
- Investment choices - benefit-cost methodologies, appropriate public and private sector cost shares, project and corridor approaches
- Infrastructure issues - inadequate capacity, funding sources, public private partnerships, state of good repair, urban, rural contexts
- Technology - advancements and implications, regulatory lag and constraints, infrastructure gaps

Marine Group

- Planning, financing, management, operations, and maintenance of marine transportation system facilities including ports, channels, inland waterways, ferry systems, cruise facilities, and intracoastal waterways
- Cargo handling and freight movement anywhere within the waterborne context
- Landside access to ports and related intermodal freight system integration
- Safety, human element, performance, efficiency, and comfort of all persons involved in and/or using the marine transportation system including offshore industry operations
- Vessel operations, navigation and safety of commercial vessels, including ferries.
- Environmental performance of the marine transportation system including ports, vessels, inland waterways, and coastal areas.
- Alternative fuels for marine equipment
- Integration of water transportation into the larger multimodal transportation system

