City of Richmond

Report to Committee

To:	Public Works and Transportation Committee	**Date:**	June 15, 2015
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 June 15, 2015 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)

Att.1

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Finance Division	☑	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	**INITIALS:**	**APPROVED BY CAO**

Staff Report

Origin

On March 24, 2014 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, currently comprising approximately 1,610,000 square feet of total building area.

This report provides an update to the overall condition of City facilities and building maintenance and replacement programs currently in place.

Background

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

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

Construction of City owned facilities is 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 related facilities, whereby the developer often assumes the role of design/construction lead and City staff assumes 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 uses including janitorial services and minor repairs/replacements such as light bulb replacements. 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 Capital Building and Infrastructure Reserve has been built to fund facility capital repair and replacement.

On an ongoing basis, staff develop and update a comprehensive plan for capital repair and improvements. This plan considers the condition of all current infrastructure assets such as buildings and equipment, and is used to plan infrastructure replacement and repair needs in the future within available capital and operating funding levels.

Analysis

The City currently has Council approved annual funding of $3.6M for preventative maintenance programs. For 2015, the City received a one-time facility related funding of $4.9M through the capital program, to complete major repair/restorations buildings such as the Seine Net Loft, Gateway Theatre and South Arm Community Centre.

The City generally 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.

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 0.05, indicating an overall good condition. Attachment 1 provides a graphical representation of the City's current building inventory and condition as well as a 2017 projection which considers completion of the Phase I Major Facilities program (Minoru Complex, Firehalls No. 1 and 3 and City Centre Community Centre). The 2017 projection highlights the effectiveness of Council's proactive approach concerning the City's building infrastructure replacement.

A large portion of City buildings were constructed in the last 35 years and this later building stock is entering a phase of accelerated ageing. This is highlighted in particular in the 1980's and older buildings in Attachment 1. As a result, maintaining the current good condition score will require continued support for Capital and Operations Maintenance funding programs as outlined in the City's 5 Year plan, including possible increases as facilities enter the phase of accelerated ageing.

Consequence of Facility Deterioration

A generally accepted industry observation related to facilities is that it costs five times as much to repair a facility as compared to having a preventative maintenance program, and that it costs five times as much to replace a facility than what it would cost to complete repairs, notwithstanding the impacts related to service disruption. While facility replacement is an excellent solution to address growth needs and implement modern systems and design, those facilities that are intended for long term use greatly benefit from the City's preventative maintenance programs.

Significant deficiencies would be anticipated should City facilities be allowed to deteriorate over the next 20 years. An example that may be typical of non-functional facility infrastructure 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.

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

Capital Replacement

The Council approved Major Facilities Phase 1 projects represent over $130M in capital investment for the replacement of Minoru Aquatics, Older Adults Centre, City Centre Community Centre, Firehall No. 1 and Firehall No. 3. The new facilities will provide medium

term relief from the increasing cost of maintaining the old facilities and introduce service level improvements. Investing in the capital replacement of buildings is a key strategy for maintaining overall facility condition and addressing growing service level demands.

Capital Repair/Rehabilitation

In 2015, Council approved $24.9M through the 5 Year capital program to complete major repairs and rehabilitation. The 2015 program includes approximately $4.9M funding to complete major repairs and upgrades to City facilities. 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 annual maintenance funding is approximately $3.6M. Going forward, it is estimated that this level of funding would need to increase by approximately $1M annually to keep pace with inflation and 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

The City's building infrastructure is currently in good condition, however, due to age many buildings are anticipated to deteriorate at an accelerated rate. In order to maintain the current average facility condition and service levels, additional funding will be required through the City's operating and capital budgets.

Jim V. Young

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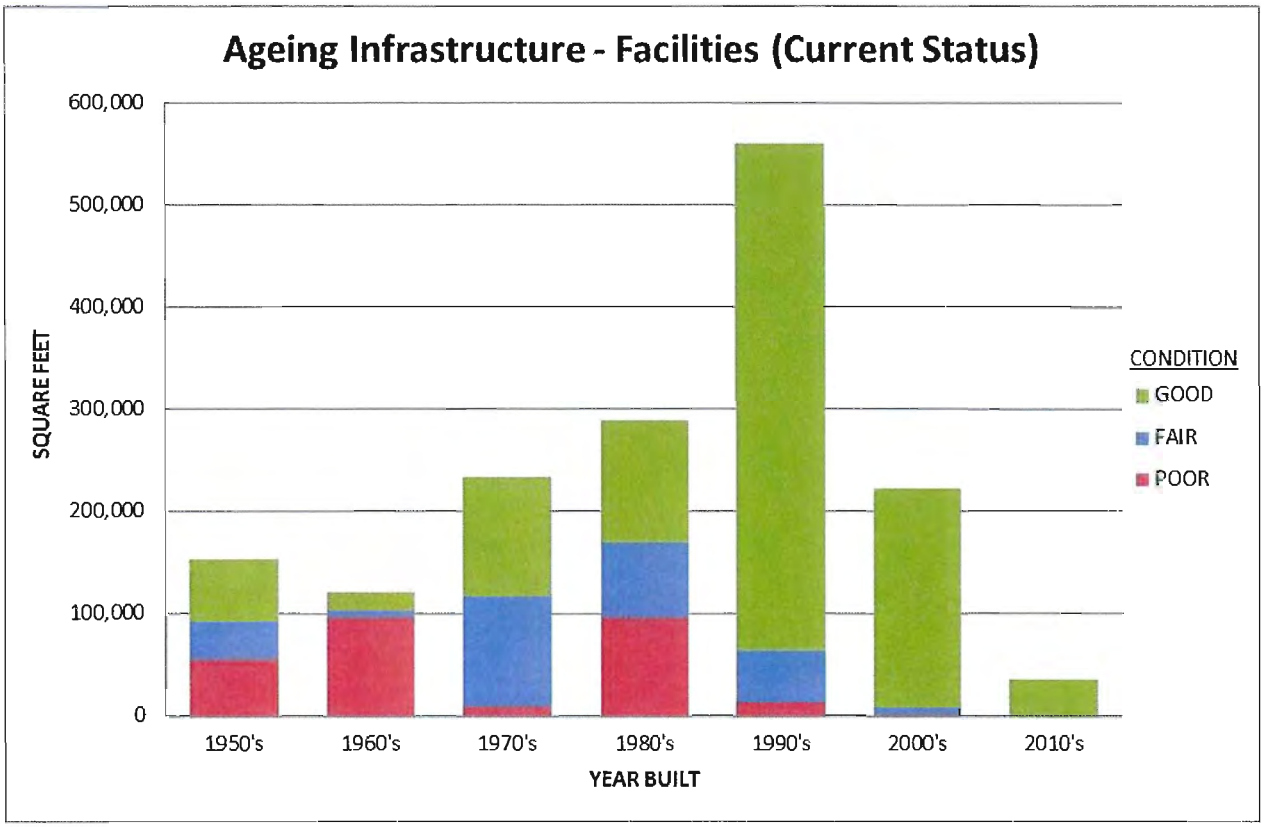
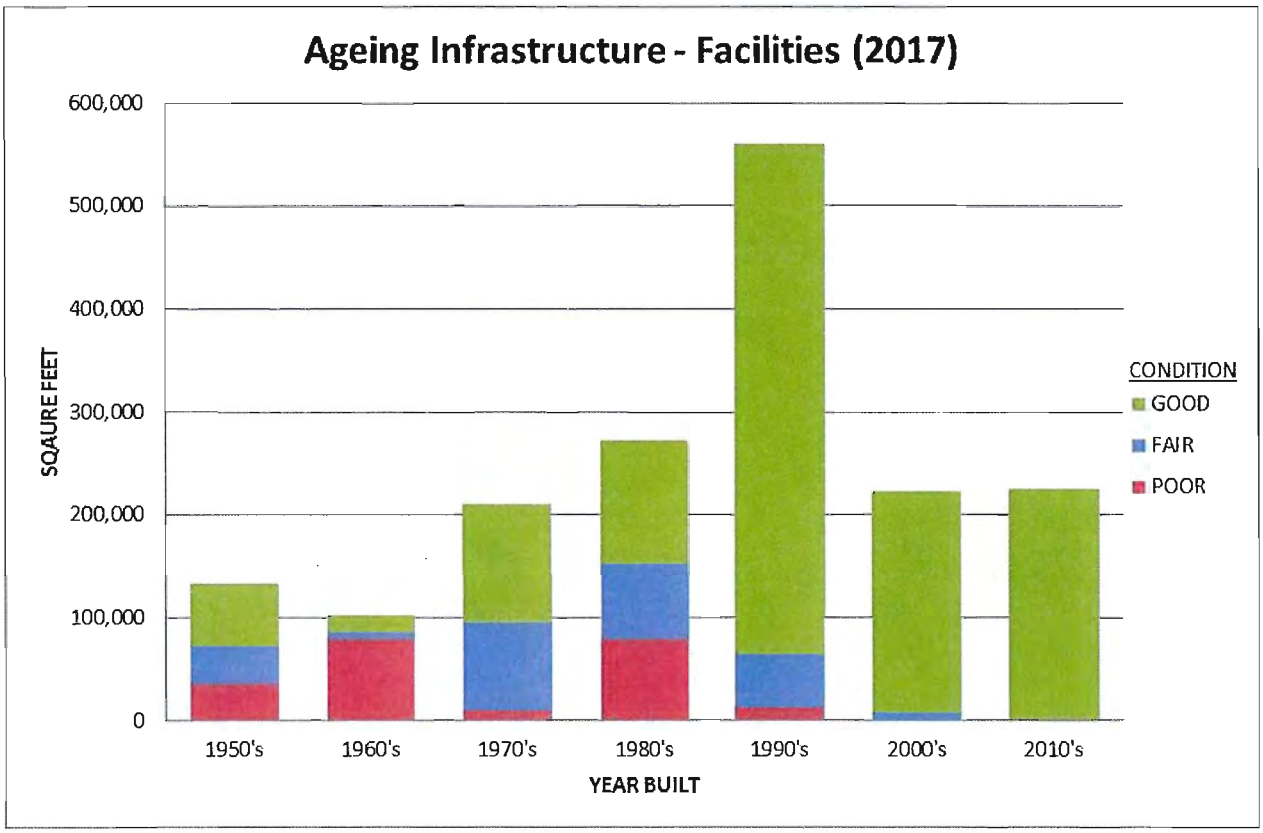
(604-247-4610)

Att. 1: Ageing Infrastructure – Facilities


Ageing Infrastructure - Facilities (Current Status)
600,000
500,000
400,000
300,000
200,000
100,000
0
SQUARE FEET
1950's
1960's
1970's
1980's
1990's
2000's
2010's
YEAR BUILT
CONDITION
GOOD
FAIR
POOR


Ageing Infrastructure - Facilities (2017)
600,000
500,000
400,000
300,000
200,000
100,000
0
SQAURE FEET
1950's
1960's
1970's
1980's
1990's
2000's
2010's
YEAR BUILT
CONDITION
GOOD
FAIR
POOR