Alexandre Nolet, M.Eng., P.ENG.

TRUE NORTH SAFETY GROUP

Expert Summary

Alex is a transportation safety engineer with TNS. He has over 10 years of experience in the areas of road user safety, pedestrian and cycling safety, rail safety, transportation engineering, and transportation planning. Alex provides safety consulting services and independent forensic investigations relating to transportation facility design, construction, operations, and maintenance. He has been qualified in the Court of Justice, Quebec as an expert in road safety.

Specialized Professional Competencies

- Road User and Pedestrian Safety
- Forensic Assessments of Roadway Design, Signage and Maintenance
- Winter Maintenance and Minimum Maintenance Standards
- Human Factors and Positive Guidance
- At-Grade Rail Crossings
- Transportation Engineering and Peer Reviews

Professional Experience

- True North Safety Group: 2018-present
- 30 Forensic Engineering: 2015-2017
- CIMA+: 2008-2014

Academic Background

- Master of Engineering, Transportation and Planning, University of Toronto, 2014
- Bachelor of Civil Engineer, Laval University, 2008

Project Experience

Safety Reviews

Safety Assessment of Proposed CN Logistics Hub, Milton, Ontario, CN, ongoing Retained to review the safety effects of the increased traffic and truck volume on the expected travel routes between the CN facility and the major destinations and freeway facilities. The study area includes approximately 100 intersections and midblock segments.

In-service Road Safety Review – City of Toronto, ongoing – Retained to complete a comprehensive safety review of the road segment of Victoria Park Avenue from Parma Court to Jonesville Crescent/Craigton Drive.

In-Service Road Safety Audits – Region of Peel, ongoing - Retained to complete a comprehensive safety review of five major signalized intersections.

Tillsonburg Corridor Study – Town of Tillsonburg, 2017 - Retained to conduct a Corridor Management Study for Quarter Town Line. The purpose of this study was to develop

economically feasible countermeasures to existing and anticipated traffic operations and safety concerns within the corridor.

Corridor In-Service Safety Review – City of Calgary, 2017 – Retained to complete a comprehensive safety review of an industrial arterial road corridor, which included three intersections and a number of private accesses.

Curve Assessment and Warning Sign Recommendations, Region of Halton, ongoing Retained to assess all curves on Regional roadways against the Ontario Traffic Manual Book 6 – Warning Signs and make recommendations for the non-compliant curves.

In-Service Road Safety Review of Dundas Street from McLaren Avenue/Pollock Avenue to Franklin Boulevard, Region of Waterloo, 2017 – Retained to conduct a safety review of a 850 metres road section of Dundas Street in Cambridge which included the review of two signalized intersection, one stop controlled intersection, one roundabout and several commercial accesses.

Safety Assessment of the Don Mills Road and Eglinton Avenue Environs, Wynford Green Limited, 2016 – Comprehensive safety reviews of thirteen intersections located in the surroundings of the proposed development on the existing Celestial Lands in the City of Toronto.

Ramp Configuration Safety Assessment – First Gulf, 2015 – A quantitative safety assessment of the "hybrid option" ramp configurations between the Gardiner Expressway, Lakeshore Boulevard and Don Valley Parkway in the City of Toronto.

In-Service Safety Reviews – Region of Halton, 2015 – Comprehensive operational safety reviews of four intersections and two road sections in the Region of Halton.

Configuration of Safety Analyst Software for Efficient and Effective Safety Management of MTO's Road Network, Ministry of Transportation Ontario – Head Office, 2012 – 2013 – Configured the Safety Analyst software for efficient safety management of MTO's road network, and developed the training material (PowerPoint slides and hands-on exercises) for a two-day training given to MTO staff

Review of Safety Impacts of Static Electronic Advertising Signs and Bus Shelter Scrolling Advertises, City of Toronto, 2013 – Conducted a before and after study to identify the safety impacts of both static electronic advertising signs and bus shelter scrolling advertises, and performed statistical calculations to determine whether the signs impact the number of collisions.

Montreal Speed Limit Assessment, City of Montreal, 2012 – Statistically assessed whether the reduction of the speed limit on local roads in the City of Montreal from 50 km/h to 40 km/h has reduced the operating speed.

Traffic Engineering Services on Retainer, Ministry of Transportation Ontario, Eastern Region, 2013 – Managed the review and development of a new version of the OTM Book 12 – Justification 6. Justification 6 provides a warrant system for the installation of pedestrian crossings. This project included a literature review, a survey of municipalities, the development of a new warrant system and a presentation to MTO staff

Pedestrian Operational Safety Review – Region of Durham, 2015 – A review of pedestrian safety and operations along Victoria Street in the Town of Whitby. The area included GO

Transit station and parking facilities, high density residential and recreational facilities.

Safety and Operational Evaluation of the Proposed Alternatives - Road 323 in Brebeuf, Ministry of Transportation Quebec, November 2009 – 2014 – Compared three alternative designs in terms of safety and operations using IHSDM, recommended the best alternative, and trained Quebec Ministry of Transportation staff on the required steps to implement the Highway Safety Manual (HSM) predictive methods using the IHSDM.

Site Selection for Development of Red-Light Cameras, Regional Municipality of York, 2013 – Developed a methodology to identify the most appropriate 4-leg signalized intersections for red-light cameras deployment. The methodology was also incorporated in the Traffic Engineering Software (TES) to automate the site selection that could be used by the Region in the following years. Managed the field investigation task.

Peer Review and Intersection Safety Review: Queen Street South and Charlton Avenue West, City of Hamilton, 2011 – Conducted a peer review of the actions and responses of the City with respect to the on-going collision concerns at the intersection. Identified if any additional treatments could potentially be implemented to help mitigate the collision concerns.

Service Road Safety Review of Six Locations, Region of Halton, 2011 – Conducted collision analysis using Empirical Bayes Method and over -representation analysis for four intersections and 2 road sections.

Traffic Operations Analysis and Countermeasures Development, Ontario Ministry of Transportation, Northwestern Region, 2010 – Calculated the potential for safety improvements (PSI) on approximately 4,250 lane-kilometres of Ministry highways. Developed a methodology to combine PSI information to physical deficiencies identified in the field and ranked sites for improvements.

City of Hamilton Mobility Pedestrian Master Plan, City of Hamilton, 2011 – Involved in the quantitative tasks of this project. Calculated probability of collisions involving pedestrians for road sections and intersections, and ranked road elements according to their potential for safety improvements.

Opportunity Study for the Modernization of the southern part of the Décarie Interchange in Montreal, Montreal, Ministry of Transportation Quebec, 2009 – Managed the field data collection which consisted in an origin-destination survey on Highway 15 between Highway 40 and Jean -Talon Street access. This project also included the production of trip distribution matrices using trip balancing algorithms. Analyzed and compared the impacts of multiple scenarios.

Safety Assessment of Intersections in Quebec City (Chemin des Quatre -Bourgeois, Chemin Ste-Foy and Boulevard Du Vallon), Municipality of Quebec City, 2009 – Managed and conducted the field data collection task for 2 intersections with high collision rates, examined the intersections characteristics (e.g. geometry, sight distances, and signage) and recommended countermeasures to improve road safety.

Evaluation of the Safety Benefits of the Reconstruction of the Turcot Interchange in the City of Montreal, Ministry of Transportation Quebec, 2009 – Developed a

methodology to quantitatively estimate the safety benefits of the reconstruction of the Turcot Interchange using both Safety Performance Functions (SPFs) and Collision Modification Factors (CMFs).

Vulnerable Road User Safety

Rural Active Transportation Strategy – City of Burlington, ongoing - Retained to undertake safety reviews of five existing midblock uncontrolled Bruce Trail crossings located in rural areas.

Preliminary Hazard Assessment at the Aurora GO Station Platform, Metrolinx and Amec Foster Wheeler, 2016 – Retained to conduct a preliminary hazard assessment of the at -grade pedestrian crossing at the Aurora GO Station platform. The study consisted of a field investigation during peak arrival and departure periods, and an assessment of future operating conditions along with a hazard assessment.

Traffic study for the St. Matthew Catholic School, Toronto District Catholic School Board, 2017-2018

Conducted a comprehensive operational and safety assessment to determine how to address the traffic congestion and safety concerns on Lavender Road and in vicinity of the school.

Design of a multi-use trail at an at-grade railway crossing, Town of Notre-Dame-des-prairies (QC), 2017-2018

Retained to determine safety measures that should be implemented in advance of the rail corridor to ensure adequate levels of safety are provided to cyclists and pedestrians travelling on the multi-use trail.

At-Grade Railway Crossing Reviews

Retained to conduct compliance reviews for each of the railway grade crossings, which involved identifying existing deficiencies, determining the appropriate remedial measures and the associated budget level cost estimate. It also involved identifying eligibility of the safety improvements for federal funding. Such projects were completed for the following road authorities:

- City of Mississauga, Ontario (2017-2018) – 32 crossings
- City of Kamloops, British Columbia (2017-2018) – 22 crossings
- Halifax Regional Municipality (2018) – 28 crossings
- Region of Waterloo (ongoing) – 34 crossings
- City of Grande Prairie, Alberta (2018) – 16 crossings
- Town of Joliette, Québec (2017) – 8 crossings
- City of Woodstock, Ontario (2017) – 6 crossings
- Region of Durham, Ontario (2016-2017) – 30 crossings
- Town of Whitby, Ontario (2017) – 5 crossings
- City of Cambridge, Ontario (2016-2017) – 23 crossings
- City of Waterloo, Ontario (2016-2017) – 18 crossings
- City of Belleville, Ontario (2016)- 25 crossings
- Town of Woolwich, Ontario (2016) – 6 crossings
- Town of Augusta, Ontario (2016) – 2 crossings

Whistling Cessation Studies

Retained to undertake railway train whistle cessation studies, which involved on-site investigation of the crossings by the project team as well as a representative of the railway company. An assessment of the railway crossing for compliance, identification of deficiencies and countermeasures with budgetary level estimates were provided. Such projects were completed for the following road authorities:

- Municipality of Shuniah, Ontario (2016) – 1 crossing
- Town of Didsbury, Alberta (2017) – 8 crossings
- Town of Coaldale, Alberta (2017) – 6 crossings
- City of Lacombe, Alberta (ongoing) – 5 crossings

Professional Societies and Associations

- Member, Professional Engineers of Ontario (PEO)
- Member, Ordre des ingénieurs du Québec
- Chair of the Accessibility Guidelines Committee, ITE
- Vice President of the Canadian Association of Road Safety Professionals (CARSP)
- Member, Association Québécoise des transports, AQTR

Publications/Presentations

- A Review of Public Right-of-way Accessibility Experiences in Canada, CARSP Conference, Victoria, June 2018
- A Review of Public Right-of-way Accessibility Experiences in Canada, CITE Conference, Edmonton, June 2018
- Bicycle Safety and Risk Management One-Day Workshop, Ontario Traffic Conference, 2017 & 2018
- Above Grade – Implications of the New Regulations on Private Owners of At-grade Railway Crossings, Canadian Underwriter, September 2017
- Pedestrian Safety and Risk Management One-Day Workshop, Ontario Traffic Conference, 2017 & 2018
- Formation sur la sécurité des piétons sur le réseau routier, One-Day Workshop, « Association québécoise des transports », 2017
- Pedestrian Safety at At-grade Railway Crossings, CARSP Annual Conference, Toronto, June 2017
- La sécurité des passages à niveau, « Association québécoise des transports » Workshop on at-grade railway crossings in Montreal, November 17, 2016
- Les implications du nouveau Règlement sur les passages à niveau, « Association québécoise des transports » Annual Conference in Quebec City, April 2016
- Canada's New Grade Crossings Regulations: Know Your Road Authority's Responsibilities, Municipal World, March 2016