



COMMITTEE OF THE WHOLE

Monday, March 6, 2017

6:30 p.m.

Council Chambers

360 Dibble St. W.

Prescott, Ontario

Pages

1. CALL TO ORDER

Chaired by Mayor Brett Todd

2. APPROVAL OF AGENDA

Suggested Motion

"THAT the agenda be adopted as presented."

3. DECLARATIONS OF INTEREST

4. PRESENTATIONS

5. DELEGATIONS

6. COMMUNITY AND PROTECTIVE SERVICES

Chaired by Councillor Leanne Burton

6.1 Staff Report 07-2017 - Arena Upgrades and Future Options

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Suggested Motion

"THAT Committee of the Whole recommend that Council direct staff to undertake the required analysis leading to the development of a preferred alternative to ensure the provision of sustainable arena based recreational services."

7. FINANCE & CORPORATE SERVICES

Chaired by Councillor Teresa Jansman

8. TOURISM & HERITAGE

Chaired by Councillor Fraser Laschinger

9. TRANSPORTATION & ENVIRONMENTAL SERVICES

Chaired by Councillor Lee McConnell

10. PLANNING

Chaired by Councillor Mike Ostrander

11. ECONOMIC DEVELOPMENT

Chaired by Councillor Ray Young

12. NEW BUSINESS

12.1 Action Item List

13. PERIOD FOR MEDIA QUESTIONS

14. CLOSED SESSION

14.1 2017 Community Awards

Suggested Motion

*"THAT Committee of the Whole move into Closed Session at _____
to address matters pertaining to:*

14.1 2017 Community Awards

*- personal matters about an identifiable individual, including municipal or
local board employees; and*

*That the CAO, Treasurer, Director of Public Works & Infrastructure,
Clerk, and Administrative Assistant - Corporate Services remain in the
room."*

15. RISE AND REPORT

16. ADJOURNMENT



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STAFF REPORT TO COUNCIL

Report No. 07-2017

Date: 6 March 2017

From: Pierre Mercier, CAO, and Dan Beattie, Director of Public Works and Infrastructure

Re: Arena Upgrades and Future Options

Recommendation:

That Committee of the Whole recommend that Council direct staff to undertake the required analysis leading to the development of a preferred alternative to ensure the provision of sustainable arena based recreational services.

Background and Analysis:

On March 7, 2016, Council was presented with a plan to replace the aging ammonia based ice plant at the Leo Boivin Community Centre. The rationale was that our ice plant is 50 years old and approaching the end of its useful lifecycle and as such a new plant was required. At the same time there were discussions about other needed improvements such as accessibility requirements, expanded dressing rooms and reception area. This was often referred to as a refresh of the facility.

On March 7th, Council heard a presentation by Cimco, on a new system known as eco-chill, a CO² system which recycles waste heat. In essence, the idea was not only to replace the plant but to also improve heating systems while reducing energy costs and greenhouse gases. The reduced energy costs were a key to the long term financial viability of the proposed system. The proposal was for the replacement of the ice plant at a cost of \$1.8 million which could be undertaken during the off season in 2017 provided the plant was ordered by August of 2016.

Following Cimco's presentation our Public Works Director reviewed the proposal and became concerned that a number of elements needed to ensure the successful replacement of the plant had not been contemplated or costed out. There were also concerns with the timelines proposed. In essence the following deficiencies in the overall cost proposal were identified:



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- No detailed electrical system design
- No detailed mechanical system (Duct Work) design
- No detailed structural design
- No preliminary civil engineering design
- No consideration of associated and on-going maintenance costs;

The additional technical considerations as well as the arena “refresh” which Council was interested in pursuing would likely add \$1.0 to \$1.5 million to the overall price tag based on the implementation of the proposed Eco-chill system.

On that basis the project was put on hold until the 2017 fiscal year with the intent of investigating various alternatives.

Ice Plant Life Cycles

The Leo Boivin ice plant is now in its 50th year. The initial review by Council to replace the ice plant was largely based on the age of the system. There was no consideration of the potential safety issues surrounding the nature of the direct injection ammonia refrigeration system.

Much of the technical information in this report comes from a research study conducted by Natural Resources Canada (NRC) through their Canmet Energy Research Group. A. The report entitled “Comparative Study of Refrigeration Systems for Ice Rinks” dated August 2014, provides comprehensive comparative data on 12 different refrigeration systems. The information includes life cycles, operation costs, safety and a host of other useful data crucial to understanding the various concerns which should be considered prior to making an informed decision.

The initial consideration which brought on the need for action by the municipality was the concern that the ice plant was well beyond its useful life. According to the NRC report the median life span for ammonia systems is at least 30 years. Median lifespan is defined as the longest period of time where 50% or more of the equipment or systems have survived. For example, if 50% or more of refrigeration equipment put in service 25 years ago are still in operation today, their life cycle is considered to be at least 25 years. However the report does include the following qualifier:

“Ammonia refrigeration systems are often referred to as being “industrial” since they have been used in industry for over a century. They contain open type

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compressors that can be maintained to prolong their life cycle for several decades. Their highly efficient compressor motors are specifically chosen for this purpose and offer better performance and flexibility considering that they can be replaced without impacting the compressor. Ammonia system components are connected by welded steel piping. The 30-year life cycle used in this study is inferior to what most equipment manufacturers consider it to be.”

This would certainly be borne out by the ice plant at the Leo Boivin arena which has operated without issues for 50 years. Interestingly there is one other identical ice plant still in use in Ontario. It is located in Goderich and is still operating well into its 67th year. This would indicate that proper day to day maintenance carried out by staff as well as timely repairs and part replacement by experienced and knowledgeable technicians is a strong factor in ensuring that the plant operates in a reliable manner.

Safety

As part of his Public Works and Infrastructures departmental responsibilities, the Director attended courses on refrigeration systems in order to fully understand and manage the existing ice plant and to ensure best management practices. The course was offered in the late fall of 2016. During the course the Director learned that the ammonia system used in the Leo Boivin Centre is one of only two left in the Canada, the other being in Goderich, Ontario.

During the training sessions it was identified that this type of system requires special training and management protocols. The issue is with the size of the ammonia tanks used in the ice plant. As ammonia is a volatile gas which can be very hazardous should there be exposure to emissions, systems which have more than 400 pounds of ammonia are subject to regulatory requirements. The Leo Boivin system is a 2,000 pound refrigeration plant. (By comparison the Goderich plant is a 2,400 pound system.)

First they must be monitored every 2 hours with key operational data noted and recorded in a log located on site. The plant must be operated by properly trained (i.e. certified) employees. Moreover where systems using more than 400 pounds of ammonia are in place, the managing authority must have an emergency management protocol in place which includes an evacuation plan for the premises as well as a “shelter in place” notification system for properties within a 1 kilometre radius.

Facilities equipped with ammonia refrigeration systems are safe when properly designed and when their safety is assured by an operational security program. The



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operational security program includes elements such as equipment information, appropriate hazard assessments, mechanical integrity, training of operation and maintenance staff, emergency management protocol and compliance audits. Ammonia refrigeration systems for ice rinks must at least comply with all relevant clauses of the Mechanical Refrigeration Code B52-05 and other applicable laws and regulations, in particular the Occupational Health and Safety Regulations (OHSR).

It is important to note that current staff assigned to manage the plant are fully knowledgeable and well trained to ensure proper maintenance. The Town also has a contract with Cimco (the manufacturer of the ice plant) for scheduled maintenance and testing of emission sensors in the facility. Our current deficiency lies in the need to certify the employees (certification courses are scheduled), the need to install sensors in the public areas (underway) and the implementation of an emergency response plan (underway). We are also looking at alternatives to ensure that ice plant data is recorded every 2 hours on a 24 / 7 basis.

It is important to note that all ice plant refrigeration systems pose risks to human health and/or safety. For example CO² systems such as the Eco-chill system proposed by Cimco, can result in lethal emissions if a supply line ruptures allowing high concentrations of CO² reaching 30,000 parts per million into the air. As with ammonia systems monitoring and emergency plans are required. It is essential that risk analyses be conducted in all cases in order to determine prevention and mitigation measures in case of an accident.

Council can be assured that the Ministry of Labour has been made aware of the current ice plant situation and has indicated that it will provide assistance as required as we implement the required safety protocols. As well our insurance company has also been made aware and has not indicated any concern.

With the advanced age of the arena facilities Council is faced with a difficult decision which could include significant financial impacts moving forward. As such this report recommends managing the risk while providing sufficient time to investigate other options throughout the course of 2017.

As noted earlier, the current ice plant is operating well and has shown no signs of imminent failure. The plant is reliable and its design is simple and easy to maintain. The parts required for long term maintenance or repair are readily available and can be installed in a matter of hours thereby keeping down time to a minimum. There is also the indisputable fact that this type of ice plant produces superior ice quality. The only



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unknown is the condition of the pipes under the ice surface's concrete base which we will be investigated as part of the analysis.

The positive consideration is that the current state of the ice plant does allow us the time to undertake a robust or fulsome planning process to ensure long term viability for the provision of arena based recreational services. It is understood, of course, that there is a need to consider the replacement of the ice plant as there will come a time where it will not be cost effective to continue replacing parts to maintain this aging system. However it is staff's opinion that replacing the ice plant and upgrading the arena as a whole should not be the only option under consideration. It may be wise to consider repurposing the Leo Boivin Community Centre by constructing a new multi-purpose recreational facility.

Accordingly it is staff's recommendation that the municipality continue to maintain the ice plant and proceed with the immediate implementation of safety and security measures which would include:

- Installation of ammonia sensors in the ice plant room and in the arena's public spaces;
- Development of an emergency management protocol for building evacuation and shelter in place provisions including a roof top warning siren and communication plan;
- Implementation of a management system which will include a 24 / 7 monitoring process including on-site inspection and recording of ammonia system data;
- Training and certification of arena staff for the operation of the ice plant (underway);
- Purchase of required safety equipment;
- Training of fire firefighters to respond to any emergency at the Community Centre.

Accessibility

Ontario's Building Code requires a barrier-free path of travel throughout most occupancies and building types. The Building Code also sets a number of requirements related to common access and circulation throughout buildings. These include requirements related to building entrances, minimum doorway and corridor widths, ramp dimensions, passing and rest spaces, and turning spaces.

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It must be noted that there has been some confusion during recent Committee of the Whole meetings with respect to the date by which accessibility in public buildings was required by law. It has now been confirmed that under the *Accessibility for Ontarians with Disabilities Act* deadlines for accessibility only applies to new or redeveloped outdoor spaces such as trails, beaches or outdoor eating areas. The last amendment to the Building Code Act required that new public buildings or public buildings which undergo extensive renovations must be fully accessible. There is no regulatory deadline for barrier free accessible access to the arena and as such the Town is not in a non-complying position under the Ontario accessibility Regulations.

As it now stands the arena is accessible via a ramp and wheelchairs do have access to a newly constructed accessible platform which provides a wheelchair friendly viewing area. Where the building falls short is with respect to access and egress doors with motorized assist, an accessible washroom and an accessible change room.

These facilities should be provided in order to be consistent with the Town's tradition of ensuring barrier free access to all. However in the current circumstances it would be preferable to establish a way forward with respect to the need to replace the ice plant or to build new facilities. It should be noted that the Director of Public Works and Infrastructure has developed a cost effective workable solution which will be the subject of a separate report should Council wish to address the accessibility issue separate from the main concern of this report.

Recommendation

Staff recommends that Council immediately move to implement the safety and security requirements as follows:

- Installation of ammonia sensors in the ice plant room and in the arena's public spaces;
- Development of an emergency management protocol for building evacuation and shelter in place provisions including a roof top warning siren and communication plan;
- Implementation of a management system which will include a 24 / 7 monitoring process including on-site inspection and recording of ammonia system data;
- Training and certification of arena staff for the operation of the ice plant (underway);
- Purchase of required safety equipment;



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- Training of fire firefighters to response to any emergency at the Community Centre.

It is also recommended that staff initiate a project planning process which will consider 2 options:

Option 1

1. Undertake a cost benefit analysis to identify the preferred alternative for the replacement of the ice plant.
2. Undertake a building condition assessment to identify deficiencies and the ability to undertake renovations and improvements.
3. Develop and cost out building improvement plans.

Option 2

Initiate a pre-planning process aimed at identifying the operational and financial feasibility of developing a new recreational facility.

Staff would further point out that proceeding with the outlined recommendations would enable the municipality to be prepared for the anticipated senior government grant programs which are expected to be focused on improved community recreational facilities throughout Canada.

Financial Implications:

Depending on the direction Council wishes to take, the financial impacts will vary considerably. The initial direction proposed in March of 2016 would likely have had costs in the neighbourhood of \$3.0 million dollars or more. Those costs however were never substantiated as the ice plant replacement proposal was incomplete and the proposed arena refresh was considered only on the basis of concept plans. The recommended course of action would include cost comparison of at least three ice plant options as well as costing an expanded arena with full accessibility components. In addition it is recommended that staff initiate a planning process to explore the potential for the construction of a new arena with industry accepted costs provided for that option.

In terms of immediate costs related to ensuring that safety and security measures be implemented immediately it is estimated that those costs will likely be in the \$50,000 to

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\$75,000 range. Currently there is \$200,000 in the 2017 capital budget to address safety and accessibility options at the Community Centre. Any unused portion of this will be held in reserve to be used towards whichever outcome Council decides to move forward with. The operational budget is currently adding \$107,500 to the Community Centre Reserve per year to address future development.

Attachments:

N/A



Pierre Mercier
CAO

Original signed by

Dan Beattie
Director of Public Works and Infrastructure

ACTION ITEM LIST – FROM JANUARY 2017

Date	Department	Item & Action	Status
Prior to January 2017	Finance	RFPs for Building Services, Banking and Audit Services	In progress
Prior to January 2017	Operations	Lighthouse Staircase – Safety Cost to Repair – staff report	In progress
Prior to January 2017	Operations	Traffic Light Cost – staff report	In progress
Prior to January 2017	HR	Employee Policies (banked hours, sick days, carryover, further education, etc.)	In progress
January 2017	CAO	Official Plan Update	In progress
January 9, 2017	CAO	Schedule an Economic Development Session & Review of Strategic Plan	In progress
January 9, 2017	CAO's	CAO to report back on accessibility deadline for the arena	March 6 CoW
January 9, 2017	CAO's	Parks and Rec Master Plan RFP	In progress
January 16, 2017	Clerk's	Report on Use of Ranked Ballots in the 2018 Municipal Election	2019
January 16, 2017	Clerk's	<i>Municipal Elections Act</i> amendments – Information Report (stated in Ranked Ballot report)	In progress
January 23, 2017	CAO/Operations	Report and resolution of	In progress

Date	Department	Item & Action	Status
		support re: Municipal Fire Service as Critical Infrastructure as part of the Province's Infrastructure Strategy	
January 23, 2017	Finance	Report on Property Taxation for Railway Right-of-ways	In progress
January 23, 2017	CAO/By-Law	Parking By-law Review	In progress
February 6, 2017	CAO	Report re: future involvement with the Leeds and Grenville Immigration Partnership	In progress
February 13, 2017	CAO	Wiser Hall Update	Complete – Feb. 21 st Will come back to Council in March 2017
February 13, 2017	Operations	Additional Clock Tower Repairs	In progress