Region of Waterloo

Engineering and Environmental Services

Facilities and Fleet Management

To:	Sustainability, Infrastructure, and Development Committee
Meeting Date:	November 4, 2025
Report Title:	Minimum Sustainable Construction Standard for Regional Facilities

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1. Recommendation

That the Regional Municipality of Waterloo take the following actions to promote sustainable development and practices for Regional facilities, as outlined in report EES-FFM-25-003, dated November 4, 2025:

a) update the minimum sustainable design and construction standard to Canada Green Building Council's (CaGBC) Zero Carbon Building-Design (ZCB-Design) Standard for new Regional facilities, replacing the existing LEED™ Silver standard

2. Purpose / Issue:

To promote sustainability and climate change mitigation and align with the direction set in the Corporate Climate Action Plan (CorCAP) through updating the Region's new construction minimum standard to CaGBC's ZCB-Design Standard.

3. Strategic Plan:

This action aligns with the Strategic Plan priority area of Climate Aligned Growth. This policy change would promote climate change mitigation by reducing greenhouse gas (GHG) emissions associated with constructing and operating new Regional facilities. By moving from the broader based LEED™ standard which awards points for a wide variety of sustainability measures, ZCB-Design Standard will focus on the reduction of a building's carbon footprint to meet the Region's targets.

4. Report Highlights:

- As outlined in Staff Report PDL-GDS-25-004, the Corporate Climate Action Plan (CorCAP) targets achieving net zero emissions from energy sources by 2050, with a specific action focused on updating the corporate building design standard to align with net zero standards.
- Net-zero carbon buildings have many benefits compared to traditional facilities.

These include GHG emission reductions, operational cost savings, positive net present value (where feasible), demonstrating the Region's leadership in addressing climate change, improved occupant comfort, improved building resilience, and alignment with Federal objectives (which is significant in considering funding and financing opportunities). A positive net present value means that the operational savings over the lifetime of the building will offset the increased capital cost compared to a baseline National Energy Code of Canada for Buildings (NECB).

- Staff recommend that the ZCB-Design Standard (current version is attached) from the CaGBC be adopted and replace the existing LEED™ Silver standard as the minimum sustainable design and construction standard for all new Regional facilities, renovations, and expansions.

5. Background:

In 2005, Council approved report CR-FM-05-004 which adopted the minimum sustainable construction standard of LEED™ Silver for all new Regional facilities over 500 m^2. This policy is proposing to be being updated in this report to align with the Corporate Climate Action Plan's goal to achieve net zero emissions from energy sources by 2050 and the Climate Aligned Growth Strategic Plan priority area at the Region by limiting embodied carbon and operational greenhouse gas emissions associated with new buildings.

For projects with less than 500 m2 of occupied space, staff recommend following the ZCB-Design Standard, but certification is not required. Process facilities such as water pumping and treatment plants, and vehicle garage spaces are recommended to follow this policy but do not need to seek certification due to large emissions being driven by energy intensive operations such as water pumping requirements or the frequent opening of overhead doors. Implementing this design standard will ensure new Region constructions will align with the Region's corporate climate target of net zero emissions by 2050.

Other municipalities that have already implemented net-zero carbon new construction standards for municipal buildings include Brantford, the Region of Peel, and the City of Toronto.

Adopting a NZC new construction standard for the Region aligns with the long-term objectives of Canada's 2020 National Model Codes; that all new buildings are constructed to net-zero energy-ready standards by 2030. This commitment was outlined by the federal, provincial, and territorial governments in the 2016 Pan-Canadian Framework on Clean Growth and Climate Change. Updating the Region's new construction standard to net-zero carbon demonstrates leadership and prepares the Region if Ontario chooses to align with the National Model Codes.

6. Communication and Engagement with Area Municipalities and the Public

Area Municipalities: This action would solely impact Region owned facilities.

Public: This policy change directly aligns with community TransformWR plan Strategy 3.2: “Build new buildings to be net-zero carbon, or build to transition to net-zero carbon” and Action 3.2.7; “Show leadership by building net-zero carbon in the public sector.”

7. Financial Implications:

	Current Year	Future Year(s)
Budget Impact?	N/A	N/A
Capital Plan Impact?	No 2025 Impact	2026 capital plan does not include this. 2026 projects will use contingency if needed for these costs, and come in through existing PFR process if funding needs to change 2027 capital plan will include this standard change in all building projects

As new facilities are planned in long range plans, capital plan budgets will be requested through the regular capital plan process and included in business cases and will be subject to Council’s approval.

According to a 2019 report prepared by the CaGBC, the capital cost premium for a ZCB can be up to 8%. Regional experience with two new Waterloo Region Housing buildings suggests the cost premium may range from 10-15% greater than LEED™ Silver. This premium cost estimate may have been driven, in part, by inflated costs associated with the pandemic. These cost premiums are also expected to decline as new technologies become more affordable. Furthermore, this initial investment will be offset by long-term operational savings. The CaGBC report highlights that mid and low-rise offices had a long-term financial benefit with a life-cycle return of 3%, while multi-unit residential buildings were cost neutral (0%). These savings are driven by an increase in energy efficiency. Additional building operator training and capacity may be required to manage and maintain ZCB building systems.

Like the LEED™ Silver standard, there will be fees for ZCB-Design certification and the required consultant support. Recent experience with a Waterloo Region Housing development suggests that design certification costs will be about 0.1% of the total project cost (i.e. approximately $50,000 of the $33.5 million total budget). This is less than the typical 1-2% of total project cost of carrying a LEED™ AP consultant and obtaining LEED™ certification.
The cost of inaction must also be considered. According to the Insurance Bureau of Canada, insured losses from severe weather in 2024 are estimated to be a record breaking $8.5 billion dollars. Investing in ZCB projects aligns with Regional climate

goals by reducing greenhouse gas emissions and mitigating these escalating costs. Meeting such progressive design standards will also produce more resilient buildings that provide a greater level of comfort for tenants. As we experience more extreme weather in the Region, such resilience will be increasingly imperative for members of the population that have a lower adaptive capacity during heat events, power outages, and flooding. Finally, integrating low-emission technologies at construction is far more cost-effective than retrofitting buildings later.

This will be considered as part of business case development for new buildings as part of the annual plan and budget process.

8. Conclusion / Next Steps:

Upon Council approval, staff will adopt the ZCB-Design Standard from the CaGBC to replace the existing LEED™ Silver standard as the minimum sustainable design and construction standard for all new Regional facilities or expansions.

9. Attachments:

Appendix A: CaGBC Zero Carbon Building-Design Standard

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