

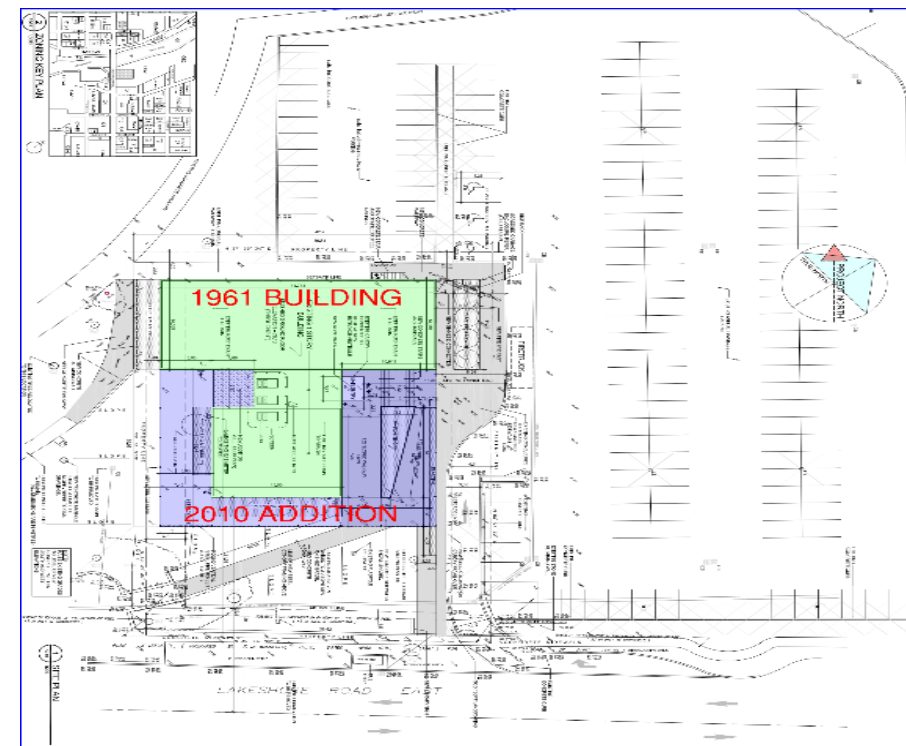
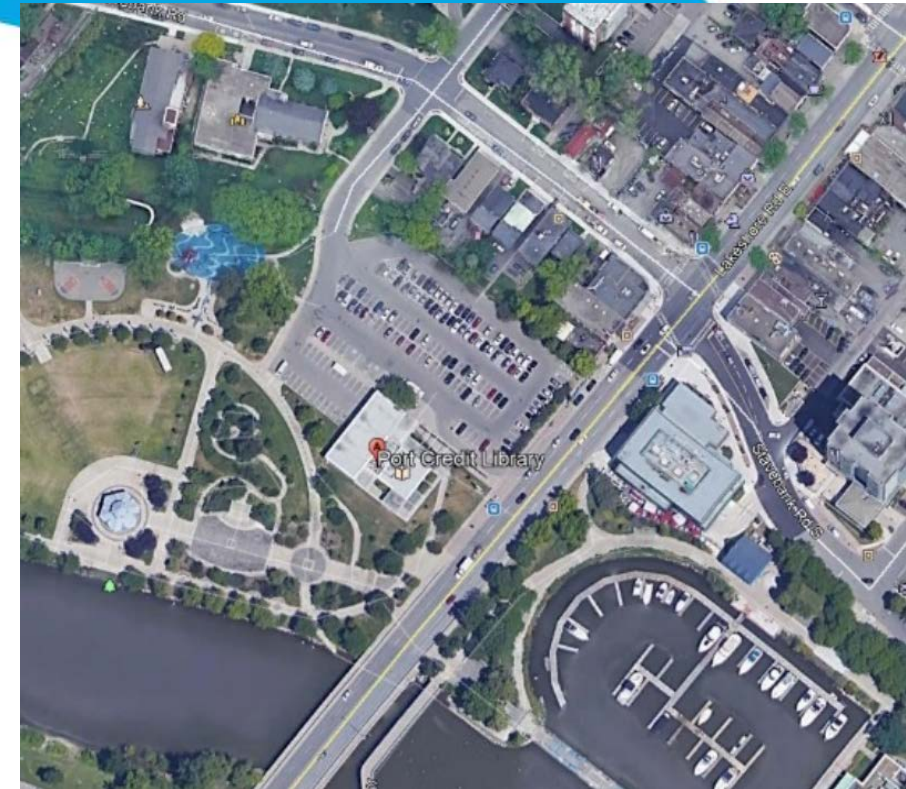
# Foundation Repairs at Port Credit Library – Ward 1- Community Meeting Presentation

March 24, 2022



## Existing Building and Site

- The Port Credit Library is built on a historical landfill and was opened to the public in 1962.
- The library provides approximately 8,200 sq. ft. of library space and program amenities.
- The building is currently listed as a heritage site.





## Existing Building and Site

- The building sits on a post and beam concrete foundation grid with a partial 3 foot crawl space and rests on 27 piers (caissons) that are driven deep into the landfill.
- The building and site underwent a major renovation in 2009 and reopened to the public in 2011.
- There are no records on file to indicate issues with the foundation system when the building was redeveloped over 10 years ago.



## Why has the Port Credit Library been closed for public use ?

- 2013- Visual deterioration of caissons supporting the building structure was noticed as part of routine building condition assessment
- 2013- 2016 – A number of structural assessments were completed to ensure the building is structurally stable and safe for public use
- 2016- Installation of foundation monitoring system as per structural engineer recommendations
- 2016- Completion of Pilot Helical Pile project to develop a long term feasible solution for caisson repair
- Spring 2021- Detailed structural assessment noted considerable loss of cross section in 4 sample caissons . Structural report recommended the closure of Library for public use





A close-up photograph of a concrete pile foundation. The pile is cylindrical and shows signs of weathering and discoloration. It is surrounded by a trench filled with dark, moist soil. At the base of the pile, there is a dark, reflective area that appears to be water or a void, possibly indicating a leak or a void in the foundation. The surrounding soil is uneven and appears to be a mix of dirt and small stones.

A close-up photograph of a concrete structure, likely a foundation or wall, showing significant signs of aging and damage. A large, irregular crack runs diagonally across the lower portion of the frame. The concrete surface is heavily textured, with areas of spalling, peeling, and exposed aggregate. The color is a mix of light gray and brownish-tan, suggesting moisture or staining. The overall appearance is one of severe structural wear and tear.

## Exposed Caisson D9

## **June 2021- Detailed structural assessment report overview**

Key findings of the detailed structural assessment included the following :

- Testing results indicated considerable loss of cross-section on 4 caissons during the past 5 year timeline.
- Although no obvious signs of distress or structural failures were observed, the consultant noted that the remaining life of the foundation cannot be determined and is deemed to be exhausted.
- Foundation upgrades need to be undertaken because of the unknown rate of deterioration of the caissons.
- It was recommended that the Library be closed for public use; however, it may stay open for maintenance and limited staff until the foundations have been upgraded.

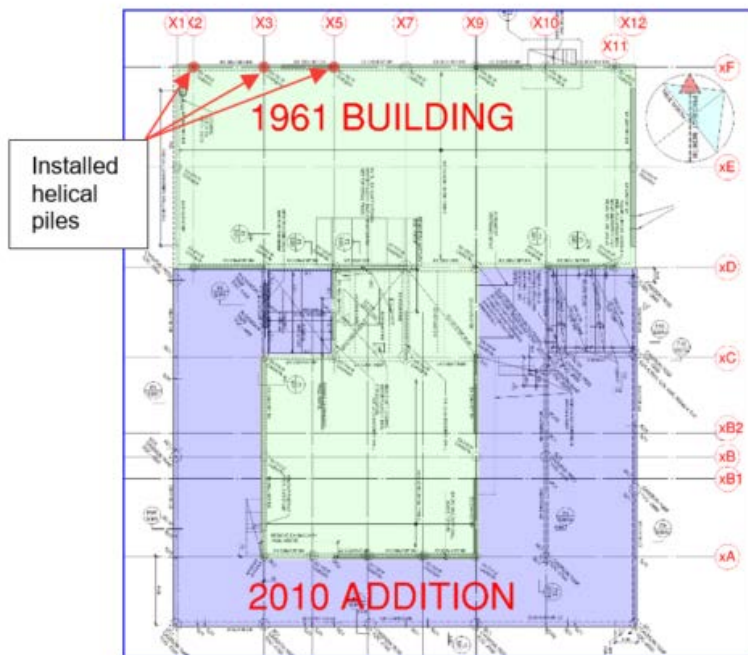
## Options explored to restore Port Credit Library Services

Option Description	Comments	Budget
Foundation rehabilitation by installation of Helical pile system	Cost effective solution. Feasibility and effectiveness of solution tested previously. Building can operate on existing site for next 50 years	\$6-\$8 million
Relocating the library to another location within the Port Credit catchment area	Suitable sites are not currently available; requires high capital cost to acquire land, develop the site and construct the building.	Excess of \$22 million
Rebuilding a new library on the existing site	High risk and difficult solution to pursue due to existing landfill site, high water table and floodplain zone. High cost to execute. Requires a 3 year implementation timeline (planning, design and construction) to implement.	Approx. \$18 Million



## Recommended solution – Helical pile system

- Pilot project was successfully completed in 2016 on 3 caissons
- Deemed an acceptable long term foundation repair solution
- Solution addresses site constraints including high ground water table, restricted site access and contaminated soil



Installation of piles – exterior and under building crawl space



## Helical pile construction- photos



## Library foundation repair budget and schedule

### Project budget : \$6 Million - \$8 Million

- Cost includes foundation repairs , site remedial work and contingences to deal with landfill condition and high water table
- Staff have requested \$8 Million through the 2022 capital budget process cash flowed over 2022 and 2023

### Project Schedule:

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb
2022												2023												2024	
Corporate report preparation	Council Approval of Corporate report	Consultant/ Construction Manager Procurement	Design		Construction Tender							Construction												Port Credit Library Reopening	

**The library is expected to reopen in late 2023 or early 2024**



## Next Steps

- Following the findings of the structural engineering report and out of an abundance of caution, staff decided to proactively close the library for further use in early July 2021.
- Staff continue to receive bi-monthly engineering reports that indicate all building monitoring points are still within the allowable engineering limits and safety factors.
- Consultant has been retained in March 2021 to complete foundation repair work

## Library Update: Initial steps

- A contactless pick up service was opened within days of the closure, where customers could pick up requested items at the Port Credit Memorial Arena.
- Parts of the library collection were transferred to other Mississauga Library locations. All items that remain housed in the closed facility are duplicated elsewhere in the library system.



## Library Update: Current



- In September, 2021, a full-service Pop Up library was introduced at the Port Credit Memorial Arena.
- The Pop Up library includes a small collection of popular items, 4 public-access computers, a printer/photocopier, a small children's area, limited study and seating space, a staff service point and the permanent home of the Mississauga Seed Library program.

## Library Update: Next Steps

- Library staff continue to look at options to host in-person programming in the Port Credit area, and relocation options for the Pollinator Garden.
- An outdoor book drop was recently installed so customers can return items at any time that it is convenient to them.
- When all libraries add Sunday hours this weekend, the Pop Up Library will also be open for customers.



# Questions ?