



To: Public Works and Transportation Committee

Date: March 4, 2014

From: John Irving MPA, P. Eng.
Director, Engineering

File: 06-2050-01/2013-Vol
01

Re: Ageing Facility Infrastructure - Update

Staff Recommendation

That staff utilize the attached “Ageing Facility Infrastructure – Update” report dated March 4, 2014 from the Director, Engineering as input in the annual capital and operating budget preparation process.

John Irving MPA, P. Eng.
Director, Engineering
(604-276-4140)

REPORT CONCURRENCE		
ROUTED TO:	CONCURRENCE	CONCURRENCE OF GENERAL MANAGER
Finance Division	<input checked="" type="checkbox"/>	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	INITIALS: 	APPROVED BY CAO

Staff Report

Origin

On September 21, 2011 staff submitted an ageing facility infrastructure report to Council for information. The report provided a facility condition summary and options to better maintain the City's inventory of 150 buildings comprising approximately 1,606,000 square feet of total building area.

This report responds to a Council referral dated September 19, 2012 and provides a current update to the overall condition of City facilities and building maintenance/replacement programs currently in place.

Background

City facilities are critical to the delivery of a broad range of services to the public for the betterment of the community. Several of the facilities are unique to Richmond and establish an important and positive cultural or iconic identity, examples of which include those with heritage status (i.e., Branscombe House, Seine Net Loft, etc.) and the Richmond Olympic Oval.

Construction of City owned facilities is generally accomplished through Council approved capital programs and/or agreements with developers. For capital projects, staff define a scope of work in consultation with the user groups and the public leading to construction through the public procurement process. A similar process is followed with developer driven facilities whereby the developer assumes the role of design/construction lead and City staff complete a review/approval role.

It is necessary to fund and perform day-to-day operations and maintenance activities at all facilities to enable their intended use, examples of which are janitorial services, minor repairs/replacements such as light bulb replacement, etc. It is also necessary to fund and complete preventative maintenance programs which may include items such as roof replacement, boiler replacement, new paint for the building interior/exterior, etc to ensure continuity of service.

The functional life of a facility is generally 45 years or more provided regular preventive maintenance is completed. The City currently has funded operations/maintenance, preventative maintenance and capital replacement programs in place as approved by Council. The current reserve, the Capital Building and Infrastructure Reserve which funds facility capital repair and replacement has been mainly utilized to fund new facilities. Staff are reviewing the capital process to identify if a comprehensive plan for capital improvements should be developed which assesses the condition of all current infrastructure assets such as buildings and equipment and uses the assessment to plan infrastructure replacement and repair needs in the future within available capital and operating funding levels.

Analysis

The City's current general buildings and leased facilities inventory consists of 150 buildings.

The City currently has Council approved funding of \$4.6M for preventative maintenance programs. In 2014, the City also has one time facility related funding of \$2.6M through the capital program to complete major repair/restorations of Minoru Chapel, Watermania and Richmond Ice Centre.

The City completes annual physical audits of 20% of City facilities through detailed site visits. The findings are used to update past information in the City's facility condition assessment computer model (Vanderwell Facility Advisors (VFA) to develop a Facility Construction Index (FCI) which has become an evaluation tool used by Cities internationally. In 2013, the City of Richmond was awarded the Vanguard Award for Leadership in Capital Planning from VFA in recognition of effective building asset management.

FCI is an industry standard designation of facility condition where 0.00 to 0.05 is good, 0.06 – 0.10 is fair, and higher than 0.10 is considered poor. While this index is an excellent facility management tool, it is not a direct measure of user experience in the building. For example, a boiler that is old, inefficient and at risk of failure will generate a poor condition score, but it may still be providing adequate heat in a building, so a building user today would not be impacted by that poor condition.

The current FCI average for all City facilities is 0.08, indicating an overall fair condition. However, over half of all buildings were constructed in the last 35 years and this later building stock is entering a phase of accelerated ageing. As a result, maintaining the current fair condition score in the future will require greater annual funding than has been allocated in the past.

Consequence of facility deterioration

A generally accepted industry observation related to facilities is that it costs 5 times as much to repair a facility as compared to having a preventative maintenance program, and that it costs 5 times as much to replace a facility than what it would cost to complete repairs, notwithstanding the impacts related to service disruption.

Significant deficiencies are anticipated should City facilities be allowed to deteriorate over the next 20 years. An example that may be typical of facility infrastructure that may no longer be functional after 20 years includes failure of roofs, boilers, HVAC systems etc. The consequence of these items no longer functioning are significant and could lead to facility closure, service level interruption, loss of City revenue and incurrence of significant costs to react to emergency conditions.

In 2013 Richmond Ice Centre experienced a failure of the cooling tower condensing unit – without this unit there is no ability to create ice surfaces. The cooling tower failure resulted in program cancellations and compromises to ice-preparation and replacement was completed on an emergency basis through sourcing replacement equipment from Delaware at relatively high cost.

The current facility condition level can be maintained through increased preventative maintenance funding and capital funding for building rehabilitation and replacement as follows.

Capital Replacement

The Council approved Major Facilities Phase 1 projects including Firehall 3 represent over \$127 Million in capital investment for the replacement of Minoru Aquatics, Older Adults Centre, City Centre Community Centre, and Firehall No. 1. The new facilities will provide short to medium term relief from the increasing cost of maintaining the old facilities. While providing opportunity for service level improvements, investing in the capital replacement of buildings greatly assists with maintaining overall facility condition.

Capital Repair/Rehabilitation

In 2014 Council approved \$7.4M through the 5-Year capital program to complete major facility rehabilitation. The 2014 program includes approximately \$2.6M funding to complete major mechanical renovations at Minoru Chapel, Watermania and Richmond Ice Centre. Staff will continue to prepare 5-Year Capital programs with required levels of funding for Council approval.

Operating Maintenance and Minor Capital

Current Facility infrastructure replacement, improvement and maintenance funding is approximately \$4.6M. Going forward it is estimated that this level of funding would need to increase by approximately \$1M annually to maintain the current facility condition index score.

It is recommended that staff utilize the preceding analysis and information outlined in preparation of future operating and capital budgets with the objective of maintaining the current level of overall facility condition.

Financial Impact

None at this time.

Conclusion

Currently the City's building infrastructure is in fair condition. However, our facilities are anticipated to deteriorate at an accelerated rate. To maintain the current average facility condition, additional funding will be required through the City's operating and capital budgets.

Jim V. Young

Jim V. Young, P. Eng.
Acting Sr. Manager, Project Development
(604-247-4610)