



Winter Maintenance



Road Safety



Policy / Manual Development



Signals

CAREER

CIMA+ (2009 - Present)
 AECOM /TSH/ Synectics) (2001-09)
 Ministry of Transportation (2000-01)
 City of Hamilton (1985 – 2000)
 Upper Canada Consultants (1983-85)

EDUCATION AND/OR TRAINING

Diploma Public Administration
 University of Western Ontario, 1997
 Bachelor of Engineering
 McMaster University, 1983
 Diploma in Technology
 Fanshawe College, 1980

ASSOCIATIONS

P.Eng - Licensed Professional
 Engineer: BC, Ontario
 PTOE - Professional Traffic
 Operations Engineer: Transportation
 Professional Certification Board
 RSP - Road Safety Professional:
 Transportation Professional
 Certification Board
 Institute of Transportation Engineers
 (ITE) – Member

PROFILE

Brian Malone has been a Licensed Professional Engineer since 1985, specializing in civil engineering, transportation, traffic engineering and transportation safety. He has a wide range of experience in project management of engineering assignments. Brian has extensive experience in the public sector, at both the provincial and local levels, prior to joining the private sector in 2001.

RELEVANT ACCOMPLISHMENTS

SAFETY STUDIES, AUDITS AND REPORTS

Hwy 401 Expansion – Credit River to RR 25 – Road Safety Audits, Milton, ON

Road safety technical lead for road safety audits being conducted for this highway expansion project. RSAs completed for design and construction project phases.

Road Safety Technical Lead

Finch West LRT – Road Safety Audits, North York, ON

Road safety technical lead for road safety audits completed for this LRT transit project. Works included RSA completion / certification to strict deadlines prior to opening of roads to traffic following rapid bridge replacement.

Road Safety Technical Lead

Rail Grade Crossing Safety Assessment and Whistle Cessation Review, Whitchurch-Stouffville, ON

Project director for safety assessment of multiple rail grade crossings and review of whistle cessation requirements.

Project Director

London Bus Rapid Transit – Conceptual Design RSA, London, ON

Project manager for road safety audit conducted on the conceptual design phase of the proposed City of London Bus Rapid Transit project. Work was completed for the City prior to entering the environmental assessment phase of the project.

Project Manager

Four Mile Creek Rd at Line 3, Niagara on the Lake - Intersection Safety Review, Niagara Region, ON

Project manager for comprehensive review of rural intersection experiencing multiple collisions. Work included proposed countermeasures and treatments to address identified safety concerns.

Project Manager



Safety Assessments and Studies

Nuclear Waste Transport Risk Assessment, Nuclear Waste Management Organization (NWMO), Canada

Development of methodology and completion of risk analysis of proposed transport options for used nuclear fuel from existing generator sites to long term storage. Complete risk analysis including development of theoretical accident scenario, measurement of accident probability and calculation of accident consequences to quantify risks

Project Director

MAIN ACHIEVEMENTS

VivaNext BRT Hwy 7 - Road Safety Audits, York Region, ON

Completion of comprehensive road safety audits through 30/60/90 & Final design stages as well as construction RSAs. Work undertaken for project consortium, EDCO.

Project Director and Road Safety Auditor

City of London Road Safety Strategy – Vision Zero, London, ON

Development of road safety strategy for the City of London. Development of comprehensive strategy to reduce harm caused by collisions to all users of the transportation network. Project included development of a public report distributed on the City website.

Project Director

City of Halifax Pedestrian Safety Study, Halifax NS

Comprehensive review of road safety issues involving pedestrians in the Halifax Regional Municipality. The study completed an overview of existing trends and practices for pedestrian safety and identified opportunities for improvement in Halifax.

Project Director

City of Halifax Strategic Road Safety Plan – Vision Zero, Halifax NS

Development of road safety strategy for the City of Halifax. Development of comprehensive strategy to reduce harm caused by collisions to all users of the transportation network, customized for the City of Halifax.

Project Manager

City of Toronto – Young Street Redesign Road Safety Audit, Toronto, ON

Road safety Audit of proposed redesign for Young Street from Sheppard to Finch. Included field review, preliminary plan review and recommendations for project modifications to improve pedestrian and cycling safety.

Project Director

City of Kingston Red Light Camera Study, Kingston, Ontario

Project director for study investigating the [potential application of red-light camera systems in the City of Kingston. Project included technical data evaluation as well as site selection with in-field review.

Project Director

City of Hamilton Walkability Master Plan, Hamilton, ON

Project co-director for development of a Transportation Master Plan for Walkability in Hamilton. The assignment included application of innovative tools for public engagement using on-line mapping and data collection. The completed TMP developed guidance for City staff to utilize when undertaking future work in both planning and operations as projects are undertaken in the City.

Project Co-Director

City of Hamilton – Red Hill Valley Parkway / Lincoln Alexander Parkway – Lighting Feasibility Study, Hamilton, ON

Detailed operational and safety review of urban parkway road network in Hamilton, Ontario specifically examining opportunities for improvement that could be achieved by implementation of continuous lighting.

Project Director

City of Hamilton – Red Hill Valley Parkway / Lincoln Alexander Parkway – Safety Study, Hamilton, ON

Detailed road safety review of urban parkway road network in Hamilton, Ontario. Review of operational and safety performance of existing 90 km/h facilities, identification of opportunities to improve safety, determination of potential range of countermeasures and completion of cost-benefit calculation for planning of mitigating treatments.

Project Manager

Town of Milton – Speed Limit Modification – Facilitation Support, Milton, ON

Provided facilitation services to assist Town staff with implementation of revised speed limit policy and specific site speed limit adjustments. Prepared and presented technical information and coordinated public input to achieve full implementation.

Project Director

The Safety Analyst ® System Implementation, Ministry of Transportation Ontario

Project director for implementation of The Safety Analyst ® software for Provincial transportation road authority. The tool covered all Ministry roads in the province of Ontario. This was the first installation of its kind in Canada.

Project Director

Halton Region Red Light Camera Location Assessment and Review, Halton, ON

Project director for comprehensive assessment of road way network, identifying locations for possible application of red light camera automated enforcement technology. Included in-house data review and in-field site assessments.

Project Director

Mississauga Safety Network Screening, Mississauga, ON

Comprehensive Network Screening study which includes the development of Safety Performance Functions for a range of road intersection and segment types. Completion of PSI analysis and identification of locations with potential for safety improvement. This assignment included the utilization of TES software.

Project Director

City of Toronto Safety Studies – Retainer Services, Toronto, ON, Ongoing

Project director for ongoing service provision of operational safety studies and road safety audits for the City of Toronto. Work is being completed at various locations throughout the City to review safety issues and propose improvements.

Project Director

City of Hamilton Road Safety Strategy - Communication Program, Hamilton, ON

Development of the Hamilton Road Safety Strategy Communications and Outreach Program, a cutting-edge communication program that would boost the City's ability to achieve safety improvements. Work included marketing and communications roles.

Project Manager

Multi-Lane Roundabout Operational and Safety Assessment, Kitchener, ON

Project director for completion of comprehensive review of operational and safety issues at major multi-lane roundabout on arterial road. Work included data analysis, on-site observations, literature review and recommendations for operational and geometric improvements.

Project Director

Safety Network Screening Study – Safety Performance Function Development, Halton Region, ON

Comprehensive Network Screening study which included the development of Safety Performance Functions for a range of road intersection and segment types. Completion of PSI analysis and identification of locations with potential for safety improvement. This assignment included the integration of the network screening process in TES software.

Project Director

Burloak Drive Rail Crossing Safety Review, Oakville, ON

Project director for comprehensive review of safety issues at existing railway crossing. Study reviewed reports completed by others and recommended improvements to improve traffic safety and ensure acceptable operations at the crossing, including potential changes to rail/signal pre-emption.

Project Director

Trafalgar Road Operations and Safety Study, Halton Region, ON

Project director for comprehensive review of operational and safety issues on Trafalgar Road from Steeles Rd to Highway 7. Study conducted with full public consultation and completion of formal PIC meeting to present range of alternatives to public for review and commentary.

Project Director

Rene Lesveque Blvd – Bus/Bike Lane Road Safety Audit, Quebec City, QC

RSA specialist for audit conducted that assessed potential opportunities to improve safety on proposed bus/bike lane to be implemented on arterial road.

RSA Specialist

Airport Parkway, Safety Review, Ottawa ON.

Project manager for road safety review of high speed arterial road providing access to Ottawa International Airport (YOW). Key findings included assessment of run-off-road crashes and evaluation of proposed road expansion in context of potential for safety improvement.

Project Manager

MAIN ACHIEVEMENTS

RSA – Preliminary Design, Golden Ears Bridge Langley, B.C.,

Working for prime consultant bidding on the design-build for the new bridge, completed RSA for 'pursuit stage' design of PPP for proposed bridge crossing of Fraser River, completed for bidding consortium and provided as value-added service with submission.

Project Manager and RSA Lead Auditor

Network Road Safety Assessment – North West Region, Ontario Ministry of Transportation

Project director for completion of road safety assessments of more than 2000 lane-km of highway in north-western Ontario. Project included utilization of mobile mapping technology; incorporating video and LIDAR field data collections methods and extensive post-processing analysis.

Project Director

Safety Network Screening and Collision Countermeasure Program, City of Hamilton, ON

Project manager for the development and implementation of network screening process, allowing proactive identification of intersection and road section locations with the potential for collision reduction. Work included evaluation of more than 1200 separate locations and rank ordering in terms to safety risk.

Project Manager

PEDESTRIAN / CYCLING / TRANSIT STUDIES

Sidewalk Infill Policy Development – Town of Grimsby, Grimsby, ON

Development of review process and standardized approach for assessment of requests for implementation of sidewalks in existing residential areas.

Project Manager

Hamilton Wayfinding Implementation Study, Hamilton, ON

Development of complete detailed requirements for design, fabrication and installation of wayfinding signing in the downtown area of Hamilton. Project schedule coordinated with planning surrounding the 2015 PanAm Games events in Hamilton

Project Manager

Mississauga Hurontario-Main LRT, Mississauga, ON, Ongoing

Technical lead from provision of road safety audit services in conjunction with design and construction of new Light Rail Transit service in Mississauga Ontario.

Technical Lead

Niagara Falls People Mover System – Route Assessment, Niagara Falls, ON

Technical lead for assessment of routing alternatives associated with update to Niagara Falls People Mover System. Working with broad range of stakeholders reviewing technical and operational issues associated with various route alternatives and provide feedback to project financing options.

Technical Lead

Pedestrian Safety Study – School Crossing - Welland St at Queen St, St. Catharines, ON

Assessment of existing crossing location adjacent to public school. Project included assessment of pedestrian behaviour and recommendations for adjustments to existing IPS signal operation.

Technical Lead

Hamilton A-Line Feasibility Study, Hamilton, ON

Project technical resource during review of feasibility of route of proposed A-Line Bus Rapid Transit service to be implemented by City of Hamilton. Included specific safety analysis of one area of the proposed corridor.

Project Technical Resource

Pedestrian Safety Study – University Drive - Brock University, St. Catharines, ON

Project Manager for development of improvement plan to sustain safe pedestrian access in proximity of on-campus construction.

Project Manager

Pedestrian Safety Study – Cootes Drive at Sanders, City of Hamilton, ON

Assessment of existing crossing location adjacent to university campus. Large pedestrian volumes at unsignalized intersection. Provided full safety assessment, including application of innovative conflict investigation study. Provided specific installation recommendations.

Project Technical Resource

Road Safety Audit – Main St. at Rifle Range Rd., City of Hamilton, ON

Design stage audit of proposed alterations to intersection operation, including traffic signal installation. Specific evaluation of pedestrian safety concerns. Identification of potential safety issues and development of alternate treatments.

Safety Auditor and Project Technical Resource

Cycling / Pedestrian Safety Assessment – Upper Middle Road Bridge at Hwy # 407, City of Burlington, ON

Project lead for safety evaluation of bridge construction and evaluation of safety impacts for pedestrians and cyclists. Issues included determination of appropriate railing height for use when cyclists are present on sidewalks.

Project Lead

ENVIRONMENTAL ASSESSMENT (E/A) STUDIES**London – Commissioners Road West E/A**, London, ON

Project manager for Class E/A study for potential implementation of revised alignment for major arterial road connecting Westmount to Byron in London, ON. Included consideration of new alignment bypassing existing steep curvilinear road.

Project Director

St. David's Road – Class E/A, St. Catharines, ON

Project manager for Class E/A study for potential implementation of cycling lanes along St. Davids Road. Location connects Brock University with residential areas of the City and required consideration of complex freeway interchange at Hwy 406.

Project Director

Heritage Road – Steeles to Embleton, Class E/A Brampton, ON

Project manager for Class E/A study for potential widening of 2-lane rural road to 4-lane urban facility. Project included full transportation assessment, problem definition, completion of extensive public consultation and preparation of report. Preliminary design was also part of this assignment.

Project Manager

Harvester Road at Appleby Line, Class E/A Burlington, ON

CIMA corporate director responsible for project delivery. Class E/A study of major signalized intersection in close proximity to QEW Highway. Major traffic issues assessed and solutions proposed.

Project Director

Falls Avenue at Bender St, Rainbow Bridge, Class E/A Niagara Falls, Burlington, ON

CIMA project technical resource for study examining intersection modification at Canada gateway from Rainbow Bridge in Niagara Falls. Project included detailed technical evaluation of alternatives using modeling and stakeholder and public consultations.

Project Technical Resource

Hamilton Pedestrian/Walkability Master Plan: Step Forward, Hamilton, ON

Co-project manager for Master Plan, which has recently been initiated to improve the pedestrian environment and increase the opportunity for walking in the City of Hamilton. Master Plan will fulfill the requirements of Phases 1 and 2 of the Municipal Class EA.

Co- Project Manager

Trafalgar Road Operations and Safety Study, Halton Region, ON

Project director for comprehensive review of operational and safety issues on Trafalgar Road from Steeles Rd to Highway 7. Study conducted with full public consultation and completion of formal PIC meeting to present range of alternatives to public for review and commentary.

Project Director

Downsview Neighbourhood Secondary Plan, Toronto, ON

Key Transportation Engineering lead for technical assessment and evaluation of proposed secondary plan treatments. Project site includes the location of Parc Downsview Park, Canada's largest urban park and the former CFB Downsview airport. The

MAIN ACHIEVEMENTS

transportation assessments of the secondary plan worked closely with the major re-development of the lands proposed by the federal government.

Transportation Engineering Lead

Fruitland Road Class E/A, City of Hamilton, ON

Project manager for Class E/A Study for proposed realignment of arterial road in east end of Hamilton. Alternatives included updating existing road, realignment of road along a new corridor and hybrid options.

Project Manager

McMaster University / Main St. Entrance – Environmental Assessment, City of Hamilton, ON

Project sub-consultant for issues related to traffic safety and pedestrian safety for proposed new entrance to McMaster University from Main Street in the City of Hamilton.

Project Sub-Consultant

East Lake Wilcox Roads Needs Study – Class EA, Richmond Hill, ON

Project sub-consultant for issues related to traffic safety and pedestrian safety for area wide transportation study. Included extensive assessment of potential traffic calming treatments.

Project Sub-Consultant

PLANNING AND DESIGN

Town of Oakville – North Service Road Detailed Design, Oakville, ON

Project director for detailed design project of complete realignment of North Service Road, east of Dorval Drive.

Project Director

MTO Central Region - Highway # 26 Culvert Replacements, Simcoe County, ON

Project manager for highway design of replacement of existing structural culverts. Project included development of detailed design and completion of contract documents utilizing the MTO CPS system.

Project Manager

City of Hamilton Walkability Master Plan, Hamilton, ON

Project co-director for development of a Transportation Master Plan for Walkability in Hamilton. The assignment included application of innovative tools for public engagement using on-line mapping and data collection. The completed TMP developed guidance for City staff to utilize when undertaking future work in both planning and operations as projects are undertaken in the City.

Project Co-Director

Town of Grimsby – Winston Road Development Reviews, Grimsby, ON

Project director for technical reviews of development submissions for new residential developments in Grimsby Ontario. Working with town staff CIMA provided reviews of operational and safety issues relating to new residential subdivision developments. Technical reports were provided to the town allowing for completion of new housing developments that would be acceptable to municipal requirements.

Project Director

Hwy 403 HOV Signing and Marking Review, MTO, ON

Project technical lead for review of signing used in HOV lane installations. Comprehensive consideration of human factors and safety issues associated with sign and marking design and placement.

Project Technical Lead

Trafalgar Road Operations and Safety Study, Halton Region, ON

Project director for comprehensive review of operational and safety issues on Trafalgar Road from Steeles Rd to Highway 7. Study conducted with full public consultation and completion of formal PIC meeting to present range of alternatives to public for review and commentary.

Project Director

MTO Traffic Volume Processing, St. Catharines, ON

Technical lead for data analysis project for MTO that results in traffic volume determination for ministry highways throughout the province. Have been involved in this assignment in projects since 1997. MTO Project Director for the production of provincial traffic volumes and collision statistics. Consultant Project Director for production of provincial traffic volumes years 2002 to 2012.

Technical Lead

Richmond Hill - MacKenzie Commons Development Planning Review, Richmond Hill, ON

Project manager and technical lead for peer review of proposed development. Issues include review of design concepts proposed for the site and compatibility of design with municipal needs.

Project Manager

Oakville Roundabout Design/Feasibility Study, Postmaster Dr., Oakville, ON

Project manager for feasibility review of use of roundabout as a traffic control device at an existing collector/collector intersection in a residential area. Recommendations for use of roundabout provided.

Project Manager

Grimsby West-End Development Planning Review, Grimsby, ON

Project manager for review of road capacity and functional design requirements for proposed expansions to the east end of Grimsby Ontario. Included projections of traffic volumes and recommendations for required road improvements on 15 and 25-year horizons.

Project Manager

TRAFFIC SIGNALS**City of Hamilton Traffic Signal Design Guidelines Update, Hamilton, ON**

Project director for comprehensive development of update to City standards for traffic signal design. Included complete review of existing guidance documents and rationalization into user-friendly manual utilized both internally and externally.

Project Director

Halton Region Red Light Camera Location Assessment and Review, Halton, ON (Ongoing)

Project director for comprehensive assessment of road way network, identifying locations for possible application of red light camera automated enforcement technology. Included in-house data review and in-field site assessments.

Project Director

Adaptive Traffic Signal Control Study, Burlington, ON (Ongoing)

Review of opportunities to improve traffic signal timing methodology for traffic signals at two selected locations. Work included development base modeling using Paramics software and analysis of opportunities for signal timing alternate approaches.

Project Director

Traffic Signal Design Updates, City of Hamilton, ON

Technical resource for project to complete design and drawings for traffic signal upgrades in Hamilton. Work included assisting with completion of PHM-125 and associated drawings.

Technical Resource

Traffic Operations Engineering, City of Hamilton, ON

Progressively responsible positions conducting and managing engineering functions for traffic signals in the City of Hamilton. Responsibility for the operation of a network of 425+ traffic signal in the City and the Region of Hamilton-Wentworth.

Project Director

Glendale Avenue at Merit St – Signal Pre-empt Design, Region of Niagara

Project lead for development of traffic signal pre-emption timing plan design for proposed new intersection signal in St. Catharines, Ontario.

Project Lead

OPERATIONS, RESEARCH & POLICY/MANUAL DEVELOPMENT

City of Guelph Parking Technology Review, Guelph, ON

Review of available technologies and provision of recommendations for implementation of parking technology that would allow Guelph to achieve goals of their Parking Master Plan. Project included detailed stakeholder consultations.

Project Manager

City of Ottawa - Neighbourhood Traffic Management Guide Development, Newmarket, ON

Technical resource for the development of a comprehensive update to the City's neighbourhood traffic calming guide. Project included extensive public consultation with a wide range of stakeholders.

Project Manager

Manual of Uniform Traffic Control Devices for Canada (MUTCD), TAC, Canada

Development of comprehensive update to the Canadian MUTCD, and manual for traffic control guidelines used across Canada. First major manual rewrite in more than a decade.

Technical Area Lead

Canadian Guide to Traffic Calming – 2017 Edition, TAC – CITE, Canada

Developed complete update to the 2001 Canadian Guide to Neighbourhood Traffic Calming. Project included working closely with a national stakeholder committee and completion of final document published in 2017.

Project Manager

City of Hamilton Traffic Signal Design Guidelines Update, Hamilton, ON

Project director for comprehensive development of update to City standards for traffic signal design. Included complete review of existing guidance documents and rationalization into user-friendly manual utilized both internally and externally.

Project Director

Region of Niagara Tourism Signing Review, Niagara, ON

Project manager for facilitation of review of updated policy relating to application of Tourism Signs in local area. Included meeting facilitation with wide range of stakeholders and presentation of technical findings to staff and Council.

Project Manager

FHWA Signalized Intersection Guide – 2012 Edition, US DOT, Washington, DC

Project technical lead for road safety sections of updated national guidelines relating to traffic signals in the US. Work included literature review of best practices and updates of manual based on industry changes including the Highway Safety Manual.

Technical Subject Area Lead

Region of Niagara Traffic Impact Study (TIS) Guidelines, Niagara, ON

Project director for finalization of draft TIS guidelines for the Region of Niagara. Work included verification of available guidance following comprehensive literature review and facilitation of in-house workshop of proposed new guidelines.

Project Director

St Lawrence Seaway Lift Bridge Assessment, St. Lawrence Seaway Authority, St. Catharines, ON

Project director for comprehensive review of 19 lift bridges across the entire St. Lawrence Seaway system. Work included review of operational and safety issues at existing bridges, assessing the need for traffic operations improvements with bridge systems.

Project Director

FHWA Roadway Departure Safety Products, US DOT, Washington D.C.

Project manager for ongoing assignment providing technical assessment and review of roadside safety equipment (crash barriers). Product submissions from suppliers are reviewed for FHWA and recommendations for acceptance provided as turn-key service to the DOT. Includes direct liaison with suppliers and provision of expert analysis services.

Project Manager

New York State MPO Road Safety Audit Guidelines, NYSMPO, New York State

Co-Project Manager for development of guidelines for completion of road safety audits in New York State. Project sponsored by NYSMPO and included publication of manual distributed statewide. Project completed in conjunction with Bergmann Associates of Rochester NY.

Co-Project Manager

NCHRP Synthesis 39-02 Improving the Safety of Mobile Lane Closures, Transportation Research Board, US

Project Director and member of team for conducting research and writing synthesis for successful practices employed by transportation agencies during mobile lane closures for improvement of safety and operation of work zones.

Project Director

Ontario Traffic Manuals, OTM Book 15 – Pedestrian Crossing Treatments – 2016 Edition, MTO

Developed of updated version of the OTM Guidelines dealing with pedestrian crossing treatments in Ontario. Efforts included developing guidance for new crossing protection treatments which coordinated with modifications to the Ontario Highway Traffic Act.

Project Director

Ontario Traffic Manual Book 12 – Traffic Signals – 2012 Edition, MTO

Project Director for the comprehensive update to Manager for consultant during development of updated OTM Book. Included extensive consultation with stakeholders and users. Final print-ready manual was delivered in short time-line to client.

Project Director

Ontario Traffic Manuals, OTM Book 7 – Temporary Conditions – 2014 Edition, MTO

Development and completion of comprehensive update to the guidelines used for work zone traffic control. Project involved extensive communications with stakeholders and development of detailed 'typical' guidelines.

Project Director

Ontario Traffic Manual Book 6 – Warning Signs, MTO

Project Director for MTO during the development and completion of OTM Book 6 – (Warning Signs).

Project Director

Town of Milton Winter Control Route Optimization, Milton ON

Comprehensive review of existing winter control (snow plowing) routing in Milton, working with software provider for development of updated routes with optimization and consideration requirement to meet legal and industry standards for response time.

Subject Matter Expert

Haldimand County Winter Control Route Assessment, Haldimand, ON

Project Manager for detailed review of routing strategy for winter control activities in the "north-shore" area of Haldimand County. Work included comprehensive assessment of routing times and ability to meet defined maintenance standards. Equipment and material usage analysis were also completed. Recommendations for route scheduling and coordination provided.

Project Manager

Winter Severity Indicator for Canadian Winter Road Maintenance, Transportation Association of Canada

Team lead for development of winter severity indicator models to be used by Canadian jurisdictions to forecast the relative harshness of a winter in comparison with a typical year (based on climatic norms) using available meteorological data on its own or in combination with RWIS data.

Team Lead

Operational Index for Severity of Winter Weather for Maintenance Operations on Provincial Highways, Ontario Ministry of Transportation

Team member for development of severity of winter weather operation models used to hind-cast quantities of de-icing and anti-icing chemicals, winter sand and equipment time (ploughing and spreading) and to estimate the Level of Service standards that can be achieved.

Team Member

Road Salt Application Assessment - Direct Liquid Application (DLA), Pre-Wet, and Dry Salt, MTO

Comprehensive multi-year study providing an assessment of operational and safety impacts of various salting techniques. trials conducted by Ministry of Transportation for application of anti-icing material. Included full technical analysis of outcomes from treatments and development of equivalency tables verifying application rates for options.

Project Lead

Winter Control Operational Procedures, City of Hamilton, ON

Department lead for implementation of updated winter control procedures for City of Hamilton, in preparation for Minimum Maintenance Standards implementation.

Department Lead

MAIN ACHIEVEMENTS

OGRA – Minimum Maintenance Standards Update – Determining AADT from Short-Term Counts

Under an assignment for OGRA what was part of the update to the MMS, project lead for the development of processes that would allow municipalities to develop AADT traffic volume data from short term count information. Utilized knowledge of municipal capacity and needs for application of count data for operational requirements.

Project Lead

EXPERT OPINION & TESTIMONY

Qualified as an expert and testified at:

- Ontario Superior Court Trials
- Ontario Coroner's Inquest
- Ontario Municipal Board Hearings
- City of Calgary Subdivision and Development Appeal Board

Qualified as an expert in the following subject areas

- Civil Engineering
- Traffic / Traffic Engineer / Traffic Engineering
- Traffic Safety / Transportation Safety / Roadway Safety
- Transportation Engineering
- Transportation Planning
- Road Signs / Signage
- Road Design / Roadway Design Standards
- Road and Sidewalk Construction
- Highway Safety
- Sidewalk Safety
- [Road] Operations
- Road Maintenance
- Winter Road Maintenance
- Roadway Service Standards

PUBLICATIONS, PRESENTATIONS AND TEACHING

2018 ITE Transportation Engineering Handbook- Chapter 8 – 7th Edition – Webinar. ITE Transportation Engineering Handbook – 7th Edition – Chapter 8: Design and Operations of Road Segments and Interchanges in Rural Areas. Presenter and Co-Author

2018-19 CITE Canadian Traffic Calming Guide Workshops – Using the Guide. Developed and presented ½ day workshop on using the Canadian Guide to Traffic Calming – Second Edition. Presented across Canada; Vancouver, Calgary, Kelowna, Fredericton, Ottawa. Presenter and Author

2018-20 Road Signing and Pavement Marking - "Signs and Lines" Ontario Traffic Manuals Training Course - Ontario Good Roads Association (OGRA): CS Anderson Roads School. Co-Presenter in a 3-Day workshop providing comprehensive training in the practical application of traffic signs and markings in accordance with guidance provided in the OTM. Co-Presenter

2017 Providing Winter Maintenance on Active Transportation Facilities - Managing Winter Operations Workshop – OGRA. Presenter at Ontario Good Roads Association Managing Winter Operations Workshop, 2017. Presentation highlighted changing expectations relating to winter maintenance of sidewalks and bicycle lanes. Presenter and Author

2017 TAC / ITE Canadian Traffic Calming Guide, Transportation Association of Canada, 2017; H. Solomon, B. Malone, G. Chartier

2016 ITE Transportation Engineering Handbook – 7th Edition – Chapter 8: Design and Operations of Road Segments and Interchanges in Rural Areas. Co-Author, Wiley & Sons Inc, 2016; R. Omrani, A. Hadayeghi, B. Malone

2015 Step Forward – Pedestrian Mobility Planning – City of Hamilton, Mobility Planning Workshop, Hamilton, Ontario 2015; B. Malone, G. O'Connor

- 2015 Road Safety Audits at Intersections – ITE Webinar Presentation.* Co-Author/Presenter for Webinar training on Road Safety Audits Specifically adapted for intersections. Co-Author/Presenter
- 2015 Fundamentals of Traffic Engineering – ITE - Road Safety Fundamentals of Geometric Design – Webinar.* Engaged by the Institute of Transportation Engineers to develop and deliver technical course Road Safety Fundamentals of Geometric Design. One of a series of modules relating to Geometric Design as part of an educational series. Complete development and delivery
- 2014 Advanced Transportation Impact Study Workshop - Ontario Traffic Conference* Co-Author/ and Co-Presenter for 1-day advanced workshop on completion and participation in traffic impact studies. Co-Presenter/Co-Author
- 2013 Rural Road Safety: Network-Wide Rural Road Safety Reviews; Case Study – MTO Northern Ontario.* CITE Annual Meeting, Calgary, Alberta, April 10, 2013; B. Malone
- 2013 Site Selection for Deployment of Red Light Cameras: Case Study Halton Region.* ITE Technical Conference and Exhibit, San Diego, CA. March 5, 2013; P. IZADPANAH, B. Malone, R. Merritt
- 2012 How to Push a Rope: Finding Transportation Solutions that Support Livable, Healthy, Safe and Economic Mobility. Planning and Operating Ottawa's Urban Roadways Workshop,* Ottawa Ontario, December 4, 2012; B Malone
- 2012 Hamilton "Step Forward" Pedestrian Mobility Plan; Sustainable Mobility Summit 2012,* Hamilton, Ontario, November 5, 2012; B. Malone, G O'Connor
- 2012 Roundabouts: Good or Evil?;* ITE Hamilton Area Section; January 2012; B. Malone
- 2012 Traffic Signing, Human Factors and Positive Guidance* Guest Lecturer on the role of human factors and positive guidance principles in the application of traffic control devices at the Ontario Traffic Conference Traffic Training School, Ontario Police College, Aylmer, Ontario. Guest Lecturer
- 2011 A Road Safety Strategy: What Good Would That Do? Ontario South-West Area ITE,* London, Ontario, November 2011; B. Malone
- 2011 Highway Safety Manual Workshop Toronto Area ITE,* Markham, Ontario, October 2011; B. Malone, R. Brownlee, J, Shaw, G. Bahar
- 2011 Hamilton Traffic Safety Communications Program: Putting Science Behind the Sizzle.* OTC 61st Annual Conference; Huntsville, Ontario, June 2010; B Malone
- 2010 Highway Safety Manual – A Practitioners Guide – Workshop.* 1-Day workshop providing emphasis on the application of the HSM techniques for traffic and transportation engineering professionals. Workshop has been presented at: Vancouver, Lake Buena Vista, Florida and Markham, Ontario. Co-Presenter
- 2010 Do Red Light Cameras Really Work?;* ITE Annual Meeting and Exhibit; Vancouver B.C. August 2010; B. Malone
- 2009 Roll-On Road Work : Improving Safety in Mobile Work Zones;* Transportation Management & Engineering Magazine, Washington D.C.; January 2010; R. Moraes, B. Malone, A. Hadayeghi
- 2009 Workzone Safety Enhancements;* ITE Annual Meeting and Exhibit; San Antonio, Texas; August 2009; B. Malone
- 2009 Framework for Incorporating Safety in Corridor Planning and Preliminary Design;* ITE Journal July 2009; Washington D.C. O. Tonkonojekov, A. Hadayeghi, B. Malone
- 2008 Road Safety Audit (RSA) Training & Workshops.* Co-Author/Presenter for training on Road Safety Audits. Content customized by jurisdiction. Includes co-presentation of FHWA Road Safety Audit course. Presented as part of deployment of the RSA Guidelines across the United States. Co-Author/Presenter
- 2008 Road Safety Evaluations – Session Moderator;* ITE Technical Conference and Exhibit; Miami, Florida; March 2008; B. Malone
- 2008 Safety Assessments – New York MPO Guidelines for Examining Road Safety;* New York Highway Safety Conference; Syracuse, New York; October 2009, B. Malone, F. Dolan
- 2008 Canada's Progress in Fatality Reduction;* ITE Annual Meeting and Exhibit; Anaheim, California, August 2009, B. Malone
- 2008 Cameras au feu rouge (Red Light Cameras);* 43rd Congress – AQTR, Quebec City, Quebec, April 2008, C. Dagenais, B. Malone

MAIN ACHIEVEMENTS

2007 Safety Assessment of Road Networks Using TES Software; ITE Annual Meeting and Exhibit; Pittsburgh, Pennsylvania, August, 2007. Hadayeghi, A., B. Malone, G. Szrejber and J. Reid

2006 Impact of Road Narrowing Traffic Calming Treatments on Speed and Volume; Transportation Association of Canada, 2006 Annual Conference; Charlottetown, PEI, September 2006. Malone, B