## K <br> BURNside

## 590 Argus Road, Oakville ON <br> ZBA Application <br> Solid Waste Management Plan

## 590 Argus LP

90 Wingold Avenue, Unit 1
Toronto, ON M6B 1P5

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590 Argus LP<br>90 Wingold Avenue, Unit 1<br>Toronto, ON M6B 1P5

R.J. Burnside \& Associates Limited

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| 3 | March 22, 2024 | Revised for updated Architectural Plans |

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## Waste Management Comment-Location Matrix

| Requirement | Report Location | Notes |
| :--- | :--- | :--- |
| Set out and collection locations <br> for residential and commercial <br> units | Sections 2.3 \& 3.0 |  |
| Staging Area Bin Configuration <br> Figure | Appendix B, Figure 4 |  |
| Residential and/or Commercial <br> Floors and Units | Section 1.0 |  |
| Number and Size of Waste <br> Receptacles | Section 2.2 |  |
| Configuration of Waste <br> Containers, Compacting and <br> Sorting Equipment | Appendix B, Figures 1, 2, \& 3 |  |
| Flow of Receptacles from the <br> Waste Storage Room to Loading <br> Area | Described in Sections 2.3 \& 3.0, <br> Illustrated in Appendix B, Figure 6 |  |
| Truck Turning Plan Showing <br> Waste Collection Route (to and <br> from Municipal Road) | Appendix C |  |
| Turning Radius of 13 m from the <br> Centreline | Illustrated in Appendix C |  |
| Maximum 18 m Reversal <br> Distance | Illustrated in Appendix C |  |
| Loading Area Overhead <br> Clearance of 7.5 metres | Described in Section 2.3 <br> Illustrated in Appendix A, Level 1 Plan <br> (No. A204). |  |
| Number of Organics Carts (360 L) <br> Required for the Site | Section 2.2 |  |
| Collection Point Level (+/- 2\%) | Section 2.3, Appendix A, Waste <br> Management \& Loading Plan (No. <br> A112), Note 7. |  |
| Weight Capacity of Loading Area <br> (35,000 kg) | Section 2.3, Appendix A, Waste <br> Management \& Loading Plan (No. <br> A112), Note 5. |  |
| Loading Area Width Required (6 <br> metres) | Section 2.3, Appendix A, Waste <br> Management \& Loading Plan (No. <br> A112), Note 6. | Type C loading area will <br> not be in use during <br> collection periods, <br> meeting required width |
| Head-On Approach (Minimum <br> 18 m) | Appendix C (figure VMD-01) |  |
| Door Width for Bin Passage (min. <br> 2.2 metres) |  <br> Loading Plan (No. A112), Note 10 |  |
| Sufficient Storage for all Waste <br> Receptacles | Appendix B, Figures 1, 2, \& 3 |  |

### 1.0 Introduction

This document describes the preliminary Solid Waste Management Plan (Plan) developed for the proposed 590 Argus Road mixed-use development located in the Town of Oakville, Ontario. This Plan is intended for municipal review during the Zoning By-Law Amendment (ZBA) process. The development's Site Plan may change during the ZBA process and prior to Site Plan Approval (SPA) / construction, though it is currently expected that the methods of handling solid waste as expressed in this report will not require revision. This report will be developed further during SPA, featuring further specifics and operational detail.

This report is based on the 'Issued for OPA/ZBA - $2^{\text {nd }}$ Submission' drawing package, dated March 20, 2024. The 'Building Statistics’ (Drawing No. A001) has been attached as Appendix A while the 'Level P1 Plan' (Drawing No. A205) and 'Level 1 Plan (Drawing No. A206) drawings from this set have been attached as Appendix B. These parts of the drawing set describe the development's solid waste management features for both residential and commercial waste.

The 590 Argus Road development will provide:

- 1,842 residential units.
- Tower A will be 45 -storeys ${ }^{1}$ and will contain 544 residential units.
- Tower B will be 50 -storeys and will contain 607 residential units.
- Tower $C$ will be 57 -storeys and will contain 691 residential units.
- $2,534 \mathrm{~m}^{2}$ Gross Floor Area (GFA) of commercial space
- The ground floor of Tower A provides $431 \mathrm{~m}^{2}$.
- The ground floor of Tower B provides $439 \mathrm{~m}^{2}$.
- The ground floor of Tower C provides $605 \mathrm{~m}^{2}$.
- Level 2 of Tower C provides $1,060 \mathrm{~m}^{2}$.
- Six-levels of underground parking (i.e., Levels P1 to P6).
- All three Towers are connected at these parking levels.
- Each Tower has their own residential waste storage room located at Level P1.
- A commercial waste storage room is located on the ground floor of Tower A
- All three Towers share a Collection Point (including loading and staging area) in Tower A.

In preparing this report, Burnside has considered the following sources:

- Halton Region - 'Development Design Guidelines for Source Separation of Solid Waste, Regional Official Plan Guidelines', Version 1.0 dated June 2014;
- Pre-Consultation Meeting notes from Halton Region dated December 7, 2022;

[^0]- Halton Region - Direct communications with Halton Region's Multi-Residential Waste Diversion Coordinator;
- Halton Region - By-law No. 123-12 and No. 88-15;
- Waste Diversion Ontario - Continuous Improvement Fund (CIF) Report 219: Best Practices for the Storage and Collection of Recyclables in Multi-Residential Buildings, dated February 2011;
- Waste Diversion Ontario - Continuous Improvement Fund (CIF) Report 723: MultiResidential Project Debriefing Series, dated March 14, 2014;
- Resource Recovery and Circular Economy Act, 2016; and
- Ontario Food and Organic Waste Framework, dated April 2018.

Halton Region’s (Region) 'Development Design Guidelines for Source Separation of Solid Waste' document (hereinafter referred to as the 'Guidelines') outline the requirements to obtain approval for municipal waste collection services. Following the Guidelines provides some flexibility to address future solid waste management needs and programs. In addition, the Region's municipal waste collection services are preferred over private services when considering long term operating costs for the development.

During the December 7, 2022, ZBA application meeting with Region staff, we were informed the development will not receive commercial waste collection services. Therefore, private collection must be arranged. The management of commercial wastes is discussed in Section 3.0.

### 2.0 Residential Waste Management

### 2.1 Residential Waste Storage Rooms

Towers A, B and C provide residents with equivalent waste disposal service. Each Tower has its own Residential Waste Storage Room located on Level P1. In accordance with Section's 1.9.2 and 1.9.3 of the Guidelines, the Residential Waste Storage Rooms for this development will feature the following:

- A chute system consisting of three separate chutes for recyclables, organics, and garbage will be used to deliver these wastes to the Residential Waste Storage Rooms.
- The chute system will be accessible to all residential units via internal corridors.
- Controls at chute access points include an interlock to prevent simultaneous access and access during maintenance.
- Each Residential Waste Storage Room will have a compactor to minimize the number of bins required for garbage storage.
- A Bulky Waste Storage Room is located near each Residential Waste Storage Room. These rooms will be a minimum of $10 \mathrm{~m}^{2}$ in size.
- All waste storage rooms (both for residential waste and commercial waste - see Section 3.0) will be locked and inaccessible to residents.
- All waste storage rooms, including bulky waste storage rooms, will be rodent proof, properly ventilated, and include a hose bib and floor drain for periodically washing the room, equipment, and waste containers (carts and bins). Should it be necessary, odour and insect issues can be addressed by:
- Increasing the cleaning efforts for the room and its equipment;
- Adding odour neutralizer sprays in the waste room(s);
- Increasing the ventilation (air changes per hour); and / or
- Reducing the storage temperature (air conditioning).
- The width of the doors for all waste storage rooms will be enough to accommodate the size of all required waste containers, a minimum of 2.2 metres in width.


### 2.2 Residential Waste Equipment Requirements

Three chutes will lead recyclables, organic waste, and garbage into each Residential Waste Storage Room. The following equipment will be located under each chute:

- Recyclables chute: 4 yd $^{3}$ front-load bins for storing recyclables.
- Organics chute: 360 L semi-automated carts for storing organics waste.
- Garbage chute: A compactor that loads $3 \mathrm{yd}^{3}$ front-load bins for storing garbage.

Burnside has determined waste storage container needs (bin counts) from the Guidelines and details provided via direct communications ${ }^{2}$ with the Region's MultiResidential Waste Diversion Coordinator.

1. Recycling (loose):

- 56 residential units can be serviced by one $4 \mathrm{yd}^{3}$ front-lift bin.

2. Organics:

- One $360 \mathrm{~L}\left(0.34 \mathrm{yd}^{3}\right)$ organics bin is required for every 25 residential units.

3. Garbage (compacted):

- 54 residential units per $3 \mathrm{yd}^{3}$ front-lift bin.

The collection schedule is unknown. Therefore, bin counts have been shown for once per week and twice per week collection. For once per week, we assume each waste stream is collected on its own day. For twice per week collection, two streams may be collected on one day - either organics \& recycling or organics \& garbage, but not recycling \& garbage. More details about the development's collection schedule is discussed in Section 2.6.1.

Table 1 outlines the equipment requirements for each Residential Waste Storage Room. Maintenance staff will check the bins daily to ensure those reaching capacity are exchanged for empty ones. They will also control access to the Residential Waste Storage Room as there are safety concerns associated with the chutes and the garbage compactor.

[^1]Table 1: Residential Waste Storage Room Equipment

| Item | Stream/Use | Quantity ${ }^{\text {+ }}$ |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Tower A (544 Units) |  | $\begin{aligned} & \text { Tower B } \\ & \text { (607 Units) } \end{aligned}$ |  | Tower C (691 Units) |  |
|  |  | 1/week | 2/week | 1/week | 2/week | 1/week | 2/week |
| 4 yd $^{3}$ front-lift container | Recycling | 11 | 7 | 12 | 8 | 14 | 9 |
| 360 L semiautomated carts | Organics | 23 | 14 | 26 | 15 | 29 | 17 |
| $3 \mathrm{yd}^{3}$ front-lift container | Garbage (compacted) | 12 | 7 | 13 | 8 | 14 | 9 |
| Waste Compactor | Compacts garbage bins | 1 |  | 1 |  | 1 |  |
| Bin Puller / Tractor | To move bins \& cart trailer | 1 (shared) |  |  |  |  |  |
| Cart Trailer | To move carts | 1 (shared) |  |  |  |  |  |

$\dagger$ Includes additional container for each stream, for each tower, to allow continuous service during collection.

The current design for each Residential Waste Storage Room not only meets these spatial requirements for all equipment, but also includes additional space to provide flexibility to accommodate future waste management needs and facilitate more efficient bin movements.

### 2.3 Bulky Waste Disposal

At least $10 \mathrm{~m}^{2}$ storage space for bulky waste is provided as a separate room near each Residential Waste Storage Room. Bulky waste items such as used furniture, mattresses, appliances, etc. will be temporarily stored in this area. This material will be collected by the Region as coordinated by the Property Manager.

Residents with bulky waste will contact staff to collect these wastes or to have staff provide escorted access to these areas. This will help ensure that unacceptable wastes (see Section 2.5) or materials that are subject to a stewardship program or a Product Care Association (such as automotive tires, paints, and electronics) will not be left in the bulky waste storage area.

Halton Region also supplies a $40 \mathrm{yd}^{3}$ roll-off bin twice per year for bulky waste collection. If required, this bin will be placed in an outdoor area of the development acceptable to Property Management Staff and the Region. Staff will contact the Region to coordinate the delivery and collection.

### 2.4 Grounds Keeping, Maintenance and Renovations

It is anticipated that waste generated by minor building maintenance activities, such as replacing broken fixtures, light bulbs, etc. (but excluding those noted in Section 2.5), can be accommodated in the waste room.

Grounds keeping is expected to be a contracted service. The service provider will remove the leaf and yard waste as part of their contract.

Construction contractors will typically undertake significant renovations or maintenance projects. It is expected that wastes generated during the work will be removed as part of their contract.

### 2.5 Materials Not Collected

Waste materials not accepted by the Region's three stream waste collection program will not be collected by the Region. Similarly, these materials will not be accepted nor stored in the Residential Waste Storage Rooms. Residents with Hazardous and Special Products (HSP, sometimes called Household Hazardous Waste) or Electronics and Electrical Equipment (EEE) are responsible for the storage and disposal of these materials.

Residents are to handle and dispose of all waste in accordance with Halton Region's requirements ${ }^{3}$. They may do so by using Return-to-Retailer programs or making use of the Halton Waste Management Site. Generally, the Halton Waste Management Site accepts all waste types, including those not collected by the development's waste management system. Residents must deliver their waste to the Halton Waste Management Site or retailer themselves.

The waste materials that are collected may change as Individual Producer Responsibility (IPR) stewardship programs are developed under the Resource Recovery and Circular Economy Act (RRCEA). For instance, the HSP program began in October 2021. Changes included additional take-back programs at retailers.

### 2.6 Waste Removal

All waste streams accumulated in each of the Residential Waste Storage Rooms (Section 2.1) and Bulky Waste Storage Areas (Section 2.3) of each Tower will be taken by maintenance staff to the shared loading /staging area (i.e., Collection Point), present on the ground floor of Tower A.

[^2]
### 2.6.1 Collection Schedule

As noted in Section 2.2, the collection schedule for the development is unknown. Based on discussions with Halton staff regarding a similar, nearby Distrikt project, twice-per week collection may be implemented. Halton staff indicated that two streams assumed to be either organics and recycling or organics and garbage -must be awaiting collection in the staging area by 7:00 AM. Halton is currently unable to schedule trucks for morning and afternoon collections but may be able to do so, or provide additional collection days, in the future. However, the schedule remains unknown until the Region begins collection services.

Further, the Blue Box Transition under the Resource Recovery and Circular Economy Act, Regulation 391/21, is scheduled to occur April 1, 2025, for the Town of Oakville. This may affect who collects recyclables and the Region's overall collection schedule.

The current design of the loading / staging area will accommodate either once-per-week or twice-per-week collection. The container staging for both options is shown in Appendix B, drawing A206. As containers are emptied, they will be moved to the area near the "Waste Elevator". This frees up space to cycle through the remaining containers (including for twice-per-week collection schedules, regardless of the waste stream collected first). Building maintenance staff will assist with the tipping process. The driver will not be required to exit the collection vehicle.

Burnside assumes an acceptable residential collection schedule can be developed such that commercial waste collection by private waste collectors will occur at different times (see Section 3.0.).

### 2.6.2 Loading / Staging Area Design

Recyclables, organics, and garbage from all three Towers will be collected in one Collection Point, located on the ground floor of Tower A. The Collection Point will feature:

- A loading area 4.0 m in width by 13.0 m in length with an overhead clearance of 7.5 m.
- While restricted to 4.0 m width, there is additional space in the loading bay. If needed, the driver will be able to complete a circle-check of the vehicle, even with both driver and passenger doors open.
- The 7.5 m overhead clearance has no encumbrances such as, beams, sprinkler heads, etc.
- A +/- $2 \%$ grade.
- Will support a $35,000 \mathrm{~kg}$ ( 35 tonnes) waste collection vehicle.

Sharing of the waste loading space will be scheduled in accordance with Regional pick-up times.

### 2.6.3 Collection Method

On each collection day, prior to 7:00 AM., maintenance staff will move the waste containers from each Residential Waste Storage Room to the Collection Point. As shown in Appendix B, bins from all three Towers will be transported from to the "Waste Elevator" (located adjacent to the Bike Storage Room on Level P1). This elevator will then transport the bins from Level P1 to the staging area on the ground floor. Maintenance staff may use a ride-on tractor or a trash bin mover ${ }^{4}$ for ease of transporting bins.

During collection, maintenance staff will assist in moving and positioning the bins in front of the collection vehicle. This will allow its driver to remain within the vehicle during collection, and not require multiple rows of bins in the staging are, positioned for collection (per Appendix 4 of the Guidelines, a minimum of 6 metres width). Staff will then shuffle bins in the staging area as the tipping proceeds. All waste containers will be returned to their respective Residential Waste Storage Rooms following collection.

The collection truck drive path is attached as Appendix C , showing the minimum 13 metre centreline turning radii.

[^3]
### 3.0 Commercial Waste Management

The Region has stated they will not provide waste collection for commercial wastes generated by this development. As such, private collection will be arranged for commercial wastes produced at the property. Commercial wastes will be stored separately from residential wastes in a dedicated Commercial Waste Room (sized $53.8 \mathrm{~m}^{2}$ ) located at the ground floor of Tower A, adjacent to the Waste Staging Area.

### 3.1 Storage Room \& Equipment

It is expected that commercial wastes will be temporarily stored within each commercial unit in a small closet using 360 L carts (or smaller) for each waste stream (i.e., garbage, recyclables, and organic waste), before they are transported via an external route to the Commercial Waste Room. This movement will be completed by the commercial tenants either daily or once the cart(s) are filled.

Frequent collection may be required for odorous wastes generated by the potential daycare on the ground floor of Tower A. Dedicated containers for these wastes would be labelled for identification by daycare operators and maintenance staff.

The Commercial Waste Room will be of a sufficient size to allow for the storage and maneuvering of multiple 360 L carts or front-lift bins for each waste stream, dependent on the operational requirements.

### 3.1.1 Using Front-lift Bins

Should front-lift bins be used for storage, a cart tipper ${ }^{5}$ will be required in the Commercial Waste Room to empty carts into front-lift bins. A sample layout for this Room, based on conservative estimates, has been shown as Figure 5 of Appendix B. This layout displays the anticipated:

- Weekly number of front-lift bins for collection.
- Two days' worth of full 360 L carts.
- One days' supply of empty 360 L carts.
- Cart-tipper floorspace.

[^4]The use of the room in this manner can be operated by either:
a) Commercial Tenants:

Tenants will bring their waste carts to the waste storage room and use the cart tipper to empty the cart into the appropriate front-lift bin. The tenant will return their emptied cart to their (commercial unit) storage closet.

This option has the benefit of requiring the fewest carts. However, training must be provided to the tenant's staff for the safe use of the cart tipper.
b) Facility Maintenance:

Tenants will bring their filled waste carts to the waste storage room. There will be spare, empty carts in the room. The tenant will grab one of the spare carts and return to their (commercial) unit, leaving their filled cart(s) in the waste storage room.

Facility maintenance staff will empty the filled carts using the cart tipper. The emptied carts will then be positioned for reuse by the tenants.

A minimum of two days of carts are recommended with this method. Tenant staff will not require training to operate the cart tipper.

### 3.1.2 Using Carts Only

If using only carts (no front-lift bins), then the tenants will:

- Deliver their filled carts to the room, and
- Grab an empty cart before returning to their (commercial) unit.

This option is likely to require the highest number of carts compared to other options. Increasing collection frequency (i.e., recycling collection two times per week) would reduce the cart count. Some manual movement of waste to completely load partly filled carts may also reduce the number of carts required.

Burnside has not prepared a figure that shows this waste storage option.

### 3.2 Collection Point and Waste Collection

Collection of commercial waste will take place at the same Collection Point that is used for residential waste. Facility maintenance staff will be responsible for moving the frontlift bins or carts into the Waste Staging Area using the scissor lift (and overhead door) that separate the staging area from the Commercial Waste Storage Room.

Private collection of commercial waste will be scheduled so that it does not conflict with the Region's (residential) waste collection schedule.

590 Argus Road, Oakville ON
March 2024

### 4.0 Conclusions

From the research completed in preparing this report, Burnside believes that the 590 Argus Road mixed-use development's waste management system operates in a safe, functional, and accessible manner, compatible with the Region's residential waste collection system. Furthermore, the development's design provides the flexibility required to address future solid waste management systems.

Burnside will work with the architectural team to ensure the site's design considers the Region's waste management Guidelines and provided ZBA comments when preparing the SPA submission.

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## Appendix A

## Site Plan and Statistics

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## Appendix B

## Waste Room and Loading Area Plans





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## Appendix C

## Waste Collection Vehicle Turning Path Analysis





[^0]:    ${ }^{1}$ All floor counts include the six-storey podium that is shared by all three Towers.

[^1]:    ${ }^{2}$ Garbage and recycling bin ratios were provided to Burnside via March 22, 2022 email from Halton Region's Multi-Residential Waste Diversion Coordinator, Andrew Suprun. These values update Halton's Guidelines.

[^2]:    ${ }^{3}$ Information on how alternate waste streams must be disposed/recycled can be found on the Region's website, www.halton.ca/waste (accessed March 2024).

[^3]:    ${ }^{4}$ The WasteCaddy (https://www.djproducts.com/product/video-wastecaddy-efficient-trash-bin-mover/, or https://www.djproducts.com/product/wastecaddy-ride-on-dumpster-mover/accessed February 2023) is provided as an example.

[^4]:    ${ }^{5}$ A cart tipper such as one from Vestil Manufacturing Corp. or similar, may be used (e.g., https://www.vestil.com/product.php?FID=227, accessed March 2024).

