



Work Set to Begin on Pavement Asset Design and Management Guide

TAC has launched a project intended to revise the association's *Pavement Design and Management Guide* and to prepare a new edition addressing pavement asset design and management.

The 1997 edition of the guide will be evaluated and updated where necessary. Key update areas are expected to include infrastructure, asset management and valuation, new pavement structural design methodologies including mechanistic-empirical methods, as well as innovative materials like warm asphalt, pervious concrete and "green" pavements.

The new national guide for pavement asset design and management will be directed at meeting the needs of engineers and technologists in public agencies, industry and academia, from entry to senior levels.

The effort is being funded by **Transport Canada, Alberta Transportation, the British Columbia Ministry of Transportation and Infrastructure, Manitoba Infrastructure and Transportation, the New Brunswick Department of Transportation, Nova Scotia Transportation and Infrastructure Renewal, Newfoundland and Labrador Transportation and Works, the Ministry of Transportation of Ontario, Prince Edward Island Transportation and Public Works, the Ministry of Transport of Quebec, the Saskatchewan Ministry of Highways and Infrastructure, Yukon Highways and Public Works, the cities of Calgary, Edmonton and Montreal, as well as the Cement Association of Canada and the Ontario Hot Mix Producers Association** in conjunction with the Asphalt Institute.

A project steering committee comprising representatives of the sponsors is being formed, and work will soon get underway to develop terms of reference and select a consultant to conduct the assignment. The project is expected to take up to three years to complete.

If any other organizations are interested in contributing to the project, they can still do so and also delegate a representative to sit on the steering committee.

The initiative was recommended by TAC's soils and materials and pavements standing committees. 



Upcoming Member Survey on Active Transportation

Many TAC members will soon be surveyed as part of an association project aimed at preparing a synthesis of practices and recommendations for the development and implementation of active transportation strategies for Canadian communities.

Active transportation is described as self-propelled mobility such as walking, cycling, in-line skating, skateboarding, skiing and paddling.

The **IBI Group**, in association with **Noxon Associates Limited, Vélo Québec** and Green Communities Canada, was selected by TAC to research, identify and understand active transportation successes and challenges in Canadian communities (see story on project in winter issue of *TAC News*).

The consultants are preparing a web-based survey in which TAC municipal members and other stakeholders, including the provincial and federal governments and non-government organizations, will be asked to participate in March.

The goal of the survey is to identify community successes and obtain information on related factors and challenges. Follow-up interviews will be conducted with key stakeholders working on active transportation projects in order to better understand their initiatives.

If you are involved in promoting active transportation or know key players in your community who are, contact Sandra Majkic at the TAC office (smajkic@tac-atc.ca) for survey participation. 

In This Issue

"School Bus Stop Ahead" Sign Guidelines to Be Published

Nominate the Transportation Industry's Best Players!

Urban Goods Movement Data Users to Be Surveyed

Cement, Concrete and Sustainable Public Works

Report Looks at Friction Testing for Winter Maintenance Performance Measurements

Report Looks at Friction Testing for Winter Maintenance Performance Measurement

A report on winter road maintenance performance measurement using friction testing will be published by TAC in the near future. The work is another step toward improving the overall maintenance of Canada's road system during winter.

The long-term vision of the initiative leading up to this publication was to utilize road surface friction testing to facilitate winter maintenance planning, evaluate the effectiveness of maintenance operations and minimize environmental impacts. Road safety would also be enhanced as motorists could be advised of friction levels in an easily understood format.



Photo: Opus International Consultants (Canada) Limited

Through a literature review and a survey of current practices in Canada and various countries, the study in question established the latest developments in winter friction testing and how it is integrated into maintenance operations. The types of equipment used and their effectiveness, based on the experience of road agencies, were reviewed. The study also investigated current approaches adopted by agencies to communicate road friction data and other information to the motoring public.

In summary, the study found that winter road surface friction measurement has been implemented in Finland, Norway and Sweden as a quality standard with these countries' road administrations deeming it to be a useful traffic safety tool. However, the agencies indicated that measuring friction can be difficult and challenging, and are therefore planning to improve quality standards with further research and development.

Scandinavian experience shows that, in order to facilitate winter maintenance operations, it would be most beneficial to develop an

efficient maintenance management system that integrates road condition measurements, including possible friction measurements, with tools that support contractor performance and communicate real-time information to road users. This information can be provided through the Internet as well as on variable message and speed signs.

Other lessons learned from the current use of friction measurements were also documented.

The study was initiated by TAC's Maintenance and Construction Standing Committee and carried out by **Opus International Consultants (Canada) Limited** under the direction of a steering committee.

Entitled *Winter Maintenance Performance Measurement Using Friction Testing*, the report has been approved for publication by TAC's Chief Engineers' Council. An announcement will be posted on the homepage of the association's website as soon as it is released.

TAC Omnibus Sponsors

Transportation | Water | Community Infrastructure | Environment | Design

COMMUNITIES
TRANSPORTATION
BUILDINGS
INFRASTRUCTURE

t: 905.882.1100 | f: 905.882.0055 | For more info please visit our website at: www.mmm.ca

One Team. Infinite Solutions.

Stantec's transportation group provides comprehensive services for aviation, bridge, rail, roadway, and transit projects.

stantec.com

Offices throughout North America

A quarterly publication of the
Transportation Association of Canada
ISSN 0317-1280 ~ Publications Mail
Commercial Sales Agreement No. 1708201
2323 St. Laurent Boulevard
Ottawa K1G 4J8
Tel. (613) 736-1350 Fax (613) 736-1395
www.tac-atc.ca

Editor: Gilbert Morier (gmorier@tac-atc.ca)
news@tac-atc.ca

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.

2009 TAC Annual Conference and Exhibition

Transportation in a Climate of Change

**October 18-21
Vancouver, British Columbia**

DELEGATES – Early registration information will be posted on the web. Check out TAC's site in mid-April.

EXHIBITORS – To book your exhibit space, visit the association's website in mid-March.

SPONSORS – For sponsorship opportunities, consult the material already posted on the website or contact Deb Cross at the TAC office (tel. [613] 736-1350; email dcross@tac-atc.ca).

www.tac-atc.ca



Photo: Tourism Vancouver

Canadian Transportation Awards Program

Nominate the Transportation Industry's Best Players!

The Canadian Transportation Awards Program is intended to **recognize leadership, excellence and achievement in all modes and segments of the transport sector**. If you know someone who has made an outstanding contribution to transportation in Canada, this is your opportunity to ensure that this individual is considered for the industry's most prestigious awards!

Nominations are solicited for the following four award categories in 2009:

- ◆ **Transportation Person of the Year;**
- ◆ **Award of Excellence (up to two awards);**
- ◆ **Award of Achievement (up to two awards); and**
- ◆ **Award of Academic Merit (up to two awards).**

Supported by Transport Canada, the Canadian Transportation Awards Program is administered by TAC. For more information on the program and to submit a nomination, **visit TAC's website at www.tac-atc.ca as of February 17. Nominations for the 2009 awards must be received online no later than April 20.**

Canada's Minister of Transport, Infrastructure and Communities or the Minister's alternate will confer the awards during the closing banquet of TAC's 2009 Annual Conference and Exhibition to be held in Vancouver, October 18-21.

TAC Foundation News: Scholarships Now Available to College Students



This year, qualified college-level students may apply, for the first time, for many of the TAC Foundation's scholarships.

This has been done to build the reach of the scholarship program and to encourage even more students to pursue advanced studies in transportation-related disciplines.

The scholarships have been promoted in community colleges and CEGEPs across Canada. Eligible students include those pursuing full-time studies in civil engineering, transportation planning, traffic management, design of transportation infrastructure and public transportation, program management, environmental monitoring and mitigation, as well as operations, construction and maintenance.

The generous support of corporate, government and individual donors is fundamental to the success of the overall scholarship program. Well over \$100,000 in scholarships is available for distribution to post-graduate, undergraduate and college-level candidates.

This support is growing as two new gold-level donors – **SNC Lavalin** and **AMEC** – have each committed to offering a \$5,000-scholarship for each of the next five years.

In other developments, the TAC Foundation has established a new web address to make information on the scholarship program and foundation activities even easier to find. The information can now be accessed directly via www.tac-foundation.ca. However, it should be noted that the same material can still be found via the main TAC website. 

URBAN GOODS MOVEMENT DATA USERS TO BE SURVEYED

TAC will soon conduct a nationwide survey on user needs and best practices to improve the collection of urban goods data.

The survey will target goods movement stakeholders, including governments at all levels, carriers from all modes – trucking, courier services, rail, air, marine and pipelines, along with shippers and receivers across the economic spectrum, and researchers.

The web-based survey is part of a broader study aimed at developing a framework and a program to conduct urban goods movement surveys. The study is intended to help improve urban goods planning across the country.

The transportation community has long recognized that the efficient movement of goods is fundamental to the viability of the economy of the nation and to its cities. The costs to society of inefficient urban goods movement are evident. They include the costs of delays due to congestion, reduced trip-time reliability, wasted fuel, as well as increased emissions of greenhouse gases and air pollutants. These impacts can be far-reaching, affecting both society as a whole and the economic viability of urban goods carriers, shippers, receivers, port authorities and others.



Photo: iTrans Consulting

Canada's transportation authorities recognize the need to better account for urban goods movement in transportation plans. However, the underlying data describing goods movement activities and patterns in the country is often lacking, incomplete or out of date. As a result, the Transportation and Research Standing Committee of TAC's Urban Transportation Council recognized that a fundamental requirement for improving urban goods movement planning and transportation planning in general is the improvement of the state of the country's related data.

The association is therefore carrying out the previously mentioned study on urban goods movement surveys throughout Canada. These surveys measure both the movement of vehicles, which can include bicycles, cars, taxis and motorcycles in addition to trucks, and the flow of goods carried in the vehicles.

Vehicle-movement data can include trip origin and destination, mode used, costs, vehicle type, time and frequency of stops, as well as intermodal transfer characteristics and costs. Commodities are

measured in terms of total tonnage generated by or attracted to particular establishments or economies of the sector.

There is also interest in being able to optimize the use of existing and emerging electronic informatics technologies such as global positioning systems. Moreover, there is a strong tie between urban and interurban goods movement as airports, marine ports, intermodal rail terminals and pipeline terminals are located in urban areas and certainly generate much vehicle movement in their own right. As a result, the study is also looking at interurban traffic.

An important component of the study is the Internet survey of key stakeholders in Canada's freight community. The survey will ask stakeholders to identify their goods movement data applications, describe the types of data they use, assess the quality and applicability of the data and identify other needs.

Entitled "Framework for High-Quality Data Collection on Urban Goods Movement in Canada", the TAC study has two parts, the first of which was completed in the fall of 2007.

Part 1 was an international literature review of data types and best practices in the collection of urban goods data, leading up to the development and testing of the survey. The first part also critically reviewed currently available Canadian and U.S. goods movement data sets.

The Part 1 report is available in the TAC website reading room.

Part 2 is the actual administration of the survey, and will use Part 1 and the survey results to develop the framework and the proposed program for data collection. Part 2 is expected to be completed this fall.

The project sponsors are **Environment Canada**, the **Ministry of Transportation of Ontario**, the **Ministry of Transport of Quebec**, the **Saskatchewan Ministry of Highways and Infrastructure**, the **cities of Edmonton, Montreal and Ottawa**, the **Region of Peel** and **TransLink (South Coast British Columbia Transportation Authority)**. The study is being conducted by **iTRANS Consulting Inc.**

For more information on the project, contact Sandra Majkic at the TAC office (smajkic@tac-atc.ca).



Excellence in Transportation Planning

Transportation Land Use Integration
Transit Planning
Traffic Management
Expert Services



Cement, Concrete and Sustainable Public Works

Editor's Note: In this contribution to TAC News, John Archer, director of sustainable development, and Tim Smith, director of transportation and public works, Cement Association of Canada, write about the cement and concrete industry's response to climate change, as well as sustainability issues. Proposed by TAC's Climate Change Task Force, this feature is the fourth article to profile climate change initiatives of member organizations. Other organizations are encouraged to contact the newsletter editor with a view to submitting articles or briefs highlighting their own projects in this area.

Concrete has long been an important building material. The Romans started using natural cementing materials mined from local volcanic areas to make concrete, and many examples of Roman buildings and public works are still with us today.



Photo: Dufferin Construction Company

Construction of concrete pavement on Highway 407 Express Toll Route in the Greater Toronto Area.

Modern cement kilns are like “mini-volcanoes” using very high temperatures to reduce raw materials (primarily crushed limestone) to a clinker that is finely ground to produce portland cement. Concrete made from portland cement is stronger and more durable than Roman concrete, and has the potential to last much longer. It is an ideal construction material for sustainable buildings and public works.

The Cement Industry's Environmental Progress

Canada's cement industry is continuously looking for ways to reduce its environmental footprint. Reducing energy consumption is one course of action as cement kilns require a large amount of energy to operate at the high temperature necessary to break limestone down.

Between 1990 and 2006, Canada's cement manufacturers improved the energy efficiency of their production operations by 11 per cent per tonne of cement, and reduced the greenhouse gas emissions intensity of their production by 6.4 per cent per tonne of cement.

Although there is not much more that can be done to economically increase the energy efficiency of kilns, there is a possibility of decreasing the amount of fossil fuels used in kilns and reducing the amount of raw material that needs to be heated and transformed to make each tonne of cement.

Three methods are being considered to reduce the industry's energy and CO₂ footprints:

- **Alternative and Renewable Energies** - Using these energies in cement kilns as a replacement for traditional fossil fuels such as coke or coal will reduce the cement's CO₂ emissions and energy use. The more these fuels are utilized, as in Europe, the greater the reductions will be.

The global cement industry has been very active in developing substitute fuels. Almost any material of organic composition can be used and, because of the high combustion temperature in a kiln, consumed safely. The Canadian cement industry is pursuing this alternate fuel strategy, with biomass as a possible long-term solution. There are two challenges however – the lengthy regulatory approval processes, and the continuous supply of these alternative energies.
- **Portland Limestone Cement (PLC)** – This type of cement, which has been used effectively in Europe for many years, reduces the clinker-to-cement ratio by intergrinding the cement with up to 15 per cent limestone. A new Canadian Standards Association (CSA) PLC standard will soon be released with a revision to the CSA concrete standard to follow. The end result is cement with a lower energy and CO₂ footprint.
- **Supplementary Cementing Material (SCM)** - Increasing the use of SCMs decreases the amount of cement being used, which further decreases the CO₂ and energy footprint of concrete. These cementing materials can be reclaimed from other industrial processes. The most common are slag (from blast furnaces), fly ash (from coal powered power stations) and silica fume (from electric arc furnaces). When included in appropriate quantities with portland cement, they typically produce a stronger, denser concrete, although they may take longer to reach their final strength. Of great benefit is that they redirect materials that formerly went to landfills into productive uses.

Concrete Has a Low Environmental Footprint

While the cement industry is working hard to reduce the energy and materials used to produce portland cement, it is important to note that its primary use is to make concrete. Concrete has low levels of energy use and CO₂ associated with it as its other components – water, as well as fine and coarse aggregates – are abundant local materials that have low energy and CO₂ footprints. Portland cement contains a small portion of a concrete mix normally ranging from 8 to 15 per cent, depending on strength requirements and amount of SCMs used. The environmental

costs of obtaining aggregate for the concrete mixes can be reduced even further by using recycled concrete.

High-performance Bridge Structures

High-performance concrete (HPC) is used to extend the life of bridge decks. New ultra high-performance concrete (UHPC) provides extremely strong concrete with increased structural and durability performance. Bridge projects can be completely redesigned using UHPC to reduce the amount of material needed, increase span lengths and, in some cases, reduce the number of piers. Self-consolidating concrete (SCC) is used to place concrete with less energy input and provides superior concrete consolidation in congested reinforced structural sections. This produces more durable structural elements. All these products contribute to a more sustainable bridge structure.

Concrete Pavements

Concrete pavements are known as being durable and have many sustainable benefits. They are reusable and recyclable, improve night-time visibility, reduce aggregate requirements for pavement structures and decrease the potential for hydroplaning. Concrete also has a low-energy footprint as it does not require a heating process during mixing

operations and its binder (cement / water paste) is not a form of feedstock energy.

Due to concrete's rigid nature, heavier vehicles create less deflection and therefore require less fuel to operate on it. Research by the National Research Council of Canada shows fuel savings for heavy trucks ranging from 0.8 to 6.9 per cent when operating on concrete pavement. This also means that it costs less to operate vehicles and that fewer emissions are released.

“ Although there is not much more that can be done to economically increase the energy efficiency of kilns, there is a possibility of decreasing the amount of fossil fuels used in kilns and reducing the amount of raw material that needs to be heated and transformed to make each tonne of cement. ”

Building Energy Efficiency

One of the lowest cost / highest benefit actions we can take is to increase the energy efficiency of buildings. A building's maintenance and operation costs can amount to 80 per cent of its environmental footprint over its lifetime. Initial investments in energy efficiency will definitely produce significant long-term benefits.

The thermal mass of concrete has significant potential for “load levelling” in both heating and cooling regimes and offers long-term payback.

For more information on concrete and sustainability, see www.cement.ca.



Edmonton: (780) 440-4411
Red Deer: (403) 340-3022

Providing 30 years of:
Quality • Innovation • Service • Professionalism

- Transportation
- Land Development
- Project Management
- Civil/Municipal
- Construction Survey
- Water Resources

www.al-terra.com

BA Consulting Group Ltd.
45 St. Clair Avenue West, Suite 300
Toronto, Ontario M4V 1K9
416.961.7110 (tel) 416.961.9607 (fax)
www.bagroup.com



Transportation Consultants

Movement in Urban Environments



engineering • environment • infrastructure



toronto	niagara	ottawa	sudbury
london	moncton	fredericton	mumbai

tel 416 497 8600 web www.rvanderson.com

Bunt & Associates Engineering Ltd.
Vancouver • Victoria • Calgary • Edmonton

**Transportation Planners
and Engineers**

www.bunteng.com





**Over 50 years of award winning services
for the transportation sector**

www.delcan.com

Markham - Ottawa - London - Waterloo - Niagara Falls
Calgary - Victoria - Vancouver



Cole Engineering

www.ColeEngineering.ca
100 Renfrew Drive, Suite 100
Markham, ON L3R 9R6
Tel: 416.987.6161 Fax: 905.940.2064

Excellence In Engineering Infrastructure

- Traffic Engineering
- Transportation Planning
- EA & Road Design
- Municipal Engineering
- Water Resources
- Project Infrastructure Management

Terminology Released for Winter Pavement Conditions Measured by Sensors

TAC has adopted a set of terms, definitions and specifications for winter pavement conditions measured by sensors.

The initiative stems from an association project undertaken to investigate the development of a common language to describe winter pavement conditions measured by pavement sensors. The project also considered a specification, based on scientific terminology, for pavement conditions defined in the current version of the U.S. National Transportation Communications for Intelligent Transportation Systems Protocol – Environmental Sensor Systems (NTCIP-ESS).

As the use of road weather information systems (RWIS) is growing in Canada, it will become important to be able to compare information and conduct analyses using data from different stations and jurisdictions. This will permit road network managers using RWIS to obtain and analyze comparable point data. It will also allow agencies to ultimately convert this information into standardized winter road conditions to cover road segments of variable lengths. In addition, this will result in improved communications with the motoring public, broadcast media and emergency services personnel.

RWIS specialists and data users consider standard terminology to describe the information provided by pavement sensors to be critical.

The new national standards and data dictionary for winter pavement conditions includes definitions for pavement temperature and five pavement conditions, that is ice, frost, dry, wet and chemically wet. It is available free of charge in the TAC website reading room.

Background work is described in the project report, *Terminology for Winter Pavement Conditions Measured by Pavement Sensors*, which can be obtained from the TAC library at tis@tac-atc.ca.

Through the course of the study, it became apparent that the development of both a national standard and a related data dictionary would require a considerable effort by vendors and the operations/maintenance community not only in Canada but throughout North America.

Proposed by TAC's Maintenance and Construction Standing Committee, the project was conducted by **Totten Sims Hubicki Associates Ltd.** (now known as **AECOM Canada Ltd.**) under the supervision of a steering committee. □

NEW MEMBERS

TAC is pleased to welcome the following new members:

Canadian Ready Mixed Concrete Association

Mississauga, Ontario
Sherry Sutherland, Technical Engineer

Infrastructure Strategies & Research Inc.

Rockland, ON
Guy Felio, President

King Disposal Equipment Ltd.

Toronto, Ontario
Mark Coimbra

Raven's Ridge Developments Ltd.

Whitehorse, YT
Erik Nyland

Township of Drummond / North Elmsley

Perth, ON
Carl Scissons

City of Victoria

Victoria, BC
Mike Lai, Assistant Director



Exceptional people. Shared success.
islengineering.com

Expertise across all aspects of transportation planning, traffic, roadway and bridge engineering.

EDMONTON CALGARY
 780.438.9000 403.254.0544

LANGLEY BC
 604.530.2288

Planning | Transportation/Systems | Design

Transportation Planning • Public Transportation
 Traffic Operations & Parking • Intercity Transportation
 Goods Movement • Planning & Design



5th Floor – 230 Richmond Street West Toronto ON M5V 1V6
 tel 416 596 1930 fax 416 596 0644 www.ibigroup.com

ITRANS Consulting
insight, integrity and innovation® in:

- Transportation Planning
- Transportation Systems
- Environmental Assessments/Functional Planning
- Transportation Safety
- Roadway Planning & Design
- Public Transit

www.itransconsulting.com | 1-888-860-1116

Vancouver • Calgary • Cambridge • Toronto • Ottawa • Washington DC

GREAT PLACE TO WORK
 INSTITUTE
 CANADA
BEST
 workplaces
2008

www.synectics-inc.net

80 Hangover Drive, Suite 3, St. Catharines ON CANADA L2W 0A1

1-866-355-6627

“School Bus Stop Ahead” Sign Guidelines to Be Published

TAC will soon issue guidelines for the application and installation of the existing “School Bus Stop Ahead” sign.

The sign is meant to warn drivers that they are approaching a school bus stop with less than minimum stopping sight distance.



The national guidelines will apply in particular to the “School Bus Stop Ahead” sign (WC-9) contained in the association’s *Manual of Uniform Traffic Control Devices for Canada*. The manual provides limited guidance for use of the sign.

Most provinces acknowledge the importance of limiting the use of

the sign to situations where a bus stop cannot be relocated. Some have developed specific guidance for the calculation of stopping sight distances but no clear distinction is made between urban and rural applications. As well, there are variances in sign size and reflectivity specifications and in the use of educational, distance and “next” sign tabs.

A specific procedure has now been established to assess the need for the WC-9 sign. The procedure calls for determining the sight distance problem and considering available alternatives such as correcting the problem or relocating the bus stop, prior to erecting the warning sign. The assessment should be conducted every time the site conditions change and can be done at regular intervals such as at the beginning of each school year. Any signs that are no longer required should be removed as soon as possible.

The new guidelines state that, once it has been determined the WC-9 sign is necessary, it should be installed as specified.

Proposed by TAC’s Traffic Operations and Management Standing Committee, the project was conducted by **Opus International Consultants (Canada) Limited** under the supervision of a steering committee.

Guidelines for the Application and Implementation of the School Bus Stop Ahead Sign will be released as a stand-alone document in the coming months. Interested parties should consult TAC’s website homepage for a publication announcement. 

TAC’s Transportation Information Service in Action

Searching the Web

With the billions of pages, documents, images and videos now available on the Internet, the struggle is not finding content but finding relevant content. A simple search in Google can yield hundreds of thousands of results, but not what the seeker needs.

Advantages of Search Engines

Search engines like Google, Yahoo and MSN Live Search provide a simple interface and can scan millions of entries in a few seconds. With new and popular topics, they can be an excellent way of getting information.

Issues

First, no search engine covers the entire Internet. By its nature, the Web changes quickly, growing in some areas and contracting in others, so that no survey is complete. Second, not all engines cover the same terrain. Yahoo and Google both scan large swaths of the Internet, but the coverage is not completely overlapping. How each decides the order of the results is also different.

Finally, while the major search engines sift through a staggering amount of material, there is an entire subset of information called the invisible Web that no search engine covers well.

The invisible Web includes information in databases such as the TAC library catalogue and sites that require registration passwords or subscriptions. TAC’s online bookstore, on a secure website, may therefore be invisible to search engines. Unless the searcher has been provided with these sources, they can be hard to find.

Improving Search Results

Some of these invisible Web sources were listed in an article entitled “Finding Information on the Web” published in the spring 2007 issue of *TAC News*. The databases described in the article have the advantage of prescreening their material so that irrelevant items do not clutter the results.

To narrow the number of search engine results, the simplest step is to use the advanced search page. Google and Yahoo offer advanced search features that can focus on specific phrases or even specific websites.

Different engines have different grammar to conduct searches. For instance, the entry “+pavement” in Google means the word pavement must appear while, in Yahoo, the “+” has no significance. The Web Search Guide (www.websearchguide.ca) has several hints and tutorials on improving search strategies.

Google, Yahoo and other search engines can provide useful information but, like any tool, the results depend on the skills of the users. As well, general search engines are only one tool and should not be relied on for all information needs. 

MEMBERSHIP HAPPENINGS

York Region is actively working on an ambitious follow-up to its Viva Bus Rapid Transit system called vivaNext. The vivaNext plan includes the extension of the Spadina subway line north from Toronto to Vaughan Centre and the extension of the Yonge subway line north from Toronto to Richmond Hill Centre. This will be the first time that York Region, whose population has nearly reached one million, will be serviced by modern subways. The vivaNext plan also calls for the construction of rapidways along major roads throughout York Region, taking the Viva buses out of mixed traffic and into their own lanes.

VivaNext had a watershed year in 2008. In November, the **Metrolinx** provincial transportation agency (Greater Toronto Transportation Authority) selected two infrastructure projects for construction beginning in 2009, including major components of the vivaNext project. Metrolinx gave its final approval to a seven-billion dollar, five-year capital plan that includes over one billion dollars for construction of several vivaNext rapidways. This funding is subject to provincial government approval.

R.V. Anderson Associates Limited, an employee-owned consulting engineering firm, has been named one of Canada's 50 best managed companies. The award is sponsored by Deloitte, CIBC Commercial Banking, the National Post and Queen's School of Business.

R.V. Anderson Associates said that, in the last five years, the company has expanded its employee ownership model to provide a level of customer service that has effectively competed with many larger, multinational and publicly traded engineering organizations. The Toronto-based firm added that its "culture of ownership" has succeeded in

achieving a vision of service excellence, a good workplace, continuing growth and development, as well as financial stability. The company has provided engineering, operations and management services since 1948. Its staff comprises environmental and infrastructure specialists in water, wastewater, transportation, solid waste diversion and urban development services.

Established in 1993, "Canada's 50 Best Managed Companies" is an awards program recognizing firms that have implemented world-class business practices and created value in innovative ways. Applications are reviewed by an independent judging panel that evaluates how companies address various business challenges, including new technologies, globalization, brand management, leadership, leveraging and developing core competencies, designing information systems and hiring the right talent to facilitate growth.

Transoft Solutions Inc., which develops software for the architectural and engineering communities, has launched a web microsite on roundabouts and roundabout design. Located at www.designroundabouts.com, the site touches on the advantages of the modern roundabout and explains why roundabouts are gaining momentum as intersection designs of choice in many communities. It provides a general understanding of modern roundabouts, as well as information on various aspects of their design. Visitors to the site can browse through roundabout facts, interesting roundabout trivia, a review of the advantages of roundabouts, case studies and weekly updated video content. Transoft Solutions is based in Richmond, BC. 

PEOPLE IN THE NEWS

The new Quebec government cabinet includes Hon. **Julie Boulet**, who continues as minister of transport, and Hon. **Norman MacMillan** as minister of state for transport.

Hon. **Brooke Taylor** has been named minister of transportation and infrastructure renewal for Nova Scotia.

Suzanne Vinet has been appointed associate deputy minister of transport, infrastructure and communities for Canada.

Gary Boddez is the new deputy minister of transportation for Alberta. Mr. Boddez, who has been named a director of TAC, succeeds **Jay Ramotar**, appointed deputy minister of the province's Treasury Board last year.

Peter Milburn has become deputy minister of transportation and infrastructure for British Columbia, replacing **John Dyble** who is now the province's deputy minister of forests and range. Mr. Milburn has been appointed a director of TAC.

Robert Gomes will succeed **Tony Fransceschini** as president and chief executive officer of Stantec Consulting Ltd. in May.

At the City of Saskatoon, **Murray Totland** has left his position as general manager of infrastructure services to become city manager.

Bruce Biglow has been named transportation practice leader of Dillon Consulting Ltd.

The Intelligent Transportation Systems Society of Canada (ITS Canada) has announced the appointment of its new executive director, **Carl Kuhnke**.

Ron Whitelock is now a senior consultant with iTRANS Consulting Inc.

Margaret Grant-McGivney has been named Trans-Canada Highway project manager at the New Brunswick Department of Transportation.

Bryce Conrad, director general of surface infrastructure programs for Transport Canada, has resumed the position of president of the Canadian National Committee of the World Road Association (PIARC). This follows the appointment of **Tony Varriano** to new duties in support of the assistant deputy minister responsible for the ministry's Program Group. Mr. Varriano had been president of the committee for the past two years.

Vince Aurilio has joined DBA Engineering Ltd. as manager of pavement engineering services.

COMING EVENTS ~ 2009

7th Annual Urban Transportation Summit

March 3-4
Toronto, Ontario
Tel. (866) 298-9343
www.strategyinstitute.com

Annual Conference of the Canadian Construction Association

March 9-14
Scottsdale, Arizona
Tel. (613) 236-9455
www.cca-acc.com

Intertraffic China 2009

March 18-20
Shanghai, China
www.intertraffic.com

2009 Design-Build in Transportation Conference

April 1-3
Baltimore, Maryland
Tel. (202) 366-1562
www.designbuildtransportation.com

Annual Conference of the Association québécoise du transport et des routes

April 6-8
Montreal, Quebec
Tel. (514) 523-6444
www.aqtr.qc.ca

TAC Spring Technical Meetings

April 16-20
Ottawa, Ontario
Tel. (613) 736-1350
www.tac-atc.ca

TAC Special Seminar on Environmental Management Systems

April 20
Ottawa, Ontario
Tel. (613) 736-1350
www.tac-atc.ca

National Conference on Preservation, Repair and Rehabilitation of Concrete Pavements

April 22-24
St. Louis, Missouri
Tel. (202) 366-1326
www.fhwa.dot.gov/pavement/concrete/2009CPTPconf.cfm

Fourth Rubber Modified Asphalt Conference

May 7-8
Akron, Ohio
Tel. (330) 972-6527
www.rubberdivision.org/meetings/rmac.htm

Annual Conference of the Intelligent Transportation Systems Society of Canada (ITS Canada)

May 10-13
Edmonton, Alberta
Tel. (905) 471-2970
www.itscanada.ca

Annual Conference of the Canadian Transportation Research Forum

May 24-27
Victoria, British Columbia
Tel. (519) 421-9701
www.ctrf.ca

Annual Conference of the Canadian Society for Civil Engineering

May 27-30
St. John's, Newfoundland and Labrador
www.csce.ca/2009/annual/

Annual Conference of the Canadian Institute of Transportation Engineers

May 30-June 3
Montreal, Quebec
www.citequebec.org/

CSCE-ASCE-ICE Triennial Conference – Coastal Engineering

June 1-2
St. John's, Newfoundland and Labrador
www.csce.ca/2009/triennial/

Annual Conference of the Federation of Canadian Municipalities

June 5-8
Whistler, British Columbia
Tel. (613) 241-5221
www.fcm.ca

Annual Conference of the Canadian Urban Transit Association

June 6-10
Whistler, British Columbia
Tel. (416) 365-9800
www.cutaactu.ca

12th International Conference on Fracture

July 12-17
Ottawa, Ontario
www.icf12.org

Annual Conference of the Canadian Institute of Planners

September 30-October 3
Niagara Falls, Ontario
Tel. (800) 207-2138

TAC Annual Conference & Exhibition

October 18-21
Vancouver, British Columbia
Tel. (613) 736-1350
www.tac-atc.ca