



# Capital Replacement Planning

Joel Allaert  
Silvio Plescia



**ONPHA**

Ontario  
Non-Profit Housing  
Association

# Joel Allaert

Team Leader, Planning, Reporting and Analytics in the Assisted Housing Division at the Canada Mortgage and Housing Corporation

Provides a broad range of research and analytical services, including financial analysis, to support the functions of the Portfolio and Agreement Administration Division.

Worked on numerous projects to help bring operational improvements to the federally administered existing social housing portfolio, including the development of two new capital replacement planning tools.

Gained extensive experience in preparing and reviewing budgets and cash flow projections for various new construction projects and on-going management of rental properties while working as a Senior Accountant for a real estate development company which develops and owns properties throughout North America.

Certified General Accountant

Financial Accounting Professor at Algonquin College in Ottawa, Ontario.



# Silvio Plescia

Senior Researcher, Housing Research Division, Sustainable Housing Group at the  
Canada Mortgage and Housing Corporation

Undertakes a broad range of research related to housing performance;

- moisture management,
- energy efficiency
- seismic
- Physical condition assessments

17 years Research Division at CMHC

2 years – Senior Advisor Building Sciences – Professional Services Division

- Supporting CMHC's Technical Inspection function

13 years Consulting Engineer.

Reserve Fund Studies – condominiums, co-operatives, non-profits.

Professional Engineer



# What is Capital Replacement Planning?

A management tool to help determine

- what major repairs or capital replacements will be needed in the future,
- when they will be needed,
- how much they will cost, and
- how much money should be set aside each year to a replacement reserve fund.



# What is Capital Replacement Planning?

A capital replacement plan lists all the major building components such as

- windows, doors, siding, roofs, heating systems, flooring, etc...
- an estimate of the remaining useful life of these components and
- their replacement cost.



# What is Capital Replacement Planning?

This information allows the housing provider to calculate:

- estimated amount of yearly replacement reserve allocations required to meet their future capital **repair** and **replacement** needs.



# Importance of Capital Replacement Planning

One of the leading causes of financial difficulties

- not being able to fund the repair or replacement of major building components when they fail.

Meeting the yearly financial needs is not enough.

Yearly allocations **must** also be made to the Replacement Reserve to have funds available to meet future capital replacements when they arise.



# Importance of Capital Replacement Planning

Annual operating budget and maintenance plans

- used to plan for routine maintenance costs that are incurred
- can be paid for out of current year revenues.

However → capital replacement planning involves costs that are typically too large to be paid for out of current year revenues.





# Paying for a Capital Repairs

Building components **will** fail and **will** require replacement.

Two options for paying for capital repairs:

1. Borrow money
2. Set money aside through planned annual savings in order to have the funds available when needed.



# Paying for a Capital Repairs Example

## 1) Borrower Funds:

- Window replacement
- \$20,000
- 10 year loan at 4%

Monthly payments\$ 202.49



# Paying for a Capital Repairs Example

## 2) Set money aside through planned annual savings:

- Window replacement
- \$20,000
- 10 year capital replacement plan
- 5 year GIC rate 1.75%

Monthly allocation to replacement reserve fund \$152.63



# Paying for a Capital Repairs Example

## Potential savings on \$20,000 windows

- Borrower Funds:
  - Monthly payments\$ 202.49
- Set money aside through planned annual savings:
  - Monthly allocation \$152.63

Savings = \$50.00 per month or \$6,000 over 10 year period.



# Paying for Capital Repairs

Capital Replacement Plan allows you to

- Plan,
- Budget, and
- Pay

for large replacements without large housing cost increases or emergency financing.



# Other Benefits of Capital Replacement Planning

Less likely to have surprise repairs and replacements,  
More time available to go through proper tendering process resulting in better quotes and lower prices,  
Lower maintenance costs due to having building components replaced before they fail; also newer building components generally require less maintenance.



# Other Benefits of Capital Replacement Planning

Lower borrowing costs,  
Improved physical appearance of housing project,  
Lower total housing charges, and  
Improved marketability – fewer vacancies, lower turnover



# Preparing a Capital Replacement Plan

Some housing providers with a simple properties use their own staff or volunteers to do the planning work.

Others with more complex buildings hire consultants to do some or most of the work.





# Deciding Who Does What

A simple property has only a few units and easy to understand mechanical and electrical systems.

Large projects and projects with several buildings usually require more time. Apartment buildings are likely to have complex mechanical and electrical systems.



# Deciding Who Does What

You do not need to be an engineer or financial whiz to understand, prepare and use a Capital Replacement Plan.

If previous reports are available for your property, you may already have a lot of the information that you need.



# Building Science Consultants and Engineers

Building science consultants and engineers can offer specialized knowledge and expertise in evaluating your property for fees.

Hire consultants for only the most technical parts of the work, such as inspecting the structure or mechanical systems.

Use a condition survey to help assess the remaining life of building components.



# CMHC's Capital Replacement Planning Tools

To assist housing providers with their capital replacement planning, CMHC has designed a manual and three tools.



# CMHC's Capital Replacement Planning Tools

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## Capital Replacement Planning Manual

Useful to all housing providers who are undertaking capital replacement planning.

Can be used as a stand alone document or in conjunction with any of CMHC's three CRP tools.



# CMHC's Capital Replacement Planning Tools

## — Capital Replacement Planning Software

- Interactive software program designed to use when preparing or reviewing plans
- User manual available on CMHC's website
- Prints professional quality reports



# CMHC's Capital Replacement Planning Tools - Capital Replacement Planning Simplified Spreadsheet

- Excel is a very familiar software
- Allows for easy sharing between CMHC, housing providers, board members, etc..
- Instructions are included in the tool, not in a separate manual



# CMHC's Capital Replacement Planning Tools

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## Capital Replacement Planning Workbook

- Designed for certain housing providers who are not comfortable using computers systems.
- Simplified calculations that can be done manually
- Contains enough workbooks to be used for 5 years of capital replacement planning





# A Technical Guy's Perspective on Capital Replacement Planning

- Competencies
- Service Providers
- Life Expectancy of components
- Tips Tricks and Things to Think About



# A Technical Guy's Perspective on Capital Replacement Planning

Competency–

- Financial
- Technical



# A Technical Guy's Perspective on Capital Replacement Planning

Who are you going to call? Who should you call?

- an accountant
- an engineer?
- an architect
- a contractor?
- Other?



# A Technical Guy's Perspective on Capital Replacement Planning

Ontario Condominium Act

Members of the Appraisal Institute of Canada

Persons who hold a certificate of practice within the meaning of the  
Architects Act

Certified Engineering Technologists

Architectural Technologists

Holders of a CRP designation

Persons who hold a certificate of authorization within the meaning of the  
Professional Engineers Act

Quantity Surveyors

Graduates of Ryerson Polytechnic University with a Bachelor of Technology  
(Architectural Science) Building Science or Architecture option.



# A Technical Guy's Perspective on Capital Replacement Planning



# A Technical Guy's Perspective on Capital Replacement Planning

## What's involved

- Review of drawings
- On-site review
  - Usually cursory in nature
- Quantity take-off
  - Usually from drawings
- Summary report
  - Description of building element
  - Condition of building element
  - Spreadsheet analysis



# A Technical Guy's Perspective on Capital Replacement Planning

How often should a professional review be carried out?

- 3 years (Ontario Condominium Act)
  - alternating between a comprehensive review (with site inspection) and Update review (without site inspection)
  - Every other (reserve fund) study must include a site inspection

How often should a CRP be looked at?

- annually



# A Technical Guy's Perspective on Capital Replacement Planning

Life Expectancies of assemblies, systems and components

- Regular maintenance
- Exposure conditions
- Service loads
- Manufacturing/composition
- Quality of materials





# A Technical Guy's Perspective on Capital Replacement Planning

## Technical Tips, Tricks & Things to Think and Talk about

- Capital Renewal – opportunity to improve building conditions/performance
  - Address deficiencies
  - Energy related improvements (reducing operating expenses)
- Take advantage of grants/rebates



# A Technical Guy's Perspective on Capital Replacement Planning

## Technical Tips, Tricks & Things to Think and Talk about

- Cost Estimates
  - Replacement - (including removal & disposal)
  - How accurate do they need to be?
    - $\pm 20\%$  for longer term items
    - $\pm 10\%$  for medium term items
    - $\pm 5\%$  for items scheduled for replacement in next year to 3 years.
- Phase renewals over time (when it makes sense)
- Group (inter)related building elements



# A Technical Guy's Perspective on Capital Replacement Planning

## Technical Tips, Tricks & Things to Think and Talk about

- CRP is a roadmap
  - Short term – 1 to 5 years
  - Mid term – 5 to 15 years
  - Long term – 15 to 40 years



# Capital Replacement Planning

THANK YOU!

Joel Allaert

- [jallaert@cmhc.ca](mailto:jallaert@cmhc.ca)

Silvio Plescia

- [splescia@cmhc.ca](mailto:splescia@cmhc.ca)

