

Standards help support safe and reliable transit systems for sustainable communities and a net-zero future

CSA Group's research and standards solutions provide comprehensive guidance for the transit and passenger rail sector in Canada, helping enhance efficiency, worker and passenger safety and security, accessibility, and environmental sustainability while promoting energy-efficient and zero-emissions transit.



How can standards support the safety, reliability, and accessibility of transit systems?

Safe and reliable transit and passenger rail systems are vital for Canadian communities, enabling access to jobs and services, providing mobility options for diverse groups, and supporting economic growth. CSA Group's standards solutions support governments, transit system operators, manufacturers, regulators, and other industry participants in developing safe and efficient transit and passenger rail networks and services while fostering operational excellence, safety, security, and innovation.

Common terminology

Standards can facilitate acceptance of common definitions and terminology to support alignment in collecting, monitoring, and reporting data and process outcomes across the whole industry.

Industry best practices

By fostering collaboration among experts representing a wide range of interest groups and cultivating consensus, standards can establish and disseminate industry best practices tailored to the unique needs of the Canadian context.

Enhanced safety and reliability

Standards help ensure that products, services, or systems operate safely and as intended while also helping organizations manage risk. This helps advance emerging technologies by building their credibility and removing barriers to their adoption.

Sustainability and climate change resilience

CSA Group's standards development process includes considerations of sustainable practices and climate change resilience measures, supporting Canada's strategic objectives.

Interoperability

By harmonizing requirements across regions and internationally, standards can help support the implementation of new technologies in existing systems, reducing development and installation time and cost.

Knowledge transfer

Standards provide a strong foundation for training programs and educational curricula. They provide a structured framework for transferring knowledge, established principles, and best practices to industry professionals.





CSA Group research and standards:

CSA Group's research and standards address a wide range of topics across the transit sector, including:

Alternative fuel vehicles

1. **CSA B401.1**, *Natural gas vehicle (NGV) maintenance facilities code*
2. **CSA B401.2**, *Propane vehicle maintenance facilities code*
3. **CSA B401.3**, *Hydrogen vehicle and trailer maintenance and storage facilities code* (in progress)
4. **CSA B401.4**, *Battery electric vehicle maintenance and storage facility code* (in progress)
5. **CAN/CSA-C22.3 NO. 8**, *Railway electrification guidelines* (in progress)

Transit accessibility and inclusivity

6. **CSA D435**, *Accessible transit buses*
7. **CSA D436**, *Accessible over-the-road buses*
8. **CSA B651**, *Accessible design for the built environment*
9. **CSA D409**, *Motor vehicles for the transportation of persons with physical disabilities*
10. **CSA Z605**, *Mobility aid securement and occupant restraint (MASOR) systems for motor vehicles*

Process, operations, and safety management

11. **CSA R114**, *Canadian method for risk evaluation and assessment for railway systems*
12. **CSA R121**, *Canadian method on safety management system requirements* (planned)
13. **CSA R122**, *Canadian method for safety indicators for railway systems* (in progress)
14. **CSA R123**, *Canadian method for supervision for railway systems* (planned)

Efficient and resilient infrastructure

15. **CSA D700**, *Climate change adaptation and resilience for transit and passenger rail systems* (planned)
16. **Transit and Passenger Rail Projects – Challenges and Opportunities for Increased Efficiency** (research report, in development)
17. **Climate Change Resilience and Adaptation for Public Transit** (research report, in development)

1.5 billion

total passenger trips were made on Canada's urban transit networks in 2023¹

CSA standards support the

UN SDGs

by enhancing reliability and safety of transit and passenger rail systems



¹ [Urban public transit, December 2023](#), Statistics Canada

