Jennifer Benedict, M. Eng., P. Eng.

Founder and Principal

Education

M. Eng., Civil Engineering, University of Toronto, Toronto, ON, 2013
B.E.S., Urban Planning, University of Waterloo, Waterloo, ON, 2009
Dip. Arch. Tech., Architectural Technology, Sheridan College, Brampton, ON, 2008

Professional Affiliations

Professional Engineer #100202182, Professional Engineers Ontario (PEO)
American Railway Engineering and Maintenance-of-Way Association (AREMA)

Years in Practice

17+

Experience Summary

Jennifer Benedict is a professional engineer with over 17 years of experience specializing in project management and regulatory compliance. Jennifer has over 12 years of experience working in railway engineering and construction. Her career has been defined by the successful execution of complex infrastructure projects, including grade separations, bridge replacements, rehabilitations, and widening initiatives.

During her tenure at Canadian Pacific Railway, Jennifer managed a variety of large-scale railway infrastructure projects, ensuring constructability around railway operations and compliance with federal railway regulations. She played a pivotal role in planning and delivering projects that addressed operational needs such as grade separations within railway yards and over 60 other overpass and underpass bridge projects. Her ability to coordinate with stakeholders, including government agencies, engineering consultants, and contractors, has been instrumental in achieving project goals while maintaining strict adherence to regulatory frameworks.

Jennifer's expertise also includes providing strategic oversight and technical guidance for railway joint infrastructure projects with stakeholder coordination is critical. She has extensive experience in navigating the complexities of regulatory requirements, including the Railway Safety Act, and has supported projects through detailed engineering risk management and compliance reviews. Her ability to balance technical demands with regulatory obligations has made her a trusted advisor in the field of railway construction and operations.

In 2022, Jennifer founded Ironwood Infrastructure Inc., a boutique engineering firm dedicated to delivering client-focused project management and engineering services. Her firm has become synonymous with excellence in railway infrastructure engineering and project management, offering innovative solutions for bridge and grade crossing projects. Her work continues to contribute to growth and improved safety of Canada's railway systems, setting benchmarks for safety and collaborative project success in railway joint infrastructure projects

Selected Experience

Ironwood Infrastructure Inc., Toronto, Ontario
Owner & Principal of Ironwood Infrastructure Inc., offering engineering, project management and education for railway joint infrastructure. Ironwood combines boutique, client-focused engineering services with regulatory compliance and valuable insight into Transport Canada and Canadian Transportation Agency responsibilities to help clients understand their responsibilities, identify their risks and make informed decisions. Ironwood also provides the most reliable and comprehensive grade crossing assessments available in Canada.

Metrolinx, Toronto, Ontario
Director Level Crossings, a technical subject matter expert for Metrolinx grade crossings. Responsible for crossing upgrades, compliance and developing a grade crossing risk reduction strategy to reduce risk at Metrolinx grade crossings by 33% over a 4-year timeframe. Developed a standard for detailed grade crossing assessments that met Transport Canada Grade Crossing Regulations and Standards as well as GO Transit Crossing Standards.

Canadian Pacific Railway, Eastern Canada
Assistant Director Public Works and Crossing Compliance, leadership for Public Works Managers and Crossing Inspectors to ensure a consistent, compliant approach in bridge and crossing project delivery across Canada. Handled construction, maintenance and cost-sharing agreements for all projects and represented Canadian Pacific at CTA mediations and on CTA dispute files when agreements could not be reached at a commercial level.

Responsible for all third-party initiated bridge and crossing projects between Quebec and Saskatchewan and completed over 130 projects.

Facilitated engineering risk management of operational changes such as speed increases, siding construction and track expansions required for compliance under the Canadian Pacific's Safety Management System.

Responsible for the implementation of CP's Grade Crossing Compliance Program at over 7500 public and private crossings in Canada.

Sample Projects

Overpasses and Railway Structures:
Completed over 60 bridge replacement, rehabilitation and grade separation projects, over or under railway lands, including all cost negotiations, design approvals and agreements per CTA guidelines. Select projects include:

- Dorval Interchange Overpass Construction, Dorval, Quebec.
- Green Road, Grade Separation, Clarington, Ontario.
- University of Montréal Pedestrian Overpass, Montreal, Québec.

- Adelaide Street, Grade Separation, London, Ontario.
- Wharncliffe Road, Subway Replacement, London, Ontario.
- Tremaine Road, Grade Separation, Milton, Ontario.
- Main Street, Grade Separation, Milton, Ontario.
- Main Street, Overpass Rehabilitation of CP Yard, Thunder Bay, Ontario.
- HWY 27, Subway Replacement, Vaughan, Ontario.
- Major Mackenzie Drive, Grade Separation, Vaughan, Ontario.
- HWY 412, Grade Separation, Whitby, Ontario.
- HWY 418, 2 Grade Separations, Clarington, Ontario.
- HWY 401 Widening Over CP tracks, Cambridge, Ontario.
- First Street Overpass Replacement, Brandon, Manitoba.
- Daly Street Overpass Replacement, Brandon, Manitoba.
- Cochrane Street, Overpass Replacement, Whitby, Ontario.
- Oxford Road 59, Overpass Rehabilitation, Oxford County, Ontario.

Grade Crossing Assessments and Upgrades:
- CP Grade Crossing Compliance Program, Canada.
- Metrolinx Grade Crossing Risk Assessment Program, Ontario.
- Crossing & Road Realignment, Blenheim Road, Cambridge, Ontario.
- Grade Crossing Improvements, St. George Street, London, Ontario.

Risk Management for Operational Changes:
- Whistle Cessation Risk Evaluation & Engineering Studies, Various Locations.
- CP Slow Order Removal & Risk Assessment, Elm Street, Sudbury, Ontario.
- CP Speed Increase Crossing Assessments, Waterloo Subdivision, Ontario.
- CP Slow Order Removal, Woodstock, Ontario.

Canadian Transportation Agency Files:
- Noise Complaints
- Suitability of Crossings
- New Private Crossing Requests & Maintenance
- New Public Crossing Requests & Maintenance
- Bridge Construction or Reconstruction Cost Apportionment

Training & Certifications

eRailSafe Qualified (CP, CN, VIA), 2023-2025
PTS Training (Metrolinx), 2022-2025
Canadian Rail Operating Rules (CROR), 2022
Canadian Method on Risk Evaluation and Assessment for Railway Systems (CMREA), 2022

Publications

2023, *Know Your Responsibility of At-Grade Crossings*. Good Roads Quarterly

Presentations

2023	*Transport Canada Grade Crossing Regulations*	Good Roads Conference

2024-2025	*Railway Joint Infrastructure and the CTA*	Various Audiences
2024-2025	*Know Your Responsibility of At-Grade Crossings*	Various Audiences

Awards

2021	Railway Track & Structures Magazine	Women of Railway Engineering Award
2025	Empowering Women in Business	Emerging Entrepreneur Award

Work History

2009-2013	Canada Mortgage and Housing Corporation, Toronto, ON	Technical Officer
2013-2014	Carson Dunlop Weldon & Associates, Toronto, ON	Building Consultant
2014-2022	Canadian Pacific Railway, Mississauga, ON	Assistant Director Public Works & Crossing Compliance
2022	Metrolinx, Toronto, ON	Director Level Crossings
2022-present	Ironwood Infrastructure, Mississauga, ON	Owner & Principal