



**INFRASTRUCTURE ASSET MANAGEMENT ALBERTA
WORKING GROUP
FEBRUARY 8, 2017
WORKSHOP MEETING NOTES**

In Attendance: Russell Crook, Christine Della Costa, Lam Huynh, Shaffin Kherani, Joline McFarlane, Christina Parkins, Ian Perry, Scott Sillers Wyatt Skovron and Mat Stephan

Notes: Candace Coams

Absent: James Friesen, Stephen Hove, Ed Kaemingh, Sheila Kitz, Elena Loukin, Lorin McConnell, Joel Sanchez and Jason Tillsley

1. Welcome

Lam Huynh welcomed everyone attending this workshop meeting and called the meeting to order at 9:15 am. Introductions, IAMA activity update and website update will be deferred this time. The first presentation started promptly at 9:15 am.

2. Underground Infrastructure

Michelle Tetreault, Executive Director for Alberta Common Ground provided the first presentation this morning. Michelle advised Alberta Common Ground Alliance is associated with Alberta One-Call (formerly called Alberta 1st Call). A free document is available called Dig Safe – Best Practices Manual <http://www.canadiancga.com/>.

There are 5 million kilometres of buried infrastructure in Alberta, with 2500 known damages in 2015 costing Albertans \$300,000,000 and \$1,000,000,000 in damage to underground infrastructure occurring across Canada every year. Training is available for ground disturbance. Download the *Damage Information Reporting Tool* called DIRT <http://www.albertacga.ca/>.

Membership is available. Refer to the website for complete details and associated cost: <http://www.albertacga.ca/join/membership-sponsorship-levels>.

Federal legislation under Bill S-229 called Underground Infrastructure Safety Enhancement Act (<http://www.albertacga.ca/Legislation>) contains:

- Registration with the notification centre = AB One Call. Registration could mean registering municipal boundaries.
- Communication and Enforcement between \$10,000-\$25,000 fines.

All underground infrastructure needs to be registered with AB One Call (AOC) by calling 1-800-242-3447 or with the “Click Before You Dig” for mobile devices (Canada) or 811 (USA).

Support has been received from AUMA and AAMDC for provincial legislation. The Underground Infrastructure Safety Enhancement Act had its first reading on September 29, 2016 and is now tabled federal legislation. Presentation to the Senate of Bill S-229 is scheduled for February 14th with debate to follow. Legislation is likely to be passed in 2 years time.

The impacts on asset management:

- More details on infrastructure available decreases costs to municipalities
- Utility coordination – higher coordination of entities disturbing assets
- Consideration of alternate purposes for your data, like “depth”
- Does disturbance by others affect your assets (pavement patches, irrigation).

There are 4 pillars to underground infrastructure damage prevention:

- Asset management
- Utility coordination
- Legislation, and
- Open data

Michelle’s contact details are:

e-mail: executivedirector@albertacga.ca

phone: 403-519-8651

website: www.albertacga.ca

For complete details and more information, please refer to the .pdf of Michelle Tetreault’s presentation.

3. FCM Grant Funding

Kate Fleming, Director, Municipal Asset Management Program, informed the audience that this is the first group being addressed in Alberta on this new program. Kate asked for a show of hands as to where municipalities are at with Asset Management: 5 of 68 present were new and not started yet, and most of the rest of 68 present had started. The client base for asset management is so broad.

The FCM (Federation of Canadian Municipalities) is not focused on or does not have a

direct link with small municipalities. These small municipalities are those with limited resources facing the biggest infrastructure challenges.

Becoming leaders in the field:

- Move from reactive to proactive decision-making
- Start with what you have OR with what you need
- Convince others that asset management is worth the investment
- Knock over stumbling blocks to get buy-in

Municipal Asset Management Program and Design consists of:

1. Awareness raising
2. Training
3. Funding (application-based)
4. Sharing of lessons learned

Focus on building capacity in the following competencies:

1. People and Leadership
2. Planning and Decision-making
3. Contributions to Asset Management
4. Policy and Governance
5. Data and Information

Take-Aways

This program is designed for all municipalities and will offer flexibility to the needs of each community and jurisdiction. It will be delivered in partnership with Communities of Practice and Provincial/Territorial Municipal Associations with improved ability to gather, analyze and use data effectively. The outcome will be to have strengthened decision-making.

FCM Programs include:

- Green Municipal Fund
- Partners for Climate Protection
- Municipalities for Climate Innovation

The funding program is still in the design phase. It will be application-based (5 questions) with a self-assessment process (scale of where you are at) in a fillable .pdf format. It is a broad document showing where a municipality stands today and where they are likely to be in the future. Municipalities need a way to measure success on infrastructure. **Candace will send out the form when it is available.**

The first step in the application process:

- Assessment (condition), plans, roadmaps, data collection

- Training in-house
- Integrate Asset Management into job descriptions
- Mentoring activities

The idea will be to “move the yardstick” in some competencies. You can subscribe to the newsletter for updates: fcm.ca/fcmgreen.

Applications will be batched monthly through a peer review process (putting out a call for “peer reviewers”).

Start with what you have versus start with what you need. The easiest way is to start with what you have as Administration and then add risk. Starting with what you need (Elected Officials) is a more philosophical approach. The problem is there is no *silver bullet* on where to go. Regardless of where you are in the asset management process, they will be there to help move the *yardsticks* forward.

Breaking ground with Councils:

- Tie asset management to risk
- KISS principal – Officials get it but the whole of TCA muddies the waters
 - Stuck to arguments that were financial in nature
 - No such things as one who has AM program and saved \$\$’s
 - Changed the process, incorporating an annual LOS Review

With the Asset Management Program, software is the only capital cost allowed in the program, with a cost-sharing ratio of $\geq 75\%$. If the service is *cloud-based*, no hardware would be required.

Kate Fleming’s contact details are:

e-mail: kfleming@fcm.ca

phone: 613-907-6218

For complete details and more information, please refer to the .pdf of Kate Fleming’s presentation.

Coffee break from 10:45 am to 11:00 am

4. Aquatera Utilities AMIS Assessment Report

Nick Kebalo, Water and Wastewater Operations Manager with Aquatera advised this assessment report was done for the City of Grande Prairie, County of Grande Prairie and the Town of Sexsmith. Aquatera has been working with Richard Fathers and the MCP Consulting Group for about 5 years now.

Richard Fathers, Consultant with MCP Consulting Group, talked a bit about the history of

MCP (Maintenance Computer Personal) going back to 1987 and where they have progressed to today supporting clients with consulting & training in: manufacturing maintenance and asset management with a focus on high risk and high impact organizations with ISO50001, the asset management standard.

AMIS (Asset Management Improvement System) was developed by MCP to improve asset management based on best practice, with an average 1st time assessment score of 20-30% and a target “world class” (management category) status of 75%. Management categories are: Chaos, Reactive, In Control, Innovator and World Class (criteria for “world class” is Level 5). Based on the benchmark in the database, ISO50001 = Level 3. The advantage of ISO certification is it is an international standard.

4-stage Approach for Improvement:

1. Benchmarking and assessing with other “like” companies
2. Implementation planning
3. Implementation
4. Review Plan

AMIS Maintenance Management Categories included:

- General Maintenance Level
- Organization and Administration
- Work Planning and Control
- Cost Management
- Productivity and Maintenance Effectiveness
- Materials Management
- Failure Analysis and Betterment
- Training and Safety

The Assessment (Audit) Program I is 3-days on site. Part 1 is to review the organization and maintenance data. Part 2 is the self-assessment to the AMIS standard targeting finance officers to prove financial benefits of asset management with cost reductions of 50% by being more pro-active. Team composition for this program is from *Managers* to *Doers*.

The Aquatera Pyramid and Their Journey to World Class

The Organization wants highest possible equipment, building and people reliability. Operating Excellence depends on 3 things:

- Operations @ 40-50%
- Design @30-40%
- Maintenance @ 10-30%

*Doers need the best systems, data and procedures.

After a huge amount of work, Aquatera completed their self-assessment. Their starting score was 21%. Four years later the score has improved to 43.5%.

The range of benefits from implementing asset management include:

- Lower energy usage
- Improved quality
- More reliable performance
- Helps with retention of trades
- Successful CI (continued improvement)

Savings of \$300,000 for Aquatera

- Had 9 satellite stores
 - Now have 1 central store location
- Criticality analysis
 - What are our assets?
- Contracted maintenance/services
 - Hired planner scheduler

You will have to work around your “have” or “need” list. You need to know where you are at from an operational perspective as a baseline. This provides holistic improvement. The lower the score, the higher the risk, which provides a good business case.

Richard Father’s contact details are:

e-mail: rfathers@mcpeurope.com

For complete details and more information, please refer to the .pdf of Richard Father’s presentation.

Lunch break from 12:00 am to 1:10 pm

Prior to commencing the afternoon presentation, Lam Huynh asked for ideas for the next workshop on June 21st. The first suggestion was to hear about lessons learned and best practices, as well as how far along others are on their asset management path. Kate Fleming asked if a short session on completing the application for Asset Management or Climate Innovation funding would be of interest. Kate Fleming agreed to come back to the June 21st workshop with such a session.

5. National Energy Codes

Lam Huynh introduced Thomas Lauder as this afternoon’s Presenter with over 29 years of experience in construction, currently the Safety Codes Officer-Building with The City of Calgary. Also attending is Marco Civitarese, Manager & Chief Building Official with

The City of Calgary.

Thomas advised he would be providing an overview of energy codes in Alberta. The National Research Council produced the Energy Code document in 2011. This document then became “Code” when adopted by the provinces. The Energy Code was adopted in Alberta in 2016 alongside the Alberta Building Code with equal status. The Energy Code is all about energy efficiency. The Energy Code is a 25% improvement over the 1997 standard.

Energy Use by Sectors (illustration from City of Calgary)

Industrial	40%
Transportation	30%
Residential	17%
Commercial/Institutional	10%
Agriculture	3%

*For commercial/industrial sectors, space heating came in at 55% of energy use.

Energy use intensity has stayed flat in recent times since the invention of the motorcar.

Code is not a very high standard. Almost all new buildings are covered by energy efficiency requirements for the first time in Alberta and talk about “floor area”. Additions of 10M² to exiting buildings would require permits for energy efficiency requirements as well. The new Energy Code covers 85% of the elements of energy use in a typical commercial building.

How does the new Energy Code work? There are three compliance paths:

1. Prescriptive – “dos and don’ts” as with most codes
2. Trade-off – measurement of heat loss
3. Performance – computer simulation of the energy use of a building to target areas of design or cost that matter to the client

The new Energy Code is a “performance-based” code. Energy efficiency improvements may add around 1% capital cost to a project. If you want to save money, talk to the Energy Consultants first. The earlier energy efficiency is factored into a project, the less it will cost. Energy Consultants suggest increased costs may be nearer to 0.5% or lower. For Energy Consultants, the biggest change is lighting (electricity “in”).

Tom Lauder’s contact details are:

??????

For complete details and more information, please refer to the .pdf of Tom Lauder’s presentation.

6. Wrap-up and Next Meeting

Lam Huynh advised that with this presentation the workshop meeting has concluded. Working group members met briefly prior to departing.

7. Adjournment

The meeting was adjourned at 1:54 pm.