The Chief Engineers Council of Canada held its fall meeting in Toronto, Ontario, Canada on September 25-26, 2016. The following summarizes the highlights of the fall meeting:

**REVIEW OF THE SPRING MEETING**

The Council reviewed the highlights from the spring meeting and approved the minutes. Specific topics highlighted were efforts on pool funded projects, the executive committee report, new officer nominations, and the Young Transportation Professionals Award.

Pool funded projects were highlighted; most significantly, the project on Geometrics. This effort is like AASHTO’s updating of the Green book. It was recognized as a significant accomplishment and that sufficient time for review of members is necessary prior to balloting proposed changes to guides.

The Council approved advancement of a Young Transportation Professional Award to promote early successes of transportation professionals. It is intended for engineers less than 35 years old, that have made significant contributions to the engineering profession. This is like AASHTO’s Vanguard award.

Emerging Issues identified for future discussion and action were infrastructure funding and investing in assets, advancing technology, climate change, land use planning and transportation, big data, and public perceptions of agency work.

**PRESENTATIONS**

**Micro Surface- Pavement Preservation Treatment - Manitoba**

This presentation focused on the use of Micro Surface treatments to address rutting, enhance IRI, and other minor surface distresses. Manitoba uses the treatment on pavements that are structurally sound, with minimal cracking, moderate rutting greater than 6mm but less than 20 mm, and a surface free of breakouts.

This treatment is a low-cost treatment to preserve pavements. Costs are $7.75 per m2 as compared to $35 m2 for thin HMA overlays. It reduces hydroplaning and improves friction. Manitoba includes a 2-year warranty.

Manitoba is experiencing a 10-year service life on the micro surface preventative maintenance fixes.

**Highway 407 Extension Project in Ontario**

This project is Ontario’s first publicly owned toll highway. The Emergency Detour route will contain 24 interchanges and use Alternative Financing and Procurement Model AFP (P3). It is to be completed in 2020. Portions of the route are already open. The estimated project cost is $1 billion.

**Nipigon River Updates**

An update on the repairs to the newly constructed Cable Stayed bridge on the Trans-Canada Highway crossing of the Nipigon River. On January 10, 2016, 40 bolts connecting the northwest bearing to the show
plate failed, causing the end of the bridge to raise about 600mm. Temporary concrete barriers were placed on the lifted end to bring the bridge back down on the bearing seat, and the bridge was re-opened to traffic the morning of January 11.

An interim repair was made early last year and an investigation was commenced to determine the cause of the failure. The investigation included testing of the bolts and a technical review and analysis. The reports are available on line at http://www.mto.gov.on.ca/english/highway-bridges/nipigon-bridge/.

Findings from the Bolt Test indicate the bolts met all requirements of ASTM A490 and exhibited good performance under cold temperatures. However, they failed due to overloading and the bolts failed at different times. The three main findings of the analysis were:

- the shoe plate flexibility resulted in significant prying action which amplified forces in the bolts
- the bearing did not allow for rotation without overloading the bolts
- bolts supplied were too long and multiple washers were used which likely hampered tightening of the bolts

Permanent retrofit repairs are scheduled for spring of 2017.

**State of Flood Preparedness in Canada**

A presentation on the State of Flood preparedness looked at the preparedness to the effects of climate change. Twelve factors were measured to determined readiness.

1. Flood Mapping
2. Land Use Planning
3. Drainage System Maintenance
4. Sustainable Flood Management
5. Home Adaptation Audit
6. Commercial Property Adaptation Audit
7. Transportation System
8. Electricity Supply
9. Drinking Water System
10. Waste Water System
11. Public Health and Safety
12. Emergency Preparedness

Each Canadian Province was scored on the 12 factors. Ontario had the highest preparedness score of a B-. The impacts of property and casualty insurance has gone up 20-fold in the last 30 years. Catastrophic losses were $0.2B in 1983 and were $4.5B in 2015. Flooding was accountable for 58% of the losses. Sewer backup coverage is becoming non-available and portions of the housing market are becoming uninsurable due to flooding risks.

**Standard Business Items**

The committee conducted its standard business items, including standing committee presentations, approval to ballot items, and nominations and selection of futures executive board members.

*Summary Presented by Mark Van Port Fleet*

*AASHTO’s delegate to the Canadian Chief Engineers Council.*

*October 31, 2016*