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The Regional Municipality of Durham Report

To: Works Committee
From: Commissioner of Works
Report: #2025-WR-4
Date: June 4, 2025

Subject:

Extension of Cart-based Waste Collection Pilot in the Town of Ajax and the Township of Scugog and Expansion Options

Recommendation:

That the Works Committee recommends to Regional Council:

- A) That staff be authorized to continue cart-based collection of garbage permanently in the following two pilot project collection areas as described below, at a one-time cost not to exceed \$25,000, exclusive of taxes, to be funded from the approved 2025 Solid Waste Management Business Plans and Budget:
- i) the pilot in the Township of Scugog to continue until the current solid waste collection contract (C003008) ends on March 31, 2028. After this date, a new contract utilizing fully automated waste collection equipment will commence; and
 - ii) the pilot in the Town of Ajax to continue until the current solid waste collection contract (C003326) ends on June 30, 2030. Following this, a new solid waste collection contract utilizing fully automated waste collection equipment will commence;

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- B) That 2026 pre-budget approval be granted and staff be authorized to negotiate amendments to Contracts C003008 and C003326 to expand the cart-based collection of garbage and organics to include Tuesday, Wednesday and Thursday collection routes effective January 1, 2026, to optimize the use of the cart-based collection vehicle used in the current pilot area at an estimated one-time cost of \$504,000 for the purchase of the carts and incremental annual operating costs not to exceed \$30,000;
- C) That financing in the amount of \$534,000 be approved as follows:
- i) \$504,000 for the purchase of the carts from the Solid Waste Management Reserve Fund;
 - ii) \$30,000 for operating costs from the 2026 property tax levy.
- D) That staff be directed to continue investigating and report back on the financial and logistical implications of expanding cart-based waste collection operation to the remaining households in the Town of Ajax and the City of Pickering in the fall of 2025; and,
- E) That all changes necessary to enact changes related to Recommendations A) and B) be made subject to the satisfaction of the Commissioner of Works and the Commissioner of Finance.
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Report:**1. Purpose**

- 1.1 The purpose of this report is to provide an update to Regional Council on the feasibility and costs to extend the Automated Cart Pilot Program in the Town of Ajax and Township of Scugog pilot locations, and the estimated costs to expand automated cart collection beyond these pilot locations.

2. Background

- 2.1 At the March 5, 2025, meeting, Works Committee received Report [#2025-WR-2](#) that provided an update on the Region's Automated Cart Pilot (Pilot) and recommended that the Region adopt an automated cart collection system for garbage and organics when new collection contracts are tendered.

- 2.2 Collection services for the Municipality of Clarington and Townships of Scugog, Uxbridge and Brock (C003008) will be procured in 2025 for an April 1, 2028, start date, with the City of Pickering and Town of Ajax collection contract (C003326) following with a July 1, 2030, start date.
- 2.3 Two-year lead time is required for waste collection contracts to allow the successful contractor time to purchase new collection vehicles.
- 2.4 Based on the success of the Pilot, Works Committee added a recommendation to the report directing staff to "investigate and report back on the feasibility and costs of continuing the current pilot program in the Town of Ajax and the Township of Scugog locations, as well as inquiring what the costs would be to expand the pilot program to the rest of the Region's waste collection areas within the existing contractual framework(s)."
- 2.5 Regional Council approved the amended report at its meeting of March 26, 2025.

3. Previous Reports and Decisions

- 3.1 Report [#2025-WR-2](#) titled "Update on the Automated Cart-Based Garbage Collection Pilot Project and Future Waste Collection Contract Delivery" provided an update on the Automated Cart Pilot and made recommendations to transition to automated cart collection for garbage and organics when new collection contracts were tendered.
- 3.2 Report [#2024-WR-4](#) titled "Proposed Automated Cart-Based Garbage Collection Pilot Project" authorized staff to undertake and Automated Cart Collection Pilot to assess the health and safety and operational impacts of residential automated cart collection. The pilot commenced in July 2024.

4. Pilot Extension and Expansion Options

- 4.1 After approval of the report at Regional Council, staff approached the current contractor to request costing to continue the Pilot to the end of 2025.
- 4.2 The current pilot project includes borrowing a fully automated waste collection vehicle from another municipality on Fridays where the truck is brought to Durham Region early on Friday mornings to complete the pilot project collections, then it returns to its normal municipality midday to complete its work on Friday afternoons. This arrangement satisfied the need for the pilot on a temporary basis, but it is not sustainable in the long term.

- 4.3 The interim solution to satisfy Council's request to continue cart-based waste collection until new waste collection contracts employing fully automated waste collection are implemented, is to retrofit cart tipping equipment onto existing waste collection vehicle and to proceed with semi-automated waste collection. Semi-automated waste collection differs from fully automated in that it requires the driver to exit the vehicle and manually position a cart onto a tipping device and then activate the tipping device which tips the cart to empty its contents into the collection vehicle. In fully automated waste collection, this operation is done from inside the cab by the driver manipulating a joystick which actuates a robotic arm to pick up and empty the cart. Semi-automated waste collection is slower than manual waste collection and this impacts on the operating cost of the operation.
- 4.4 The three available options to continue and expand the Pilot are outlined below;
- a. **Option One** – Continue current pilot project on a permanent basis
 - The current practice of borrowing a fully automated waste collection vehicle on Fridays from another municipality is not sustainable. Therefore, the contractor will retrofit one existing rear-loading collection truck with two tote tippers to allow for the continuation of the current pilot project on a permanent basis.
 - Option One involves the cost of equipment and labor to retrofit a vehicle currently in use for the Region collection contract to allow the continuation of the Pilot on the two collection routes for semi-automated collection of garbage only.
 - There is an additional cost to provide organics carts for semi-automated collection in the Pilot area. Under Option One only the waste would be collected using the semi-automated carts. Organics would be collected via the existing program.
 - b. **Option Two** - Retrofit the vehicle from Option One and use it on all collection days (Tuesday – Friday) to expand the semi-automated cart collection beyond the Pilot area;

- Maximizes the use of the tipping equipment on the retrofitted collection vehicle, enabling the additional testing of collection conditions in different areas. This includes potentially harder to service areas, depending on routing and collection scheduling.
 - Homes in the expansion area would require carts for garbage that would be provided by the Region. As a result, these homes will not need carts during the larger system rollout.
 - To incorporate semi-automated collection for organics, additional organics carts compatible with semi-automated collection would be required for every household on the Pilot and expansion routes.
 - One retrofitted vehicle allows for the expansion of the Pilot in one Tuesday, Wednesday, Thursday and Friday collection route, but does not allow all homes the Region services to receive semi-automated collection.
- c. **Option Three** – The conversion of the entire existing Ajax and Pickering collection contract (Contract C003326) to semi-automated collection. The logistical and operating cost implications for this option are still under investigation and staff will report back on operational and financial impacts in the fall of 2025.

5. Financial Implications

5.1 Table 1 outlines the cost implications for options One and Two.

Table 1: Pilot Extension and Expansion Cost Estimates

Option	2025 Cost	Capital Cost Estimate	Annual Operating Cost Estimate
Option One – Continue Pilot unchanged on Fridays	\$25,000	N/A	N/A
Option Two – Expand Pilot to	N/A	\$280,000 for garbage carts	Up to \$30,000

Option	2025 Cost	Capital Cost Estimate	Annual Operating Cost Estimate
three additional collection days and include organics to maximize use of truck with tippers (semi-automated)		\$224,000 for organics carts	
Option Three – Conversion of Ajax/Pickering contract to semi-automated collection	N/A	To be reported to Council once determined	To be reported to Council once determined

- 5.2 To continue semi-automated cart collection in the original Pilot areas, the cost to retrofit a vehicle with automated tippers is estimated at \$25,000 and can be accommodated within the approved 2025 Solid Waste Management Service budget.
- 5.3 Advancing rollout to additional pilot areas (Option #2) effective January 1, 2026 requires funds to purchase bins and address impacts to operational efficiencies. The estimated costs are approximately \$504,000 for carts and annual increased collection operating costs not to exceed \$30,000. Pre-budget approval for these incremental costs would be required and are proposed to be funded as follows:
- a. \$504,000 for the purchase of the carts from the Solid Waste Management Reserve Fund
 - b. \$30,000 for operating costs from the 2026 property tax levy
- 5.4 Although the recommendation has an incremental financial impact, there is significant value to the corporation to continuing to collect information from the pilot areas in terms of compositional data and to develop communication materials for future roll outs. Additionally, any carts purchased during pilot program expansion will reduce the number required during full program implementation.

- 5.5 Expanding the entire existing Ajax and Pickering collection contract (Contract C003326) to semi-automated collection the Pilot beyond three additional days of collection routes (option #3) may incur additional operating costs, which have not been determined at the writing of this report and would be subject to separate approval.
- 5.6 The benefits of increased time efficiency for collection, reduced health and safety incidences for drivers and reduced identified labour costs associated with fully automated waste collection will not be realized until the current collection contracts are rebid and the fully automated collection fleet for collections is delivered.

6. Relationship to Strategic Plan

- 6.1 This report aligns with/addresses the following Strategic Direction(s) and Pathway(s) in Durham Region's 2025-2035 Strategic Plan:

Connected and Vibrant Communities

- C1. Align Regional infrastructure and asset management with projected growth, climate impacts, and community needs.

Environmental Sustainability and Climate Action

- E4. Lead the transition to sustainable living through waste management, diversion, and the circular economy.

Strong Relationships

- S5. Ensure accountable and transparent decision-making to serve community needs, while responsibly managing available resources.
- 6.2 This report aligns with/addresses the following Foundation(s) in Durham Region's 2025-2035 Strategic Plan:
- Processes: Continuously improving processes to ensure we are responsive to community needs.
 - Technology: Keeping pace with technological change to ensure efficient and effective service delivery.

7. Conclusion

- 7.1 There are three options available to the Regional Municipality of Durham to accommodate Regional Council's request for an extension and expansion of the Automated Cart Waste Collection Pilot.
- 7.2 Staff recommends proceeding with the first option at this time and to report back on the logistical and financial implications of the remaining options in the fall of 2025.
- 7.3 This report has been reviewed by the Finance Department and the Commissioner of Finance concurs with the financial recommendations.
- 7.4 For additional information, contact: Andrew Evans, Director Waste Management Services, at 905-668-4113 extension 4102.

Respectfully submitted,

Original signed by:

Ramesh Jagannathan, MBA, M.Eng., P.Eng., PTOE
Commissioner of Works

Recommended for Presentation to Committee

Original signed by:

Elaine C. Baxter-Trahair
Chief Administrative Officer