

CIVIC FACILITIES RENEWAL STRATEGY

2019



**CITY OF
PRINCE GEORGE**

July 2019

Executive Summary

The first step towards good asset management is gathering the data. This was the purpose of the 2018 Civic Facilities Assessment report presented in February 2019. The second step is determining what funding is necessary to keep the City's civic buildings in good working order and continue to provide the services the community has come to expect. This renewal strategy presents the results of two prioritization methods used to determine the funding required for each building listed in table ES1.

The first method is to invest in all of the building components whose condition rating from the Civic Facilities Assessment report is less than or equal to 74 and the second method is to focus renewal investments on the same condition threshold, but only for the critical building systems; electrical, mechanical, and exterior components. These systems include; electrical, fire protection, HVAC, plumbing, exterior enclosure and roofing.

Table ES1: Buildings Included in this Strategy

Fire Halls	Leased Buildings
Fire Hall #2 – Ospika	Exhibition Sports Centre
Fire Hall #3 – Vanway	Agriplex
Fire Hall #4 – Hart	PGX Barn
Aquatic Facilities	Beef, Dairy, and Poultry Barns
Aquatic Centre	Millennium Barn
Arena Facilities	Connaught Youth Centre
CN Centre	Search and Rescue
Elksentre	Studio 2820
Kin Atrium (Connector)	Studio 2880
Kin I	SPCA Building
Kin II and Lounge	Elder Citizens Rec Association (ECRA)
Kin III	Pine Valley Golf Clubhouse
Rolling Mix Concrete Arena (RMCA)	Seniors Activity Centre (SAC)
Cultural Facilities	South Fort George Rec Centre
PG Playhouse	Kinsmen Community Centre
Two Rivers Art Gallery	Via Rail Building
Bob Harkins Library	1310 3rd Ave Building
Civic Centre	Parkade Buildings
Administration Buildings	2 nd Ave Parkade
City Hall and Annex	5 th Ave Parkade
4050 18th Ave Yard Shop	6 th Ave Parkade
3990 18th Ave Admin	Plaza Parkade
18th Ave Solid Waste	Westel Parkade
Police Facility	Stadium Buildings
RCMP Detachment	Masich Place Stadium
	Citizen Field Stadium

After the analysis was completed using the City's predictive modeling software, BUILDER SMS, and the projects included in the current 2019-2023 Capital Financial Plans (CFP), it was determined that Method 1 and Method 2 resulted in a 10-year estimated average annual renewal investment of \$4.6 million and \$4.0 million, respectively. This is in addition to the approved capital projects in the 2019-2023 Capital Financial Plans, such as, the Aquatic Centre renovations, Masich Place stadium renovations, 2nd Ave Parkade, and various roof replacement projects. The approved capital budgets in the 2019-2023 Capital Financial Plans average an expenditure of \$2.8 million over the next 10-years. The total annual average renewal investment is \$7.4million and \$6.8 million for Method 1 and Method 2, respectively.

The difference of \$600,000 between Method 1 and Method 2 represents a 13% savings if only the critical building components that impact the function and service life of the asset are renewed – it reveals that the majority of building components with a condition rating of less than or equal to 74 are part of the critical building systems. Critical building systems components typically have a shorter life expectancy, which requires that they be replaced more often, and, mechanical, electrical and control systems are more susceptible to inflationary pressure.

The City has invested \$1.7 million, on average, over the last 10 years into critical building system components. Based on the analysis contained in the Civic Facilities renewal strategy, in addition to the \$2.8 million approved in the 2019-2023 Capital Financial Plan, \$4.0 million to \$4.6 million is necessary for the next 10 years to maintain the City's Civic Facilities. The third step, in gaining a complete picture of how the City will manage its civic buildings for current and future citizens, is to develop a financial strategy to fund the required renewal investments over the next 10 years and beyond.

During the analysis, it was apparent that the arenas require the most renewal investment, which is not surprising since arenas are the most expensive buildings the City owns. One of the City's oldest buildings is the Rolling Mix Concrete Arena. This building requires repairs and replacements worth over \$11 million over the next 10 years. Options for decommissioning or replacing this facility should be considered soon as costs continue to increase and the facility is nearing the end of its service life.

As the City's infrastructure ages, adequate reinvestments are a necessity to continue the services these assets provide to the community. Prioritizing spending by investing in what already exists and what is most critical will help to move the City and community into a more sustainable future.

Revisions

REVISION	DATE	UPDATED BY	COMMENTS
1.0	July 17, 2019	K. Bobbie	Adjusted Bob Harkins Library Entrance & Circulation Desk project budget from \$3.7 million to \$4.36 million. Adjusted Figure 5 and Table 4 and Table 5.

Report Prepared by:

Kristy Bobbie, AScT, Asset Manager
Asset Management Division, Engineering & Public Works

Report Reviewed by:

Dave Dyer, P.Eng.
General Manager, Engineering & Public Works

Reference Reports

[PGDOCS-#492455-AM Civic Facilities Assessment Report 2018 & Appendices Updated Jan 2019](#)

Table of Contents

1.0 Introduction	1
2.0 Method 1: Facility Renewal Investment Needs (<=74 Condition).....	4
2.01 Fire Halls.....	4
2.02 Aquatic Facilities	4
2.03 Arena Facilities.....	5
2.04 Cultural Facilities	7
2.05 Administration Buildings.....	8
2.06 Police Facility.....	10
2.07 Leased Buildings.....	10
2.08 Parkade Buildings	13
2.09 Stadium Buildings.....	14
2.10 Investment Summary for Method 1.....	15
3.0 Method 2: Critical System Renewal Investment Needs (<=74 Condition)	16
4.0 Conclusions & Recommendations.....	18
Appendix A: Original Construction Cost vs. Current Estimated Replacement Costs (2019) ..	20
Table 1: Buildings Included in this Strategy.....	1
Table 2: Construction Cost Increases.....	2
Table 3: Condition Rating Definitions.....	3
Table 4: 10 yr Estimated Renewal Investments for All Building Systems.....	16
Table 5: 10 yr Estimated Renewal Investments for Only Critical Building Systems (Electrical, Mechanical, and Exterior).....	17
Figure 1: Asset Age Profile by Replacement Cost (in 2019 dollars) with Population.....	2
Figure 2: 10 Year Estimated Investments for the Fire Halls	4
Figure 3: 10 yr Required Investments for the Aquatic Centre	5
Figure 4: 10 yr Required Investments for Arena Facilities.....	6
Figure 5: 10 yr Required Investments for Cultural Facilities	8
Figure 6: 10 yr Required Investments for Administration Buildings	9
Figure 7: Exhibition Grounds.....	10
Figure 8: 10 yr Required Investments for Exhibition Grounds Buildings	11
Figure 9: 10 yr Required Investments for Leased Buildings.....	13
Figure 10: 10 yr Required Investments for Parkades	14
Figure 11: 10 yr Estimated Renewal Investments for All Building Systems	15
Figure 12: 10 yr Estimated Renewal Investments for Critical Building Systems	18

1.0 Introduction

The first step in gaining a better understanding of how the City's buildings are performing and what investments are needed was to collect social, economic, and environmental data for each of them. This was the purpose of the Civic Facilities Assessment and Dashboards presented in February 2019.

This strategy is the next step in refining what investments are necessary for each building and communicates the actions required for the responsive management of the City's civic buildings, compliance with regulatory requirements, and funding needed over a 10-year planning period to continue to provide the services these facilities offer.

The City's goal in managing these assets is to provide safe and reliable facilities in the most cost effective manner for present and future customers. Visual condition assessments were conducted between 2015 and 2018. The inspection data is stored in the City's predictive modeling software, BUILDER SMS, which utilizes the condition data to predict how much longer these buildings' components will last, recommends which components require repairs/replacements, and assists the City in determining where to focus its spending. Table 1 lists the buildings included in this strategy.

Table 1: Buildings Included in this Strategy

Fire Halls	Leased Buildings
Fire Hall #2 – Ospika	Exhibition Sports Centre
Fire Hall #3 – Vanway	Agriplex
Fire Hall #4 – Hart	PGX Barn
Aquatic Facilities	Beef, Dairy, and Poultry Barns
Aquatic Centre	Millennium Barn
Arena Facilities	Connaught Youth Centre
CN Centre	Search and Rescue
Elksentre	Studio 2820
Kin Atrium (Connector)	Studio 2880
Kin I	SPCA Building
Kin II and Lounge	Elder Citizens Rec Association (ECRA)
Kin III	Pine Valley Golf Clubhouse
Rolling Mix Concrete Arena (RMCA)	Seniors Activity Centre (SAC)
Cultural Facilities	South Fort George Rec Centre
PG Playhouse	Kinsmen Community Centre
Two Rivers Art Gallery	Via Rail Building
Bob Harkins Library	1310 3rd Ave Building
Civic Centre	Parkade Buildings
Administration Buildings	2 nd Ave Parkade
City Hall and Annex	5 th Ave Parkade
4050 18th Ave Yard Shop	6 th Ave Parkade
3990 18th Ave Admin	Plaza Parkade
18th Ave Solid Waste	Westel Parkade
Police Facility	Stadium Buildings
RCMP Detachment	Masich Place Stadium
	Citizen Field Stadium

These facilities have been built over time since the first one in 1940, the Exhibition Sports Centre. Like many of the City’s infrastructure assets, a lot of them were built in the seventies and eighties when the City was booming and there were predictions that the population would continue to rise. Civic building construction had another large spike in the nineties, constructing some of the highest cost buildings like CN Centre, Civic Centre, and the Aquatic Centre. Figure 1 illustrates the amount of facilities built per year by replacement cost. The red line is the population from BCStats and Stats Canada. The population nearly doubled between 1971 and 1981 and continued to rise into the nineties, then dropped.

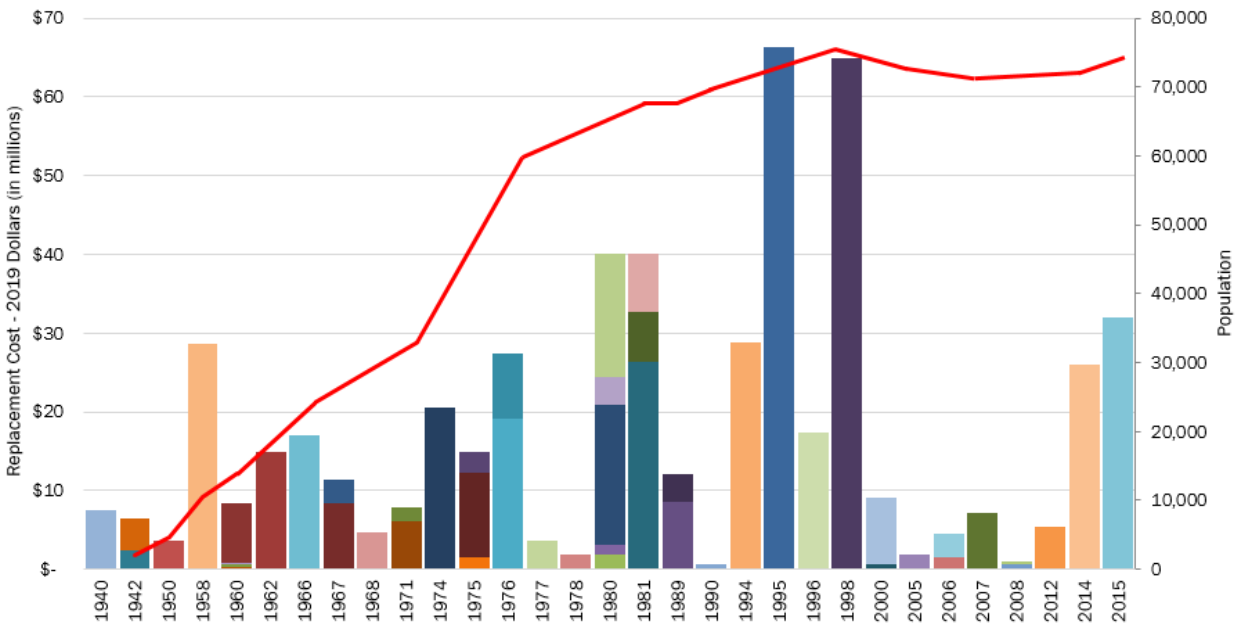


Figure 1: Asset Age Profile by Replacement Cost (in 2019 dollars) with Population

The facilities included in this report have an estimated replacement cost of \$533 million in 2019 dollars. This value is considered lower than actual replacement cost. The City is refining this value to a more modernized replacement cost using actual building replacement project costs.

Where data is available, the historical cost to build these facilities can be found in Appendix A along with the estimated replacement cost in 2019 dollars. The increase in the cost to construct is substantial. For example, the cost to build the Rolling Mix Concrete Arena was \$6 million in 1958 and the estimated replacement cost in 2019 is \$29 million which is most likely on the low side. This is an increase of 360%. Table 2 lists the average percent increase for each building type to gain perspective for the increase in construction costs over time.

Table 2: Construction Cost Increases

Building Category	* Average % Increase in Construction Cost
Fire Halls	311%
Aquatic	430%
Arenas	220%
Cultural	112%
Administration	246%
Police	22%
Leased	493%
Parkades	108%
Stadiums	28%

* Derived from replacement costs that are based on RS Means cost estimating for replacing like for like. These % increases are not based on modernized replacement costs which expect to be significantly higher.

Based on the condition rating definitions found in table 3 on the next page, it was determined that the building components whose condition is less than or equal to 74 found in the mid-amber category and lower, require the most attention and therefore, it is these components that are discussed in this report.

Table 3: Condition Rating Definitions

Rating & System Condition Index (SCI)	SRM Needs	Rating Definition
Green (+) SCI = 100	Sustainment consisting of possible preventive maintenance (where applicable)	Entire component-section or component-section sample free of observable or known distress
Green SCI = 93 - 99	Sustainment consisting of possible preventive maintenance (where applicable) and minor repairs (corrective maintenance) to possibly few or some subcomponents	No component-section or sample serviceability or reliability reduction. Some, but not all, minor (non-critical) subcomponents may suffer from slight degradation or few major (critical) subcomponents may suffer from slight degradation.
Green (-) SCI = 86 - 92		Slight or no serviceability or reliability reduction overall to the component-section or sample. Some, but not all, minor (noncritical) subcomponents may suffer from minor degradation or more than one major (critical) subcomponent may suffer from slight degradation.
Amber (+) SCI = 75 - 85	Sustainment or restoration to any of the following: Minor repairs to several subcomponents; or Significant repair, rehabilitation, or replacement of one or more subcomponents, but not enough to encompass the component-section as a whole; or Combinations thereof	Component-section or sample serviceability or reliability is degraded, but adequate. A very few, major (critical) subcomponents may suffer from moderate deterioration with perhaps a few minor (non-critical) subcomponents suffering from severe deterioration.
Amber SCI = 65 - 74		Component-section or sample serviceability or reliability is definitely impaired. Some, but not a majority, major (critical) subcomponents may suffer from moderate deterioration with perhaps many minor (non-critical) subcomponents suffering from severe deterioration.
Amber (-) SCI = 56 - 64		Component-section or sample has significant serviceability or reliability loss. Most subcomponents may suffer from moderate degradation or a few major (critical) subcomponents may suffer from severe degradation.
Red (+) SCI = 37 - 55	Sustainment or restoration required consisting of major repair, rehabilitation, or replacement to the component-section as a whole.	Significant serviceability or reliability reduction in component- section or sample. A majority of subcomponents are severely degraded and others may have varying degrees of degradation.
Red SCI = 11 - 36		Severe serviceability or reliability reduction to the component- section or sample such that it is barely able to perform. Most subcomponents are severely degraded.
Red (-) SCI = 0 - 10		Overall component-section degradation is total. Few, if any, subcomponents salvageable. Complete loss of component section or sample serviceability.

Two methods were used to calculate the required renewal investments over the next 10 years. The first method was to focus on only building components whose condition is ≤ 74 for all of the facilities, including projects identified in the Capital Expenditure Plan (CEP). The second method uses the same condition range, but focuses strictly on the critical systems; mechanical, electrical, and exterior.

The following sections detail the two methods and are organized by building category.

2.0 Method 1: Facility Investment Needs (<=74 Condition)

Method 1 includes an analysis of repairs and replacements on building components that have a condition score <=74, in order to spend funds where it reduces the risk of failure the most. The workplan costs from BUILDER SMS are considered to be a Class D cost estimate and therefore a contingency of 25% has been applied. Some projects on the workplan have been investigated by specialized contractors. These more accurate cost estimates have been included where available.

In addition to the components identified in BUILDER through visual inspections, there are some components that require replacements based on more in-depth assessments done by specialized inspectors. The projects identified in the current 2019-2023 Capital Expenditure Plan (CEP) are also included in this report. Fire Hall #1 and the Four Seasons Leisure Pool buildings are not included in this analysis as they are currently being replaced.

2.01 Fire Halls

The three Fire Halls and their components are in relatively good condition. Based on the condition assessments, there is approximately \$600k worth of repairs and replacements recommended over the next 10 years for components that have a condition score of <=74. This equates to an average of \$60k per year. Figure 2 illustrates the estimated costs required in the next 10 years on repairs and replacements in the three fire halls.

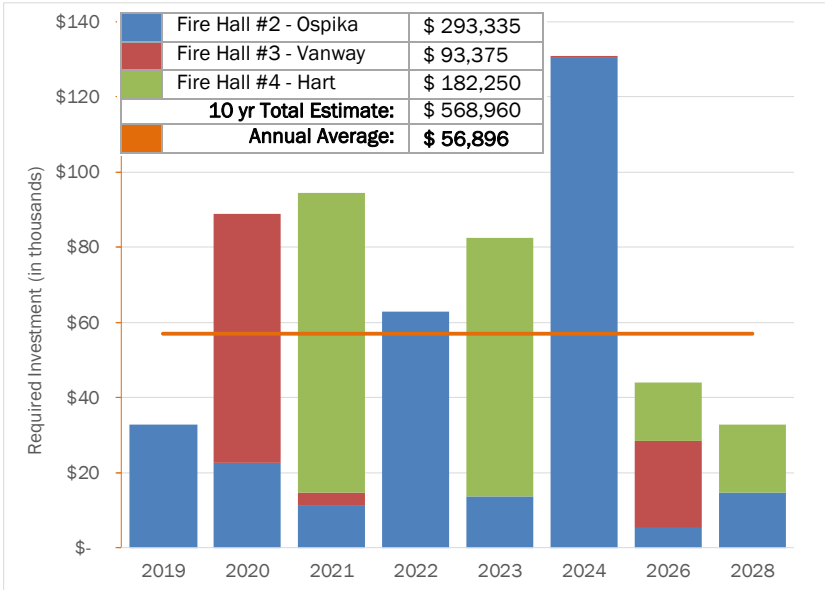


Figure 2: 10 Year Estimated Investments for the Fire Halls

2.02 Aquatic Facilities

In the last 10 years the City has invested \$2.6 million into this facility including projects to replace mechanical and HVAC components, water treatment equipment, and energy improvements. The major components that require replacement in the Aquatic Centre are the building envelope, roof, wave pool tiling, mechanical equipment, and the parking lot. This work has been funded in the current CEP for a total of \$10 million and will commence in 2020.

The Building Automation System will be up for replacement in 2023/2024 for approx. \$500k. There are some interior finishes and HVAC components that are not part of the project noted above. The approx. required investment for these components whose conditions are ≤ 74 is \$880k over the next 10. This is in addition to the projects already described above. Figure 3 illustrates annual required investments.

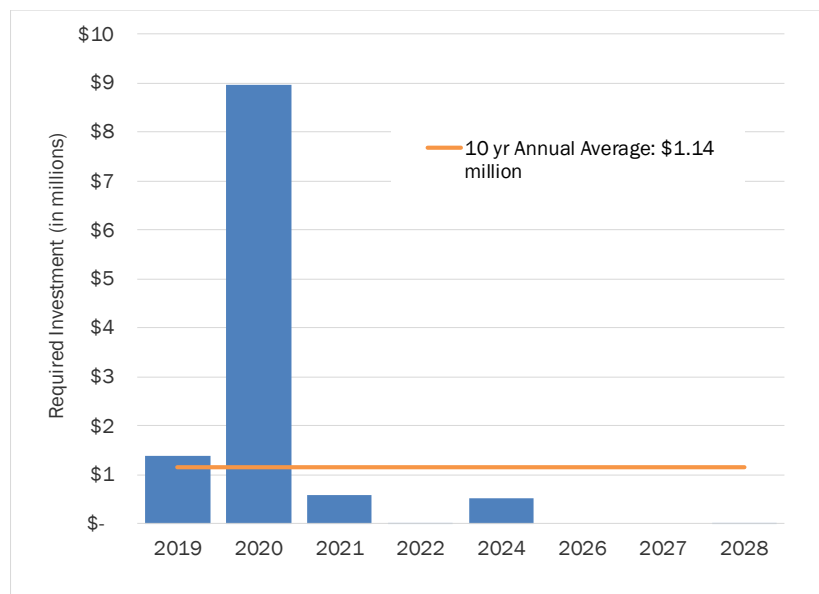


Figure 3: 10 yr Required Investments for The Aquatic Centre

2.03 Arena Facilities

The largest renewal investment required over the next 10 years is in the Arenas. This is not surprising since this building category has the highest replacement cost of all the categories. The recommended repairs and replacements on components that have a condition score of ≤ 74 , those that have been identified in the current CEP (funded and unfunded) and replacement planning work totals \$25 million over the next 10 years or \$2.5 million on average annually. Of this total, \$11.5 million is work required at the Rolling Mix Concrete Arena. Figure 4 on the following page, illustrates the 10 year required investments for the arena facilities.

CN Centre:

CN Centre is worth the most in terms of replacement cost of all of the City's civic facilities. Although it seems like a new building, it is already 24 years old and requires replacement of some of its components. In the last 10 years, the City has invested \$2.6 million into this facility. Many of the projects were related to the electrical and HVAC systems which makes sense considering these types of components tend to have a shorter life expectancy than other building components.

There are several projects that have been approved in the current CEP:

- Roof replacement, 2022 - \$1.3 million,
- Roof ladder replacement, 2019 - \$26k,
- Dasher board replacement, 2019 - \$578k,
- Kitchen equipment replacement, 2019 - \$50k
- Stage curtain motor replacement, 2019 - \$25k

There are several unfunded projects for CN Centre in the current CEP, as well as, an exterior enclosure renewal project and score clock replacement.

- Sound system upgrade, 2020 - \$300k
- Toilet replacement, 2021 - \$50k
- Chiller Maintenance, 2020 - \$55k
- Security & access control, 2021 - \$100k

- Building exterior enclosure, 2021 - \$2.5 million
- Score Clock Replacement, 2026 - \$1.5 million

In addition to the above noted projects, \$1.4 million is required over the next 10 years to replace components at CN Centre whose condition is ≤ 74 . This is an investment of \$140k per year on average.

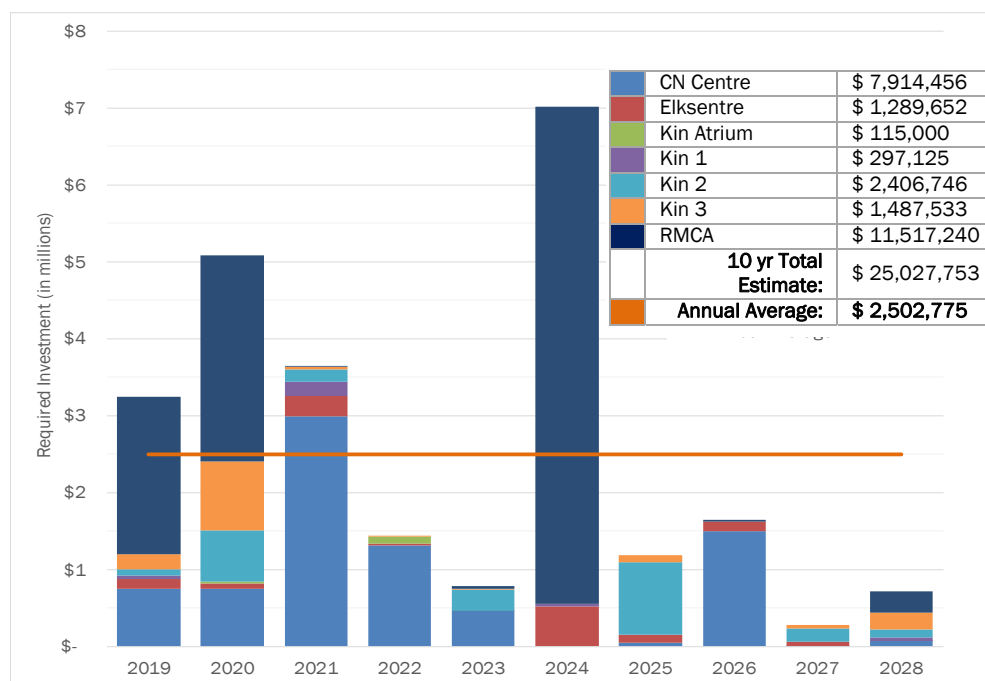


Figure 4: 10 yr Required Investments for Arena Facilities

Elksentre:

The estimated renewal investment over the next ten years is \$1.3 million or \$130k per year on average. This includes components whose condition scores are ≤ 74 and includes funding for an HVAC strategy to plan for an upgrade to its existing HVAC in order to condition the air and control humidity to reduce mold growth in its ceiling spaces.

The Kins:

Kin 1 is only 5 years old and doesn't require much for replacement. Preventative maintenance and monitoring will be ongoing to ensure the life of the building components can last as long as possible. There is however, a crucial replacement of a fire alarm system that failed prematurely and is already obsolete. This project is \$40k and will be funded through operating budgets this year. There are some HVAC and plumbing components that require replacement over the next 10 years for a total of \$257k in today's dollars.

In addition to the replacement of Kin 1 for \$16 million, the City has also invested \$1.8 million in Kin 2 and 3 over the last 10 years. One of the significant projects was replacing Kin 3's floor structure for \$1 million.

Kin 2 is 45 years old and requires an estimated \$2.4 million in replacements over the next 10 years. This includes replacements of components whose condition is ≤ 74 , projects that have been identified in the current CEP, and replacement planning work. Kin 2's roof replacement has been approved in the current CEP in 2020 for a total of \$493k. Also included in the \$2.4 million total, is funding for an HVAC strategy

to plan for an upgrade to its existing HVAC to condition the air and control humidity to reduce mold growth in its ceiling spaces.

Kin 3 is 44 years old and requires an estimated \$1.5 million in replacements over the next 10 years. This includes replacements of components whose condition is ≤ 74 , projects that have been identified in the current CEP, and replacement planning work. Kin 3's roof replacement has been approved in the current CEP in 2020 for a total of \$657k. The skate floor replacement is also in the CEP for \$125k in 2020, but has not been approved for funding. Also included in the \$1.5 million total, is funding for an HVAC strategy. Like Kin 2 and the Elksentre, an upgrade to the HVAC system is required to condition the air and control humidity to reduce mold growth in its ceiling spaces.

The Kin atrium is fairly young and only requires continued preventative maintenance and monitoring of components.

Rolling Mix Concrete Arena (RMCA):

This arena is one of the oldest buildings the City owns. It is now 61 years old and requires significant renewal investment in order to continue to provide the service it's expected to. The City has invested \$1.8 million in this arena over the last 10 years on projects like the roof replacement and exterior upgrades.

More than \$11 million over the next 10 years is still required. This includes replacements of components whose condition is ≤ 74 and projects that have been identified in the current CEP. The HVAC system and the floor replacements add up to over \$3.5 million alone. Some of the water piping in the foundation has failed recently and it is unknown whether the floor of the arena will last another 5 to 10 years.

The Arenas' ice plants will eventually have their chillers replaced with smaller units. These plate and frame style units reduce the amount of ammonia usage, use less energy and are safer. The estimated cost for these replacements will be determined in the near future.

2.04 Cultural Facilities

PG Playhouse:

This building is 23 years old and will require approx. \$668k in replacements over the next 10 years or \$67k per year on average. The majority of this required spending is on the HVAC system component replacement in the next 5 years.

Two Rivers Art Gallery:

There are two projects approved in the CEP for this building. One is a Building Automation System (BAS) replacement in 2019 for \$130k and the other is a partial roof replacement in 2020 for \$63k. The remaining components whose condition is ≤ 74 require \$820k in the next 10 years or \$82k per year on average.

Bob Harkins Library:

The Library is undergoing major renovations to its entrance and construction of a new circulation desk. This work is commencing in 2019 for a total budget cost of \$4.36 million. Prior to this project, the City had invested \$1.6 million into this facility over the last 10 years on projects like the roof replacement and mechanical and electrical system upgrades.

In addition to the projects noted for 2019, there are three other projects included in the current CEP that are currently unfunded:

- Structural repairs, 2023 - \$100k

- Flooring replacement, 2022 - \$235k
- Soffit replacement, 2021 - \$261k

These budget costs will need to be re-evaluated to ensure they are still current.

There is also required spending on the components whose conditions are ≤ 74 , totaling \$2.8 million or \$280k per year on average. The deck slab is showing signs of deterioration underneath the floor and should be coated with a torch-on membrane for waterproofing to postpone any structural repairs that could occur if not done.

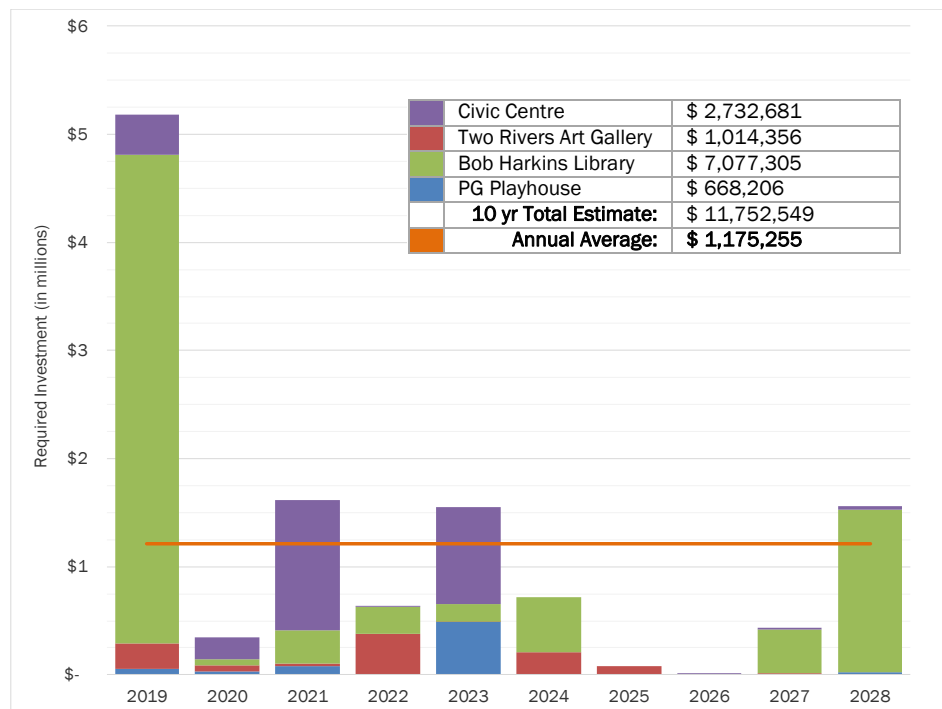


Figure 5: 10 yr Required Investments for Cultural Facilities

Civic Centre:

The City has invested \$1.1 million in this building over the last 10 years. Projects include electrical and energy improvements and interior renovation. There will be major components of the Civic Centre HVAC needing replacement in the next 5 years for a total of more than \$1 million in today's dollars. The Building Automation System (BAS) replacement is estimated at \$500k for 2021. The roof has been approved for replacement for a total budget of \$566k in 2021. There is a project in the current CEP to replace the flooring for a total of \$202k which has not been approved. The total required investment for this building is estimated at \$2.7 million over the next 10 years including the above noted projects. This would be an average investment of \$273k per year.

2.05 Administration Buildings

City Hall:

The City has invested \$1.9 million into this building over the last 10 years in projects like the phase 1 window replacements, HVAC repair, and interior renovations. The HVAC system needs replacement with upgraded components to meet today's standards for a total estimated cost of \$3.8 million. This work includes; the Building Automation System (BAS), pneumatic controls, A/C, air handling units and part of the heating system. It also includes a contingency for the temporary location of staff while work is being completed on each floor of the building. This building also has some plumbing components that are almost 60 years old and are becoming problematic. The plumbing components that have lower condition scores could be included in the HVAC replacement project. In the meantime, plumbing failures are corrected through the operating accounts while major plumbing repairs are deferred to the CEP.

Phase 2 of the City Hall window replacement is currently unfunded in the CEP for a total of \$435k in 2022. Although this project may not be immediate from a condition point of view, upgrading windows to today's energy efficient windows results in savings over time in heating and cooling costs.

The transformer and switch gear at City Hall is original to the building from 1965. The equipment is obsolete. Reliable power for the City's Civic Facilities is a key element in the delivery of services to the public. Failure of this electrical equipment would result in a lengthy closure of City Hall. City Hall is location to some of the City's departments providing services to the public, but it is also the location of the City's essential servers and IT network equipment. This project has been included in the current CEP for \$205k in 2020 and is presently unfunded.

Aside from these projects, an estimated \$1.1 million for replacements of components whose condition is <=74 is required over the next 10 years or \$110k per year on average. This investment consists mostly of components in the interior finishes, plumbing, and electrical systems.

4050 18th Ave Yard Shop:

This building requires a roof replacement over the Mechanics' bay which has been funded in 2019 for \$426k. The overhead doors in this building also require replacement in 2022 for an estimated cost of \$215k. There is an estimated \$337k required for replacements over the next 10 years or \$34k per year on average. This work includes replacing components of the interior finishes, plumbing, and HVAC systems.

18th Ave Yard All Buildings:

The 18th Ave Yard doesn't currently have an emergency backup generator to provide power when BC Hydro's service is interrupted. During the winter, the fleet shop works 24 hours a day working on snow clearing and other essential equipment and would be without power during a BC Hydro outage. Heating is another issue when power is interrupted over a longer period of time. This is most apparent in the utility parking garage where the vacuum trucks need to be kept heated for such things as emergency sewer backups. An emergency generator project has been included in the current CEP for a total of \$215k in 2020 and is presently unfunded.

18th Ave Solid Waste Building:

The flooring in this building is the only component scoring <= 74 for an estimated replacement cost of \$76k in 2025.

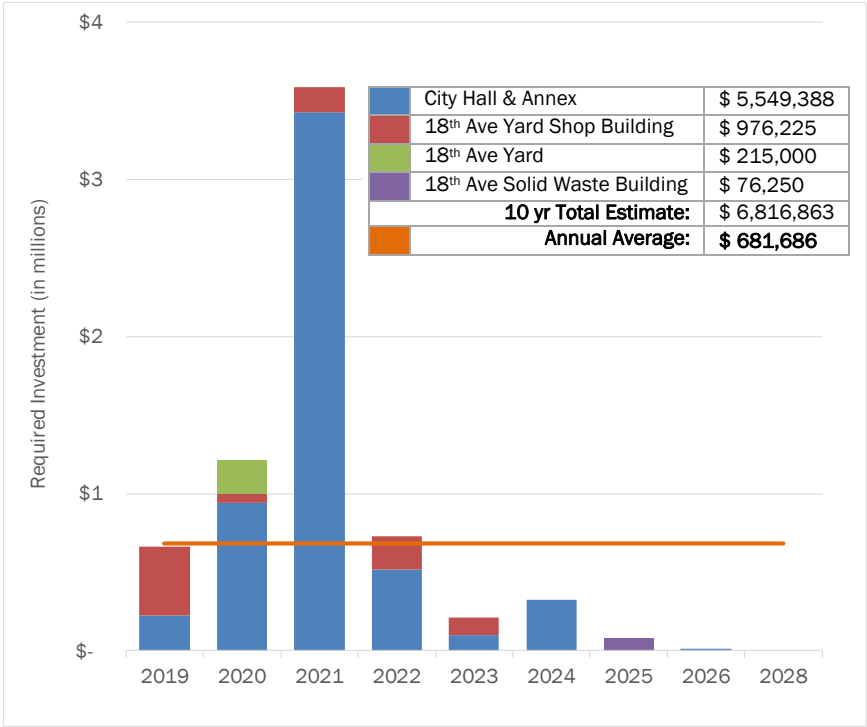


Figure 6: 10 yr Required Investments for Administration Buildings

Figure 6 illustrates the estimated spending required to renew the building components whose conditions are scoring ≤ 74 and includes the projects currently identified in the CEP. The average annual renewal investment is \$682k for these buildings.

2.06 Police Facility

The RCMP Detachment is new and in good condition; however, the roof is beginning to deteriorate. Pooling was observed by the drains and vegetation is growing around the edges. Monitoring and repair will be completed as necessary. There are also some HVAC components that are failing prematurely and are currently being replaced over time through operating budgets.

2.07 Leased Buildings

Exhibition Grounds Buildings:

As with the previous sections of this report, the following renewal investment costs are based on building components whose conditions are ≤ 74 and include projects identified in the current capital plan (CEP).

The barns at the Exhibition Grounds are leased by the PG Agricultural & Historical Association, PG Horse Society, and BCNE. The lease for the use of the grounds and barns expires in 2020 and the 10-year lease for the Rodeo Grounds expires in 2027. The Exhibition Sports Centre is leased to the PG Gymnastics Society. Figure 7 shows a map of the area.



Figure 7: Exhibition Grounds

Based on the terms of the lease agreement for the barns, the City is responsible to replace heaters and boilers. All other repairs or replacements are the responsibility of the Tenants. The latest condition assessments identify, there are approx. \$1.4 million worth of repairs and replacements of the exterior, interior, and electrical components that have a condition score in the lower amber and red categories, ≤ 74 condition score. These components will be reviewed by the City and Tenants to determine what risk they pose to safety and functionality and prioritize what is critical to repair or replace. There may be components that have a poor condition, but do not pose a threat to health and safety or usage. There could be an opportunity to demolish the Beef and Dairy barns depending on the Tenants' requirements for storage. These two barns are in poor condition and require approx. \$142k in the next year and a total of \$330k over the next 10 years.

The roof replacements of the two largest buildings, the Millennium barn and the Agriplex, have been approved. The Millennium barn roof replacement is scheduled to commence in 2025 for \$141k and the Agriplex roof replacement is scheduled to commence in 2020 for \$445k.

Based on the terms of the lease agreement for the Exhibition Sports Centre, the City is responsible to replace heaters, boilers, roofing and siding. All other repairs or replacements are the responsibility of the Tenant. There is approximately \$860k worth of repairs and replacements of the exterior windows/doors, electrical, and plumbing. In the short term, the City has approval to replace the Sports Centre lower roof for a budget of \$122k in 2019 and upper roof for \$45k in 2025. There is also a project identified in the current CEP to build a gymnastics viewing area which has not been approved. In the long term, this type of building use could be considered as part of an integrated facility.

Figure 8 Illustrates the estimated investments over the next 10 years for building components that are the responsibility of the City and Tenants. This is based on the existing lease agreements. As mentioned, the City and the Tenants will conduct an assessment of what components are critical for replacement based on public health, safety, and usability. The outcome may not necessarily be that the Tenants’ have to spend as much as the condition assessments and BUILDER prescribe.

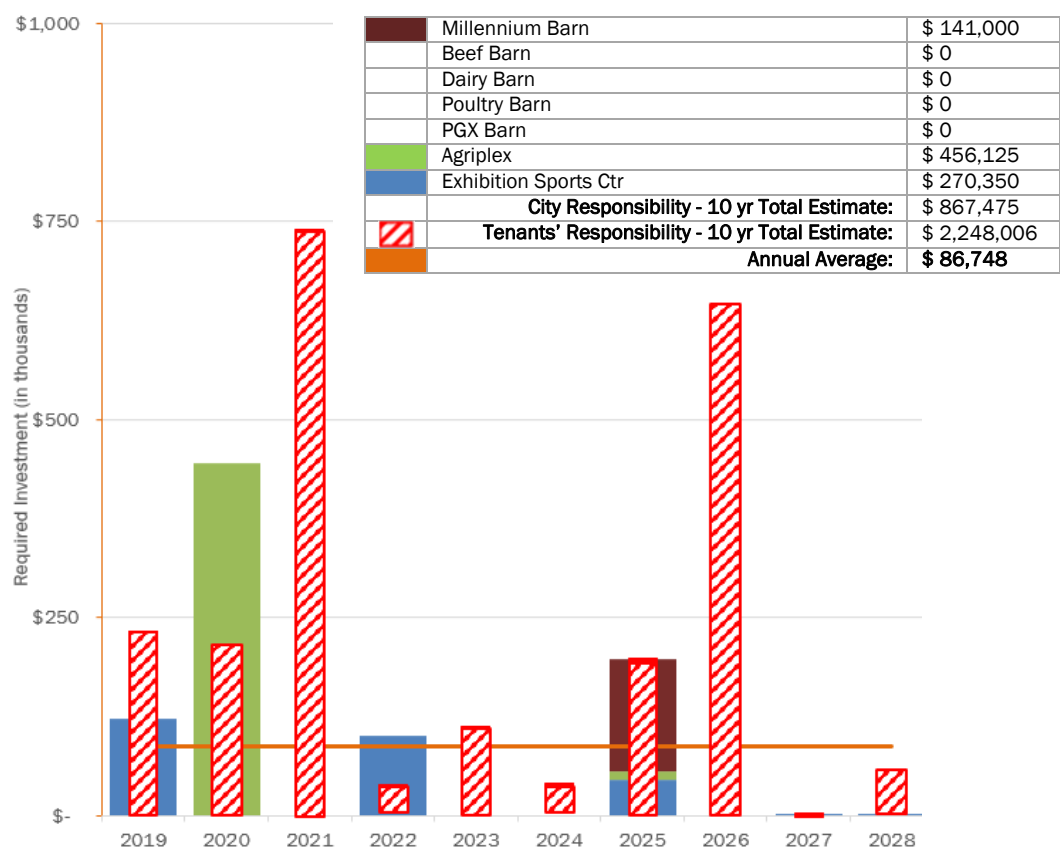


Figure 8: 10 yr Required Investments for Exhibition Grounds Buildings

Connaught Youth Centre:

This building is 57 years old and requires approx. \$950k in replacements over the next 10 years. Roofing, plumbing, HVAC and electrical require the most renewal investment. A new support column is currently being designed to replace a structural deficiency. The exterior wall finishes also require replacement. This project is currently included in the CEP for \$84k in 2020, but is unfunded.

Elder Citizens Recreation Association:

This building requires approx. \$773k in component replacements over the next 10 years. This includes two projects identified in the current CEP, the elevator replacement and fascia & fencing replacement.

These have not been approved. This also includes the replacement of the Building Automation System (BAS) in 2025 for \$150k. The total \$773k includes replacements of some interior finishes, plumbing, fire protection and electrical. These building components have been identified in the lease agreement as being the responsibility of the tenant. This work totals \$295k, leaving \$478k over the next 10 years the responsibility of the City.

Kinsmen Community Centre:

The City owns the land at this location. Typically, the tenants pay for any repairs or replacements to the building, but in 2017 the City replaced the roof for a total of \$65k which included \$30k in NDIIT grant funding. The building requires approx. \$585k over the next 10 years primarily on the exterior and HVAC system.

Pine Valley Golf Clubhouse:

This building requires approx. \$51k in component replacements over the next 10 years consisting of plumbing, HVAC, and electrical.

Search & Rescue:

The roof of this building has been approved for replacement this year for \$54.5k. The rest of the building is in relatively good condition.

Senior's Activity Centre:

The roof of this building has been approved for replacement in 2021 for \$195k. It will also be receiving a new lift to provide better accessibility in 2019 for \$65k. The other significant components coming up for replacement are plumbing, HVAC, and electrical. The total estimated renewal investments over the next 10 years is approx. \$888k, or \$89k per year on average. Based on the lease agreement, of the \$888k, \$687k is the responsibility of the Tenant.

South Fort George Rec Centre:

Based on the condition assessments, this building requires \$525k over the next 10 years. The roof and exterior require significant repairs.

SPCA building:

The roof of this building has been approved for replacement in 2019 for \$77k. The remaining investments required to replace various components in the building is \$375k over the next 10 years, or \$38k per year on average.

Studio 2880 and 2820:

These buildings are 77 years old and among the oldest the City owns. Roofing, exterior, and interior finishes are the primary components coming up for replacement in the next 10 years. The total renewal investment over the next 10 years for these buildings is \$470k. The Community Arts Council currently leases these buildings and has plans to move from that location. Minimal investment is recommended with a focus on any component replacement posing a health and safety concern.

VIA Rail Building:

This building requires approx. \$374k over the next 10 years primarily for the roof and electrical component replacements.

1310 3rd Ave:

This building is partially leased by the Community Arts Council and may become their permanent home. The building requires significant renewal investments over the next 10 years totaling \$674k. This includes a roof replacement project that has been approved and is scheduled to be installed this year for \$257k.

Figure 9 shows the estimated renewal investments over the next 10 years for building components that are the responsibility of the City and Tenants. This is based on the existing lease agreements. As mentioned, the City and the Tenants will conduct an assessment of what components are critical for replacement based on health, safety, and usability. The outcome may not necessarily be that the Tenants' have to spend as much as the condition assessments and BUILDER prescribe.

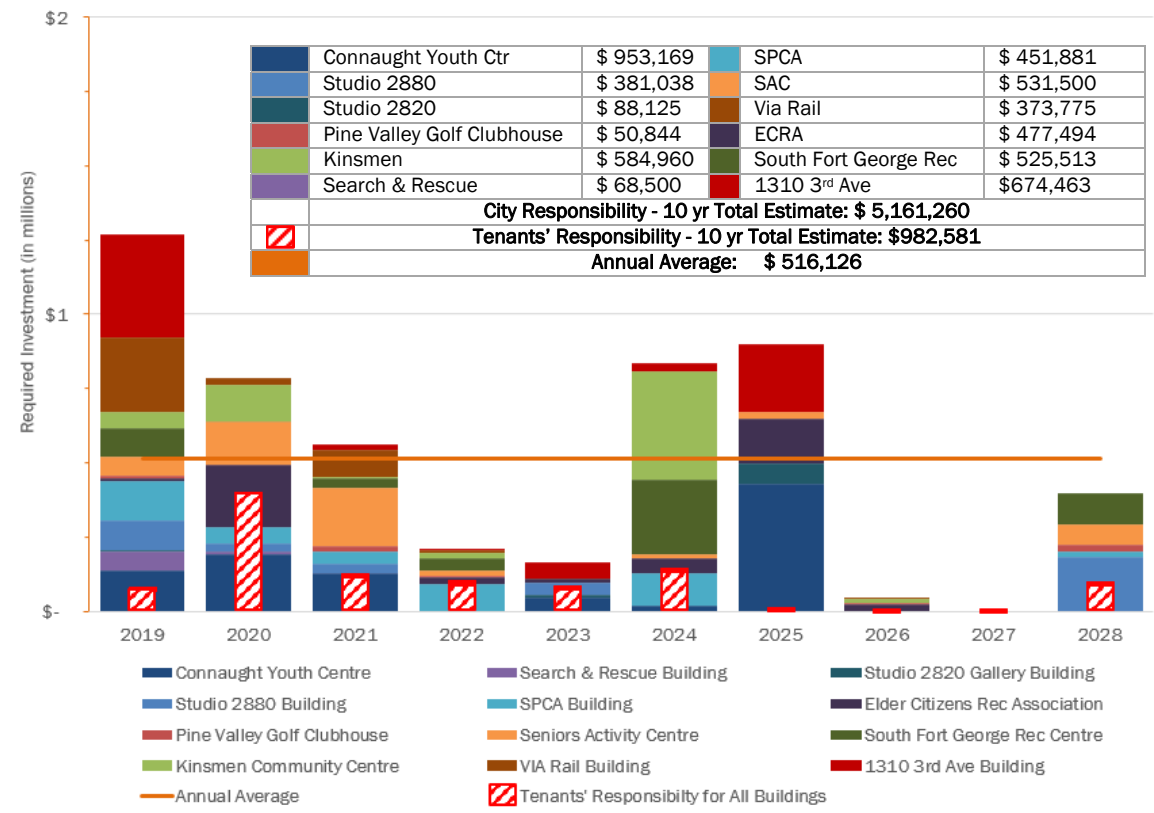


Figure 9: 10 yr Required Investments for Leased Buildings

2.08 Parkade Buildings

2nd Ave Parkade:

This Parkade will be undergoing renovations this year for a total budget cost of \$5.17million. This project will address structural, mechanical, and electrical system deterioration.

5th Ave Parkade:

The majority of the 5th Ave Parkade was renovated in 2018 for a total of \$1.23 million. Another major component up for renewal in the next 5 years is the roof deck which requires waterproofing for a current cost estimate of \$590k. There is also an estimated \$116k over the next 10 years to replace components whose condition is <=74.

6th Ave Parkade:

This parkade was built in 2007 and does not currently require any significant repairs or replacements, however, there are some leaks in the southwest corner from an above ground parking lot that sits on top of the parkade. In order to keep the concrete structure in good condition, a membrane should be installed on the surface of the parking lot and a layer of asphalt pavement overtop. The cost estimate for this work

has not been calculated, but would be in the range of \$100k to \$200k. This should be completed in the next few years.

Plaza Parkade:

The Plaza Parkade has significant deterioration of some structural concrete components, along with mechanical and electrical upgrades. There has been a significant increase in the cost of renovations for parkade buildings based on recent projects and budgets require adjusting. The current estimate for this renovation is \$2.4 million.

The project will be coordinated with the renovation of the 5th Ave Parkade and the completion of the new George St Parkade. Detailed design will start in 2020 and will include an updated cost estimate. Construction is planned for 2021 once the George St Parkade is available. There is also an elevator replacement project included in the current CEP in 2021 for \$182k that has not been approved.

Westel Parkade:

This parkade is leased by the City from BCR Properties Ltd. The majority of repairs and replacements are the responsibility of the City. There is currently a deck replacement project approved in the CEP for \$515k to commence this year. Over the next 10 years there is an estimated \$187k for replacements of components whose condition is <=74.

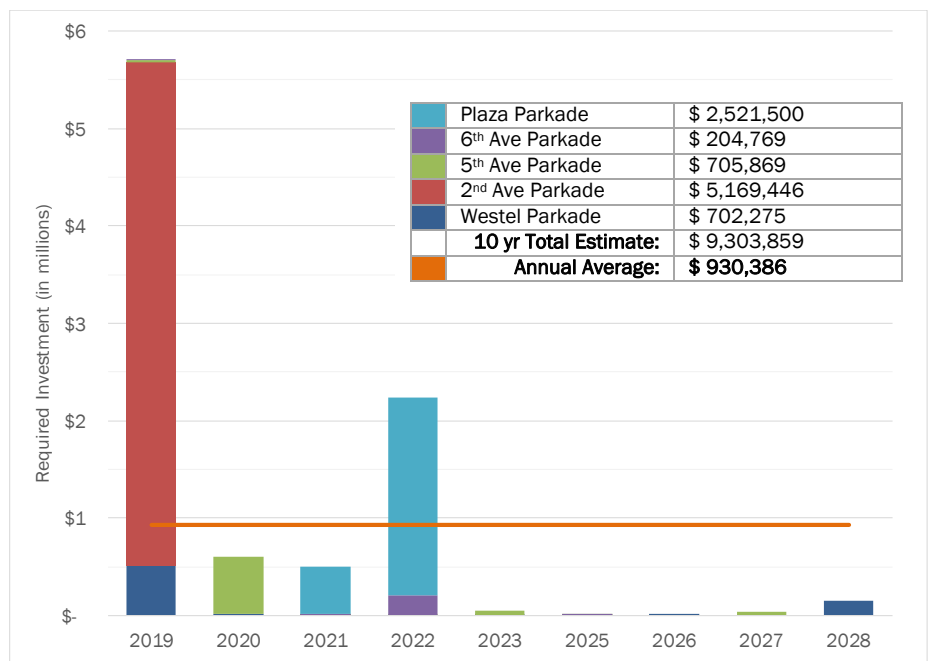


Figure 10: 10 yr Required Investments for Parkades

2.09 Stadium Buildings

Masich Place Stadium:

In 2017/2018, Masich Place Stadium received an investment of \$4.8 million with a new synthetic turf infield, resurfaced track, and new track and field infrastructure, as well as upgrades to the grandstand with exterior painting, lighting, and accessible infrastructure. The second phase of investment into this facility has been approved and will include renovations to the change room, washrooms, concession,

mechanical, and electrical components of this facility for a total budget of \$2.7 million over the next two years.

Citizen Field Stadium:

This stadium is 14 years old and is in good condition. Based on the condition assessment, approx. \$14k is required over the next 10 years for those components whose condition score is ≤ 74 . This work is primarily for plumbing and HVAC component replacements. The Citizen newspaper pays an annual fee of \$10k to the baseball association to help with operations and maintenance of this facility.

2.10 Investment Summary for Method 1

It is unlikely that there will be enough resources to do the majority of the work in the first 3 years as seen in Figure 11. This work could be spread out over the 10-year period.

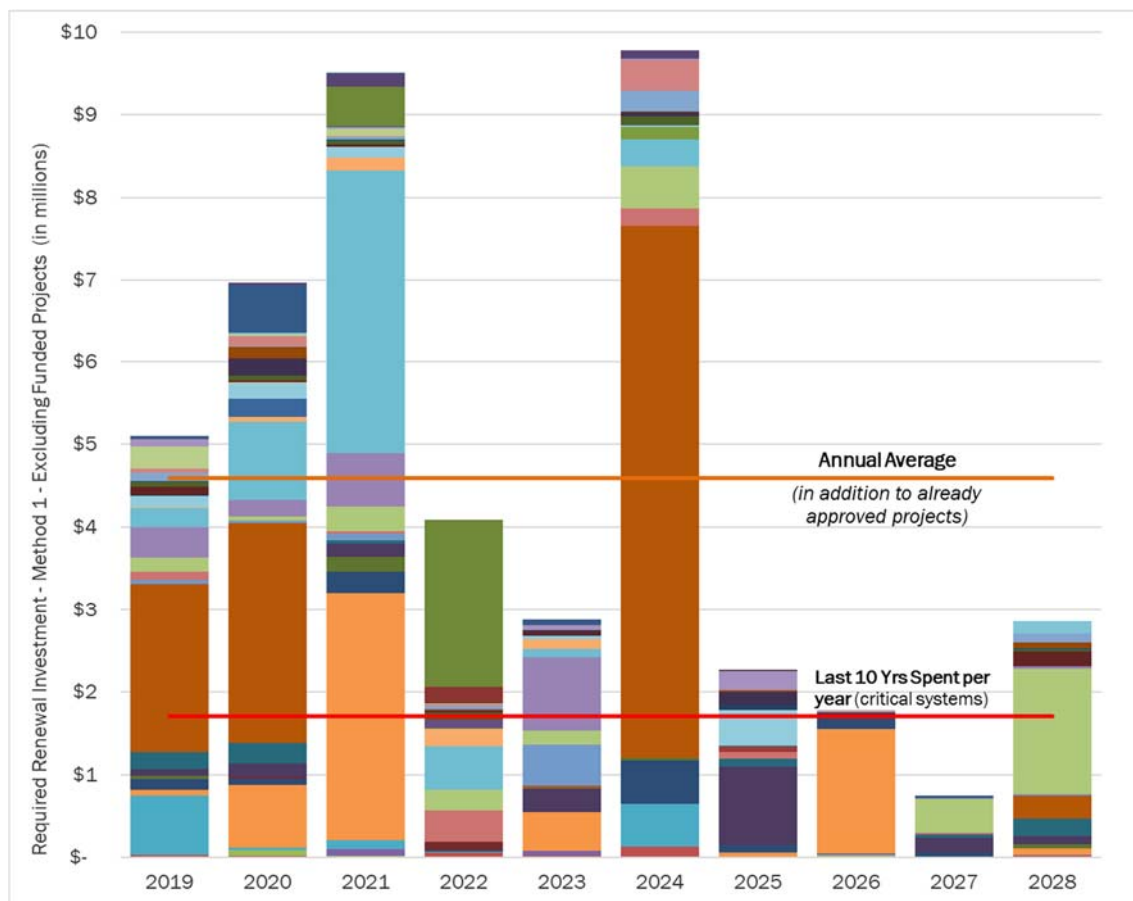


Figure 11: 10 yr Estimated Renewal Investments for All Building Systems

The annual average renewal investment is estimated to be \$7.4 million per year. This includes the already approved large investment projects for the Aquatic Centre, Masich Place, 2nd Ave Parkade, Library, and various roof replacement projects. Excluding the already approved capital projects, the annual average renewal investment over the next 10 years is \$4.6 million.

Table 4 lists the buildings and their estimated 10-year investment which includes all components whose condition is ≤ 74 , projects that have been identified in the current CEP, and replacement planning work.

Table 4: 10 yr Estimated Renewal Investments for All Building Systems Requiring Replacement

Building Name	Estimated 10 Year Investment	Building Name	Estimated 10 Year Investment
Fire Hall No 2 - Ospika	\$ 293,335	Poultry Barn	\$ 0
Fire Hall No 3 - Vanway	\$ 93,375	Dairy Barn	\$ 0
Fire Hall No 4 - Hart	\$ 182,250	Beef Barn	\$ 0
Aquatic Centre	\$ 11,446,875	Millennium Barn	\$ 141,000
CN Centre	\$ 7,914,456	Connaught Youth Centre	\$ 953,169
Elksentre	\$ 1,289,652	Search & Rescue Building	\$ 68,500
Kin Atrium (Connector)	\$ 115,000	Studio 2820 Gallery Building	\$ 88,125
Kin Centre I Arena	\$ 297,125	Studio 2880 Building	\$ 381,038
Kin Centre II Arena & Lounge	\$ 2,406,746	SPCA Building	\$ 451,881
Kin Centre III Arena	\$ 1,487,533	Elder Citizens Rec Association	\$ 477,494
Rolling Mix Concrete Arena	\$ 11,517,240	Pine Valley Golf Clubhouse	\$ 50,844
PG Playhouse	\$ 668,206	Seniors Activity Centre	\$ 531,500
Two Rivers Art Gallery	\$ 1,014,356	South Fort George Rec Centre	\$ 525,513
B. Harkins Library	\$ 7,711,819	Kinsmen Community Centre	\$ 584,960
Civic Centre / Civic Plaza	\$ 2,732,681	VIA Rail Building	\$ 373,775
City Hall & Annex	\$ 5,549,388	1310 3rd Ave Building	\$ 674,463
4050 18th Ave Yard Shop	\$ 976,225	Westel Parkade	\$ 702,275
18th Ave Yard	\$ 215,000	2nd Ave Parkade	\$ 5,169,446
18th Ave Solid Waste Building	\$ 76,250	5th Ave Parkade	\$ 705,869
RCMP Detachment	\$ 156,288	6th Ave Parkade	\$ 204,769
Leased Buildings – City’s Responsibility Only		Plaza Parkade	\$ 2,521,500
Exhibition Sports Centre	\$ 270,350	Masich Stadium	\$ 3,019,965
Exhibition Grounds Agriplex	\$ 456,125	Citizen Field Stadium	\$14,538
PGX Barn	\$ 0		
Total Estimated 10 Year Renewal Investment:			\$74,510,899
Annual Average:			\$ 7.4 million
Annual Average (Excluding already funded projects):			\$ 4.6 million

3.0 Method 2: Critical System Renewal Investment Needs (≤ 74 Condition)

The previous method summarized the upcoming renewal investment needs of each building based on condition assessments and professional judgement. The work identified focuses on all building components whose condition is ≤ 74 . Method 2 uses the same condition range, but focuses strictly on the critical systems; mechanical, electrical, and exterior to determine required 10 year investments.

These critical systems, which include; electrical, fire protection, HVAC, plumbing, exterior, and roofing have the highest risk for most buildings. Especially the electrical and HVAC which need to maintain current code compliance. As HVAC systems are updated, there are efficiencies in electricity and natural gas and provide safe, healthy, and comfortable environments for the building's users. The exterior of a building is critical for the protection of the interior components from the environment.

Table 5: 10 yr Estimated Renewal Investments for Only Critical Building Systems Requiring Replacement (Electrical, Mechanical, and Exterior)

Building Name	Estimated 10 Year Investment	Building Name	Estimated 10 Year Investment
Fire Hall No 2 - Ospika	\$ 246,704	Poultry Barn	\$ 0
Fire Hall No 3 - Vanway	\$ 81,250	Dairy Barn	\$ 0
Fire Hall No 4 - Hart	\$ 164,125	Beef Barn	\$ 0
Aquatic Centre	\$10,963,306	Millennium Barn	\$ 141,000
CN Centre	\$ 7,161,456	Connaught Youth Centre	\$ 948,969
Elksentre	\$ 1,178,446	Search & Rescue Building	\$ 57,188
Kin Atrium (Connector)	\$ 115,000	Studio 2820 Gallery Building	\$ 88,125
Kin Centre I Arena	\$ 257,125	Studio 2880 Building	\$ 283,163
Kin Centre II Arena & Lounge	\$ 2,406,745	SPCA Building	\$ 387,800
Kin Centre III Arena	\$ 1,355,752	Elder Citizens Rec Association	\$ 293,831
Rolling Mix Concrete Arena	\$ 9,084,469	Pine Valley Golf Clubhouse	\$ 50,844
PG Playhouse	\$ 668,206	Seniors Activity Centre	\$ 395,875
Two Rivers Art Gallery	\$ 1,014,356	South Fort George Rec Centre	\$ 524,138
B. Harkins Library	\$ 7,308,519	Kinsmen Community Centre	\$ 578,963
Civic Centre / Civic Plaza	\$ 2,105,681	VIA Rail Building	\$ 337,913
City Hall & Annex	\$ 5,044,444	1310 3rd Ave Building	\$ 607,169
4050 18th Ave Yard Shop	\$ 933,100	Westel Parkade	\$ 537,187
18th Ave Yard	\$ 215,000	2nd Ave Parkade	\$ 5,169,446
18th Ave Solid Waste Building	\$ 0	5th Ave Parkade	\$ 675,119
RCMP Detachment	\$4,900	6th Ave Parkade	\$ 204,769
Leased Buildings – City's Responsibility Only		Plaza Parkade	\$ 2,340,000
Exhibition Sports Centre	\$ 170,350	Masich Stadium	\$ 2,860,600
Exhibition Grounds Agriplex	\$ 456,125	Citizen Field Stadium	\$ 11,630
PGX Barn	\$ 0		
Total Estimated 10 Year Renewal Investment:			\$ 67,428,788
Annual Average:			\$ 6.8 million
Annual Average (Excluding already funded projects):			\$4.0 million

Method 2 results in an annual average renewal investment of \$4.0 million in addition to the already

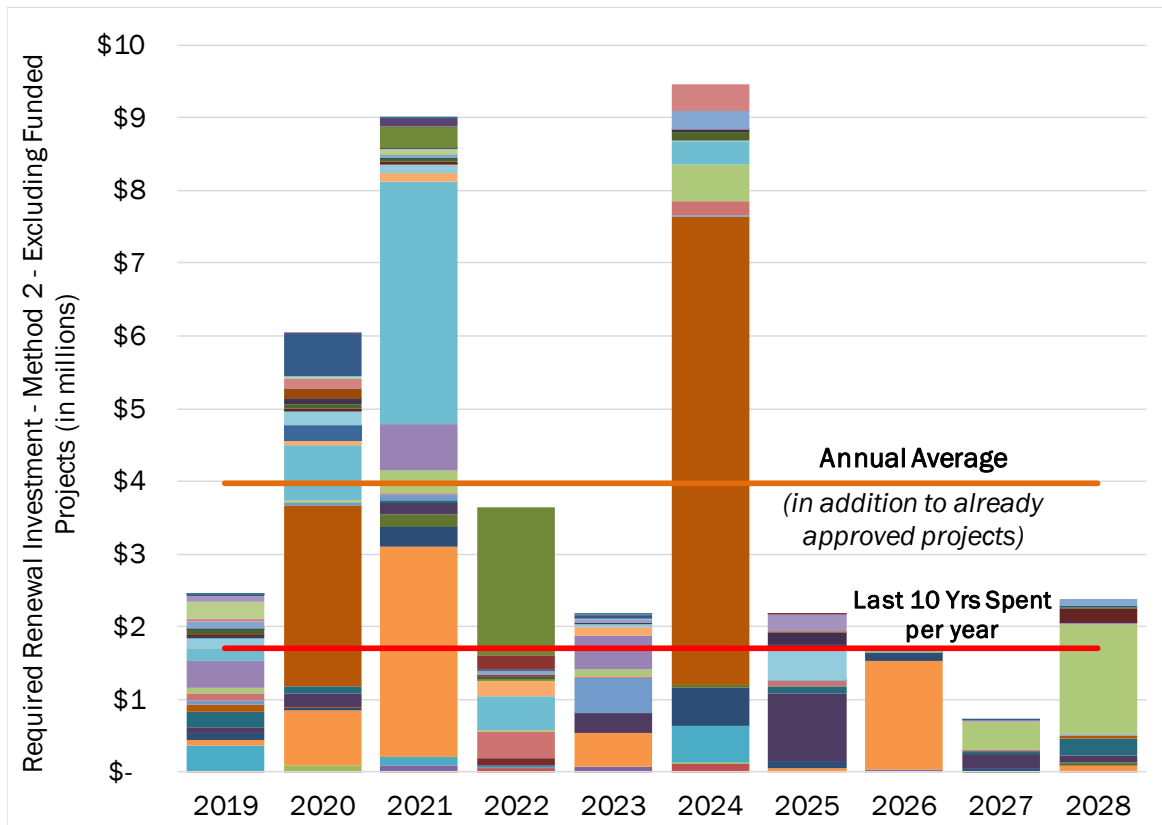


Figure 12: 10 yr Estimated Renewal Investments for Critical Building (Excludes Already Funded Capital Projects)

approved capital projects. See figure 12 for an annual breakdown of required investments for the critical systems.

4.0 Conclusions & Recommendations

Method 1 includes analysis on all building components whose condition is ≤ 74 . This method includes projects related to all building components such as: electrical, mechanical, ceiling, wall and floor finishes, and interior doors and results in an annual average renewal investment of \$4.6 million. In order to prioritize spending in areas that have the highest risk, method 2 focuses on the critical building systems such as: electrical, mechanical, and exterior and results in an annual average renewal investment of \$4.0. The similarity in these results re-enforces the fact that the majority of building components in poorer condition are the critical building systems, which are also the biggest cost drivers. The City has only been spending \$1.7 million on average annually over the last 10 years. It is important to note that method 2 does not include the buildings' interior aesthetics. If the decision is made to fund \$4.0 million on average per year, this will not address any interior finishes, such as interior doors and windows, flooring, and walls.

The City's required annual average renewal investment is between \$4.0 million and \$4.6 million, for civic buildings to keep them in good working order. Therefore, a financial strategy to fund the civic facilities

required renewals will be developed for Council's consideration for implementation over a 5 to 10-year period. This strategy may include a variety of funding sources such as: grants, borrowing, fees and charges, lease rates, revenue for property and parcel taxes.

Administration will also continue to explore opportunities for the City to divest of aged facilities. This can be through sale, demolition, or replacement. For example, given the age of the Rolling Mix Concrete Arena and the amount renewals required, over \$11 million, this would be a good candidate to consider replacing with a modern facility instead of investing in renovations.

Another building category that requires immediate attention is the leased buildings, specifically the Exhibition Grounds. Based on the lease agreements, there are some building components that are the responsibility of the City and some of the Tenants. The City and the Tenants will conduct an assessment of what components are critical for replacement based on public health, safety, and usability. The outcome may not necessarily be that the Tenants' have to spend as much as the condition assessments and BUILDER prescribe.

The City is continually evolving in its asset management practices, using the information it collects to make data driven decisions on spending priorities in order to continue to provide services to the community in an affordable and sustainable way.

Appendix A: Original Construction Cost vs. Current Estimated Replacement Costs (2019)

Building Name	Year Built	Original Installation Cost	Current 2019 Estimated Replacement Cost - Like for Like (not modernized)	Increase \$	Increase %
Fire Hall #2 Ospika	1968	\$ 1,092,346	\$ 4,644,346	\$ 3,551,999	325%
Fire Hall #3 Vanway	1977	\$ 857,738	\$ 3,556,794	\$ 2,699,056	315%
Fire Hall #4 Hart	1980	\$ 906,417	\$ 3,556,794	\$ 2,650,377	292%
Aquatic Centre	1998	\$ 12,268,532	\$ 65,000,000	\$ 52,731,468	430%
CN Centre	1995	\$ 21,748,751	\$ 66,353,829	\$ 44,605,078	205%
Elksentre	1976	\$ 2,714,025	\$ 8,298,568	\$ 5,584,543	206%
KIN 1	2014	\$ 20,021,233	\$ 25,914,432	\$ 5,893,199	29%
KIN 2 & 3	1974	\$ 7,764,268	\$ 31,218,369	\$ 23,454,101	302%
RMCA	1958	\$ 6,231,907	\$ 28,651,738	\$ 22,419,831	360%
PG Playhouse	1971	\$ 2,956,138	\$ 6,053,030	\$ 3,096,892	105%
Two Rivers Art Gallery	2000	\$ 5,283,478	\$ 8,469,741	\$ 3,186,263	60%
Bob Harkins Library	1981	\$ 10,255,177	\$ 26,402,464	\$ 16,147,287	157%
Civic Centre	1994	\$ 12,862,320	\$ 28,880,000	\$ 16,017,680	125%
City Hall	1966	\$ 11,938,608	\$ 17,991,592	\$ 6,052,984	51%
18th Ave Yard Admin	2012	\$ 2,582,700	\$ 5,408,642	\$ 2,825,942	109%
18th Ave Yard Carpenter/Electrical	1980	\$ 498,783	\$ 1,790,575	\$ 1,291,792	259%
18th Ave Yard Shop	1980	\$ 3,272,241	\$ 17,620,005	\$ 14,347,764	438%
18th Ave Yard Solid Waste	1980	\$ 296,585	\$ 1,400,798	\$ 1,104,213	372%
RCMP Detachment	2015	\$ 35,269,046	\$ 42,869,746	\$ 7,600,700	22%
Exhibition Sports Centre	1940	\$ 1,217,000	\$ 7,482,641	\$ 6,265,641	515%
Agriplex	1975	\$ 1,056,594	\$ 1,607,989	\$ 551,395	52%
PGX Barn	1990	\$ 218,000	\$ 654,865	\$ 436,865	200%
Connaught Youth Centre	1962	\$ 2,350,112	\$ 14,968,000	\$ 12,617,888	537%
Search & Rescue	1967	\$ 250,962	\$ 2,987,921	\$ 2,736,959	1091%
Studio 2820	1942	\$ 431,031	\$ 2,459,712	\$ 2,028,681	471%
Studio 2880	1942	\$ 667,287	\$ 4,072,857	\$ 3,405,570	510%
SPCA Building	1975	\$ 620,277	\$ 2,768,661	\$ 2,148,384	346%
Elders Citizens Rec Association	1989	\$ 1,450,260	\$ 8,517,442	\$ 7,067,182	487%
Senior's Activity Centre	1960	\$ 1,596,208	\$ 7,598,631	\$ 6,002,423	376%
South Fort George Rec Centre	1971	\$ 905,933	\$ 1,728,576	\$ 822,643	91%
Via Rail Building	1981	\$ 1,183,212	\$ 7,239,518	\$ 6,056,306	512%
1310 3rd Avenue	1950	\$ 280,432	\$ 3,706,436	\$ 3,426,004	1222%
2nd Ave Parkade	1976	\$ 10,058,140	\$ 19,129,326	\$ 9,071,186	90%
5th Ave Parkade	1967	\$ 4,164,663	\$ 8,382,447	\$ 4,217,784	101%
6th Ave Parkade	2007	\$ 3,024,686	\$ 7,167,986	\$ 4,143,300	137%
Plaza Parkade	1980	\$ 7,657,806	\$ 15,734,175	\$ 8,076,369	105%
Masich Place Stadium	1989	\$ 2,549,386	\$ 3,504,720	\$ 955,334	37%
Citizen Field Stadium	2005	\$ 1,629,989	\$ 1,930,860	\$ 300,871	18%

* Replacement costs are based on RS Means cost estimating for replacing like for like. They are not based on modernized replacement costs and expect to be significantly higher.