

Who Cares if It's Safe

System Assurance on Urban Railways

Keely Sullivan, P.Eng., LL.M., PMP

March 3, 2025

Outline

1. What is System Assurance for Railways and Why is it Important?
2. **“Who Cares” versus “Is it Safe”**
3. Federal Rail Regulatory Regimes
4. Western Canada Spotlight on Provincial Rail Regulations
5. Do we Need Direct Regulation of Rail in Alberta?
6. What We Can Do Now to Improve Rail Safety
7. Questions



What is System Assurance and Why is it Important

Railway system assurance refers to the necessary governance, processes, and objective evidence by which all interested parties satisfy themselves that a given product, service, system, or organizational change can be safely integrated, operated and maintained into the transportation network, so far as is reasonably practicable. (RISSB)

OTTAWA LIGHT
RAIL TRANSIT
COMMISSION

Issues that caused LRT derailment still 'pose a risk to safety': TSB report

The problems that caused an August 2021 derailment and a component failure in July 2022 on Ottawa's light rail system "continue to pose a risk to safety until the issues are resolved," the Transportation Safety Board says.

Canada - Ottawa | February 15, 2023



Report of the Ottawa Light Rail Transit Public Inquiry **Final Report**

November 2022

The Honourable William Hourigan
Commissioner

“Who Cares” versus “Is It Safe”

Part 1: Who Cares

- Regulatory Environments

Part 2: Is it Safe

- The new CSA standards on risk management (CSA R114:22) and others under development
- Adoption of Independent Safety Assessors on Rail Projects

What is Regulation?

- ▶ **“Sustained and focused control exercised by a public agency over activities that are valued by a community”**
- ▶ It typically includes:
 - ▶ A specific set of commands
 - ▶ A deliberate state influence
 - ▶ A form of social or economic influence
- ▶ Analogy: Building Safety
 - ▶ Tightly regulated in Alberta under the Safety Codes Act
 - ▶ Minimum standards for design are legislated
 - ▶ Defined regulator who oversees permit approvals, inspections, and approval to occupy a space

The Source of Rail Regulation in Canada

CONSTITUTION ACT, 1867

VI. Distribution of Legislative Powers

Exclusive Powers of Provincial Legislatures

Section 92

Exclusive Powers of Provincial Legislatures

Subjects of exclusive Provincial Legislation

92 In each Province the Legislature may exclusively make Laws in relation to Matters coming within the Classes of Subjects next hereinafter enumerated; that is to say,

10. Local Works and Undertakings other than such as are of the following Classes:

- (a)** Lines of Steam or other Ships, Railways, Canals, Telegraphs, and other Works and Undertakings connecting the Province with any other or others of the Provinces, or extending beyond the Limits of the Province:
- (b)** Lines of Steam Ships between the Province and any British or Foreign Country:
- (c)** Such Works as, although wholly situate within the Province, are before or after their Execution declared by the Parliament of Canada to be for the general Advantage of Canada or for the Advantage of Two or more of the Provinces.

Federal Spotlight

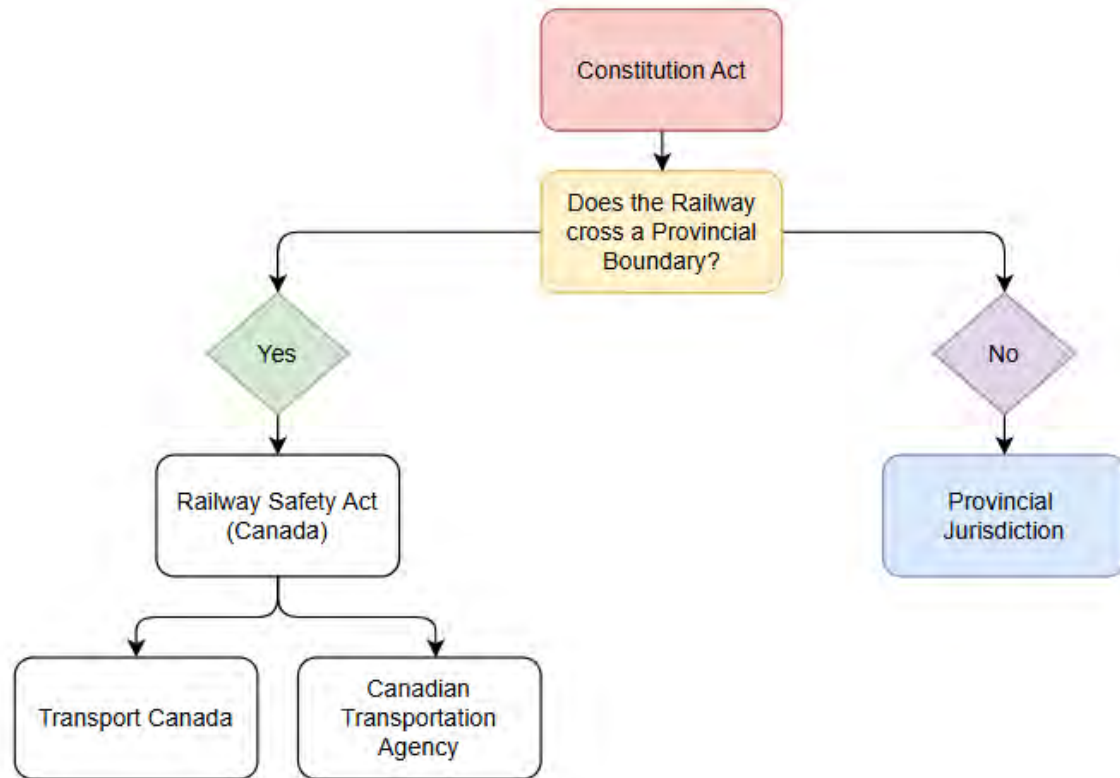
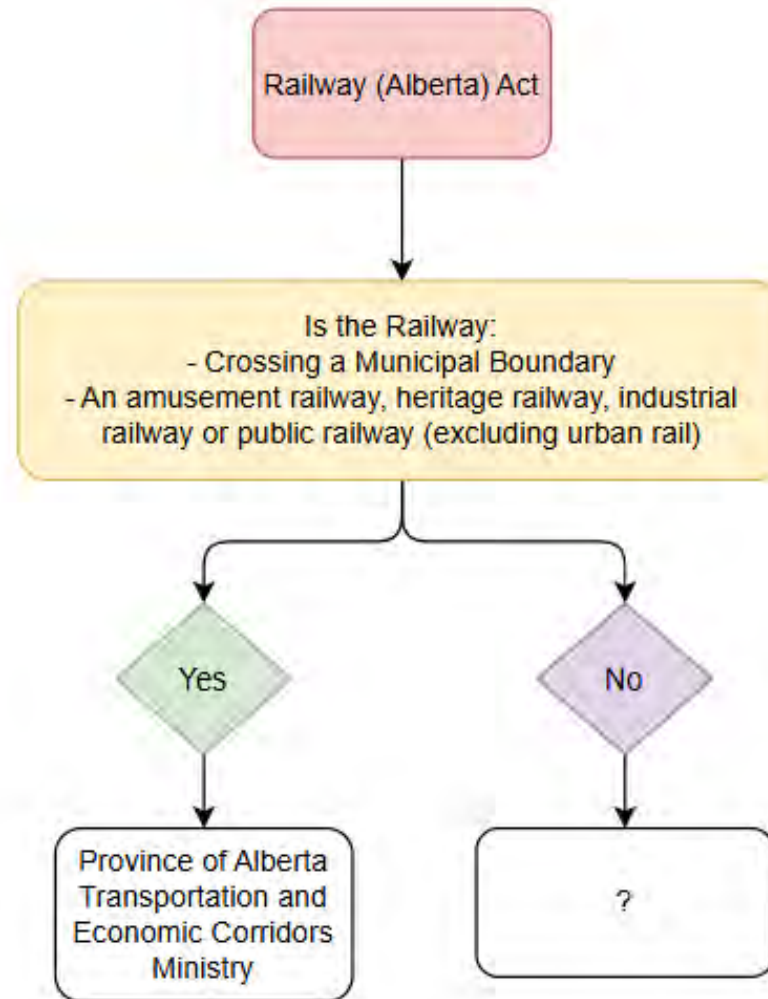
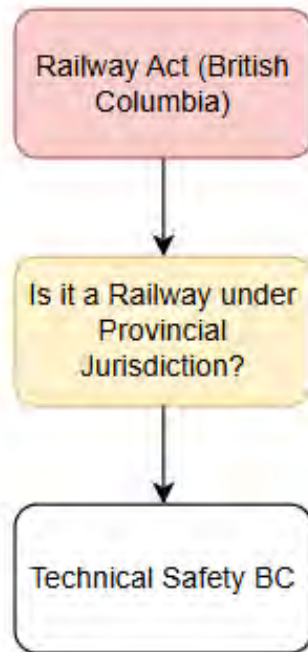


Image credit: Reuters

Provincial Spotlight: BC and Alberta



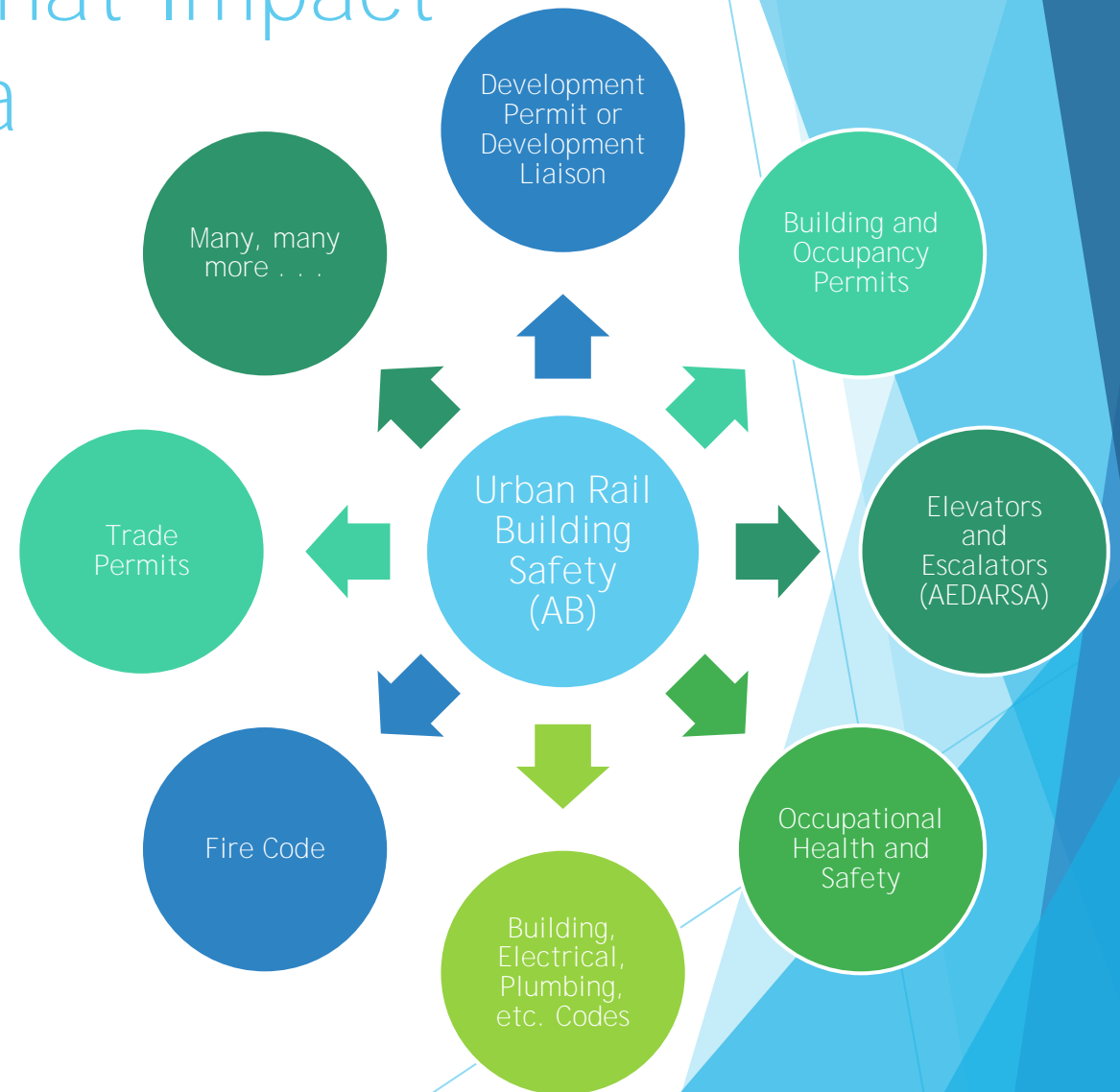
City of Calgary Spotlight

- ▶ Historically, Calgary Transit has self-satisfied with respect to railway system assurance
- ▶ Some projects have followed formal structures, including:
 - ▶ US DOT FTA Safety, Security and Certification Program (WestLRT and OCC2.0 projects)
 - ▶ Early adopters of CSA R114 and Independent Safety Assessors (Green Line)
- ▶ Also subject to intersecting responsibility for safety when sharing infrastructure with federally regulated railways
- ▶ Typically follows a “Regulation by Contract” approach
- ▶ All projects are subject to the overarching standard of care and skillful, ethical, and professional conduct as set out by APEGA



The Web of Regulations that Impact Urban Railways in Alberta

- ▶ **Railway safety isn't a singular responsibility.**
- ▶ Urban rail projects and operations still fall under many other regulatory regimes such as:
 - ▶ Building safety regimes
 - ▶ Environmental safety
 - ▶ Road safety
 - ▶ Professional regulators such as APEGA and AAA
 - ▶ Many more . . .

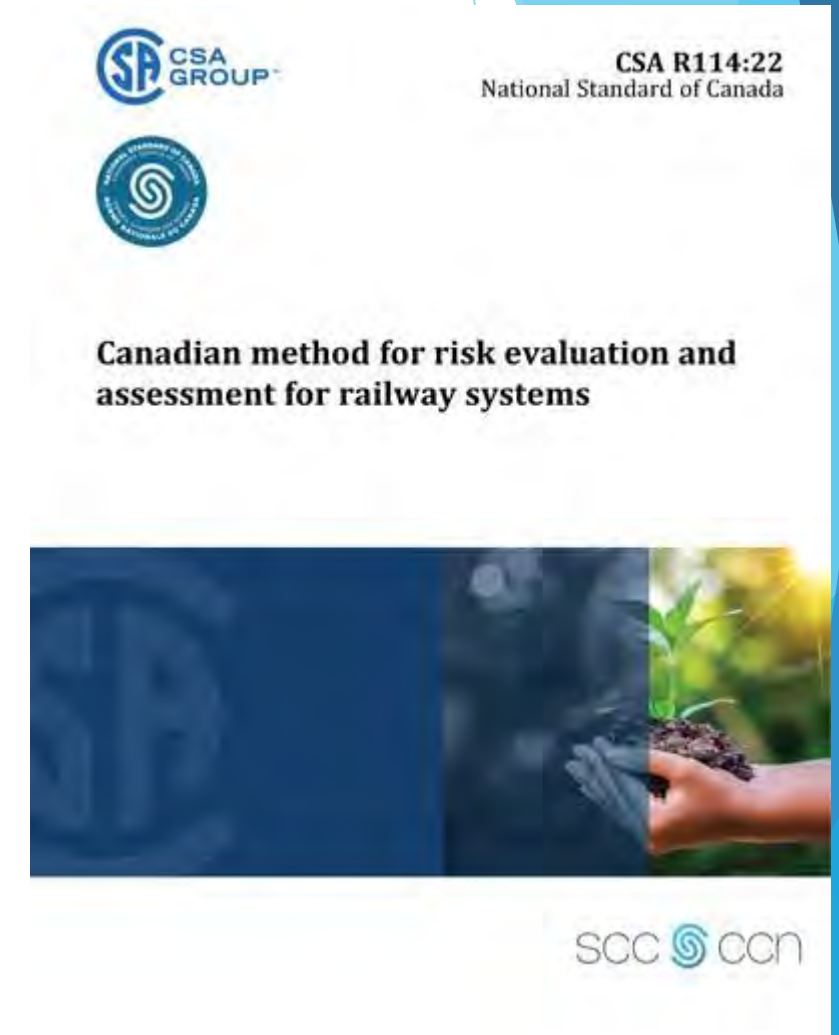


Do We Need Direct Regulatory Regimes for Urban Rail in Alberta?

- ▶ Regulatory regimes are expensive to stand up and operate, and can be inflexible in rapidly changing environments
- ▶ Questions to Ask Ourselves:
 - ▶ Does the quantity and complexity of projects in a region warrant an explicit regulatory regime?
 - ▶ How are our municipalities structured for urban rail?
 - ▶ Are you operating in a private system, public system, or mixed?
 - ▶ How mature is the municipality at standing up new projects?
 - ▶ Are there other levers that can be used to promote good practice adoption, such as contractual requirements, funding agreement requirements, adopting Independent Safety Assessors for third party oversight, etc. to provide an equivalent level of safety?

What Can We Do

- ▶ Recognize that self-regulation is a privilege, not a right
- ▶ Ensure contracts are clear regarding level of due diligence required for the project scale
- ▶ Enhance organizational maturity regarding system assurance responsibilities and the changing standards of care
- ▶ Engage an Independent Safety Assessor for major railway projects for independent third-party review and oversight
- ▶ Become consistent in our approaches to system assurance for all projects within a municipality or between municipalities based on widely accepted standards of care



Disclaimer

- ▶ This presentation should not be considered legal advice
- ▶ Each project will have unique aspects that may propel it into another regulatory regime, or have stakeholders who hold an alternate regulatory authority. It is up to you to ensure that you are familiar with the authorities and regulatory systems in place (or lack thereof)
- ▶ This presentation and the thesis upon which it is based reflect solely the opinions of the author

Questions

- ▶ Contact Information:
 - ▶ Keely Sullivan, P.Eng., LLM, PMP
 - ▶ Keely.Sullivan@calgary.ca