



Canada

Name: TAC / ACT

Membership: As of December 31, 2016, TAC membership was comprised of 256 individual, 52 corporate, 51 student and 8 retired members.

STRUCTURE

The Tunnelling Association of Canada (TAC) was established in 1980 as a national association encompassing several regions: British Columbia, Alberta, Manitoba and the Prairies, Ontario, and Quebec and the Maritimes. Key objectives of TAC include:

- Promote the development and use of underground space to decision makers and the public;
- Increase awareness of Canadian underground design, excavation and construction technologies;
- Facilitate the exchange of information on related activities and technical developments;
- Represent the interests of the tunnelling and underground excavation community in matters of technical and public concerns;
- Act as an intermediary body between ITA and those individuals and organizations in Canada who are interested in tunnels and underground excavations;
- Disseminate throughout Canada the news of the activities of ITA;
- Organize the annual Canadian Tunnelling Awards and bi-annual TAC Conference; and
- Provide support for the TAC Young Members division as well as student scholarships.

2016 MEMBERSHIP

As of December 31, 2016, TAC membership was comprised of 256 individual, 52 corporate, 51 student and 8 retired members.

The TAC organizational structure consists of the following 6 Officers and 10 Directors:

Officers:

Erik Eberhardt, President
Rick Lovat, Immediate Past President
Steve Skelhorn, Vice President, East
Bruce Downing, Vice President, West
Michelle Richards, Treasurer
Derek Zoldy, Secretary

Directors:

Serge Moalli, Director, British Columbia
Rick Lovat, Immediate Past President
Jason Mann, Director, Manitoba & Prairies
Walter Trisi, Director, Ontario
André Rancourt, Director, Québec and Maritimes
Nichole Boulton, Director
Jean Habimana, Director
Boro Lukajic, Director
Lara Reggin, Director
Seamus Tynan, Director

TAC engages the services of Gibson Group Management Inc. (GGMI) to manage the administration of the association through GGMI's offices in Richmond, British Columbia, Canada.

MAIN ACTIVITIES IN 2016

TAC 2016 Conference –

Capitalizing on Underground Infrastructure

The biennial TAC Conference continues to grow in size and importance as the Canadian tunnelling industry also continues to grow. The October 2016 event in Ottawa, Ontario attracted over 275 delegates and guests, 35 firms as trade show exhibitors, and 56 plenary, technical and poster presentations. An opening highlight was an exceptional technical tour of the tunnelling work underway on Ottawa's Confederation Line LRT.

TAC 2016 Awards Dinner

2016 was the fifth year that the Tunnelling Association of Canada (TAC) presented achievement awards to recognize deserving individuals and projects in the Canadian tunnelling industry. TAC's newest award - Canadian Lifetime Achievement Award- was presented to Dr. Raymond Benson. Full 2016 TAC Achievement

Awards details are posted on the TAC website at http://www.tunnelcanada.ca/achievement_awards.html.

Working Groups

TAC members currently serve on numerous ITA Working groups including:

- Dr. Jinyuan Liu, Ryerson University – ITA WG 2: Research
- Steve Skelhorn, McNally Corporation – ITA WG 5: Health and Safety in Works
- Gary Kramer, Hatch – ITA WG9: Seismic Effects
- Rick Lovat, Lovat Tunnelling Solutions – ITA WG 14: Mechanization of Excavation
- Hamid Javady, MMM Group Limited – ITA WG 17: Long Tunnels at Great Depth
- Dr. Heinrich Heinz, Thurber Engineering – ITA WG 19: Conventional Tunnelling

TAC will poll its members for additional interest in serving on ITA's Working Groups in 2017.

Publications

Work on TAC's commemorative book on the History of Canadian Tunnelling continues to progress well with final printing expected in 2017. In addition, TAC collaborates with *Tunnels & Tunnelling* on their North American edition to publish articles on Canadian tunnelling projects.

FEATURED PROJECT - Eglinton Cross Town Light Rail Transit, Toronto, Ontario

The Crosstown is a 19km corridor that includes a 10km tunnel. The project is split into three contracts: the west tunnels, the east tunnels, and the stations. The tunnels are being driven by two pairs of TBMs.

In 2016, the Obayashi / Kenaidan / Kenny Joint Venture completed the west tunnel, and the Aecon / Dragados Joint Venture completed the east tunnels.



FEATURED PROJECT - Ottawa Light Rail Transit, Ottawa, Ontario

The OLRT project, being constructed by the Rideau Transit Group (Ellis Don, SNC Lavalin, and Dragados Canada) is well underway and scheduled for completion in early 2018. TAC members attending the TAC Ottawa conference in October 2017 had an opportunity to visit the site.



FEATURED PROJECT - Romaine-3, Quebec

The Province of Quebec's Hydro-electrical construction continues with the 395MW Romaine-3 project wrapping up work on final dam construction. Pressure tunnel excavation has been completed. The Romaine 3 project was recipient of TAC's 2016 Canadian Infrastructure Project of the Year award



FEATURED PROJECT - Port Mann Water Supply Tunnel, Vancouver, British Columbia

The Port Mann project included two deep shafts and a 1km long, 3.5m diameter tunnel passing under the Fraser River. The shafts and tunnel will house a new water main, which replaces the current smaller and seismically vulnerable buried pipeline that crosses the river. The pipeline is a critical link in Metro Vancouver's regional water supply network, and the first of several planned tunnel-based water crossings. The tunnel was constructed with an EPB TBM, with observed pressures of up to 6bar, the highest pressures to date in Canadian soft ground tunnelling.

This project was recipient of TAC's 2016 Canadian Innovation Project of the Year.



FEATURED PROJECT - John Hart Generating Station, Vancouver Island, BC

The underground works were performed by a joint venture of SNC-Aecon and Frontier-Kemper. As of the end of August 2016, the surge shaft tunnel, underground powerhouse, and main access tunnel had been completely excavated: 2/3 of the 1575m long power tunnel and 3/4 of the 520m long tailrace tunnel remained to be excavated. It took 13 months, 485 blasts, to excavate the 60,000 cubic metres of rock for the powerhouse cavern.



2017 ACTIVITIES PLANNED

The BC and Ontario Chapters are very active and expect to hold 8-10 monthly meetings, each, in 2017. These feature invited speakers on regional tunnelling projects, or technical tours. TAC is working on the revitalization of its website with a launch anticipated in mid-2017.

TAC's biennial Technical Workshop, scheduled for October 12-13 will be held in Montreal, Quebec. The 2017 workshop will also host TAC's Annual Awards Gala where individuals and projects are recognized for their outstanding contributions to tunnelling and underground space.

The Tunnelling Association of Canada presents the Dan Eisenstein Memorial Scholarship each year to a post-graduate student planning to undertake, or currently undertaking, post-graduate studies in the field of tunnelling at a recognized university in Canada and will do so again in 2017. The 2016 recipient was Sarah Cain of Queen's University.

Efforts in 2016 to grow TAC's student membership were very successful, increasing the student percentage of total membership from 10% to almost 14% at the end of 2016. In 2017, TAC will continue to work closely with universities to run student-focused tours and events.