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TALK

Quarterly Newsletter of the CANADIAN INSTITUTE OF TRANSPORTATION ENGINEERS
INSTITUT CANADIEN DES INGÉNIEURS EN TRANSPORTS
(a Canadian Non-Profit Corporation)

SPECIAL ISSUE

STUDENTS EDITION

Shining the spotlight on CITE's future – our students and student chapters – and how professionals can support them

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president's ponderings



EDWARD SOLDO, P.Eng., FITE

Canadian District President

president@cite7.org

For transportation professionals, November is a time of year when we rush to get projects done and prepare to transition from one season – construction – to the next season – winter! Unless you're in the prairies, where a major September snow storm caught many by surprise, quickly followed by a warm chinook.

Over the course of the last few months, the Board of Directors and Executive Committee have been busy. On October 31, 2017, the Canadian Institute of Transportation Engineers [became a registered Canadian Not-for-profit corporation](#). As part of the Canada Not-for-profit Corporations Act, CITE must adopt operating bylaws that conform to regulatory requirements of the Act. The proposed bylaws were approved by the CITE Board on September 14, 2018 and, through an electronic vote by eligible members

between October 8 and 10, 2018, I am pleased to announce that our operating bylaws were approved by our membership. Special thanks to our administrator Steven Garner for all the work he did on this initiative.

The Training Committee has been hard at work developing and organizing training opportunities for our members across the country related to Complete Streets, Traffic Calming, CCG Calc, and Bicycle Facility Design. The events held to date have been a success; just take a look at the [Section News](#) to see how many sections and members have been engaged. I encourage all members to check out the [upcoming training opportunities](#) for topics of interest.

The Technical Liaison Committee has recently undergone a transformation with the approval of a new terms of reference. I would like to thank Dwayne Cross for his leadership of the group over the last number of years. CITE undertook a call for member volunteers for the new TLC and I am pleased to welcome Farhad Shahla, Irimi Akhnoukh, Mariya Otten-Andrew, and Ryan Martinson to the committee. A special thanks as well to Kerra Mruss who will serve as an advisor to the new TLC over the course of the next few months.

The 2019 Local Arrangements Committee is hard at work preparing for a fantastic conference in Ottawa – ***Bold and Transformative Solutions***. Check out our new conference website at conference.cite7.org. The call for papers is out and submissions are due by November 9, 2018. Hope to see you all there. The LAC guarantees fabulous weather, a program that will showcase the best transportation initiatives across the country, and a technical tour/social program that will allow you to explore our nation's capital.

president's ponderings

The TAC Fall Meeting and Annual Conference just wrapped up in Saskatoon. I would like to thank all of our [TAC Appointees](#) for volunteering their time and their work on the various committees. Congratulations to Luis Escobar and Greg O'Brien on their appointment to the Traffic Operations & Management Standing Committee (TOMSC).






As the year closes out, so does the term for our District Director, Gene Chartier. For as long as I can remember, Gene has been involved in ITE in one manner or another, at the local section or national district level. His leadership, wisdom, sage advice, and historical knowledge have been invaluable in charting the course for CITE over the last decade. Personally, I will miss him as he was a mentor to me and, more importantly, a friend who I could always discuss issues with. I know where you work Gene and may have to call you from time to time to turn on that 286. Thank you for all the time and dedication you have put into CITE over the years.

As we move into winter, remember to drive safely, enjoy the outdoors, and partake in some of the fantastic seasonal activities offered across this great country. Take some time to attend your local section meetings and I hope to see you all in Ottawa this coming June.

If there is anything you want to share about CITE, or have any questions that I can help out with, please feel free to drop me an email at esoldo@cite7.org.






Edward Soldo, P.Eng. FITE
Canadian District President



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district director's message

Happy Autumn everyone! While I will miss the nicer summer weather, there is something special about fall in Canada. Traditionally, a season of letting things go, like the shedding of leaves, fall is also a time of renewal and rebirth. And so goes the theme of this, my final column as Canadian District Director ... out with the old and in with the new.

The 2018 Joint ITE/Midwestern and Great Lakes District International Annual Meeting and Exhibit, held in August in Minneapolis, was another resounding success for the Institute. Attended by over 1,270 individuals, the meeting featured the many aspects typical of ITE's most celebrated event, including the Excellence in Transportation Awards and Leadership ITE Graduation Lunch. The Canadian District was well-represented at the luncheon that featured our first ever international ITE Student Chapter Award, received by the University of Manitoba for their outstanding efforts over the past year. U of M students also represented the District at the 2018 ITE Collegiate Traffic Bowl Grand Championship held during the conference. Thanks to all CITE members who attended the meeting. Next year's event is scheduled for Austin, TX from July 21 to 24, 2019. Our colleagues in the great state of Texas promise a memorable meeting. Yee-haw!

The ITE International Board of Direction held its fall session in Scottsdale, AZ earlier this month. The meeting focused primarily on the ONE ITE initiative currently underway. As noted in the recent e-mail communiqué from ITE Headquarters, the Board took several important steps to advance the initiative, including:

- Reviewing transition plans for implementing the new Missouri Valley District and a "new" Great Lakes District;
- Approving a plan to transition Section Affiliates to full ITE members;
- Adopting new model Charters and Bylaws for Districts in the U.S.; and
- Establishing a new Rocky Mountain District in the western U.S.

While these initiatives have limited immediate impact on the Canadian District, they illustrate how ITE continues to grow and evolve as an organization. These actions will not only strengthen the Institute today; they will position ITE to remain a relevant, vibrant organization for years to come. Hats off to my colleagues on the Board for their efforts, especially International President Michael Sanderson. Michael has led us through the ONE ITE initiative with unwavering resolve, always believing this process necessary to charting a better and brighter future for ITE. Incoming International President Bruce Belmore will continue to build on this momentum as the Institute revamps and modernizes its governance structure.

The Board also heard a presentation from Coordination Council Chair Russell Brownlee and Vice Chair Eric Rensel on *Developing Trends Facing the Transportation Profession*. This inaugural edition of the Council's thought leadership report was compiled via one-page concepts from its members based on their expertise in the industry and what they envision as significant and emerging trends within the next few years. The report identified 23 trends/opportunities for ITE to consider as we move forward. The presentation spurred an enlightened discussion by the Board on future directions



GENE CHARTIER,
M.A.Sc., P.Eng., FITE
Canadian District Director
director@cite7.org

district director's message

CITE was well represented at the ITE Excellence in Transportation Awards in Minnesota with our first ever international ITE Student Chapter Award won by the University of Manitoba.



for ITE, which resulted in a new key initiative – Mobility as a Service – to complement ongoing work related to Vision Zero, Smart Communities, Transportation and Health, and Connected and Automated Vehicles. Stay tuned for more information on this developing topic!

ITE continues to work on the following noteworthy technical initiatives:

- ITE is set to release the online *Curbside Management Practitioner's Resource* in November. Developed collaboratively by the ITE Transportation Planning and Complete Streets Councils and NACTO, the resource presents a framework and toolbox for analyzing and optimizing curbside space in this time of change with the aim of prioritizing and maximizing community values and safety.
- Development of the Fifth Edition of the *Parking Generation Manual* is well underway. The new and improved document will reflect changing mobility trends and travel behaviour while still providing needed guidance to practitioners today. ITE is coordinating data analysis and presentation with the National Parking Association and Urban Land Institute in a concurrent update to their companion document, *Shared Parking*. Transoft has developed a prototype ParkGen web app (similar to the TripGen app) that is enabling a review of preliminary parking generation data plots and statistics. Release of the updated *Parking Generation Manual* is targeted for early 2019.
- ITE and the Vision Zero Network received a grant from the Road to Zero Coalition, a committee of the US National Safety Council, to develop and conduct training on speed management.
- The ITE Traffic Engineering Council recently updated the [Traffic Calming fact sheets](#) on the ITE website. The Council is beginning to update the *Prohibitions of Turns on Red* recommended practice. As an adjunct activity, ITE staff is participating in TRB project 03-136 *Evaluating the Performance of Right-Turn-On-Red Operation at Signalized Intersections [with single and dual right-turn lanes]*.
- ITE was awarded a contract to update the 2007 *Railroad-Highway Grade Crossing Handbook* to reflect current practices regarding highway-rail crossings and related activities.
- The ITE Transportation Planning Council is developing a *Multimodal Transportation Impact Assessment (MTIA) for Site Development* guide. The project team is establishing a web page to collect input and solicit comments on interim MTIA project drafts.
- The ITE Coordinating Council, in conjunction with the Transportation Education Council, is creating a series of 50-minute lectures to present the subject area of each ITE council, standing committee or specialized group, beginning with the Traffic Engineering and Transportation Safety Councils. Once completed, the Transportation Education Council will help market these lectures to faculty for use in the classroom.

...continued on page 5

district director's message

As I close this, my final column, I wish to express my heartfelt thanks to the many people who have offered their support and assistance over the last 13 years. It has been a tremendous honour to serve on the CITE Executive Committee with my friends and colleagues Bruce Belmore, Russell Brownlee, Jim Gough, Joanna Kervin, Jen Malzer, Jeannette Montufar, Julia Salvini, Edward Soldo, Mike Skene, Peter Truch, and Ryan Vanderputten. These individuals volunteer their time freely to help lead and administer the activities of this outstanding organization. I would also be remiss not to acknowledge the exceptional service I received from our support team over the years – Don Cook, Evonne Donaher, Steven Garner, Ralph Hessian, Paul Hill, Sandy Rempel, and Dave Twaddle. Without their assistance we (I) would have been lost.

During my time on the Exec, I've had the unique opportunity to travel from coast to coast within Canada and the US and meet many dedicated transportation professionals, all with the same goal of improving mobility and safety for the travelling public. The experience has been enriching, humbling and, at times, demanding, but not something I would trade for anything. At each stop along the way, I have been welcomed with open arms and shown hospitality second to none.

It is a bittersweet time as I bid adieu, but I know the organization is in good hands and headed in the right direction with our leadership at both the District and International levels, which includes incoming District Director Jen Malzer. I couldn't be more proud of ITE and the Canadian District today. We truly are Canada's Community of Transportation Professionals!



GENE CHARTIER

Canadian District Director



Gene with the 2008 District Executive and ITE leadership. Left to Right: Tom Brahm (ITE Executive Director), Bruce Belmore (CITE President), Alf Guebert (ITE International President), Jeannette Montufar (CITE Secretary-Treasurer), Jim Gough (CITE District Director), Gene Chartier (CITE VP), Mike Skene (CITE Past President), Paul Hill (CITE District Administrator).



Gene with the 2018 District Executive. Left to Right: Jen Malzer (Past President), Edward Soldo (President), Gene Chartier (District Director), Julia Salvini (Vice-President), Ryan Vanderputten (Secretary-Treasurer).



bold & transformative solutions

CITE ANNUAL CONFERENCE
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▶ put your ideas on the podium

CALL FOR ABSTRACTS

CITE invites all interested transportation professionals and students to help shape our annual conference happening 2-5 June 2019 in Ottawa, Ontario! The conference theme – **bold and transformative solutions** – will showcase unique responses to the challenges of urban growth, climate change, technological development, and access to mobility by all groups. In facing these challenges, the collective knowledge and experience of the ITE community will enable us to build on successes, learn from experiences, and tailor the analysis, design, and implementation of transportation systems to the specific communities and users impacted. A variety of topics and presentation formats are encouraged. See the complete [Call for Abstracts here](#).

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When was the last time you reached out to your student chapter?

Another school year has begun and the latest round of students are back to school and knee deep in calculus and traffic flow theory. ITE student chapters across the country are also kicking off the new school year with elections and event planning. If you were involved with a student chapter, reading this article may bring back fond memories of good friends, new challenges, and great experiences. If you were never a part of an ITE student chapter, you may be surprised to learn how much student chapters do.

ITE student chapters organize and partake in a variety of activities including presentations, workshops, tours, events, conferences, fundraising activities, design competitions, and more. These events provide students with the opportunity to learn about transportation while also building their professional networks and honing their skills through managing and running an organization.

As a professional, there are many opportunities for you to give back and help your local student chapter that also connect your company to the industry's emerging talent:

Volunteer to give a presentation – Student chapters typically host several presentations/technical seminars each year. Giving a presentation provides you with an opportunity to showcase the projects and ideas that you have been working on. It's also a great way to meet future graduates who are interested in the field and your organization.

Offer to host a tour – Are you working on an interesting project or do you have a workplace that students may enjoy seeing? Transportation related construction projects, maintenance facilities, traffic control centres, and new neighbourhoods or developments often make great tours, but it can be difficult for students to find a contact within the industry or on a specific project. You can help out by providing a contact point within your company / organization and perhaps even offering to lead the tour!

Inquire about Industry Night and/or sponsorship opportunities – Many chapters hold an annual industry focused luncheon or evening, often with the dual purposes of providing a networking opportunity for students and businesses and collecting sponsorship funds for the next year. These types of events enable companies to showcase themselves and their latest projects and usually also provide an informal setting for students and professionals to meet.

Sponsoring an event or sponsorships in kind (such as food, accommodations, and/or travel) are common ways that companies provide support with the added benefit of seeing the direct result of their sponsorships when these successful events are run by student chapters.

Help with the general operation of the chapter – While help with this is provided by an official Student Chapter Advisor, the advisors themselves are often full time professionals and/or professors who may need a break. Ways that you can help include advising on how to hold elections, brainstorming fundraising ideas, and helping with the planning for the student chapter's attendance at upcoming conferences.

Ready to connect with your student chapter?

Listings and the contact information for your local student chapter can be found at cite7.org and on page 47. Your Section should also be able to connect you with the local student chapter. If you are feeling ambitious, you can also offer to take on the Student Chapter Advisor role. Volunteering in any capacity will enable you to help your local student chapter and support the next generation of engineers and the future of our industry.

University of Manitoba ITE Student Chapter President Abby Scaletta describes how receiving support from their Section and local professionals is crucial to their success:

"Our Chapter has greatly benefited from interaction with the ITE Manitoba Section in planning joint events and attending each other's networking and luncheon events. In particular, we coordinate a fundraiser every year and split the profits. It's both profitable and provides networking opportunities to students who plan and attend the event. We are also supported by many practitioners in the Winnipeg area who present at our technical sessions, lead tours for our members, and invite us to participate in their events. Our Student Chapter Advisor, in particular, supports students by providing networking opportunities, being a mentor, connecting us with technical speakers, and encouraging and taking an interest in the Chapter."

ITE President Elect Bruce Belmore on student engagement

I went back to my old haunt – Louis Pub – on the University of Saskatchewan campus in February 2018 for a [student pizza and beer night](#) put on by the Saskatchewan Section of ITE and WSP. Students could learn about careers in transportation and which companies were hiring. I was pleasantly surprised as the students attending the session represented the full range of career interests including academia, consulting, contracting, and government.

It was a great way to meet students in a casual setting and to exchange information about what ITE could do for their career. One of the students I was speaking with ended up getting offered a term position in our firm. To me, we need to be building a closer relationship with students and invite them into our organization. This relationship needs to be grown first and foremost at the local Section level and is now articulated in the new Section definition, as approved by the International Board during 2018.

ITE understands that students are the future of our organization and have been putting emphasis on removing barriers to participating in ITE. As an example, the International Board approved that the cost of undergraduate [student membership](#) will now be free and grad students only pay \$30 per year. Students will receive a monthly digital copy of the ITE Journal, membership database access, educational opportunities, job posting service, virtual career fairs and access to 15,000 transportation professionals

through the ITE Community e-bulletin board. The best question that I have seen posted on the ITE Community this year came from a student; it was about what sort of campus transportation analysis would be appropriate to undertake as part of their thesis. Many members responded with ideas such as conducting traffic counts, assessing parking, use of roundabouts, reviewing transit, examining traffic operations and management, etc. It is that sort of community welcome that resonates well with younger members and is an easy way to ask for advice from what may otherwise seem like a daunting group of senior members.

Another area with growing momentum is the ITE Student Leadership Summits (SLSs). These are conferences put on by students for students. Starting 5 years ago in California, they have now grown across the US and this year to both Australia and Canada. The [inaugural Canadian SLS](#) took place in Edmonton, Alberta and was jointly hosted by the University of Manitoba and University of Alberta Student Chapters. I was privileged to speak on the topic of Professional Ethics at the event. I also had the opportunity this year to speak at both the Oregon State University SLS and the UMass at Amherst SLS.

Last, ITE has just kicked off the [Matson and Hammond Mentorship Program](#). It's a great way for younger members to get involved and to make lifelong relationships with others in the industry. There are very few rules for participating and you can provide direction on what you are specifically looking for in a relationship such as frequency of meetings, short or long term involvement, and type of mentorship training desired. Applications are open for mentors and mentees at community.ite.org/mentoring.

We are seeing a growth in the number of student chapters in both Canada and the US and we will continue to work with student advisors to foster growth, knowledge, and participation by students in ITE. If we continue to work hard to achieve student engagement, I believe the future of ITE will be in good hands.



Bruce chats with students at the University of Saskatchewan pizza & beer night hosted by the local Saskatchewan Section and WSP



Speaking at the first Canadian Student Leadership Summit



Bruce with Kayla Fleskes, Oregon State University SLS Chair

Bruce Belmore, P.Eng. PTOE, AVS
ITE President Elect

my favourite...

In this feature, fellow CITE members share favourite transportation tidbits from across Canada. For this special students edition, we hear from three former student chapter presidents and their favourite...

...student chapter memories plus great ways to support students as a professional



Audra Jones, M.Sc., P.Eng.

City of Edmonton - Traffic Safety | Edmonton, AB
Former University of Alberta Student Chapter President

The UofA Student Chapter was very active back in the 1980s. We enjoyed a variety of technical activities, including lunch-and-learns with guest speakers, networking breakfasts with industry professionals, and technical tours. A walk-through of the tunnel to the new University LRT Station (and seeing the tunnel "mole" in action) was a real highlight! And we had a bit of fun, too: "international" pot-lucks with a variety of delectable goodies were always well-attended and our annual spring event at the home of our advisor, Dr. Stan Teply, showed just how competitive egg decorating could be (who would have guessed?!). This year, I was happy to attend a couple of student mixers and am pleased to see the continuing enthusiasm for Transportation Engineering at the UofA. I had an ulterior motive for attending and was happy to sign up a number of student volunteers for our successful CITE Annual Conference held last June here in Edmonton. Thanks, students!!!



Jen Malzer, M.Sc. P.Eng.

City of Calgary - Transportation Engineer, Liveable Streets | Calgary, AB
Former University of Manitoba Student Chapter President

I feel like I'm still having favourite ITE university moments! Since my first ITE days as inaugural Manitoba Student Chapter president, I have loved watching that group grow! In my year, I introduced a Sustainable Transportation competition to increase involvement. Despite some great prizes, we didn't have many participants but it taught me to reach out for partners and take a chance.

More recently, I created a rule for myself to speak to at least one student chapter each year. I'm biased in my belief that this is the most effective way to give support since it was a class presentation from a local professional that first got me interested in transportation. Each year I try to present on a new idea in the industry and ask the students for permission to not have all the answers. It's a great reminder that students have such a fresh critical lens and a lot of keenness too.

I also try to stay open to student requests. This year, I was able to give interviews for two theses. This may be my new favourite way to support students because, a few months later, a great gift lands in your inbox: a *Rural Retrofit Guide for Active Transportation* by Olivia White from McGill. It's like Christmas! It's nearly guaranteed that anything you interview on will be turned into a relevant yet modern version of your own practice! I'm anxiously awaiting a thesis on "hackathons as engagement" from The University of Glasgow; I'm not sure how Ross found me but I'm glad he did.

I challenge all of our members, both students and professionals, to reach out. Exchanging ideas is so beneficial for everyone involved and will advance our industry.



Omar Shams

City of Hamilton - Traffic Design Technologist | Hamilton, ON
Former Mohawk-McMaster Student Chapter President

Throughout my affiliation with the Mohawk-McMaster student chapter, I learned two transformative lessons: *“Professional networking is not collecting contacts, it is planting relations”* and *“Allow your passion to become your purpose and one day it will become your profession.”*

As president of the Mohawk-McMaster student chapter, I strove to create a platform for professional development and to foster a valuable networking and knowledge sharing environment for my fellow transportation enthusiast schoolmates. My favourite was when we held a series of Synchro training sessions for students from both institutions to demonstrate the practical use of the software.

With the rise of interest in transportation among McMaster University students, the need for a new McMaster-based chapter was necessary. I was involved in the formation of the new McMaster University student chapter, which received official status in 2016, with Sean Nix and Dr. Antonio Paez. Since then, I have been actively supporting the McMaster chapter and have attended a number of their speaker events; I will soon be even more engaged with them as the new Technical Liaison for Hamilton Section.

Today, the members of both Mohawk and McMaster student chapters are increasing in numbers and are following their predecessors' mission with added enthusiasm and greater execution of plans and activities to engage, learn, and grow within the institute and transportation industry. The observed passion for transportation engineering among the next generation of engineers at Mohawk and McMaster chapters is promising for the future of the transportation industry. As a local professional at the Hamilton area, I am taking this opportunity to announce my full support to assist the executives and members of both chapters in achieving their professional goals and expanding their professional network.



From left to right: Jen Malzer, Mitchell Jacobson, Scott Minty, Jonathan Regehr, Ana Malbasa, Prof Alan Clayton. Touring Washington DC just before TRB in 2004.



Omar Shams with fellow past student chapter executive member Darren Loro and former Mohawk Student Chapter Advisor Sean Nix.

CREDIT: TANYA WORMS

Have a topic idea? Want to be featured in a future edition? Contact us at communications@cite7.org!

In this feature, we highlight research from across Canada that asks relevant questions and offers insight and solutions to pressing transportation issues. For this special edition, we shine the spotlight on Ahmed Osama, winner of the 2018 CITE Excellence in Transportation Student Paper Award, and his research.

A Framework to Identify, Diagnose, and Remedy Active Transportation Crash Hot Zones

AHMED OSAMA, PhD, AIN SHAMS UNIVERSITY

Traffic injuries and fatalities are known for the heavy burden that they place on national economies and households. Due to the growing recognition of the enormous toll exacted by road traffic crashes, the United Nations announced this decade (2011-2020) as a Decade of Action for Road Safety. In September 2015, representatives of states attending the United Nations General Assembly identified measures – such as increasing safety standards in cars, reducing drunk-driving, exploring sustainable transport, etc. – that aim to halve the global number of deaths and injuries from road traffic crashes by 2020. From that standpoint, many cities worldwide are recognizing the vital role that active transportation can play in creating safer as well as healthier and more sustainable and livable communities. This motivates city authorities to apply various policies that would encourage this growing trend of transportation. Active transportation, with walking and cycling being its main components, is any human-propelled mode of transportation. Pedestrians are the largest single traveler group since almost everyone walks as a part of their journey. Also, more people are cycling in the past decade for commuting, work, and leisure activities.^{1,2} Despite some associated risks of exposure to traffic and air pollution, the promotion of active transportation presents a promising strategy.³ Active transportation not only addresses the problems of energy consumption, environmental pollution, and climate change, but also provides substantial health benefits.⁴ Physical inactivity is a primary contributor to the constant elevation in rates of obesity, heart disease, diabetes, stroke, and other chronic health conditions.⁵ It is estimated

that there are 3.2 million deaths worldwide per year attributable to physical inactivity.⁶ Active transportation can overcome car dependence as well as increase physical activity levels.⁷ Moreover, shifting to such sustainable modes would reduce traffic congestion and vehicle crashes.⁸ The total economic benefits of active transportation in Canada can reach up to \$7 billion/year at a mode share as low as 15%.⁹

Regardless of the aforementioned benefits of active transportation, cyclists and pedestrians are vulnerable road users. They are usually subjected to an elevated level of perceived and actual injury risk and discomfort, which may discourage commuters from using active modes and see them as less safe than driving.^{10,11} Almost a quarter of all deaths on the world's roads is among those with the least protection, i.e., pedestrians (22%) and cyclists (4%).¹² For various types of community settings, safety concerns deter one in five Canadians from walking or cycling.¹³ Although vulnerable road users usually account for a low number of reported crashes, they still account for most of the fatalities. Therefore, there is a need for developing systematic approaches to improve active transportation safety.

Due to the aforementioned, this article briefly discusses a comprehensive framework that was developed and applied within the City of Vancouver for identifying, diagnosing, and remedying the macro-level active transportation safety issues.¹⁴ It provides original insights into active transportation networks, crash models, crash hot zones identification, and policy recommendations.

CASE STUDY: CITY OF VANCOUVER

Although vulnerable road users usually account for a low number of reported crashes, they still account for most of the fatalities. In British Columbia, active commuters represent 5.5% of the injuries and 25% of the fatalities due to motor vehicle crashes.¹⁵ The total cost to BC society of pedestrian and cycling injuries and fatalities amounts to around \$1.175 billion per year.¹⁶ Locally, in the city of Vancouver, active trips accounted for approximately 20% of all trips and around 3% of the reported crashes between years 2007 and 2012.¹⁷ However, they represented approximately 50% of the fatalities due to crashes with motor vehicles over this period.¹⁸ It is, therefore, essential for city officials to first develop efficient and safe active transportation networks before encouraging more road users to shift to active commuting. In view of this, the City of Vancouver adopted the “Transportation 2040” plan in 2012, which provides a long-term strategic vision for transportation within the City of Vancouver.¹⁷ The Transportation 2040 plan includes targets to considerably increase the proportion of trips made by sustainable transport, i.e., walking, cycling, and transit, while working in parallel towards zero transportation-related fatalities and emissions. A key component of this plan is creating an active transportation network and environment that is safe and convenient for commuters of all ages and abilities.

The proposed framework was applied within the City of Vancouver to identify, diagnose, and treat active transportation crash-prone zones within the city.¹⁴ Five years of pedestrian-motorist and cyclist-motorist crashes were investigated at 134 traffic analysis zones (TAZs) in the City of Vancouver. A large GIS dataset incorporating traffic exposure, socio-economics, land use, built environment, road network, and bike and pedestrian network was collected. Empirical and full Bayesian macro-level crash models were developed to assess the associations between the aforementioned variables and pedestrian crashes as well as cyclist crashes. A multi-response full Bayesian mixed crash model, that accounted for spatial and mode correlations, was then developed incorporating vehicle, bike, and pedestrian traffic exposures to identify the active transportation crash-prone

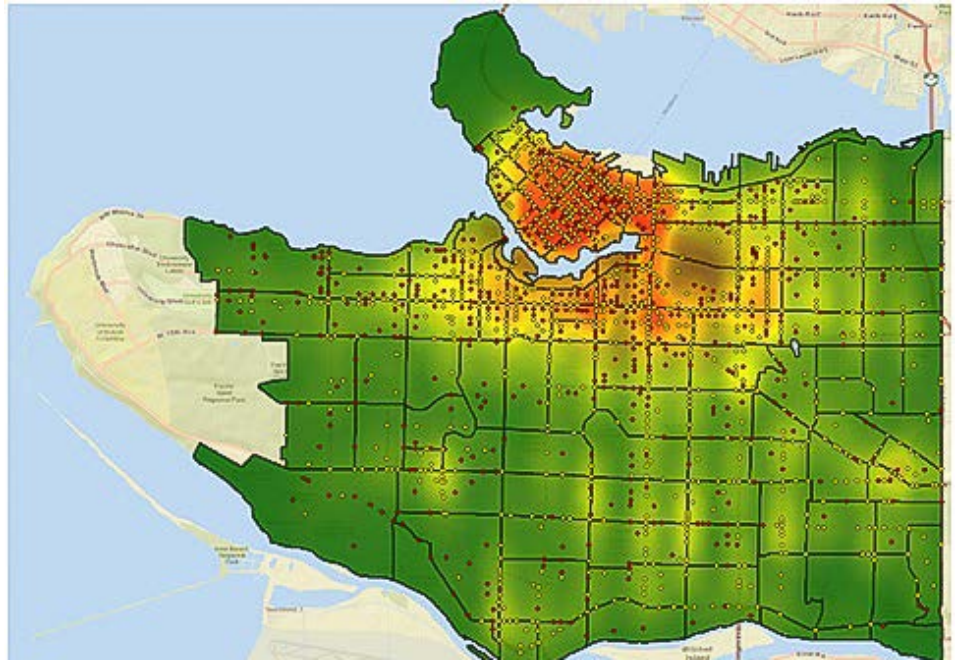


Figure 1. Cyclist Collisions (red points) and Pedestrian Collisions (yellow points) at City of Vancouver traffic analysis zones (TAZs).

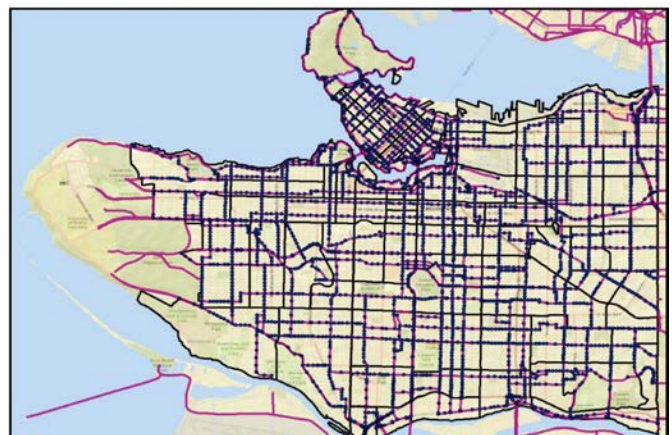
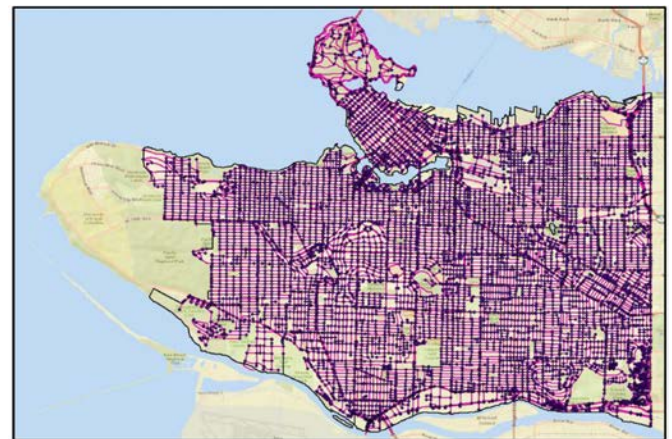


Figure 2. Sidewalk (above) and Bike (below) Networks' Characterizations at the different TAZs.

north of the 49th

zones (CPZs) and safe zones (SZs) using a novel approach based on the “Mahalanobis distance” method. The CPZs were found to be clustered into four spatial clusters and the Vancouver Downtown cluster was the largest. The trigger variables at each CPZ and SZ were then statistically identified and categorized to diagnose the factors causing the zones to be crash-prone or safe. Trigger variables were categorized into three levels; land use, traffic demand, and traffic supply. City of Vancouver’s downtown area incorporated many of the trigger variables at all of the three levels, which implies that rigorous efforts are needed to treat the active transportation network there. The other CPZ clusters incorporated trigger variables to various extents. Lastly, remedies were proposed, using various manuals and guides as well as assessing the SZ trigger variables, to address the various CPZ trigger variables through land use, traffic demand, and traffic supply management policies.

Some findings in this study agreed with the results from former studies in the literature, though better exposure indicators and a more comprehensive set of cyclist and pedestrian safety correlates were used in the current study. The crash models’ results showed that the cyclist crashes and pedestrian crashes had almost similar associations with the studied zone characteristics. The cyclist/pedestrian crashes were non-linearly and positively associated with the traffic exposure variables. The exponents of the exposure measures were less than one supporting the “safety in numbers” hypothesis. The results also showed that the increase in the cyclist/pedestrian crashes was associated with the increase in the socio-economic attributes such as employment and household densities, and the built environment attributes such as transit stop and traffic signal densities. Regarding land use, a positive association was found between cyclist/pedestrian crash frequency and commercial area density, while both residential and recreational areas’ densities had negative associations with the active commuters’ crashes.

For road network facilities, higher cyclist/pedestrian crash frequency was found associated with more arterial and collector roads proportion, while a decline in those crashes was found associated with the increase in local roads proportion. Cyclist crashes were negatively associated with the off-street bike links proportion. Bike and sidewalk networks’ connectivity was found positively associated with cyclist and pedestrian crashes respectively, on the contrary of the networks’ continuity, slope, and length.

Based on this study, several remedies and recommendations can be suggested and derived from various sources of credible literature as well as the SZ and CPZ trigger variables’ analysis to improve active commuters’ safety. It is obvious that it is not enough to just provide bike and sidewalk networks; rather, the quality of the network is an important factor. The length, connectivity, continuity, and the slope of the bike and pedestrian networks need to be prudently studied and addressed. In addition, the signalized and non-signalized intersections need to be treated according to complete streets acts (such as NACTO guides) to be friendlier and safer to the active commuters. Separated bus lanes, bike lanes, and walkways can also be good solutions for cyclist and pedestrian interactions with transit and vehicles. Moreover, mixed land use that provides shorter commute distance for active commuters can reduce the crash risks for those users. Lastly, a better hierarchy of the streets that can reduce the dependence on high speed and high traffic volume roads shall make active commuters more comfortable and safer. All in all, the study recommends small blocks that contain a broad variety of land use, demand management programs, sustainable street networks and intersections, and safely separated and easily accessible transit stops. In addition to the bonus of being serviced by a continuous, well-connected, and accessible active transportation specialized network, these solutions are expected to be safely bikeable and walkable.

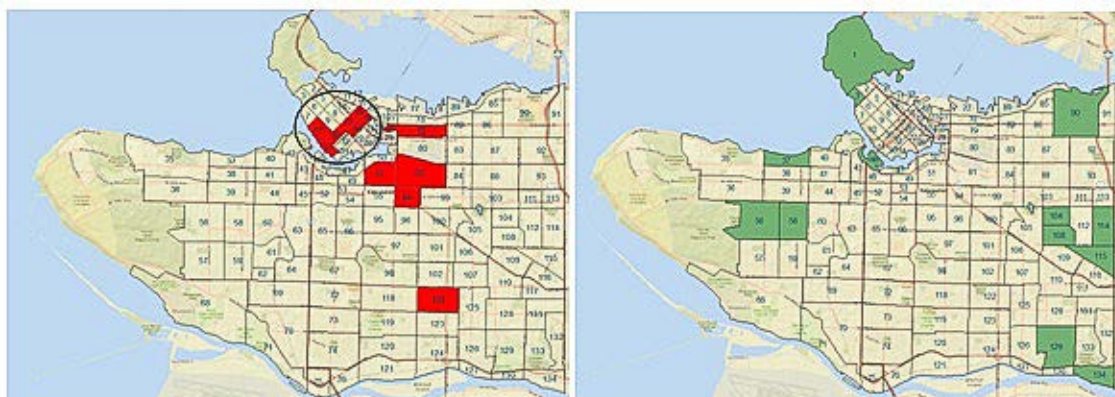


Figure 3. City of Vancouver’s active transportation crash-prone zones (CPZs, in red) and safe zones (SZs, in green).

FURTHER RESEARCH

Further areas of research can enhance the results of this study. First, investigating more trigger variables is important to recommend the most efficient active transportation policies. Second, applying this study on other environments of active transportation can provide an opportunity to assess different perspectives regarding active transportation safety. Lastly, monitoring the variation in crash rates at the active transportation crash-prone zones, after applying the suggested management policies, would validate the results of this study.



Ahmed Osama is currently an Assistant Professor at Ain Shams University and a Visiting Assistant Professor at American University in Cairo. He recently received his PhD in Transportation Engineering from the University of British Columbia (UBC), where he was a research assistant at the Bureau of Intelligent Transportation Systems and Freight Security. He participated in several traffic safety projects for cities in Canada and abroad and co-authored more than 15 publications. His work earned awards from UBC, Canadian Transportation Research Forum, CITE, and Transport Canada.

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REFERENCES & FURTHER READING

1. Cycling UK, 2012. Retrieved December 5, 2017, from <https://www.cyclinguk.org/resources/cycling-uk-cycling-statistics>.
2. USA Today, 2014. Retrieved December 28, 2017, from <https://www.usatoday.com/story/news/nation/2014/05/08/bike-commuting-popularity-grows/8846311/>.
3. De Nazelle, A., Nieuwenhuijsen, M.J., Antó, J.M., Brauer, M., Briggs, D., Braun-Fahrländer, C., Cavill, N., Cooper, A.R., Desqueyroux, H., Fruin, S. and Hoek, G., 2011. Improving health through policies that promote active travel: a review of evidence to support integrated health impact assessment. *Environment International*, 37(4), pp.766-777.
4. De Hartog, J.J., Boogaard, H., Nijland, H. and Hoek, G., 2010. Do the health benefits of cycling outweigh the risks?. *Environmental Health Perspectives*, 118(8), p.1109.
5. Centers for Disease Control and Prevention (CDC). Retrieved July 28, 2017, from http://www.cdc.gov/healthyplaces/transportation/promote_strategy.htm.
6. Mathers, Colin, Stevens, Gretchen and Mascarenhas, Maya, 2009. *Global Health Risks: Mortality and burden of disease attributable to selected major risks*.
7. Lindsay, G., Macmillan, A. and Woodward, A., 2011. Moving urban trips from cars to bicycles: impact on health and emissions. *Australian and New Zealand Journal of Public Health*, 35(1), pp.54-60.
8. Litman, T., 2004. Quantifying the benefits of nonmotorized transportation for achieving mobility management objectives. Victoria, BC: *Victoria Transport Policy Institute*.
9. Campbell, R. and Wittgens, M., 2004. The business case for active transportation. *Gloucester: Go for Green*.
10. Buehler, R., Gotschi, T. and Winters, M., 2016. Moving toward active transportation: how policies can encourage walking and bicycling. *Active Living Research*, San Diego, CA.
11. Lawson, A.R., Pakrashi, V., Ghosh, B. and Szeto, W.Y., 2013. Perception of safety of cyclists in Dublin City. *Accident Analysis & Prevention*, 50, pp.499-511.
12. Toroyan, T., 2013. *Global status report on road safety*.
13. Canadian Medical Association, 2013. *Built Environment and Health*.
14. Osama, A., 2018. New insights into active transportation safety: a macro-level analysis framework. Dissertation, University of British Columbia.
15. Transport Canada, 2007. Canadian Motor Vehicle Traffic Collision Statistics. Ottawa, Ontario.
16. BC Cycling Coalition, 2015. The Climate is Right for Cycling. Retrieved December 28, 2017, from http://engage.gov.bc.ca/app/uploads/sites/116/2015/12/039_-BC-Cycling-Coalition.pdf.
17. City of Vancouver, 2012. Transportation 2040. Retrieved December 13, 2017, from <http://vancouver.ca/files/cov/transportation-2040-plan.pdf>.
18. ICBC Insurance Company of British Columbia, 2013. *Quick Statistics*.

Celebrating a standout chapter

University of Manitoba ITE 2017-2018 Highlights

BY ABBY SCALETTA
UNIVERSITY OF MANITOBA STUDENT CHAPTER PRESIDENT



a note from the editor

The University of Manitoba ITE Student Chapter has been a leading example of what student leadership and creativity, a strong support network of alumni and professionals, and much hard work can accomplish.

To celebrate the University of Manitoba's acceptance of the 2018 international ITE Student Chapter of the Year Award, Student Chapter President Abby Scaletta highlights the activities and events that earned them the title. We shine the spotlight on two major events from the Chapter's year with excerpts from their Annual Report – an international technical trip taken by six chapter members to Colombia, South America and a collaborative community outreach program with CanU to introduce youth to careers in transportation. [CanU](#) is a Winnipeg-based charitable organization that provides out-of-school mentorship and an educational enrichment program for youth in Grades 5-12.

The University of Manitoba ITE Student Chapter was extremely excited to find out they were the recipients of the 2018 international ITE Student Chapter Award presented at the Annual ITE Conference in Minneapolis. The award is presented to one of over 150 students chapters worldwide that best:

- promotes the advancement of the transportation profession,
- educates students on various transportation topics through presentations and tours, and
- hosts events for student members to network with professionals.

The University of Manitoba Student Chapter accomplished these objectives through coordinating and planning 78 events, meetings, and liaisons during the 2017-2018 school year.

ITE Student Chapter of the Year

Highlights of the year include:

- fundraising, purchasing, building, and delivering Christmas hampers to six families;
- planning a four-day educational/outreach event with middle school students on various transportation topics;
- networking events with peers and professionals;
- technical speaking events where professionals present on their projects and companies to student members;
- Ciclovía and bike tours in Bogota, Colombia, a tour of the Port of Cartagena in Colombia, and a tour of the Transportation Management Centre in Winnipeg;
- representation at four transportation conferences in North America;
- over 30 liaison activities, meetings, or publications with transportation professionals;
- co-organizing the first Canadian ITE Student Leadership Summit with the U of Alberta Student Chapter to provide learning and networking opportunities to students from across Canada; and
- an industry workshop on building public transportation systems with presentations from Bjorn Radstrom from Winnipeg Transit and Bob Hastings from Trimet based in Portland, Oregon.

The annual report detailing the Chapter's activities for the 2017-2018 year can be found [here](#).

THE UNIVERSITY OF MANITOBA
ITE STUDENT CHAPTER



ANNUAL
REPORT

INSPIRE CHANGE



March 1, 2017 to
February 28, 2018



University of Manitoba

YEAR AT A GLANCE Mar 2017 to Feb 2018

COMMUNITY INVOLVEMENT EVENTS

- Apr 2017 Middle School Education Program
- Oct 2017 Adopt-a-Highway Cleanup
- Nov 2017 Movember Campaign
Pancake Breakfast
- Dec 2017 Christmas Hampers

SOCIAL & FUNDRAISING EVENTS

- Apr 2017 - Food Sales (4)
- Jan 2018 Social Fundraisers (3)
ITE MB Escape Room
Halloween Bingo Bowling
Comedy Club Night
Social/Networking Events (4)

GUEST SPEAKERS

- Mar 2017 Janice Lukes
- Oct 2017 Garreth Rempel
Stephanie Whitehouse
& Mark Doucet
- Nov 2017 Steven Florko
- Jan 2018 Craig Milligan
- Feb 2018 Mark Vogt

TECHNICAL TOURS

- Apr 2017 Winnipeg Traffic
Management Centre
- Feb 2018 Ciclovía Tour in Bogota
Bike Tour in Bogota
Port Tour in Cartagena

CONFERENCES

- Jun 2017 *excite* Youth Summit
- Jul 2017 ITE/CITE Toronto
- Sep 2017 TAC Conference
- Jan 2018 TRB Annual General Meeting

OTHER EVENTS

- Apr 2017 Public Transportation Workshop

CHAPTER LIAISON

- Apr 2017 - Newsletters (5)
- Oct 2017 Planning Meetings (3)
Recruitment Events (5)
- May 2017 Caleb Olfert Presentation
- Jul 2017 CITE Traffic Bowl
- Jan 2018 ITE Student Chapter Event at TRB

COLOMBIA TECHNICAL TRIP

This year during reading week, six students spent eight days visiting two cities in Colombia. They had a total of eight flights, many Ubers, multiple BRT and bus trips, a couple of boat rides, biking, walking, and a speedy cable car ride down Mount Monserrate. On the trip, students were able to learn about transportation in Colombia by participating in technical tours and by actively using and experiencing the various modes the country had to offer. The students spent an afternoon exploring the various routes and different stations of the TransMilenio, including one underground station pictured right. Check out the next page for more information about the various tours.



COLOMBIA TECHNICAL TRIP

CICLOVIA TOURS

We were fortunate to have the chance to experience Ciclovía ourselves as pedestrians the Sunday we arrived in Bogota (photo below). The next day we met the Ciclovía team at their operations headquarters to discuss the initiative and how it has benefitted the community (pictured right). We learned that Ciclovía's network is over 100 km long with tents set up to offer services such as free bike shares, doctors, bike lessons, and even games such as chess that rotate locations to serve all communities. All information about Ciclovía is available online so users know where services will be.

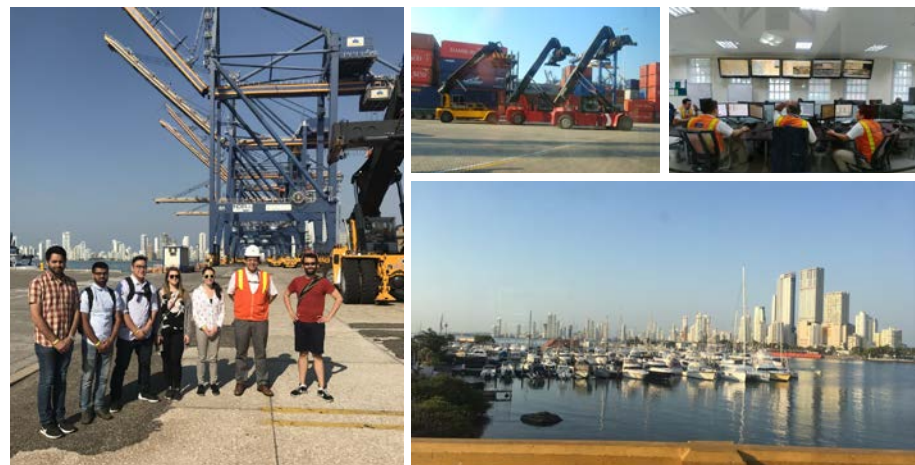


BOGOTA BIKE TOUR

Our second tour in Bogota was a 30-km long bike tour to explore the best and worst cycling infrastructure the city had to offer. Pictured below is a painted and protected bike lane. We also visited a small scale cargo bike shop where they build specialized cargo bikes (photo below) and another bike shop that specialized in bike trailers. The variety of purposes the locals have for using bikes is reflected in both the types of bikes that can be found and the city's cycling infrastructure.

CARTAGENA PORT TOUR

While in Cartagena, we visited the largest container port in Colombia; it is the 4th largest port in all of Latin America. We had a guided tour of the operations building and shipment yard. We witnessed a narcotic detecting demonstration from a dog in the K-9 unit and explored a small zoo that was open to cruise ship tourists at the port. Below are many photos from the tour, including one which is a model of the port that they use to improve operations.



CanU COMMUNITY EVENT

We held a new and exciting community event this year in partnership with CanU Canada, the City of Winnipeg Traffic Signals Branch, Waze, New Flyer, Winnipeg Transit, UMCycle, and Bike Winnipeg! It was a highly collaborative effort to teach the CanU kids as much about transportation as we could in the 4-5 hour events held each Saturday in April. The 12-20 students in attendance at each of the four events ranged in age from 8-16 years old. CanU is a charitable organization that helps young students realize the opportunities available to them through post-secondary schooling and provides students social and nutrition resources to help them thrive in life. We greatly appreciate the support from our collaborators!

Day 1: Introduction to Transportation



The day consisted of an interactive presentation that explained the transportation engineering profession, how engineering impacts the lives of people, and our goal to make positive change in our world through transportation. This was accomplished through an exercise looking at the issues and solutions surrounding traffic congestion, measuring modal trade offs, how transportation is a piece in solving many world issues, road safety applications, designing a complete street, and playing a online [public transportation design game](#). If the students didn't walk away wanting to become engineers, they will certainly appreciate the work we do!

Day 2: Traffic Signals, Technology, and Waze

City of Winnipeg Traffic Signals employees came in to present and conduct two interactive activities with the students. The first was to use radar sensors to detect vehicles to be served at a signal and the second was using traffic cameras and to play Scrabble around the computer room. Traffic Signals presented on Winnipeg's Transportation Management Centre and what timing engineers do. Waze conducted part three of the event which was having students become map editors to contribute to transportation data. The students also had a chance to feel like a timing engineer with an [online game](#). Thank you City of Winnipeg and Waze!



CanU COMMUNITY EVENT

Day 3: Public Transportation

The CanU kids had an exciting jam-packed day with two transit tours and some free ice cream courtesy of Chaeban. The first tour was from President & CEO of New Flyer, Paul Soubry, where he showed us how our local busses are constructed and shipped across North America. The second tour was from Winnipeg Transit as they discussed the many components of how transit works including universal design and accessibility, a tour of the control centre, and a chartered trip down the Southwest Bus Rapid Transit line. Thank you New Flyer and Winnipeg Transit!



Day 4: Bike Safety and Maintenance

Our final day consisted of teaching the students hands on skills for bike safety and maintenance. The event started with a presentation on bicycle safety where they watched videos on helmets and traffic skills. They then moved outdoors where they learned how to fit their helmets and bike height using bikes provided from UMCycle. Next groups split into two rotating groups between safety and maintenance activities. The maintenance activities were lead by UMCycle and assisted by Bike Winnipeg. Students learned hands on how to conduct ABC checks and fix a flat tire. The safety activities were led by ITE, supported by Bike Winnipeg, and included teaching the students handling skills and how to make proper turns. Thank you to UMCycle and Bike Winnipeg for your expertise as well as to MPI and CanBike Manitoba for safety materials.



TRAINING OPPORTUNITIES



Connect your interests and professional development goals with these upcoming training opportunities presented by the CITE Training Committee

Register at
cite7.org/training

Traffic Calming

A half day workshop to introduce the new Canadian Guide to Traffic Calming. Learn about the traffic calming process and implementation. Understand the treatments – their applicability, effectiveness, and design guidance. Apply the Guide to the development of a traffic calming policy.

November

Fredericton (with the ITE Atlantic Provinces Fall Technical Session),
Kelowna, Vancouver, Victoria

January

Ottawa, Montreal, Quebec City

February or March

Burlington, London

Complete Streets

The Complete Streets training program will include a review and discussion of design elements and guidance from relevant Canadian examples. The review and discussion of Complete Streets will be supplemented by guidance from regional, national, and international sources in order to provide a comprehensive overview of best practices relevant to local context. Specific topics related to the local context will be selected to build a workshop tailored to design opportunities and challenges within Canada.

February

Edmonton

Bicycle Facilities

A one-day bicycle facilities design workshop that considers the wide variety of contexts in which cycling infrastructure is implemented, including rural, suburban, and urban communities. The course will assist design professionals in developing awareness and understanding of the unique issues and needs of cyclists and provide attendees an understanding of the latest national and international trends, best practices, and design guidance in the rapidly evolving field of bicycle facility design.

November

Regina

Have your say

What training topics are of interest to **you**? Please tell what you want to see next year. We are looking to expand our committee. If interested, please send your resume and a description of why you want to join the CITE Training Committee to training_committee@cite7.org.

NOW AVAILABLE!

Canadian Guide to Traffic Calming

SECOND EDITION

Changes and additions include:

- Recognizing **EDUCATION & ENFORCEMENT** as valid, and/or preferred alternatives to physical measures;
- Describing measures applicable to **ARTERIAL ROADS & RURAL ROADS**;
- Adding **TRAFFIC CALMING DEVICES** some well-accepted and others ready to be further tested and evaluated; and;
- Referencing **PERFORMANCE OUTCOMES** where new information has become available since the first edition.

Click here to learn more about what's new in this edition

UPDATED NATIONAL REFERENCE ON TRAFFIC CALMING PRINCIPLES AND APPLICATIONS

The Canadian Guide to Traffic Calming (Second Edition) presents traffic calming as a method to reduce the speed and/or volume of non-local traffic infiltrating into neighbourhoods. It explains principles and suggests a process for introducing and implementing traffic calming, and describes the applicability, effectiveness, and design principle for a wide range of traffic calming devices. The devices are categorized in terms of vertical deflection, horizontal deflection, roadway narrowing, surface treatment, pavement markings, access

restriction, gateways, enforcement, education, shared space, and emerging technologies and measures.

This second edition reflects changes in road conditions, attitudes toward vulnerable road users, and available technologies, and valuable experience regarding the efficacy of options. It was created through a partnership between the Transportation Association of Canada (TAC) and the Canadian Institute of Transportation Engineers (CITE).

GET YOUR COPY IN THE TAC BOOKSTORE TODAY!



TLC Welcomes New Members

Following the [update of the Technical Liaison Committee \(TLC\) Terms of Reference](#) earlier this year, the CITE Executive put out a call for volunteers to join the new TLC. The TLC has now been selected and includes four members: Ryan Martinson (Chair), Mars Otten-Andrew (Vice Chair), Irini Akhnoukh, and Farhad Shahla. A big thank you to the previous members of the Committee for their hard work and dedication to the TLC.

The new TLC recently gathered for the first time in Ottawa. The Committee will look to implement the new Terms of Reference and focus on coordination with TAC and ITE International. Stay tuned in 2019 for updates on progress of the TLC!



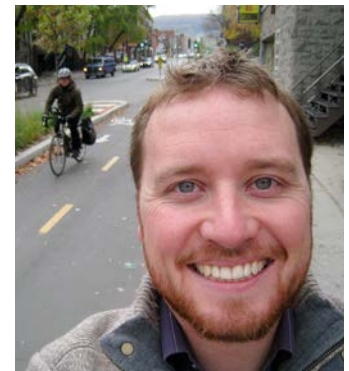
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Transportation Specialist
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A REVIEW OF PUBLIC RIGHT-OF-WAY ACCESSIBILITY EXPERIENCES IN CANADA

An analysis of accessibility design guidelines and standards used in municipalities and jurisdictions across Canada

Get the recently released report at
cite7.org/research-training/projects/

CITE has a strong partnership with the Transportation Association of Canada (TAC). One of our key contributions to TAC's technical projects is participation on a number of TAC councils and committees through CITE appointees. In this TAC Tidbits, our appointees share updates about their committees from the Fall 2019 TAC meetings in Saskatoon, Saskatchewan.

Chief Engineers Council



EDWARD SOLDO

CITE President & Director of Roads and Traffic, City of Hamilton

The Chief Engineers Council (CEC) fall technical meetings were held over two days in Saskatoon in conjunction with the TAC Annual Meeting and Conference. The committee had a number of presentations on the first day related to the following:

Autonomous and Connected Task Force – TAC has established a task force to deal with the rapidly evolving and complex subject of connected vehicles and automated vehicles (CV/AVs). Dr. Garreth Rempel provided an update on the “Preparing for Connectivity and Automation in Canada’s Transportation System” workshop held in Toronto that was organized by TAC in collaboration with Transport Canada and ITS Canada in June. The event gathered over 100 participants from government, industry, and academia and was intended to build a shared understanding of CV/AV development and implementation across North America, and to inform work by members, partners, and stakeholders as they prepare for and manage the introduction of CV/AVs in Canada.

The workshop identified a number of possible roles for TAC in the CV/AV sector, focusing on two key ideas:

- Convening and informing CV/AV stakeholders
- Stewarding CV/AV deployment

TAC staff and working group members have drafted Terms of Reference for the CV/AV Task Force. The draft Terms of Reference outline the Task Force’s proposed mandate, roles, objectives, scope and activities, as well as operating guidance for supporting committees, reporting, membership, executive, meetings and approvals. The terms of Reference for the Task Force, if approved, would include voting members representing TAC Councils, different orders of government, private sector, academia and invited representatives of partner organizations. The Institute of Transportation Engineers has identified CV/AVs are a strategic focus area and CITE will be engaging TAC regarding our participation and involvement with the Task Force.

Other presentations included the following:

- An Update on Federal Funding program such as the National Trade Corridors Fund and Investing in Canada Plan
- Climate change and TAC’s Geometric Design Guide
- P3 projects in Saskatoon
- Cyber security and BC’s Traffic Management Centre
- Montreal’s Bonaventure Project: From Expressway to Promenade

On the second day of meetings, the CEC received updates and approved the activities of all TAC's standing committees including the Asset Management Task Force, the Joint Active Transportation Subcommittee, and the following standing committees: Geometric Design, Maintenance and Construction, Pavements, Road Safety, Soils and Materials, Structures, Traffic Operations and Maintenance.

The two days of meeting provided an overview of the vast array of transportation initiatives that TAC is undertaking. The CITE/TAC relationship is an important one as it allows for an exchange of information that each organization is undertaking and provides a forum for collaboration to best serve transportation professionals across Canada.

Urban Transportation Council



KATE WHITFIELD

Senior Associate Engineer/Planner, Alta Planning + Design - Canada, Inc.

Topics under the heading of 'Cross-Cutting Initiatives' took the bulk of the time at the Urban Transportation Council meeting. After a presentation on the draft terms of reference (ToR) for the proposed Connected and Automated Vehicles Task Force, the discussion around the table was on what value-add might be achieved by including the words 'Shared' and 'Electric' in the title of the task force. One of the discussion points being that it is more than naming the task force after cars and technology. After a lengthy discussion, the UTC crafted recommendations for the board's consideration with an outcome to be provided at a later date. If anything, the discussion reflected the feeling in the room that CVs and AVs have a significant impact on urban environments.

During the UTC Council Meeting, presentations were also made on *Sustainable Mobility Policy in Quebec* by Martin Hotte and on the *FHWA Multimodal Network Connectivity Guide*. This guide is available for free online at https://www.fhwa.dot.gov/environment/bicycle_pedestrian/publications/multimodal_connectivity/.

Education and Human Resources Development Council



MAUREEN VAN RAVENS

Manager of Transportation, Town of Halton Hills, Ontario

The Council had various presentations and discussions on a variety of topics. These included Road Safety Education in Transportation Engineering, Competency Based Assessment for Engineers-in-Training and the Trends in Post-Secondary Education and assessing if it is adequate for new challenges facing our transportation professionals. In addition, the Council had a lengthy discussion of the Legalization of Cannabis and Workplace Safety. In summary, it was concluded that to date the majority of employers have not made specific changes to the policies as it relates to cannabis. There may be further discussion in the future as it relates to this topic.

This year in Saskatoon, the EHRDC held a fall annual event with a local high school to introduce the transportation profession to students. We welcomed approximately 20 high students to our conference. The students spoke to the numerous exhibitors about their service and or equipment to have a better understanding of the transportation profession. We also had a very successful event with our post-secondary students to further engage them in the transportation industry. In addition, EHRDC hosted three conference sessions in Saskatoon:

- Evolution in Transportation
- Retiring soon? What's next in your career?
- Building for the Future: Construction Management Retention & Expertise

All the sessions were a huge success and well attended.

For 2019 annual Conference, the Council is planning three panel sessions/workshops along with a university/college event. More information will be available in the spring.

Traffic Operations and Management Standing Committee (TOMSC)



JAMES DONNELLY

Transportation Engineer / Principal,
Urban Systems



LUIS ESCOBAR

Senior Associate & Discipline Lead,
Stantec



JIM MALLET

President & CEO, Paradigm
Transportation Solutions Limited



JEANNETTE MONTUFAR

Founding Partner & CEO,
MORR Transportation Consulting



GREG O'BRIEN

Atlantic Practice Manager, Traffic Engineering and
Transportation Planning, WSP Canada Inc.

TRANSPORTATION TOPICS FROM ACROSS THE COUNTRY

Vancouver has adopted a goal of zero traffic-related fatalities by 2040 and a target of 2/3 of total trips by sustainable modes also by 2040. The VANquish collisions hackathon was held this past summer to raise awareness about road safety in the city—this was done over two and a half days and there were 120 participants (<https://vancouver.ca/streets-transportation/vanquish-collisions-hackathon.aspx>).

Kelowna has implemented a dockless bikeshare program (DropBike) on a pilot basis for the next 18 months. All bikes are equipped with GPS to know their location throughout the day. This has been used to understand demand throughout the network.

BC Ministry of Transportation is implementing high-friction surface treatments at 14 high-collision locations. Have also implemented enhanced road maintenance contractor monitoring through GPS tracking of snow ploughs. The Ministry is also taking a stricter approach to commercial vehicle enforcement and will be spending \$1.8M to upgrade existing weather stations.

Regina is currently building a bypass which has the second diverging diamond interchange in Canada. Regina plans to build 60km of freeway and the first phase of this freeway was opened in 2017.

Ottawa has implemented 40 km/h “gateway speed limits” to start October 12, 2018. Area speed limit signs will be posted at key locations that serve as entrances to the community, and speed limit signage along each road within the community will not be necessary.

Extensive construction underway in **Montreal** – TURCOT interchange and Champlain bridge is the largest single infrastructure project in Canada to date

Quebec has implemented “shared streets” where pedestrians have the right-of-way. The speed limit on shared streets is 20km/h and motorists must yield the right-of-way to pedestrians.

TRANSPORT CANADA - GRADE SEPARATION GUIDELINES

Transport Canada presented the findings of a literature review conducted by the University of Manitoba regarding grade separation criteria. The findings from the review addressed safety benefits, economic benefits, decision criteria and thresholds. A review of the information found there is no systematic or consistent methodology available in Canada to quantify when to install grade separation. Subsequently, Transport Canada is proposing the following criteria that will be adjusted/finalized after hearing from TAC:

- Traffic volume – AADT exceeds 100,000 or 50,000 if grade separation is economically justified
- Vehicle speed - posted highway speed equals or exceeds 90 km/hr if grade separation is economically justified
- Queuing – consider for existing crossing where there are known queuing issues and an entranceway/intersection is within 30m of the crossing
- Train volume – average 150 or more trains per day, or 75 or more trains per day if grade separation is economically feasible
- Maximum train speed – Class 6 railway or train speed exceeds 177 km/h
- Cross product – Cross product exceeds 1 million or 500,000 if grade separation is economically justified
- Vehicle delay – exceeds 40 vehicle-hours per day
- Level of service – if the highway/roadway facility is performing at LOS below its intended minimum design level of 10% or more of the time

Other criteria such as collision history, air quality, land use, number of lanes, etc also apply with no thresholds.

Joint Active Transportation Subcommittee



MARIAN MITHANI

Client Consultant, EcoCounter

In the Spring, JATSC proposed the volunteer project “Methods for Estimating Latent Demand for Active Transportation” to Urban Transportation Council. This project is now under way by a team of subcommittee members from JATSC, Transportation Planning Research (TPRSC) and Sustainable Transportation (STSC). Other AT projects reported from joint committees include safety audits and impacts of bike infrastructure (RSSC), bike regulatory approaches (STSC), health-transportation opportunities (TPRSC), and the latest updates to ped/bike traffic control (TOMSC).

A new custom, JATSC meetings feature presentations to spark discussion and brainstorming of unaddressed AT topics. Members learned about Nova Scotia’s AT initiatives including the Blue Route Cycling Network, which lead to discussion of the implications from new guidance for AT facilities, particularly in rural areas. Other hot topics and projects ideas shared in the roundtable were:

- more detailed guidance for rural pedestrian facilities;
- small municipality innovations;
- warrants for separated paths on structures; and,
- safety for pedestrians and cyclists in the advent of CV/AV.

Sustainable Transportation Standing Committee



JUSTIN BAK

Project Manager, City of Toronto

The Sustainable Transportation Standing Committee (STSC) is a standing committee under the Urban Transportation Council (UTC). The primary objectives of the STSC are to promote research, analysis, development, and application of sustainable transportation strategies, policies, tools, and practices for urban areas. Current projects include:

- Strategic Opportunities for Integrating Health and Transportation
- Public and Stakeholder Engagement in Sustainable Transportation.
- Compendium of Provincial Legal and Regulatory Approaches Supporting Bikeway Geometric Design and Traffic Control Practices.

During the fall technical meetings, the committee received an update on the Strategic Opportunities for Integrating Health and Transportation project from the project steering committee and a draft will be completed in early 2019. The City of Saskatoon presented to the committee about their Active Transportation Plan with a focus on the development of the proposed cycling network. Following an update from the Connected and Automated Vehicles Working Group, the committee had a discussion on the potential implications of connected and automated vehicles on sustainable transportation.

Geometric Design Standing Committee



MARCIA ENG

Senior Transportation Engineer, Urban Systems Ltd.

- Geometric Design Standing Committee is setting terms of reference for being members of the committee
- TAC in review of historical manuals and availability of them, as well and development of a revision process for all publications
- Roundtable discussions on what is happening or of concern across jurisdictions include:
 - › Looking for new ways to finance roads
 - › Impact of Climate Change on winter roads, and conversion to all weather roads
 - › Innovative design using first principles
 - › Consideration of safety proponent as part of evaluation for design build proposals
 - › Ongoing Active Transportation and Complete Streets projects
 - › Staff training on the new guide as well as supplements to the guide by jurisdiction
 - › Comment that an index would be beneficial for the new guide
- Geometric Design Guide foundation course last year was well attended. Course attendees were not aware of all the software tools that are available for use in design.
- Presentation by Transport Canada on development of Grade Separation Guidelines (for rails) and research to the Road Safety, Geometric Design and Traffic Operations and Management Standing Committees. Transport Canada is looking for input on rationale in prioritization for grade separation.
- Ongoing working group discussions for the Cross Section (4), Access (8) and Interchange (10) chapters
- 2019 TAC Conference will be a joint conference with ITS Canada in Halifax, Nova Scotia.

Road Safety Standing Committee



PEDRAM IZADPANAH

Partner & Vice President, TES

Road Safety Standing Committee (RSSC) updated their strategic plan for the next five years. Extensive consultation was conducted and more than 300 comments were received. The new plan states the following vision and strategic directions.

RSSC Vision: Investing in our profession to enable bold road safety solutions

The 4 strategic directions:

- New Paradigms
- A Stronger Profession
- Timely Research
- Member Value

The RSSC organized 5 technical sessions including 21 presentations in the areas of:

- Designing streets for all road users,
- General issues in road safety, and
- Safe systems approach to road safety.

The RSSC sponsored and organized a workshop on “Human Factors Considerations and Safety Performance of New Active Transportation Infrastructure.” Also, the RSSC organized a panel discussion on Vision Zero with panelists from all levels of the government.

RSSC seeks members to nominate road safety related projects for the RSSC Road Safety Engineering Award which is usually conferred on an annual basis. In 2018, four submissions were received and the following two projects were jointly awarded:

- City of London Vision Zero, and
- SNC Lavalin Snow Plow Safety Swing Arm.

The RSSC has one project awaiting funding to scope the development of (Canadian Road Safety Handbook) CRaSH Handbook. It is currently half funded and required another \$55,000. This is an important initiative on part of the RSSC. Encourage your agencies to support this important project.

Given the multidisciplinary and cross subcommittee nature of road safety, the RSSC developed a road safety checklist and submitted it to Chief Engineers’ Council. The idea of the checklist is to include it as part of all pool funded projects to ensure that road safety is considered as part of the development of the project.

In the past year, the RSSC membership showed interest in increasing educational content of the RSSC meetings and reducing the administrative subjects. In the 2018 meeting in Saskatoon, two presentations were included: (1) Transport Canada on at-grade railway crossings and (2) Wider Pavement Markings TAC Project by Paul de Leur.

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ABBY SCALETTA B.Sc., EIT



Current employment

- University of Manitoba Transportation Information Group, M.Sc. Student/Research Associate
- Stantec Consulting Ltd., Civil Engineer-in-Training (part-time)

Education

- University of Manitoba, Bachelor of Science in Civil Engineering, 2017

Academic Achievements

- Manitoba Graduate Fellowship Scholarship, 2018
- Guild Electric TAC Foundation Scholarship, 2018
- CITE John Vardon Memorial Scholarship, 2018
- Nellie McClung Trailblazer Scholarship, 2018

First job in transportation engineering

Fireseeds North Infrastructure, Co-op Student, 2016 in Winnipeg, Manitoba

What positions have you taken on as a member of ITE?

- U of Manitoba Chapter, President (2017-2019)
- U of Manitoba Chapter, Other Positions (2014-2017)

Family

I recently got engaged to my Transportation Engineer fiancé, Morgan Glasgow!

Personal hobbies

Hiking, canoeing, and ultimate frisbee!

CITE INVOLVEMENT

When did you first attend a CITE event?

My first CITE event was attending a technical luncheon held by the University of Manitoba Student Chapter where I learned about a functional design for a local project. This was my first exposure to the transportation field and I found all the considerations and trade-offs interesting.

What is your CITE involvement (past and present)?

I started as a general member of the University of Manitoba ITE Student Chapter in 2014 and moved up to Community Chair, Vice President, and am now in my second term as President. I hope to continue this momentum with ITE through involvement with the local Manitoba Section upon graduation.

What do you value most about your CITE membership?

As a student and young professional, I find the most valuable part of my membership to be the networking and connections I've been able to make locally with the UofM ITE Student Chapter and ITE Manitoba Section as well as nationally with CITE Conferences. At all levels of ITE, I've been able to both learn more about the field of transportation and meet a lot of incredible people. Thank you!

PROFESSIONAL EXPERIENCE/ACHIEVEMENTS

What are one or two projects that you're most proud to have worked on?

Since I am new to the professional world, my favourite and only substantial project was assisting on an in-service road safety review in my old neighborhood! It was an incredible feeling to make a positive change in my own community and to improve safety for all users in the area.

If asked to speak to a class of engineering or planning students, how would you recommend it as a profession?

This is my bread and butter! I love hosting outreach events. I tell young students that if they want to go into a field that changes people's lives, they should be a transportation professional. We have the tools to make positive environmental, social, and economic change through our work. Examples include promoting active transportation, providing affordable access to opportunities, saving lives in road safety, and reducing congestion. If today's youth want to help people or the environment, they should consider a career in transportation.

Projecting yourself into the future, from an end-of-career perspective, what will you hope to have accomplished?

I hope to leave the profession knowing the world is a safer, more sustainable, and more equitable place to live as a result of the work that I've done. I'd also hope to have more tangible outcomes such as continuing my involvement with CITE through taking on executive roles in the future.

What is the single greatest satisfaction you take from your job as a transportation professional?

I've really enjoyed the opportunities to inspire youth to think about transportation differently and realize its strong importance in people's lives. Even if they don't become transportation professionals, it's nice to have more people appreciate and understand the work we do.

What is the first thing people most commonly ask or say when they find out you are a transportation professional?

I get asked to improve transit or improve cycling infrastructure in Winnipeg. I stand up for my friends at the City as much as I can!

GETTING TO KNOW YOU

What attracted you to the transportation profession? Did you have another career in mind?

I was attracted to transportation because of the mix of hard and soft skills required to analyze data and balance trade-offs. Transportation systems are as complex as the people and goods that are being moved. It's truly a challenging, multi-disciplinary, and broad field, all of which make it very interesting. I originally wanted to be an architect but found it too subjective. Then I wanted to become a structural engineer but found it too objective. Transportation became a perfect mix of the two!

What is the most daring thing you've done in your lifetime?

Pushing myself to trail run/hike a 65 km (1000 m elevation gain) trail in just over 14 hours and 11 minutes. It was for a kids' charity though so it was well worth the pain!

What is the last book that you read or are currently reading?

The last book I finished was *Door to Door* by Edward Humes. It's a book on transportation in which each chapter covers a different transportation topic such as road safety, technology, and the journey your coffee takes before it ends up in your cup. I swear I'm not a nerd.

What is your favorite mode of transportation?

When the weather's nice, I love cycling to get where I need to go. There's something empowering about the independence of using an active mode of transportation. When the weather gets tough, I still occasionally bike but often take transit as my primary mode.

INTERESTS & PERSPECTIVES

Who has had the greatest influence on your life and career?

It's cheesy, but my parents and fiancé have had the greatest influence on my life and career. I'm lucky to have a strong support system like them especially when I take on too many projects.



VANCOUVER ISLAND SECTION

The Vancouver Island Section held a luncheon on Oct 25 featuring a presentation followed by the Section's Annual General Meeting.

Neil Arason, Director, Injury Prevention and Healthy Settings with the BC Ministry of Health, presented an overview of vision zero and the Safe Systems Approach with a focus on active transportation and the five principles underlying the related effective crash countermeasures.

Our AGM was kicked off with a visit from CITE President Edward Soldo who provided an overview of national level District activities. Following, a review of the Section finances was presented and new Executive officers elected. We are pleased to introduce the new Vancouver Island Executive:

President

Bruce Beames, Morrison Hershfield

Vice-President

Todd Litman, Victoria Transport Policy Institute

Treasurer

Catharine Mohoruk, District of Saanich

Past President

Nadine King, Watt Consulting



GREATER VANCOUVER SECTION

Over the summer, the Greater Vancouver Section, in conjunction with CITE Training Committee and City of Surrey, hosted a full-day training workshop about Complete Streets on July 25th at Surrey City Hall. The session allowed the attendees to become familiar with Complete Streets principles and how they change with local context. There were several interactive group design exercises in addition to a site visit in the neighbourhood. The attendees were also able to learn about guidance available regional, national, and internationally to supplement and advance Complete Street designs. The Section wishes to



Section President Jared Duivestain and Stephen Sargeant of Watt Consulting Group.



express our appreciation to the City of Surrey for providing a venue as well as supplying materials such as data and mapping to support the training session.

Our activities have continued into the fall, where the Section has hosted two technical meetings.

The first event of the fall was a breakfast meeting held on September 6th. Jeremy Finkleman, MCIP, RPP from Urban Systems provided a presentation on New Mobility and Autonomous Vehicle Possibilities. The presentation included the results of a nation-wide survey conducted by Urban Systems to better understand the upcoming opportunities and threats presented by this new technology. Key insights gathered from the survey and suggested next steps for municipalities and agencies to

ensure proactive planning were also included in this presentation.

The second event was a lunch meeting held on October 4th. Stephen Sargeant, M.Eng., P.Eng, PTOE from the Kelowna office of Watt Consulting Group travelled to Vancouver to provide a presentation on designing roundabouts. The presentation covered typical design constraints and methods for adapting to them, examples of components that could have been designed/built better, policies and how roundabouts fit into other plans, and some unique applications. Stephen's presentation was supplemented by photos of several local and regional roundabouts in Canada highlighting the constraints for each design.

Fall breakfast meeting with a presentation from Jeremy Finkleman of Urban Systems on New Mobility and Autonomous Vehicle Possibilities.



Lunch meeting with Stephen Sargeant of Watt Consulting on roundabout design.



NORTHERN ALBERTA SECTION

After a summer break, the Northern Alberta Section of CITE kicked off the 2018-19 season in the last week of September with a couple of events. First, the Northern Alberta Section partnered with ITEUA to host a technical bike tour on September 29. The 9 AM start time was early and the 1°C starting temperature made for a brisk ride.

Thanks to everybody who toughed it out. Jen Rutledge, City of Edmonton, led the group on a tour of the southside bike routes with several stops along the way to review design details and challenges. Afterwards, the group continued across the High Level Bridge where Dallas Karhut, City of Edmonton, led the group for a tour of the Downtown Bike Network (though it was cut short for the sake of our toes!). Thanks to Jen and Dallas and all who joined for the ride!

To finish off the opening week of the season, Ryan Martinson, Stantec, made the trip from Calgary to present at the Northern Alberta Section's October luncheon. Ryan

shared his presentation on Equity and Mobility, discussing how planning decisions can be affected by a biased user experience design process. A big thanks to Ryan Martinson for a very thoughtful presentation and to Stantec for sponsoring the luncheon!



LETHBRIDGE CHAPTER

The Lethbridge chapter started summer off with an informative session on the updated TAC Geometric Design Guide for Canadian Roads. This was well attended as many people wanted to get up to date on the changes in the current edition. Next, we had Jordan Walker from the local office of Ventus Geospatial present their drone mapping capabilities and how it has been used on a variety of projects in Southern Alberta.

We took a break for the summer but made sure to fit in our Summer BBQ at the end of August. The group gathered in the park to enjoy burgers and the nice weather.

In September, we were joined by Chris Poirier of Associated Engineering and Ahmed Ali of the City of Lethbridge for a presentation on the new Lethbridge Bike Boulevard. They presented on the unique design, construction, and operation challenges experienced on the first facility of its kind in Alberta. The presentation had a great turnout, and attendees had the opportunity to have a conversation about the Bike Boulevard and cycling in Lethbridge in general.

Upcoming, the chapter is looking at more guest presenters and more partnerships with local organizations. Details for upcoming events and activities will be forthcoming in the Chapter's email invites. If you would like to be added to the Lethbridge Chapter mailing list, please contact Breanna Jackson at jacksonb@ae.ca.



SOUTHERN ALBERTA SECTION

The Southern Alberta Chapter held two workshops and one tour this quarter.

In continuation of ITESA's series of Complete Streets Workshops, a morning workshop was held prior to the September luncheon. The topic for the workshop was Community Planning and speakers were Joyce Tang, Program Manager for Centre City and Main Streets Implementation and Amanda Szpecht, City Shaping Lead for Green Line both from the City of Calgary. The workshop discussed how community planning contributes to our health and social well-being and influences our quality of life.

The luncheon speaker was David Down, Chief Urban Designer - City of Calgary discussing the Quality Design Project. The project responds to the Municipal Development Plan goals for improvement of planning and design outcomes through the creation of a more consistent understanding of expectations around design quality and clarity around definition and communication of design objectives. The project involves collecting data through criteria ratings, surveys and questionnaires which will inform both application review and policy content.

The CITE Training Committee presented their popular traffic calming workshop in October. The learning objectives included:

- Define – Define Traffic Calming and understand the function of the CGTC for Traffic Calming in Canada
- Identify – Identify the components of a Traffic Calming process and how to achieve Traffic Calming implementation
- Understand – Understand the range of Traffic Calming treatments in the CGTC; their applicability, effectiveness and design guidance
- Apply – Apply CGTC towards development of a Traffic Calming policy and application of treatments to neighbourhood and arterial example scenarios

In October, we headed over to the Calgary Transit Operations Control Centre for a tour of their facility. The recently completed upgraded Operations Centre is the main control centre for both LRT and bus operations dispatch, monitoring and incident management.

This October, we also said goodbye to a friend and twenty-year member of ITE, Joey Sherstabetoff, who passed away after a year-long battle with cancer. Joey was a University of Calgary engineering grad and worked as a transportation engineer at AMEC. He will be remembered as a committed friend, a hard worker, and very thorough engineer. We invite everyone to honour his memory with an extra hug for your loved ones.

Strong attendance at the Calgary Traffic Calming workshop held October 1.



PHOTO CREDIT: RYAN VANDERPUTTEN

MANITOBA SECTION

After a relaxing summer, the Manitoba Section was back in action with a unique opportunity at our September luncheon. David Wiebe and Adam Prokopanko of Dillon Consulting Ltd. delivered a presentation and tour of the Waverley Underpass project, which is currently ongoing in Winnipeg. Both the presentation and walking tour provided some valuable insight and behind the scenes anecdotes to our members on this high profile project. The project includes replacement of an existing at-grade railway crossing at Waverley St. and Taylor Ave. with an underpass for motorists, as well as reconstruction and rehabilitation of Waverley St. The project will not only improve traffic flow but will enhance safety, mobility and capacity, as well as active transportation within the project area.

Our October event was our annual fundraiser. For the second year, this was in the form of an Escape Room Tournament! We had another great afternoon of escape room fun (not to mention fierce competition), followed by a delicious dinner with colleagues from the Winnipeg area.

We have a number of luncheon presentations planned to bring us to the end of 2018 and the end of our current Executive positions where we will say so long and deepest thanks to current Past-President, Bjorn Radstrom.



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Waverley Underpass Project Site (supplied by Dillon Consulting Ltd.)





TORONTO SECTION

The Toronto ITE Section had a busy summer season with more fall events to round out the remainder of 2018. Toronto ITE Section strives to partner our events with complimentary organizations and municipalities to expand our reach and presentation material diversity. In 2018 alone, we partnered up with lower and upper tier municipalities, private consultants, universities, and peer transportation organizations. Some of the events over the summer season included:

1. ITE Toronto Section hosted its second technical tour on Sep 21, 2018 visiting a number of construction sites associated with Eglinton Crosstown LRT Project. The tour included visits to the Mount Dennis Station, including the elevated guide-way, and the Caledonia Station constructions sites. More than 30 ITE Toronto members and non-members consisting of professionals and students attended the tour.
2. ITE Toronto Section with IBI Group also hosted a Multi-Modal Transportation Panel on October 10. The purpose of this interactive session was to discuss key aspects of multi-modal analysis from a range of perspectives including review agencies, public realm designers, transportation consultants and technical analysis groups. The panel included attendees from York Region, City of Toronto, IBI Group, and BA Group.
3. ITE Toronto Section with the CITE Training Committee held a workshop on intersection capacity analysis and the Canadian Capacity Guide. It was also a great opportunity to be guided through some of the newest features of the PTV Vistro Software!

ITE Toronto Section is also excited about our upcoming events which includes:

1. A social event with the Young Professionals in Transportation (YPT) which will include a presentation on data analytics and an opportunity to network and socialize with your colleagues and friends.
2. ITE Toronto is working with ITE Lakehead University Student Chapter to host a technical workshop and luncheon in Thunder Bay, consisting of multiple presentations from a variety of speakers, including (but not limited to) the Ministry of Transportation of Ontario, the City of Thunder Bay, and ITE Toronto Section.
3. The fast approaching ITE Toronto Christmas Luncheon and Annual General Meeting in early December.

Thank you to all our attendees and sponsors which allow us to host such great events!



student chapter news

UNIVERSITY OF MANITOBA

The University of Manitoba Student Chapter is looking forward to another year of chapter activities! This summer, five student chapter members attended the ITE Annual Conference in Minneapolis to accept the international ITE Student Chapter Award and compete in the Collegiate Traffic Bowl! Immediately preceding the conference, the members also attended the University of Minnesota's Student Leadership Summit where they learned professional skills and technical content about transportation in our society.

Now that the school year has begun, we've held a number of recruitment events, assisted Urban Systems in planning a Bicycles & Transportation Engineering event with girls from Women in Science and Engineering (WISE), and had a luncheon presentation from Dillon Consulting on their study of opening the intersection of Portage Ave and Main St to pedestrians. Some of our members attended an ITE Manitoba Section tour of a local project and participated in a joint Manitoba Section and U of M Chapter fundraiser in an escape room tournament event.



YORK UNIVERSITY

The ITE York University Student Chapter has been busy with the start of our first academic year. We started the year with a successful membership drive that nearly doubled the membership to 26.

Our largest and most successful events so far have been our first two in a planned series of monthly academic seminars. Our September Seminar theme was transportation safety and featured three speakers from different perspectives to help educate the next generation of transportation professionals at our institution. Our speakers included **Dr. Sarah Richmond**, an applied public health scientist with Public Health Ontario; **Dr. Pedram Izadpanah**, a transportation engineer and the vice president of TES Information Technology; and **Constable Eugenia Ambrozaitis**, a training constable and designated collision reconstructionist with the Toronto Police Service. Their presentations attracted a full audience with over forty attendees learning more about various perspectives for transportation safety representing the three E's of safety: education, engineering, and enforcement.

Our October Seminar on project management featured four speakers from various management roles. Speakers included **Brett Sears**, a senior project manager with WSP; and **Dr. Sabbir Saiyed**, a manager of transportation system planning with the Region of Peel. The remaining speakers attended on behalf of the Project Management Institute (PMI) Toronto Section. This included **Siavosh Dâna**, the co-founder and CEO of AXLEAPP.IO; and **Antonio Gittens**, a transportation planner with IBI Group. This seminar was attended by nearly 50 individuals who wanted to learn more about project management. We would like to take the opportunity to thank the speakers from both of these seminars for their contributions.

At our first general meeting of the year, fourth-year civil engineering student and our vice-president, **Anson Thomas**, gave a special presentation on his internship with Metrolinx. During this meeting, our group members also had the opportunity to help shape our student chapter by joining committees and expressing interest in potential events. At our first social event, several of our members attended a Canadian Football League game where we watched the Saskatchewan Roughriders, our president's favourite team, beat the Toronto Argonauts.

Our upcoming events will include a workshop for students to learn GIS software alongside their peers. Additionally, we will continue to host our monthly seminar events that are open to all students and the general public. For information about our events and for general information about our student chapter, please visit our website at ite.club.yorku.ca. You can also email us at ite@yorku.ca or visit one of our social media pages.



Chapter members at Lassonde School club awareness event



Chapter President Erik Nevland and our September Seminar speakers



Erik and our October Seminar speakers

UNIVERSITY OF TORONTO

UofT ITE 2017-2018 Seminar Series

The weekly “Friday Seminar Series” established by the UofT ITE Student Chapter has started up for the new academic year. The weekly transportation seminar series is predominantly attended by the students and faculty of the transportation group at the University of Toronto, in addition to industry representatives and students from other institutions. The seminar series provides attendees with the opportunity to learn about the work currently being done by professionals in the transportation industry, as well as the opportunity to hear from visiting professors discussing their research and graduate students discussing their thesis work. Thus far, seminars have been delivered by graduating Master students Puyuan (Paul) Deng and Yan (Tony) Zhaung, professors from both U of T and other institutions, and industry professionals. Beginning this year, presentation slides and videos of seminars, when available, will be shared on

the Chapter’s website (www.ut-ite.ca/tagged/seminars2018to2019). We would like to invite ITE members in the GTHA to consider presenting their work during Winter 2019. Presentations are typically 40 minutes, followed by a Q&A session. The seminars take place Fridays from 11:00am to 12:00pm at the Stanford Fleming building on the St. George Campus. For more information or to request a presentation date, please contact us at ite@utoronto.ca.

UofT ITE 2018 Open House

The UofT ITE Student Chapter is pleased to announce that our open house will be held on November 2, 2018. For more details, visit our events page (www.ut-ite.ca/eventsandnews), check out our Twitter account, join our Facebook group, or contact us by email.



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congratulations & welcome

CITE extends a warm welcome to all new Canadian District ITE members who recently joined us!

Sulaf Alkarawi, P.Eng., City Of Toronto, Toronto, ON

Ran An, Mohawk College, Hamilton, ON

Laura Andersen, Clifton Associates Ltd., Saskatoon, SK

Sidra Anis, University of Windsor, Windsor, ON

Amandeep Bains, York University, Toronto, ON

Zoravar Singh Bajwa, York University, Brampton, ON

Connor M. Bayne, University of Alberta, Edmonton, AB

Spencer Behn, British Columbia Institute of Technology,
Burnaby, BC

Anastasiya Bilotserkivska, C.E.T., City Of Toronto, Richmond
Hill, ON

Noris Bot, Parsons Inc., Niagara Falls, ON

Shena Changirwa, Fort McMurray, AB

Timothy Chin, LEA Consulting Ltd., Markham, ON

Khaled Chowdhury, E.I.T., City Of Toronto, Scarborough, ON

Md. Tanvir Uddin Chowdhury, York University, Toronto, ON

George Clifford, P.Eng., New Brunswick Department of
Transportation and Infrastructure, Fredericton, NB

Tony Desjardins, P.Eng., New Brunswick Department of
Transportation and Infrastructure, Fredericton, NB

Sherif Adel Eltahlawy, Ryerson University, Toronto, ON

Sannara Eom, Lakehead University, Thunder Bay, ON

Devin Feng, University of Waterloo, Waterloo, ON

Frank Feng, PEO, City Of Toronto, Toronto, ON

Serge Gagnon, P.Eng., New Brunswick Department of
Transportation and Infrastructure, Fredericton, NB

Mauricio Garcia, Lakehead University, Thunder Bay, ON

Pengcheng Ge, Ottawa, ON

Tarek Ghoul, University of British Columbia, Vancouver, BC

Bobby Gurung, Lakehead University, Thunder Bay, ON

Stefan Hajgato, Waterloo, ON

Rizwan Heer, Mohawk College, Hamilton, ON

James Hoyt, P.Eng., New Brunswick Department of
Transportation and Infrastructure, Fredericton, NB

Sibhat Hussain, York University, North York, ON

Lisa Ing, City Of Toronto, Toronto, ON

Roberto Ionescu, City of Toronto, Toronto, ON

Roqeeb Olalekan Ismail, Lakehead University, Thunder Bay,
ON

Yunseo Jeong, Concordia University, Montreal, QC

Vithusan Jeyakanth, York University, Toronto, ON

Joel Ekwujo John-Ogbe, Lakehead University, Thunder
Bay, ON

Thomas Joines, Lakehead University, Calgary, AB

Humera Khatoon, City Of Toronto, North York, ON

Matthew Krech, Transport Canada, Ottawa, ON

Timothy Kubat, Lakehead University, Thunder Bay, ON

Jacob Lamb, University of Calgary, Calgary, AB

Adam Lanigan, Dillon Consulting, Halifax, NS

Neluka Leanage, University of Waterloo, Kitchener, ON

Daniel Abraham Leung, Lakehead University, Thunder Bay,
ON

George Liou, University of British Columbia, Vancouver, BC

Tu Lu, Lakehead University, Thunder Bay, ON

Madison Lukas, Lakehead University, Calgary, AB

Debbie MacInnis, Nova Scotia Department of
Transportation & Infrastructure Renewal, Halifax, NS

Devon Mackie, Lakehead University, Thunder Bay, ON

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congratulations & welcome

Justine MacLeod, P.Eng., New Brunswick Department of Transportation and Infrastructure, Fredericton, NB

Sai Shoben Madurai Sekar, University Of Alberta, Edmonton, AB

Josh McInnis, P.Eng., New Brunswick Department of Transportation and Infrastructure, Fredericton, NB

Eric James Richard McLaren, IBI Group, Ottawa, ON

Ross McLaren, GNEC - Great Northern Engineering Consultants, Burnaby, BC

Jues Michaud, P.Eng., New Brunswick Department of Transportation and Infrastructure, Fredericton, NB

James C. Millington, City Of Toronto, Toronto, ON

Amin Mneina, University of Manitoba, Winnipeg, MB

Pouya Moghassem, Concordia University, Montreal, QC

Ahmad Mohammadi, York University, Toronto, ON

Hossameldin Mohammed, University of British Columbia, Vancouver, BC

Saad Nadeem, Lakehead University, Thunder Bay, ON

Diane Nash, P.Eng., New Brunswick Department of Transportation and Infrastructure, Fredericton, NB

Oluremi Richard Oyediji, University of Waterloo, Waterloo, ON

Mahesh Persaud, City Of Toronto, Toronto, ON

Matt Pooya, P.Eng., City Of Toronto, Toronto, ON

Doug Pulsifer, Nova Scotia Department of Transportation & Infrastructure Renewal, Halifax, NS

Muhammad Azam Qamar, P.Eng., City Of Toronto, Mississauga, ON

Jason Rae, Nova Scotia Department of Transportation & Infrastructure Renewal, Halifax, NS

Sam Roosma, University of British Columbia, Vancouver, BC

Eric Saunderson, Region of Waterloo, Kitchener, ON

Graeme Leo Selinger, Lakehead University, Thunder Bay, ON

Yashish Sharma, University of Manitoba, Winnipeg, MB

Yuan Yi Shi, University of Toronto, Toronto, ON

Deepak Shrestha, E.I.T., City Of Toronto, Toronto, ON

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Kordell Joseph Verstraten, Lakehead University, Thunder Bay, ON

Hanh Vu, Mohawk College, Hamilton, ON

Jordan R. Waldt, Lakehead University, Ridgeville, ON

Chandler Roy White, University of British Columbia, Vancouver, BC

Kaushan Wimalasiri Devasurendra, University of Calgary, Calgary, AB

Darren Man Wong, Lakehead University, Thunder Bay, ON

Steven K. Wood, MORR Transportation Consulting Ltd., Winnipeg, MB

Sandy Yang, University of Waterloo, Waterloo, ON


Yu Zhong Zhang, Lakehead University, Thunder Bay, ON

Peter Zhou, British Columbia Institute of Technology, Burnaby, BC

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