

Memo



To: Judith Powell, Holding Company 1539059 Ontario Inc.
From: Lori Andrews, P. Eng., Senior Waste Management Engineer, Dillon Consulting Limited
Date: October 6, 2022
Subject: Waste Management Planning Review – 349 Davis Rd, Oakville, Ontario
Our File: 22 - 4077

1.0 Introduction

Dillon Consulting Limited (Dillon) was retained by 1539059 Ontario Inc. in May 2022 to complete a waste management planning review for the 349 Davis Road development in Oakville, Halton Region, Ontario. The proposed mixed-use development consists of a:

- 20-storey building;
- 388 residential units; and
- Commercial space.

The wastes streams generated at the development may be collected by Halton Region should the site design comply with Halton Region's *Development Design Guidelines for Source Separation of Solid Waste* (Guidelines).

This memo includes the following key sections:

- **Section 2.0:** Waste Management Overview;
- **Section 3.0:** Container and Capacity Requirements; and
- **Section 4.0 :** Staging Collection Area.

This memo includes assessment of the following design components regarding solid waste management:

- Container and Capacity Requirements;
- Residential Waste Storage Rooms;
- Commercial Waste Storage;
- Waste Staging Area Requirements;
- Bulk Waste Storage;
- Transfer from Storage Areas to Staging Areas;
- Collection Vehicle Requirements; and
- Truck Access

The **Site Plan A203** with waste management elements is attached as an **Appendix A**

2.0

Waste Management Overview

2.1

Regional Collection Services

This memo assumes that Halton Region may provide collection services for **Recyclable Materials (single-stream containers and paper), Organics, and Garbage** waste streams from the site's residential generated sources only.

All commercial wastes generated at the site must be serviced by a private service provider and not serviced by the Region.

2.2

Waste Management System

The waste management systems as outlined in the **Site Plan** designed by are summarized below:

- Bi-sorter chute systems are located in the building and will be used to collect residential garbage, recycling, and organics from each residential floor;
- The garbage shaft has two bi-sorters which are located in a chute room on the ground floor within the waste storage room;
- The Site Plan demonstrates the location of the allocated commercial waste area designated space. The commercial waste area is on the ground floor and will service all the commercial tenants. As per the Guidelines' requirements, commercial waste bins will not be combined with the residential waste and are to remain separate at all times. Residential bins will not be set out at the same time as commercial bins; and
- The Site Plan includes the outdoor garbage staging area for materials to be set out for collection. Waste bins will be set out for collection in the designated staging area. Bins shall be transferred to the staging area via the double door exit at the loading/receiving garbage area.

3.0

Container and Capacity Requirements

The Region may provide collection services for three stream collection. The required containers are outlined in the capacity is determined by the number of residential units and the Region's Guidelines. The Region does not provide collection for materials from commercial sources.

Following the Region's Guidelines and service practices, it is recommended that front-load containers are used for the garbage and recycling streams, and 360 L carts are used for the organics stream. These bins and carts are continuously in service and can be switched out when full by property management personnel when required. It is recommended that additional bins and carts are stored within the waste rooms as backups or spares.

Residential Capacity Requirements

The Region's Guidelines recommend the following as a minimum:

- One 360L recycling cart for every seven units;
- One 360L organics cart for every twenty-five units; and
- The total number of garbage bins is dependent on the number of units, compaction, and collection frequency.

The container specifications above (from the Halton Guidelines) assume weekly collection. For the development:

- Garbage, organics, and recycling would be collected once per week; and
- Recycling should be collected in front loading containers, and not in carts due to the large generated volume.

Using the Region's Guidelines and the approach noted above, the capacity required analysed. Capacity results are presented in **Table 1: Container Types for Residential Collected Materials**, along with the suggested container sizes (note 4 to 6 cubic yard sizes) to accommodate the quantity of material generated weekly and collected once per week.

It is understood that the bulk waste storage area (10 m²) will need to accommodate residents' disposal/recycling of items, such as furniture, mattresses, oversized cardboard and larger garbage bags, electronics waste, paint/solvents, batteries, household hazardous type waste stored separately etc. which will need to be managed on a needs basis by property managers. Additionally, bulk waste areas with double doors would best accommodate the moving of large items in and out of the rooms.

Table 1: Container Types for Residential Collected Materials

Material Type	Container Type	Collection Frequency	Capacity Need
Garbage	Front-load bin	1 /week	<ul style="list-style-type: none"> • Container size is four (4) CY • 5 bins required • Garbage bins are compacted
Recycling	Front-load bin	1 /week	<ul style="list-style-type: none"> • Container size is six (6) CY • Six (6) bins required • Not compacted • It is outlined in the Guidelines that the Region collects Recycling in carts; however, for a development of this size, 388 units, front-load bins would be recommended.
Organics	Wheeled Cart	1 /week	<ul style="list-style-type: none"> • 360 L carts • 16 carts required • Not compacted
Bulk Waste	Roll-off container	As needed	Property management to call for temporary container and collection services as needed.

CY = cubic yard

3.2 Commercial Capacity Requirements

Commercial garbage and recycling must be kept separate from residential materials. Based on Dillon’s experience with similar commercial areas, and the commercial footprint area, it is recommended that the commercial waste room have the following waste containers, at minimum:

- Garbage: Two three (3) cubic yard front-load containers, and one four (4) cubic yard front-load container for compacted garbage;
- Cardboard: Three 3 cubic yard front-load containers for cardboard;
- Recycling: Two three (3) cubic yard front-load containers for recycling; and
- Organics: One three (3) cubic yard front-load container for organics.

The type and size of containers may also change depending on the type of businesses and the waste they generate.

4.0

Staging Collection Area

It is understood that all waste streams (garbage, recycling, and organics) may be collected by Halton Region on the same day. However, the staging area, labelled **Outdoor Garbage Staging Area** on the **Site Plan**, has been designed to accommodate space for the residential waste streams. The residential waste generated weekly has the largest required capacity and volume, compared to the commercial generated volume. Again, we note that the commercial waste would be collected by a private service provider and scheduled on different days than residential collections.

Additionally, there is space for the organics carts to be placed simultaneously in the staging area should they be co-collected along with recycling or the garbage route. It is assumed that the different waste streams may be collected at different times in the day.

Bins will be transferred in and out of the buildings by the property management. Front -end collection vehicle drivers will not need to exit their vehicles. Property management staff will also be available for jockeying of bins to accommodate the collection if needed. Emptied bins will be wheeled back inside after collection and not stored outside.

See the ground level **Site Plan** provided by the design team. Note, a common loading area labelled **Loading Area**. This is not used for waste management, rather, it is a designated loading area for deliveries and moving trucks and does not interfere with waste collection operations.

4.1

Truck Access

Trucks access the site only on the ground level. Truck access accommodates a 13.0 m centre turning radius, 18.0 m forward head-on approach to the staging area and 6.0 m road width throughout the site. Trucks do not enter the underground parking levels. Trucks do not operate near parking spaces nor ramp entry/exits to the parking garage.

The staging area construction shall be level (the change of grade must not be more than +/- 2%). The supporting structure final approved design shall be certified by an engineer (upon final approvals) that it is designed and shall be constructed to support a minimum of 35 tonnes (the weight of a fully loaded waste truck).

A collection vehicle can enter the site, collect the waste and exit without the need to backup more than 18 metres and does not need to back onto a Municipal Road, i.e. Davis Road.

The dedicated staging area shall be adequately signed indicating that the area is a Waste Collection Point and that there shall be no parking or blocking of waste collection bins.

Traffic flow diagrams using AutoTurn™ are recommended to be added to the Site Plan by the owner's traffic consultant to accompany application.

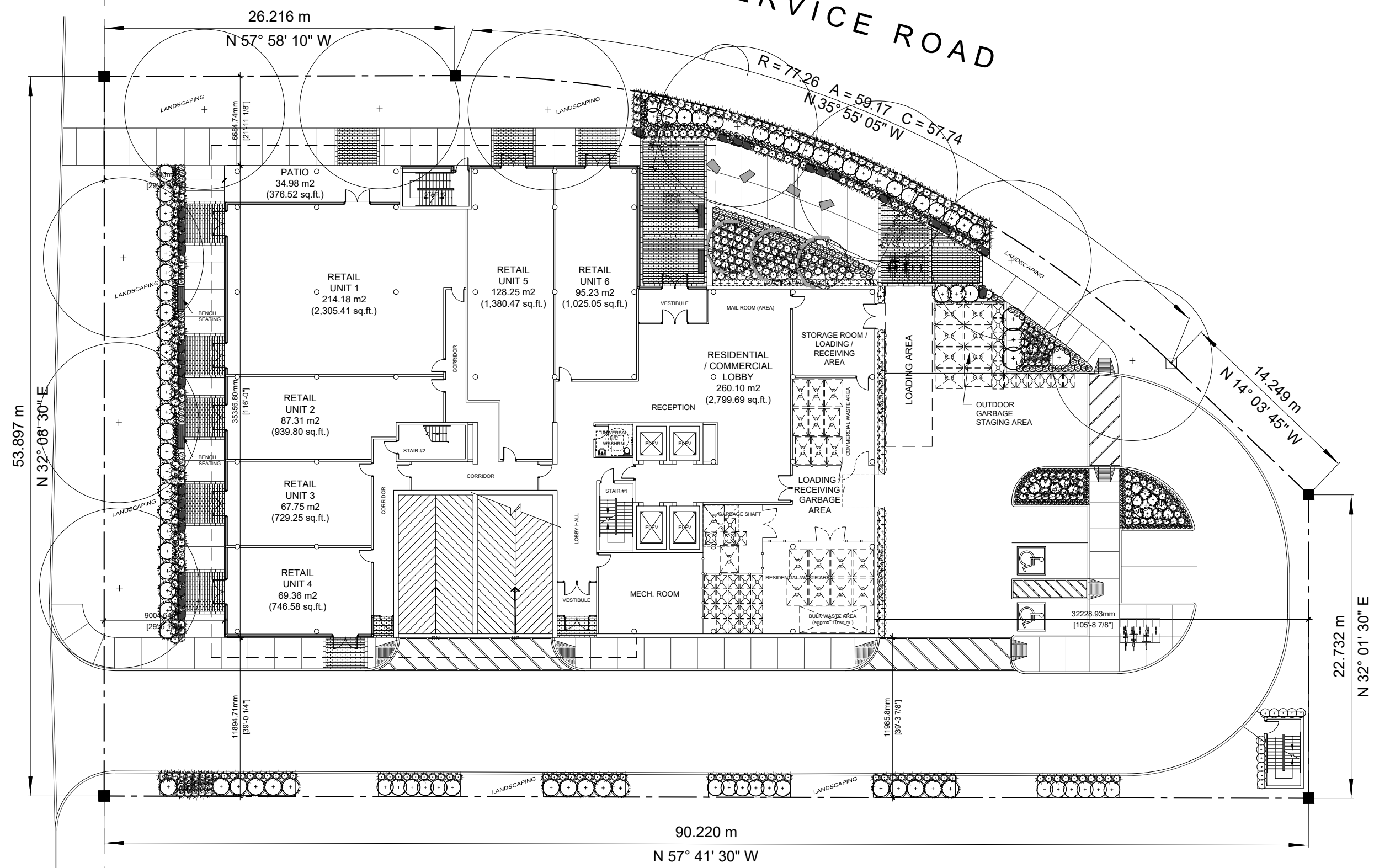
Appendix A

Site Plan

All material herein remains property of the architect noted below.
 THE GENERAL CONTRACTOR SHALL REPORT AND VERIFY ALL DIMENSIONS AND REPORT ERRORS AND OMISSIONS TO THE ARCHITECT. DRAWINGS MUST NOT BE SCALED.
 THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION PURPOSES UNLESS COUNTERSIGNED BY:

DAVIS ROAD

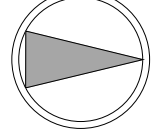
SOUTH SERVICE ROAD



STUDIO
 VERONICA MADONNA ARCHITECT
 7 Colwyn Road, Toronto ON,
 WorkCo., 39 Advance Road, Etobicoke ON,
 416-937-8907



Construction North



No.	Description	Date
1	Issued for Review	APR. 21/22
2	Issued for Review	APR. 28/22
3	Issued for Pre-Consultation Meeting	MAY 06/22
4	Issued for Review / Coordination	MAY 31/22
5	Issued for Official Plan Amendment and Zoning By-Law Amendment	Sept. 14/22
6	Iss. to Waste Management for Coord.	Oct. 04/22

Location
Mixed-Use 58-Storey Building
 349 Davis Road
 Oakville, Ontario L6J 2X2

Page Title
**Proposed Building
 Ground Floor Plan**

Project number 22003
 Date JAN.
 Drawn by D.D.
 Checked by V.M.

A203

Scale as noted