



## Multilane Roundabout Sign and Marking Study Launched

TAC will prepare standard markings and signage, as well as application criteria, for multilane roundabouts in Canada.

In 2000, the association's Traffic Operations and Management Standing Committee (TOMSC) initiated a volunteer project with the intention of standardizing signage and markings for roundabouts. A survey undertaken at the time revealed several different signs and applications in use by different American agencies.

While TOMSC has dealt extensively with the marking and sign issues associated with single-lane roundabouts, multilane roundabouts are more complex. In particular, the location of tourist and route signage and lane markings within a multilane roundabout are two significant issues that still need to be addressed.

TOMSC therefore proposed a project focusing on multilane roundabouts that was subsequently approved by the Chief Engineers' Council.

The objectives of the project are to review and evaluate relevant studies and data on markings and signage used for multilane roundabouts, identify conditions under which various signs and markings should be used, and provide application criteria and offer alternatives where the devices are not

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## Kicking Horse Canyon Project Gets Environmental Kudos

A Trans-Canada Highway improvement project in British Columbia – one of five nominations for TAC's Environmental Achievement Award – has been selected to receive this honour.

To be presented during the upcoming TAC conference in Toronto, the award was established to recognize an exemplary contribution to the protection and enhancement of the environment or a particularly innovative approach to solving an environmental problem from a transportation perspective.

The 2007 award will be conferred on the **British Columbia Ministry of Transportation and Infrastructure** for its Kicking Horse Canyon Project, an initiative that will result in the upgrading of the Trans-Canada Highway from two to four lanes over a 26-km section between Golden and Yoho National Park.

The project has addressed key environmental elements including air quality protection,

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### 2008 TAC Annual Conference and Exhibition

#### *Transportation – A Key to a Sustainable Future*

**September 21-24  
Westin Harbour Castle Hotel  
Toronto, Ontario**

**It's too late to book exhibit space – the show is sold out – but you can still register as a conference delegate or sign up as a sponsor!**

A comprehensive registration package, including an advance program, was sent to most recipients of the print version of *TAC News* in early summer. The same information is available on the association's website at [www.tac-atc.ca](http://www.tac-atc.ca). Delegates are also encouraged to register online and qualify for a major prize!



Photo: Tourism Toronto

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recommended. In addition, recommendations will be formulated on the possible need for a public education program or changes to the rules of the road in this area.

The project will include a review and evaluation of related studies and ongoing research in the United States and Canada, as well as a review of applications across this country. The advantages and disadvantages of the various devices will be described and a recommendation made for a national guideline.

If sufficient data does not exist to determine a recommended approach to marking lanes within a roundabout, then simulator testing will be conducted as part of the study.

The major project deliverable will be a report synthesizing the evaluation and simulation testing of signs and markings in multilane roundabouts

and related recommendations, justification and recommendations for application criteria, as well as options where application is not recommended.

Recommendations for changes to TAC's *Manual of Uniform Traffic Control Devices for Canada* will also be produced.

The project will be conducted by a yet to be selected consultant under the direction of a steering committee. Work is expected to be finalized by the end of 2010.

Sponsoring the initiative are **Transport Canada, Alberta Transportation, the New Brunswick Department of Transportation, Nova Scotia Transportation and Infrastructure Renewal, the Ministry of Transportation of Ontario, Prince Edward Island Transportation and Public Works, the Quebec Ministry of Transport, the cities of Halifax, Hamilton, Montreal and Ottawa** and the **Region of Waterloo**. 

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revegetation and slope remediation, aquatic habitat, water quality protection and erosion control, roadway remediation, as well as reduction of animal-vehicle collisions and habitat fragmentation.

Before recommending the British Columbia proposal to TAC's Board of Directors, an Environment Council panel reviewed four other nominations for the award: Development of Environmental Standards and Practices: Envisioning a Greener Future with ESP! (**Ministry of Transportation of Ontario** and **Ecoplans Limited**); Island Park Drive Rapid Bridge Replacement (**Ministry of Transportation of Ontario**); Lake Wabukayne: Innovation in Storm Water Management Pond Maintenance (**City of Mississauga** in partnership with **Marshall Macklin Monaghan Limited** and **McNally Construction Inc.**); and Design and Construction of a Pervious Concrete Pavement (**Ministry of Transportation of Ontario**).

The award winner and all the nominees have been invited to make presentations at a session to take place during the 2008 TAC conference. Descriptions of the nominations will also be published in the conference proceedings. 



Photo: British Columbia Ministry of Transportation and Infrastructure

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*TAC is a national association with a mission to promote the provision of safe, secure, efficient, effective and environmentally and financially sustainable transportation services in support of Canada's social and economic goals.*

*The Association is a neutral forum for gathering or exchanging ideas, information and knowledge on technical guidelines and best practices.*

*In Canada as a whole, TAC has a primary focus on roadways and their strategic linkages and inter-relationships with other components of the transportation system.*

*In urban areas, TAC's primary focus is on the movement of people, goods and services and its relationship with land use patterns.*

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## Urban Sustainability in the Form of LED Street Lighting and Active Transportation

Two Ontario municipalities – the **City of Welland** and the **Regional Municipality of York** – will each receive TAC's Sustainable Urban Transportation Award this year.

The 2007 edition of the award will recognize the City of Welland and Welland Hydro LED streetlight conversion program – *Lighting the Way Forward to a Green Community* – and York Region's pedestrian and cycling master plan study.

The annual award recognizes outstanding contributions by association members to the development and enhancement of sustainable urban transportation, as well as innovation and transferability of programs to other Canadian communities.

Between 2005 and 2006, the City of Welland and Welland Hydro partnered to complete the conversion of all existing incandescent traffic signals to light emitting diodes (LEDs) in an attempt to reduce power consumption and associated costs.

As a result of the successful traffic signal conversion, both organizations began exploring alternative street lighting technology. In the fall of 2007,

(cont'd on p. 4)

## Winter Road Condition Terminology Project Underway

A project aimed at developing a common vocabulary to describe winter road conditions has been launched by TAC.

In winter, transportation departments across Canada provide many different road users with information about road conditions. The information must accurately describe the conditions motorists are likely to encounter to help ensure safe trip planning and driver behaviour.

Based on road condition information, travelers may decide to take a trip without making any changes to their plans other than to use extra caution, or to change their plans taking into account driving conditions. Changes could affect the departure time, expected arrival time, expected travel speed and even the mode of travel. In some cases, the trip may be cancelled or rescheduled.

To ensure the accuracy of the information and consistent understanding, specialists believe that it must be accessible via various media including radio, television, print and Internet, and available in its entirety. They also recommend that the information not be subject to interpretation by the media or users.

The new project will initially focus on compiling the various vocabularies used in Canada and across North America to describe winter road

conditions. Criteria will be established to assess the relevance and reliability of the information conveyed using these vocabularies. Processes and terminology that meet the criteria will be recommended and consideration will be given to opportunities to integrate the recommended terminology into other systems used to acquire and transmit road conditions.

The major deliverable of the project will be a report describing the research work and offering recommendations on winter road condition terminology.

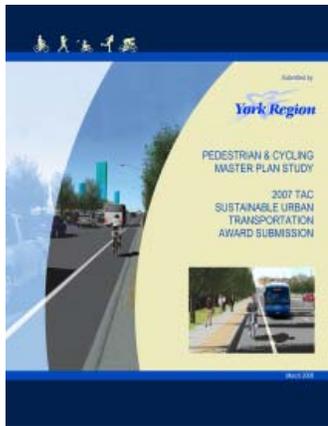
Proposed by TAC's Maintenance and Construction Standing Committee, the project will be conducted by a yet to be selected consultant reporting to a steering committee. The initiative is expected to be completed by the spring of 2010.

The project sponsors are **Alberta Transportation, Manitoba Infrastructure and Transportation, the New Brunswick Department of Transportation, Newfoundland and Labrador Transportation and Works, Nova Scotia Transportation and Infrastructure Renewal, the Ministry of Transportation of Ontario, the Quebec Ministry of Transport, the Yukon Department of Highways and Public Works, Transport Canada** and the **cities of Edmonton and Winnipeg**. 

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Welland Hydro undertook the installation of 47 90-watt LED streetlights on a minor collector road. Due to the vast attention this project generated, the city requested a third-party validation of the initiative. This included a public perception survey and on-site testing.

The City of Welland is now moving forward with plans to adopt LED technology in all new lighting applications. The city recently updated its engineering standards for new subdivisions accordingly. In addition, it is beginning a review of decorative street lighting applications.



As for York Region, one of the key action areas of its recently approved sustainability strategy is preparing and adopting the region's pedestrian and cycling master plan to promote an active transportation system and lifestyle. It means giving a higher priority to walking, cycling, public transit and carpooling. This will result in a

more balanced transportation system with less emphasis on single-occupant vehicle trips in order to reduce the region's carbon footprint.

The master plan also includes planning and design guidelines for the development of a regional pedestrian system and cycling network. The

plan is more than a proposed network of on-and-off-road pedestrian and cycling facilities to connect local municipalities. It is a plan that includes a partnership funding program, an implementation strategy, as well as a set of outreach programs to promote safe walking and cycling in York Region.

The region, which has a fast growing population now totalling about one million people, is committed to changing public travel choices and providing a range of accessible alternate transportation options for all users. The many benefits include the improved health of residents, cleaner air, a more efficient transportation network and reduced dependence on the automobile.

The other five nominations considered for the Sustainable Urban Transportation Award were: Implementation of Transportation Demand Management Initiatives in the Region of Peel (**Region of Peel**); Design and Construction of Concrete Pavements with Recycled Curb and Gutter and Sidewalk (**University of Waterloo** and **Cement Association of Canada**); City of North Vancouver's Long-term Transportation Plan (**City of North Vancouver** and **Urban Systems Ltd.**); Pedestrian and Cyclist Bridge over Highway 401 (**Region of Waterloo**, **City of Kitchener** and **City of Cambridge**, ON); and City of Montreal's Transportation Plan (**City of Montreal**).

A session based on the 2007 urban transportation award will be held during TAC's upcoming annual conference.

The award is supported by **Transport Canada's Urban Transportation Showcase Program (UTSP)**. 



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## CONTINENTAL GATEWAY: SUSTAINABLE TRANSPORTATION PLANNING

*Editor's Note: In this contribution to TAC News, Linda McAusland, director of the Transportation Policy Branch of the Ministry of Transportation of Ontario, writes about the climate change aspects of the strategy for the Ontario-Quebec Continental Gateway and Trade Corridor. Proposed by TAC's Task Force on Climate Change, this feature is the third article to profile climate change initiatives of member agencies.*

*Other agencies are encouraged to contact the newsletter editor with a view to submitting articles or briefs highlighting their own projects in this area.*

Climate change is a serious environmental challenge for governments and industry around the world and for the transportation sector in particular. Transportation sources produce 25 per cent of total greenhouse gas (GHG) emissions in Canada, making climate change a critically important issue that all transportation planners need to address.

The Ontario-Quebec Continental Gateway and Trade Corridor is a key component of Canada's multimodal transportation system that includes strategic ports, airports, intermodal facilities and border crossings, as well as essential road, rail and marine infrastructure. The governments of Ontario, Quebec and Canada are working closely together and with the private sector to develop a strategy for the gateway that ensures it can meet the needs of future growth.

Madeleine Paquin, president and CEO of Logistec Corporation, Claude Robert, CEO of Transport Robert, and Patrick R. Sinnott, senior vice-president, Supply-Chain, Canadian Tire, have all agreed to participate as strategic advisors to support the three governments on this initiative. The strategy will also actively take into account developments from Canada's trading partners in the U.S. Michael Kergin, former Canadian ambassador to the U.S., has been retained as the strategic counsellor on the Canada-U.S. perspective.

The goal of the continental gateway strategy is to develop sustainable measures to

optimize Ontario's and Quebec's multimodal transportation systems in the short, medium and longer term.

### Improving Infrastructure

Strategic investments in infrastructure, particularly at borders and in urban areas, provide a substantial opportunity to alleviate

“ The continental gateway initiative will continue to examine and address regulatory issues for all modes that impact the efficiency and sustainability of the transportation system. ”

road traffic congestion and reduce resulting GHG emissions and air pollutants.

A major continental gateway infrastructure project is a new crossing at the Windsor-Detroit border. The Windsor-Essex Parkway is the technically and environmentally preferred access road option extending Highway 401 to a new inspection plaza and river crossing. In Quebec, the completion of Highway 30 will provide the Montreal region with a bypass route. These projects will help reduce congestion on some of the gateway's key trade routes and ensure they can meet the demands of future growth. The continental gateway strategy will also look at other opportunities for strategic infrastructure improvements, including the use of intelligent

transportation systems, to facilitate the flow of traffic for all modes.

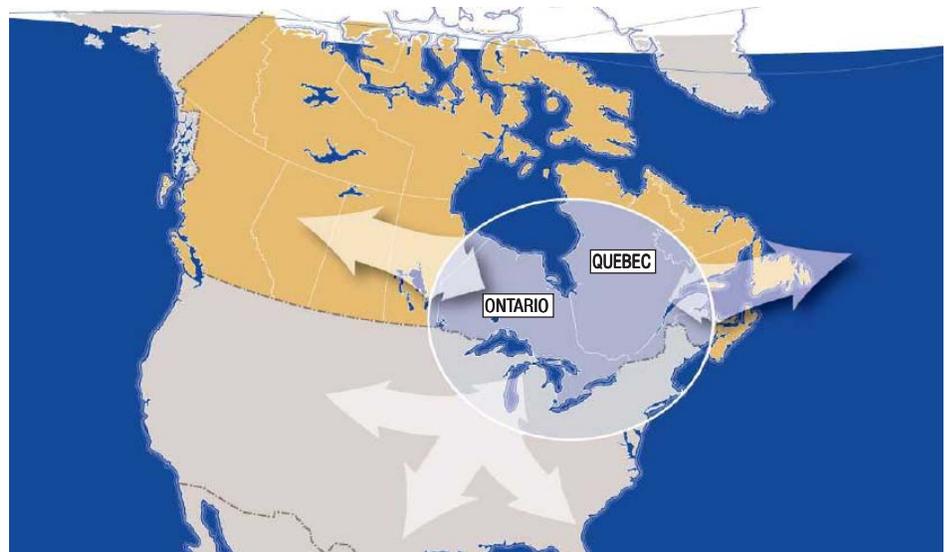
### Regulatory Changes

The continental gateway strategy is examining changes to policies and regulations that will support industry in making choices which are efficient, competitive and environmentally friendly.

As part of the Ontario-Quebec Agreement on Trade Enhancement and Economic Cooperation, the governments of Ontario and Quebec have moved towards a harmonized approach for implementing speed limiters for trucks. In addition, Ontario will pursue changes to permit the use of single wide tires on trucks and develop a program to permit long combination vehicles on Ontario's highways. These regulatory changes will increase the efficiency of the trucking industry and will reduce the amount of GHG emissions produced by the transportation sector.

The Government of Canada also offers an ecoFREIGHT program to fund the demonstration of new technologies and the purchase of proven technologies that lower GHG emissions in the transportation of freight by all modes. The continental gateway initiative will continue to examine and address

(cont'd on p. 6)



Ontario-Quebec Continental Gateway and Trade Corridor

(cont'd from p. 5)

regulatory issues for all modes that impact the efficiency and sustainability of the transportation system.

“ Strategic investments in infrastructure, particularly at borders and in urban areas, provide a substantial opportunity to alleviate road traffic congestion and reduce resulting GHG emissions and air pollutants. ”

### Multimodal Integration

The continental gateway initiative is taking a multimodal approach to freight movement, one that supports all modes of transportation and their optimal integration. For example, the initiative is examining ways to improve access to intermodal facilities such as ports, airports and rail intermodal yards, and helping

provide industry with efficient and competitive modal choices.

A comprehensive workplan has been developed to guide the continental gateway strategy including eight research projects on infrastructure and eight multi-government working groups to address policy and regulatory issues that affect the efficiency and effectiveness of the transportation system. This work will culminate in the fall of 2009 with the release of a strategy for the

continental gateway with infrastructure, policy and regulatory recommendations.

Government and industry are working together in improving freight transportation for the future to ensure the Ontario-Quebec multimodal transportation system is efficient and competitive and contributes to economic growth in an environmentally responsible way.

For more information on the Ontario-Quebec Continental Gateway and Trade Corridor, visit [www.continentalgateway.ca](http://www.continentalgateway.ca).



## Report on Utility Management in Rights-of-way Available Soon

TAC has prepared a synthesis of practice documenting the management, coordination and placement of utilities in rights-of-way in terms of the needs of road authorities.

Management of utilities in the right-of-way, which is the responsibility of the road authority, has become increasingly complex in recent years. Growth continues at a rapid pace in most regions. Roadways and utilities alike are aging and many require replacement, while the underground infrastructure, built over many years, is often poorly documented. As such, there is an obvious potential for the needs of the traveling public, road authorities and utility companies to conflict.

The upcoming report provides information on existing utility management practices and experiences in Canada, as well as Europe and New Zealand. Related legislation and policies are also reviewed.

The document discusses fees for occupying the right-of-way and compensation for relocations, coordination and communication between road authorities and utility companies, as well as procedures for utility construction and work.

The report identifies some common concerns including road project delays and increased costs caused by utility relocations. It notes the quality of data, either for field locates or as-built drawings, is often poor. Another concern expressed is that utility cuts made in newly constructed pavements decrease road service life, thereby increasing costs. Finally, the report says that significant efforts are required to obtain equitable sharing of costs related to the management of the right-of-way, pavement degradation and utility relocation.

Further work on collaborative approaches, data standards and common data systems is also suggested in the report.

Initiated by TAC's Maintenance and Construction Standing Committee, the project was conducted by the **Boulevard Transportation Group** under the supervision of a steering committee. The report was subsequently approved by the Chief Engineers' Council.

Interested parties should check the association's website this fall for a notice on how to obtain the *Synthesis of Practice for Managing Utilities in and Adjacent to the Public Right-of-way*.

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## TAC Foundation Renews Investment in Students' Futures

With more than 70 applications for its 2008-09 academic year scholarships, the Scholarship Committee of the TAC Foundation had a difficult task selecting the 27 individuals who will receive the awards.

The recipients will share over \$125,000 for transportation-related studies that the Foundation trusts will lead to future contributions to the sector.

Name	Degree	University	Scholarship Donor	Amount
Dominique Poirier	Postgraduate	McGill University	iTRANS Consulting Inc.	\$10,000
Garreth Todd Rempel	Postgraduate	University of Manitoba	Waterloo Alumni (Carl Haas, Susan Tighe, Ralph Haas and Frank Meyer)	7,500
Conor Reynolds	Postgraduate	University of British Columbia	EBA Engineering Consultants Ltd.	5,000
Luc Pellecier	Postgraduate	École de technologie supérieure	Stantec Consulting Ltd.	5,000
Tarek Agal	Postgraduate	École de technologie supérieure	Albert M. Stevens	5,000
Jean-Philippe Roy	Postgraduate	École de technologie supérieure	IBI Group	5,000
Jonathan Lewis	Postgraduate	University of New Brunswick	MMM Group Limited	5,000
Haithem Soliman	Postgraduate	University of Manitoba	Cement Association of Canada	5,000
Razavi Navabzadeh	Postgraduate	University of Waterloo	Provinces/Territories	5,000
Anne-Marie Langlois	Postgraduate	Université Laval	Provinces/Territories	5,000
Farbod Nassiri	Postgraduate	University of Waterloo	TAC Foundation	5,000
Kassie Betts	Undergraduate	University of Ottawa	3M Canada Company	5,000
Ben Jablonski	Undergraduate	University of Manitoba	Armtec	5,000
Stephen Czerniej	Undergraduate	Simon Fraser University	UMA Engineering Ltd.	5,000
Jérémie Aubé	Undergraduate	Université de Moncton	McCormick Rankin Corporation	5,000
James Anderson	Undergraduate	University of Alberta	Delcan Corporation	5,000
Daniel Lai	Undergraduate	University of British Columbia	Dillon Consulting Limited	5,000
Kim Lafrance	Postgraduate	Université Laval	Provinces/Territories	4,000
Andrew Chun Kit Wong	Postgraduate	University of Toronto	Provinces/Territories	4,000
Zeeshan Abdy	Postgraduate	University of Waterloo	Provinces/Territories	4,000
Pedram Izadpanah	Postgraduate	University of Waterloo	Provinces/Territories	3,000
Graeme Brown	Postgraduate	Dalhousie University	Provinces/Territories	3,000
Pooya Rafiee	Postgraduate	École Polytechnique de Montréal	TAC Foundation	3,000
Iphigénie Ndiaye	Postgraduate	Université du Québec à Montréal	Provinces/Territories	3,000
Muhammad Ahsanul Habib	Postgraduate	University of Toronto	TAC Foundation	3,000
Josée Dumont	Undergraduate	University of Toronto	Provinces/Territories	3,000
Evan Andrew Thompson	Undergraduate	Dalhousie University	Municipalities	3,000

In addition to the scholarship winners selected directly by the Foundation, at least six \$1,000 entrance bursaries, funded by JEGEL and the Emery family, will be given out by the educational institutions the winning students are attending.

The TAC Foundation is expressing special appreciation to its scholarship committee, which was headed up by Susan Tighe and Robyn McGregor. The other members of this year's committee were Henri Allain, Curtis Berthelot, Nancy Button, Alan Carter, Lynne Cowe Falls, Wei He, Billy Kenny, Peter Lesters, Donaldson MacLeod, Jeannette Montufar, Li Ningyuan, Pascale Pierre, Larry Purcka, Chris Raymond, Ahmed Shalaby, Guy Tremblay and Robin Walsh. 

## SNOW SCHOOL GETS TOP GRADES

TAC's new Educational Achievement Award will be presented to the **Ontario Good Roads Association (OGRA)** for its snow school program.

The award was established last year to recognize outstanding contributions by a TAC member in the area of education or training relating to an in-house or external program that has one or more noteworthy elements of innovation, demonstrable payoff, widespread recognition, improved skills sets, improved practices, or provides the foundation for future and better business practices.

The winning nomination was one of three submitted for the 2007 award. It will be conferred at the association's upcoming Toronto conference.

"Snow School" was developed to provide an overview of the most current winter maintenance methods, equipment and materials, as well as effective salt management practices, to municipal and contract equipment operators, patrollers, supervisors and mechanics. The three-day in-residence program is a collaborative effort of OGRA, the **Ministry of Transportation of Ontario** and the largest municipal road salt users in the province.

Snow School is now recognized throughout Ontario as well as in other Canadian jurisdictions as the most comprehensive winter maintenance training program currently available in Canada. It is designed to meet the requirements of **Environment Canada's Code of Practice for the Environmental Management of Road Salts**. It is also the first initiative of its kind to offer content specifically for mechanics.

Two other nominations received for the award were also reviewed by a selection committee of TAC's Education and Human Resources Development Council before the OGRA program was recommended to the association's Board of Directors. They were for a maintenance career training program to enhance staff development opportunities and provide the skilled workforce needed to meet current and future program delivery expectations (**Manitoba Infrastructure and Transportation**) and an aviation career development program established to assist students pursuing a career in this area in the Northwest Territories (**Northwest Territories Department of Transportation**). 

### FOR YOUR AGENDA

**TAC's Spring 2009 Technical Meetings** will be held in Ottawa April 16 to 20. The meetings provide an opportunity for all of the association's councils and committees to convene. 



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## Project Results to Provide Guidance on Chevron Alignment Signs

A project intended to develop national guidelines on the use and installation of chevron alignment signs is being undertaken by TAC.

Many Canadian jurisdictions have established their own guidelines for chevron alignment signs. As a result, inconsistencies have developed among road authorities. Chevron placement is also inconsistent on different types of roads in given jurisdictions. Motorists can therefore find it confusing to interpret the signs.

Based on this situation, TAC's Traffic Operations and Management Standing Committee determined that national guidelines on the use and installation of chevron alignment signs were needed. Road authorities will be encouraged to apply the guidelines, thereby strengthening the shift towards uniformity and enhancing motorist comprehension. This will help respond to driver needs especially in critical areas where there is a significant change in the horizontal alignment of a road.

The new project will review existing practices across Canada and the United States, related research, as well as human factors and installation principles associated with sign interpretation and recognition. If necessary, field testing will be undertaken to evaluate the efficiency of recommended guidelines. In addition to the guidelines, a specific update to the Association's *Manual of Uniform Traffic Control Devices for Canada* will be prepared as part of this project.

A consultant will be selected by year's end to carry out the project under a steering committee. Work should be completed by the end of 2010.

The project is being sponsored by **Alberta Transportation, Manitoba Infrastructure and Transportation, the New Brunswick Department of Transportation, Nova Scotia Transportation and Infrastructure Renewal, the Ministry of Transportation of Ontario, the Quebec Ministry of Transport, the Saskatchewan Ministry of Highways and Infrastructure** and the **cities of Edmonton and Ottawa**. 

## New Award Granted for Winter Road Safety Initiatives

The **Ministry of Transportation of Ontario** will be the first recipient of TAC's Road Safety Engineering Award in recognition of its winter road safety advancements.

The new award reflects the importance that the association attaches to road safety within the transportation sector. It is intended to honour exemplary contributions by a TAC member in Canadian roadway safety engineering and infrastructure.

The honour is also designed to encourage the development and implementation of roadway safety countermeasures, guidelines and safety management systems for roadway design and operations.

All roadway safety initiatives related to engineering or infrastructure are eligible to receive the award for which three organizations were nominated this year.

Over the last decade, the Ministry of Transportation of Ontario (MTO) has made many advancements in winter road safety. It has successfully developed and implemented a broad range of scalable countermeasures to deal with winter weather and the resulting driving conditions. MTO's approach has been to attack the problem on all levels with an array of countermeasures addressing the network as a whole, specific corridors and finally so-called hot spots or higher-risk locations.

Two other submissions received for the 2007 award were also reviewed by a selection panel reporting to TAC's Road Safety Standing Committee. They were entitled: Night Icing Potential Project: Thermal Mapping (**Nova Scotia Transportation and Infrastructure Renewal**) and In-pavement LED (Light Emitting Diode) Pedestrian Crosswalks (**City of Airdrie, AB**). The winning nomination was ratified by the Board of Directors.

The award will be presented at TAC's Toronto annual conference and a session based on the nominations will also be held during the event. 

## PEOPLE IN THE NEWS

At the British Columbia Ministry of Transportation and Infrastructure, **Sandra Carroll** is the new assistant deputy minister responsible for transportation planning and policy. She replaces **Kathie Miller** who has retired.

**Alan Humphries** has been appointed assistant deputy minister for policy and corporate services at Alberta Transportation.

**Thomas Prendergast** is the new chief executive officer of TransLink (South Coast British Columbia Transportation Authority), succeeding **Pat Jacobsen** who stepped down earlier this year.

**Réjean Chartrand** has joined Morrison Hershfield Limited as senior advisor on public-private partnerships. He will also provide consulting services for transportation and municipal sector infrastructure and operations.

At the City of Edmonton, **Mike Koziol** has been named general manager of the new Capital Construction Department while **Brice Stephenson** has assumed the position of manager of transportation operations.

**Gary Vlieg** is now the director of engineering, parks and environment at the City of Langley, BC.

**Jeff Morrison** has left the Canadian Construction Association to become president and chief operating officer of the Association of Canadian Engineering Companies.

**Geni Bahar** is now president of Navigats Inc.

**Ken Fyvie** of Pavetech Consultants Ltd. is the winner of a \$100-gift certificate from Lee Valley Tools for which participants in a recent TAC member and customer survey were eligible. 

## 2008 CONFERENCE SPONSORSHIP CONTINUES TO GROW

TAC's Toronto conference has proven to be very attractive to previous and new sponsors alike. Special thanks to the most recent sponsors who signed on since the last issue of the newsletter.

### NATIONAL SPONSORS

#### Platinum

**Hatch Mott MacDonald Ltd.**

#### Bronze

CH2M HILL Canada Limited  
International Municipal Signal Association (IMSA)

### HOST-ACTIVITY SPONSORS

#### First Star

**JEGEL (John Emery Geotechnical Engineering Limited)**  
**Morrison-Hershfield Limited**  
**Bot Construction Limited**  
**Lafarge North America**  
**Miller Group**  
**Dufferin Construction Limited/**  
**St. Lawrence Cement Incorporated**  
**Cement Association of Canada**  
**Vineland Estates Winery**  
**Atlantic Industries Limited**  
**(Companion Program)**

#### Second Star

Highway Construction Inspection Incorporated  
3M  
JEGEL (John Emery Geotechnical Engineering Limited)  
Thurber Management Limited  
Corrugated Steel Pipe Institute  
Carillion Canada Incorporated  
Pioneer Construction Limited  
Facca Incorporated  
Aecon Construction and Materials Limited  
Rankin Construction Incorporated  
TWD Roads Management Incorporated  
Ontario Road Builders Association (ORBA)  
URS Canada

#### Third Star

Genivar Consultants Limited Partnership  
McCormick-Rankin  
Bonnechere Excavating Incorporated  
Phillips Engineering Limited  
Steed and Evans Limited  
Stacey Electric  
Metric Group Limited/  
Metric Contracting Services Corporation  
Interpaving Limited  
D.F. Elliott Consulting Engineers Limited  
Walker Aggregates Incorporated  
Stantec Consulting Limited  
Fowler Construction Company Limited  
Graham Brothers Construction Limited  
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Centre for Pavement and Transportation Technology (CPATT)  
Burgess Engineering  
Shaheen and Peaker Limited  
Coco Group of Companies  
(Companion Program)  
UMA Engineering Limited  
(Companion Program)  
Totten Sims Hubicki Associates  
(Companion Program)  
Canadian Council of Independent Labs (CCIL)  
Peto MacCallum Limited

### TAC Member and Customer Survey Earns Strong Response

TAC would like to thank all those who participated in its member and customer online survey or in one of the telephone focus groups moderated by Vision Research, the consulting firm assisting the association in the development of certain aspects of its next business plan.

As participation rates were above the target levels set by TAC and the consultant, the feedback will be that much more valuable to the association's Board of Directors as it begins preparing the three-year business plan to be launched next April.

Results of the survey will be shared with *TAC News* readers next spring after TAC staff has had the time to analyze them in conjunction with the consultant and to present the findings to the Board.

One key finding that can be shared at this time is that overall satisfaction with the association and its services remains high. 

#### Other

Ontario Hot Mix Producers Association  
Roadware  
Municipal Signal Association

## Coloured Pavements for Bus Lanes to Be Studied

TAC has launched a project that will evaluate the effectiveness of coloured pavements to indicate the exclusive use of designated travel lanes by buses.

The designation of bus lanes is a common transit priority measure taken by road authorities to give transit vehicles sole use of a travel lane on either a full or part-time basis.

To date, most bus lanes in North America have been designated by signs and pavement markings. The pavement markings typically include lane markings, as well as a diamond symbol sometimes accompanied by the words "Buses Only" at the start of a city block.

The use of coloured pavements to indicate exclusive bus lanes may better convey the special bus-only status on a continual basis while eliminating the need for motorists to turn their attention away from the road.



Photo: Kornel Mucsi

Proposed by the association's Traffic Operations and Management Standing Committee, the project will include a review of current applications of coloured pavements by different jurisdictions, including bylaws, warrants and effectiveness. The use of pavement colouration in other traffic control devices will also be considered. In addition, technical specifications for pavement colouration will be reviewed to meet safety requirements.

The project will lead to the development of a warrant and a set of conditions for the implementation of coloured pavements for bus lane designation. It will also identify and recommend a colour pigment for bus lanes.

Another project objective is to develop complete designation schemes with signage, pavement markings and colouration for all categories of bus lanes including full versus part-time use and restrictive or permissive designation for right turns.

The final project objective is to formulate technical specifications for pavement colouration addressing issues that include colour pigment, visibility under various lighting and inclement weather conditions, safety, skid resistance and maintenance costs.

The major project deliverable is a report detailing research, conclusions and recommendations for the use of coloured pavements to designate bus lanes. The document will also provide recommended revisions to TAC's *Manual of Uniform Traffic Control Devices for Canada*, as appropriate.

A steering committee will direct the work of the consultant selected to carry out the project which is expected to be completed in the fall of 2009.

The initiative is sponsored by **Transport Canada**, the **Quebec Ministry of Transport**, the **cities of Calgary, Montreal and Ottawa**, the **Halifax Regional Municipality**, the **Montreal Transit Corporation**, the **Toronto Transit Commission** and **TransLink (South Coast British Columbia Transportation Authority)**. 

## NEW MEMBERS

TAC is pleased to welcome the following new members:

### **AC Eagle Enterprises Ltd.**

Kamloops, BC  
*Darrell Axani*

### **AME Materials Engineering (Ottawa)**

Ottawa, ON  
*Steve Goodman*, Branch Manager

### **Town of Comox**

Comox, BC  
*Glenn Westendorp*, Public Works Supervisor

### **Mackenzie County**

La Crete, AB  
*Ryan Becker*, Director, Planning & Emergency Services

### **NAVIGATS INC.**

North York, ON  
*Geni Bahar*, President

### **Nova Scotia Community College - Waterfront Campus**

Dartmouth, NS  
*B. Lynn Allison*, Academic Chair

### **Ontario Hot Mix Producers Association - Asphalt Institute**

Mississauga, ON  
*Alexander Brown*, Technical Director

### **Pinnacle Engineering Limited**

St. John's, NL  
*Keith Hannon*

### **Terraprobe Limited**

Brampton, ON  
*Rehman Abdul*, Senior Geotechnical Associate

### **Municipal District of Wainwright No. 61**

Wainwright, AB  
*Ivan Perich*, Public Works Superintendent

### **Md. Hossain**

Calgary, AB

## COMING EVENTS

### 2008

#### 86<sup>th</sup> Congress of Transportation Clubs International

September 11-13  
 Moncton, New Brunswick  
 Tel. (877) 858-8628  
[www.transportationclubsinternational.com](http://www.transportationclubsinternational.com)

#### TAC Annual Conference & Exhibition

September 21-24  
 Toronto, Ontario  
 Tel. (613) 736-1350  
[www.tac-atc.ca](http://www.tac-atc.ca)

#### Annual Meeting of the American Public Transportation Association

October 5-8  
 San Diego, California  
 Tel. (202) 496-4800  
[www.apta.com](http://www.apta.com)

#### National Concrete Bridge Conference

October 5-8  
 Orlando, Florida  
 Tel. (312) 360-3205  
[www.pci.org/news/bridge\\_conference](http://www.pci.org/news/bridge_conference)

#### Symposium on Pavement Surface Characteristics for Roads and Airfields – SURF 2008

October 21-23  
 Portoroz, Slovenia  
 Tel. (418) 644-0890, ext. 4056  
[www.surf2008.si](http://www.surf2008.si)

#### Fall Conference of the Canadian Urban Transit Association

November 8-12  
 Windsor, Ontario  
 Tel. (416) 365-9800  
[www.cutaactu.ca](http://www.cutaactu.ca)

#### International Conference on Warm-mix Asphalt

November 11-13  
 Nashville, Tennessee  
 Tel. (888) 468-6499  
[www.hotmix.org](http://www.hotmix.org)

#### Annual Urban Infrastructure Week

November 17-19  
 Quebec City, Quebec  
 Tel. (514) 848-9885  
[www.ceriu.qc.ca](http://www.ceriu.qc.ca)

#### Annual Conference of the Canadian Technical Asphalt Association

November 17-19  
 Saskatoon, Saskatchewan  
 Tel. (250) 361-9187  
[www.ctaa.ca](http://www.ctaa.ca)

#### Freight Demand Forecasts Conference

December 3-4  
 Vancouver, British Columbia  
 Tel. (604) 687-8691  
[www.westac.com](http://www.westac.com)

### 2009

#### 88<sup>th</sup> Annual Meeting of the Transportation Research Board

January 11-15  
 Washington, DC

Tel. (202) 334-2934  
[www.trb.org/meeting/](http://www.trb.org/meeting/)  
[www.hotmix.org](http://www.hotmix.org)

#### TAC Spring Technical Meetings

April 16-20  
 Ottawa, Ontario  
 Tel. (613) 736-1350  
[www.tac-atc.ca](http://www.tac-atc.ca)

#### TAC Annual Conference & Exhibition

October 18-21  
 Vancouver, British Columbia  
 Tel. (613) 736-1350  
[www.tac-atc.ca](http://www.tac-atc.ca)

## Traffic Signal Conspicuity Publication to Be Released

A synthesis of current practices used to enhance traffic signal conspicuity will be published by TAC in the near future.

“Conspicuity” refers to the attention-attracting quality of a traffic signal and depends on the signal characteristics, the interaction of the signal with the background, and whether and where the driver expects to see it. The more conspicuous a signal is, the easier it will be for a driver, cyclist or pedestrian to detect it quickly.

The main determinants of conspicuity are signal size, signal luminance, contrast between signal and background, complexity of the visual scene and driver expectation.

The focus of the TAC project that led to the publication was on traffic signal placement (primary, secondary, auxiliary or pedestrian), signal head orientation (horizontal or vertical), lens type (halogen, LED, incandescent or other), lens shape (square, circle, diamond or arrow), lens size, backboard colour, reflective tape including use and colour, visors or hoods, and colour of backside of backboard.

The synthesis consists of a review of information contained in traffic signal guideline manuals, technical papers and other publications from North America, the United Kingdom and Australia. It also documents regulations on the installation of signal displays. The report includes a summary of the results of a survey conducted across North America with a view to determining current practices. In addition, a review of emerging research and technology is provided.

Based on the overall project findings, there is a need for additional research and testing in a number of areas related to the conspicuity of traffic signal displays. These have been prioritized with the most important listed first: colour of backboards (yellow vs. black), use of reflective tape on backboards (yellow tape on yellow backboards and white tape on black backboards), use of 300 mm lenses for all displays, effectiveness of placement / orientation (horizontal vs. vertical placement of heads), effectiveness of lowering luminance of displays at night, and target size.

Proposed by the TAC’s Traffic Operations and Management Standing Committee, the project was conducted by **iTRANS Consulting Inc.** under the direction of a steering committee. The results were approved by the Chief Engineers’ Council.

*Synthesis of Practice for Enhancing Traffic Signal Conspicuity* is expected to be published in late fall. A notice will be posted on the association’s website as soon as it becomes available. 