



**COMMITTEE OF THE WHOLE (PUBLIC)**  
**Report No. 23-015**

**28 February 2023**

**Facilities Renewal Program and School Condition Improvement 2022-2023 Project Plan**

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**PURPOSE:**

1. To obtain Board approval of the Facilities Renewal Program (FRP) to be implemented under the School Renewal Allocation (SRA), Temporary Accommodations (portable moves) and School Condition Improvement (SCI) funding for the 2022-2023 budget year.

**STRATEGIC LINKS:**

2. In keeping with the goal of creating a culture of social responsibility, as outlined in the 2019-2023 Strategic Plan, the District continues to support the physical environments that facilitate learning, and offer comfort and safety. It is the District's desire to provide inspirational places to learn and work which attract, retain, nurture, value and engage students and staff. Investments into building renewal and upgrades of schools will help improve the quality of teaching spaces and help to promote the success of our students and staff.

**CONTEXT:**

3. The OCDSB (Ottawa-Carleton District School Board) has a large portfolio of buildings and properties encompassing over 12 million square feet. More than 80% of the spaces are over 20 years old. Like all public sector organizations, the OCDSB has a large estimated backlog of differed renewal projects which is estimated to be \$978 million.

The annual plan is designed to address the facility needs of the District, with a focus on ensuring safe and healthy learning and working spaces for students and staff.

The Board has approved, as part of the total OCDSB operating budget, the School Renewal Allocation (SRA) 2022-2023 budget in the amount of \$15,285,803 which is equal to the SRA grant. The 2021-2022 SRA carry forward from the previous fiscal year is \$2,157,453. The Temporary Accommodations Allocation (portable moves) for 2022-2023 is \$3,000,000. The total Facilities Renewal Program Budget for 2022-2023 is \$20,443,256.

The 2022-2023 allocation of capital renewal funding for School Condition Improvement (SCI) is \$46,198,850. The 2021-2022 SCI carry forward from the previous fiscal year is \$45,845,259. The total School Condition Improvement budget for 2022-2023 is \$92,044,109.

The total combined Facilities Renewal Program and School Condition Improvement budget for the 2022-2023 year is \$112,487,365.

The recommended 2022-2023 plan includes a variety of renewal projects including:

- Site – paving and sidewalks, septic and water systems, parking areas, play areas, playgrounds, fencing;
- Building envelope – roofs, doors and windows, foundation repairs, masonry repairs, structural repairs;
- Building interior – flooring, ceilings, interior doors and hardware, millwork;
- Mechanical – heating, ventilation, air-conditioning, chillers, plumbing, controls;
- Electrical – hydro service upgrades, power distribution, generator replacements, lighting, communication cabling, network and telephone upgrades, public address and fire alarm systems;
- Portables – relocations, upgrades and repairs;
- Various functional alterations, program upgrades, renovations, and regulatory requirements;
- Environmental – asbestos abatement, oil storage tank removal and soils contamination remediation;
- Energy conservation and efficiency upgrades, multi-year energy plan projects; and
- Accessibility – 20 year accessibility plan and various barrier-free projects, elevator replacements, *Accessibility for Ontarians with Disabilities Act (AODA)* compliance for major renovations; a continued rollout of universal washrooms and change rooms are being undertaken based on identified needs.

#### **KEY CONSIDERATIONS:**

4. This year, the Facilities Renewal Program (FRP) and School Condition Improvement (SCI) involve many projects of varying complexity and size. The priorities for the planned projects are based upon a multitude of factors which are considered prior to the final determination of the FRP and SCI work plans. These factors include: long-range building envelope reports; mechanical and electrical forecasts based upon Facilities staff experience and knowledge of the buildings; consultant reports; VFA building audits; preventative maintenance reports; school condition reports; program requirements; and accessibility needs.
5. SCI Funding Methodology  
SCI funding is provided to address school renewal needs and must be used for expenditures that meet the requirement to be capitalized.

School boards are now restricted to using 70% of their SCI funding to address major building components (for example, foundations, roofs, windows) and systems (for example, HVAC and plumbing). School boards are allowed to use the remaining 30% of their SCI funding to address any locally-identified renewal needs that are listed in the provincial building database. Please see Table 1 below for the categories of restricted (70%) and unrestricted (30%) uses of SCI funding.

Table 1: Summary of Restricted and Unrestricted Expenditures:

<b>Categories</b>	<b>Restricted (70%)</b>	<b>Unrestricted (30%)</b>
A. Substructure (e.g. foundations, basement walls)	Yes	Yes
B. Shell/Superstructure (e.g. roofs, exterior walls and windows)	Yes	Yes
C. Interiors (e.g., stairs, floor finishes, ceilings)	No	Yes
D. Services (e.g., plumbing, HVAC, fire protection and electrical)	Yes	Yes
E. Equipment & Furnishings	No	Yes
F. Special Construction & Demolition	No	Yes
G. Building Site Work (parking lots, site lighting)	No	Yes

6. Backlog

The current backlog of renewal projects continues to be in excess of \$894 million for the District’s permanent learning facilities. Administration sites are not included in this total. Accessibility and program backlog is currently estimated at an additional \$84 million (total backlog of \$978 million). The planned projects are designed to maximize the value at each school and improve the condition of the facility for the students. The list of planned projects is subject to change due to unforeseen building component failures and program change pressures that may arise late in the school year.

7. Temporary Accommodation

The temporary accommodations (portables) are still an integral part of the accommodation plan and are funded by the Ministry to meet accommodation pressures as a result of enrolment growth. With the need to do major renewal work and/or accommodation retrofits, portables may be used at some sites in order to create swing space for renovations.

8. Accessibility

On an annual basis, staff undertakes numerous projects to eliminate barriers within facilities. Projects include new elevators, lifts, ramps and accessible washrooms. There are many planned projects; staff also executes several reactionary projects based on specific needs that arise at schools to support students throughout the year.

The goal is to have at least one inclusive washroom for students and staff (separate) in every facility. The Ontario Building Code now requires introducing universal washrooms in buildings where they don't already exist in conjunction with

major renovations or new construction. Currently 121 facilities have inclusive washrooms, 3 facilities are a work in progress and 26 facilities are pending.

Universal washrooms are large, single use, barrier-free washroom facilities located centrally and on a barrier-free path of travel. These washrooms include automatic door operators and locks, emergency assistance alarms, barrier-free fixtures, area for plinth/adult size change tables and handheld showers for cleaning accidents.

Inclusive washrooms are single-use washroom facilities located centrally and accessed directly off corridors and access. They may or may not be accessible and have separate washroom designations for students and staff.

The District completed a general Accessibility Audit of all facilities in 2006 to determine what might be needed to bring facilities in line with the new Accessibility for Ontarians with Disabilities Act (AODA), which was passed into law in June 2005. This comprehensive plan has been used as a guide for planning projects annually.

The AODA requires Ontario to become accessible to people with disabilities by January 1, 2025. With respect to the built environment, unfortunately, to date, Ontario still does not have an AODA Built Environment Accessibility Standard. Changes to the building code have been made over the years to address physical barriers but only apply to new builds and major retrofits.

There is still a significant amount of work to be done and in order to help staff direct resources efficiently; in the summer of 2022 an architectural firm was hired to complete an audit of all facilities. This audit will serve as a guide to implement a multi-year plan on reducing physical barriers, where possible, within all facilities and adapt to any proposed changes implemented by the provincial government.

#### 9. Sustainability & Environmental Impact

As staff implement renewal projects within facilities, the design focus is on the sustainability of buildings where possible. Increased insulation for roof replacements, higher efficiency window systems, LED lighting installations and the movement to electrification of building mechanical systems is an indication of the transition to a more sustainable built environment for facilities.

Reducing energy consumption and greenhouse gas (GHG) emissions continues to be a focus of the Facilities group and a main consideration when planning projects. A significant reduction in GHG emissions is only possible with a reduction in natural gas consumption. Reducing electrical consumption will have a lesser impact.

There are four main approaches to reducing GHG emissions (gas consumption): reduce heating demand, operate systems more efficiently, install higher efficiency equipment and transition from gas to electricity as an energy source.

Improving the building envelope performance helps to reduce the heating demand. The roof and window replacement projects are a big contributor. When replacing

roofs when possible insulation value is increased. Older windows are replaced with new windows with better thermal resistance and sealing to reduce cold air infiltration.

Operating systems more efficiently by investing in the central building automation system (BAS) with various upgrade projects. The BAS enables us to schedule heating and ventilation systems to operate at lower set points during unoccupied periods. The BAS also continuously monitors system performance so that malfunctioning equipment is quickly identified and repaired. The net result of operating systems efficiently and only when needed, is a reduction in gas consumption.

When planning projects, funding is included in the budget for high efficiency equipment. When replacing lighting, heating and ventilation systems higher efficiency equipment is typically installed, which helps reduce energy consumption.

Transitioning from gas to electricity as an energy source. This approach has the potential for the biggest impact on GHG emissions, however it has been the most difficult to implement. Until recently this approach has been cost prohibitive from an operational point of view. A Ministry lead study in 2019 demonstrated that it would be 4.6 times more expensive to heat a school with electricity versus gas. With an estimated \$6M of the annual utilities budget attributed to heating, the financial burden would be too great. Recent advances in the electric heat pump technology, coupled with rising gas prices has made the idea of electricity as a primary heat source more feasible. For all projects that include replacement of heating or ventilation equipment, consideration is given to an electric heat pump design. In some cases physical constraints or limited electrical infrastructure prohibit the approach however; implementation of this design is more frequent. Following are additional points on this topic:

- The implementation of the 'air-to-air' heat pump technology, which applies to rooftop HVAC units, is now fairly straightforward. New design standard is to replace traditional gas fired rooftop HVAC units with heat pump HVAC units. This approach is being applied to all projects, where practical;
- The implementation of the 'air-to-water' heat pump technology, which applies to boiler/hot water systems, is more difficult. In most cases this would involve modifications to the building structure and mechanical and electrical infrastructure. However, this approach is being considered for projects involving boiler replacements and will be applied, where practical;
- Electric resistance heating for water (electric boilers) or space heating remains cost prohibitive at this point; and
- Note that the designs for new capital projects (Shingwàkons Public School, Half Moon Bay Elementary School #2 and New Riverside South Secondary School) all incorporate this heat pump technology and are using electricity as the primary heating source. Energy modeling shows that we can expect a 50%

reduction in GHG emissions with these schools when compared with a traditional elementary school using gas as the primary heating source.

Reducing energy consumption and GHG emissions continues to be a focus during the planning, design and commissioning phases of the projects. From 2013 to 2019 we were able to achieve a 19.1% reduction in GHG emissions. This trend reversed slightly in the past 3 years due largely to the increase in ventilation being provided as part of the COVID precautions. Going forward we expect to achieve 2-3% reductions in GHG emissions annually as a result of energy management and GHG reduction measures.

10. COVID-19 Resilience Infrastructure Stream-Education Related Projects (CVRIS-EDU)

On 28 October 2020, the Ministry of Education announced a new, time limited COVID-19 Resilience Infrastructure Stream (CVRIS) under the Investing in Canada Infrastructure Program (ICIP) to provide up to \$700 million in combined federal-provincial funding for education-related infrastructure projects. On 23 February 2021, the Federal Government/Ministry of Education provided us with a list of approved projects, totaling \$25.6 million. On 23 September 2021, the deadline to complete and expense the projects was extended to 31 December 2023. To date, the Facilities department has expensed and committed \$20.5 million of this allocation. The remaining \$5.1 million will be expensed by the new project completion date.

11. Unforeseen Annual Needs

Certain general project portfolios have budgets established under the various sites location designation. Unspecified projects have historically arisen, and provisions have been made to address these annual needs through the various sites budget lines. Project lists will be refined throughout the year based on supporting District programs and prioritized renewal needs as a result of building deterioration and failures, e.g., roof leaks, portable condition reviews and facility condition indexes.

12. Consolidation of Projects

In order to benefit from economies of scale, multi-discipline renewal projects may be combined at a school to improve the amount of work completed in a shorter period of time and draw on multiple trades and contractors to create a larger program upgrade. These projects will be developed through the design review and will be tendered as single contracts when feasible. This will improve project delivery and ensure effective communications with all stakeholders during construction.

The 2022-2023 Facilities Work Plan continues to target building infrastructure renewal projects. Historical metrics indicate the realistic construction work that can be undertaken annually by the District is between \$40-\$50 million. The entire FRP/SCI budget allocation has been assigned to multiple site specific projects and with support of multi-year programs continued from the 2021-2022 budget year.

<b>2022-2023 Proposed SCI Projects</b>		
Electrical/Power	\$15,355,000	17%
Interior	\$28,935,000	31%
Mechanical	\$18,692,000	20%
Roofing	\$11,770,000	13%
Site/Paving	\$6,955,000	8%
Windows	\$10,100,000	11%
Contingency	\$237,109	0%
<b>Total</b>	<b>\$92,044,109</b>	<b>100%</b>

13. Special Initiatives:

Solar Photovoltaic Systems

In conjunction with the District's multi-year energy plan and 2019-2023 Strategic Plan goal of creating a culture of responsibility, the work plan identifies fifteen sites which will receive solar photovoltaic net-metering systems. These systems will allow the building to use electricity generated from the building-mounted panels which reduces consumption from the electrical grid and also reduces our carbon footprint.

**RESOURCE IMPLICATIONS:**

14. Funding

The combined approved FRP budgets (funded through the SRA) and SCI budgets in the Ministry's 2022-2023 estimates are as follows:

FRP

School Renewal Allocation	\$ 15,285,803
Temporary Accommodations (Portables) Allocation	\$ 3,000,000
FRP Reserves 2021-2022 - Carry forward	<u>\$ 2,157,453</u>
<b>TOTAL FRP Funding 2022-2023</b>	<b>\$ 20,443,256</b>

SCI

SCI 2022-2023 Funding	\$ 46,198,850
SCI Reserves 2021-2022 – Carry forward	<u>\$ 45,845,259</u>
<b>TOTAL SCI Funding 2022-2023</b>	<b>\$ 92,044,109</b>

**TOTAL FRP/SCI Funding 2022-2023** **\$112,487,365**

Expenditure

The FRP and SCI projects are planned for the 2022-2023 fiscal year. A summary of the FRP/SCI 2022-2023 budget by division of work is outlined in Appendix A. The detailed project list, by school or project initiative, is outlined in Appendix B. In order to meet the Broader Public Sector (BPS) procurement guidelines, projects need to be approved prior to raising commitments. Lists of projects have been compiled in order to effectively roll out next fiscal year's funding. The following is the estimate of project expenditures:

<u>FRP Projects</u>	
FRP Project Plan	\$ 17,443,256
Temporary Accommodations (Portables) Projects	<u>\$ 3,000,000</u>
TOTAL FRP Planned Projects 2022-2023	\$ 20,443,256

<u>SCI Projects</u>	
SCI Project Plan	\$ 46,198,850
SCI Reserves 2021-2022 - Carry forward	<u>\$ 45,845,259</u>
TOTAL SCI Planned Projects 2022-2023	\$ 92,044,109

**TOTAL FRP/SCI Planned Projects 2022-2023** **\$112,487,365**

As the 2022-2023 planned projects are tendered, based on bid results, projects will be added or removed in order to expend the full budget allocations. It is expected that SCI funding will be used for eligible facility renewal needs. Uncommitted FRP and SCI funds during the year will be used to augment the projects to ensure full use of the funding available.

Original project estimates are based on initial information available and are considered Class 'D' estimates (+/- 25%). As projects evolve during the design development, the project scope may increase or decrease depending on further investigation of existing site conditions and site specific needs. Project budgets will be increased or decreased as required to reflect the scope adjustments for the projects.

As part of the Ministry of Education's reporting requirements, project updates are entered into the VFA database to track the work completed, monitor renewal backlog and generate new funding in subsequent years.

#### **COMMUNICATION/CONSULTATION ISSUES:**

15. Due to the number of FRP and SCI projects, Facilities staff continues to work with school communities, childcare operators, Program and Learning K-12, Learning Support Services, Continuing Education and Community Use of Schools departments to prepare work plans that will allow construction to proceed safely during the school year, while minimizing the disruption to students and staff.

#### **RECOMMENDATIONS:**

- A. THAT the Facilities Renewal Program and School Condition Improvement Project budget in the amount of \$112,487,365 be approved as detailed in Appendix B of Report 23-015;
- B. THAT staff be authorized to proceed with individual project tenders within the Facilities Renewal Program and School Condition Improvement Project plans;
- C. THAT as FRP/SCI projects are tendered, based on bid results, or as priorities change, additional projects may be added or removed to suit the availability of the overall budget and these additional projects will be able to proceed without further approval as long as the total overall FRP/SCI budgets are not exceeded; and



D. THAT the Chair of the Board and Director of Education are authorized to award contracts above \$500,000 that is within this overall available uncommitted approved budget.

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Randall Gerrior  
Associate Director Business Operations

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Michèle Giroux  
Director of Education and  
Secretary of the Board

**APPENDICES**

Appendix A - 2022-2023 Facilities Renewal Program and School Condition Improvement Summary

Appendix B - 2022-2023 Facilities Renewal Program and School Condition Improvement Project List