157 & 165 Cross Avenue, Oakville ON
OPA/ZBA Application
Solid Waste Management Plan

Cross Realty LP.
90 Wingold Avenue, Unit 1
Toronto, ON M6B 1P5

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February 2024
300057336.0000

Distribution List

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0	Yes	Yes	Cross Realty LP.
0	Yes	Yes	Teeple Architects Inc.

Record of Revisions

Revision	Date	Description
0	February 16, 2024	Issued for OPA/ZBA

R.J. Burnside & Associates Limited

Report Prepared By:

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Report Reviewed By:

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Technical Leader, Solid Waste
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1.0 Introduction

This document describes the preliminary Solid Waste Management Plan (Plan) developed for the proposed 157 & 165 Cross Avenue 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' drawing package, dated February 16, 2024. Table 1 are a list of drawings from this package, contained in Appendix A, describe the development's solid waste management features for both residential and commercial waste:

Table 1: Appendix A Drawing List

Drawing No.	Drawing Title
A001	Sheet List, Zoning Requirements
A112	Loading Plan
A113	Waste Management Plan
A207	Level P1 Plan
A211	Level 1 Plan
A401	North & South Elevations
A402	East & West Elevations

The 157 & 165 Cross Avenue development will provide:

- 1,198 residential units.
  - Tower A will be 61-storeys and will contain 694 residential units.
  - Tower B will be 45-storeys and will contain 504 residential units.
- 2,739 m^2 Gross Floor Area (GFA) of leasable retail space
  - The first two levels of Tower A provide 1,710 m^2.
  - The first two levels of Tower B provide 983 m^2.
- 1,127 m^2 GFA of office space between the first two levels of Tower A.
- Seven (7) levels of underground parking (i.e., Levels P1 to P7).
  - Both Towers are connected at these parking levels.
- Each Tower has their own residential waste storage room located at Level P1.
- Retail and office waste storage rooms located on the ground floor.
  - These rooms are not delineated on the plans but will be within the 'commercial' and 'office' footprints.

- Both Towers share a Collection Point (including loading and staging area) on the ground level.

As noted in the Pre-Consultation Comments Report by Halton Region staff, the development will not be eligible to receive commercial waste collection services. Therefore, private collection must be arranged. The management of commercial wastes is discussed in Section 3.0.

1.1 Design Resources

In preparing this report, R.J. Burnside & Associates Limited (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 Comments Report from the Town of Oakville dated June 28, 2023;
- Waste Management Meeting with Halton Region's Waste Management Team dated September 18, 2023, and other direct communications with Halton staff;
- 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: Multi-Residential Project Debriefing Series, dated March 14, 2014;
- Resource Recovery and Circular Economy Act, 2016; and
- Ontario Food and Organic Waste Framework, dated April 2018.

1.1.1 Halton Region Guidelines

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.

Based on the Guidelines, the residential portion of this development is expected to be compatible with Regional provided recycling, organics, and refuse collection. This waste management plan for the development is sufficiently flexible to allow future revision of Regional waste collection processes, including privatization and changes anticipated by the Resource Recovery and Circular Economy Act (RRCEA).

1.1.2 Other Considerations

In addition to the City Requirements, Burnside considered Continuous Improvement Fund (CIF) Report 219 and Report 723 related to multiunit residential buildings for their waste management effectiveness. Both reports made recommendations for the design and operation of waste management systems for new multi-residential buildings. The findings of the CIF reports are consistent with City Requirements. Burnside has also studied the Ontario Food and Organic Waste Framework which outlines the objective of increasing resource recovery (from food and organic waste in particular) from multiunit residential buildings.

2.0 Waste Management System Requirements

2.1 Residential Waste Storage Rooms

Towers A and B 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.
- Separate rooms adjacent to each Residential Waste Storage Room will be designated for the storage of bulk waste (i.e., the Bulky Waste Storage Area). These rooms will be a minimum of 10 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);
  - Installing an in-room air cleaner; and / or
  - Reducing the storage room 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 tower's 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 yd^3 front-load bins for storing garbage.

Based upon a once-per-week collection schedule for each stream, Burnside has determined waste storage container needs (bin counts) from the Guidelines and details provided via direct communications[1] with the Region's Multi-Residential Waste Diversion Coordinator.

1. Recycling (loose):
   - 56 residential units can be serviced by one 4 yd^3 front-lift bin.

2. Organics:
   - One 360 L (0.34 yd^3) organics bin is required for every 25 residential units.

3. Garbage (compacted):
   - 54 residential units per 3 yd^3 front-lift bin.

Table 2 outlines the equipment requirements for each Residential Waste Storage Room. Maintenance staff will check the containers frequently 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.

Table 2: Residential Waste Storage Room Equipment

Item	Stream/Use	Quantity	
		Tower A (694 Units)	**Tower B (504 Units)**
4 yd^3 front-lift bin	Recycling	14	10
360 L semi-automated carts	Organics	29	22
3 yd^3 front-lift bin (compaction type)	Garbage (compacted)	14	11
Waste Compactor	Compacts garbage into the 3 yd^3 front-lift bins	1	1
Bin Tractor	To move bins & (loaded) cart trailer	1	N/A
Cart Trailer	To move carts	1	N/A

Note:
1. Container counts (carts and bins) assume twice per week collection.
2. Container counts include one extra for continuous service during collection.

[1] 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.

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 Collection Point and Waste Collection

Recyclables, organics, and garbage from both Towers will be collected in one Collection Point, located on the ground floor.

The Collection Point will feature:

- a loading area 6 m in width by 13 m in length with an overhead clearance of 7.5 m;
- a +/- 2% grade; and
- a weight capacity of 35,000 kg (35 tonnes)[2].

The staging area is 131.7 m^2, which is sufficient to store and maneuver the recycling bins from both Towers during a single collection day. This is considered this a 'worst-case' collection day, given the anticipated once weekly collection schedule. The layout of recycling and garbage bins awaiting collection in the staging area is illustrated on the 'Level 1 Plan' (Drawing No. A211) in Appendix A.

On each collection day, prior to 7:00 AM., maintenance staff will move the bins from each Residential Waste Storage Room to the Collection Point.

- Bins from Tower A's Residential Waste Storage Room will reach the Collection Point by moving up a ramp (labeled "Driveway" in Drawing No. A211). Maintenance staff may use a ride-on tractor[3] for ease of transporting bins.
- Bins / carts from Tower B's Residential Waste Storage Room will be moved directly to the staging area via the service elevator connecting it to the staging area.

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 area, 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 B, showing the minimum 13 metre centreline turning radii.

[2] Confirmation to be provided by others.
[3] A Kubota sub-compact tractor (https://www.kubota.ca/products/BX2380 accessed February 2024) is provided as an example.

3.0 Retail & Office 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 retail and office wastes produced at the property. Retail and office wastes will be stored separately from residential wastes in dedicated waste rooms, proposed to be a part of each tower located at the ground floor. These commercial waste rooms are not shown on the current plans.

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 to the Commercial Waste Room in their respective tower. 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 potential tenants. Dedicated containers for these wastes would be labelled for identification by daycare operators and maintenance staff.

The commercial waste rooms 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[4] will be required in the commercial waste room to empty carts into front-lift bins.

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 then 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.

[4] 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 February 2024).

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.

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 front-lift bins or carts into the staging area.

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

4.0 Conclusions

From the research completed in preparing this report, Burnside believes that the 157 & 165 Cross Avenue mixed-use development's waste management system will operate in a safe, functional, and accessible manner, compatible with the Region's residential waste collection system. Furthermore, the development's design provides flexibility 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 addresses any municipal comments when preparing the SPA submission.

BURNSIDE

[THE DIFFERENCE IS OUR PEOPLE]

Appendix A

Site Plan and Statistics

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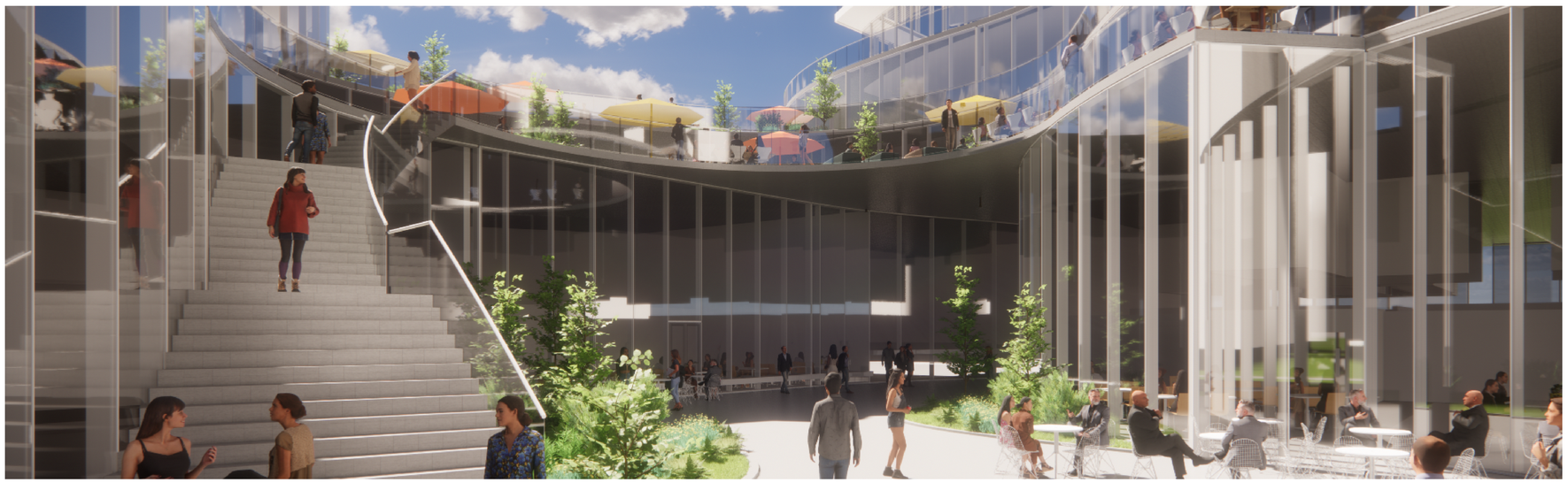
5 Camden Street,
Toronto, ON, Canada, M5V 1V2
T. 416.598.0554
www.teeplearch.com

NO.	DATE:	ISSUED FOR:
1	2024-02-16	ISSUED FOR OPA/ZBA



157-165 CROSS AVENUE

ISSUED FOR OPA / ZBA

16 FEBRUARY 2024

ARCHITECT
Teeple Architects Inc.
5 Camden Street, Toronto, ON, Canada, M5V 1V2
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STRUCTURAL
-
-
-

MECHANICAL
-
-
-

ELECTRICAL
-
-
-

LANDSCAPE
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DISTRIKT

157 - 165 CROSS AVE, OAKVILLE

157 & 165 Cross Avenue, Oakville, ON, Canada

ONTARIO ASSOCIATION OF ARCHITECTS
STEPHEN R. TEEPLE
LICENCE
4078

SEAL

COVER SHEET

Author	Checker		
DRAWN BY	CHECKED BY		
23-107		ARCH E	2024-02-16
PROJ NO	SCALE	FORMAT	PLOT DATE

A000

SHEET LIST

BUILDING STATISTICS - OVERALL

GCA BY LEVEL (BELOW GRADE)

LEVELS	AREA PER LEVEL (SM)	AREA PER LEVEL (SF)	NO. OF TYP LEVELS	TOTAL AREA (SM)	TOTAL AREA (SF)
LEVEL P7	5,688.49 m²	61,230 SF	1	5,688.49 m²	61,230 SF
LEVEL P6	5,688.49 m²	61,230 SF	1	5,688.49 m²	61,230 SF
LEVEL P5	5,688.49 m²	61,230 SF	1	5,688.49 m²	61,230 SF
LEVEL P4	5,688.49 m²	61,230 SF	1	5,688.49 m²	61,230 SF
LEVEL P3	5,688.49 m²	61,230 SF	1	5,688.49 m²	61,230 SF
LEVEL P2	5,688.49 m²	61,230 SF	1	5,688.49 m²	61,230 SF
LEVEL P1	5,688.49 m²	61,230 SF	1	5,688.49 m²	61,230 SF
TOTAL	**39,819.44 m²**	**428,613 SF**	**1**	**39,819.44 m²**	**428,613 SF**

GCA BY LEVEL (ABOVE GRADE)

LEVELS	AREA PER LEVEL (SM)	AREA PER LEVEL (SF)	NO. OF TYP LEVELS	TOTAL AREA (SM)	TOTAL AREA (SF)
LEVEL 01	3,814.28 m²	41,057 SF	1	3,814.28 m²	41,057 SF
LEVEL MEZZANINE	4,352.13 m²	46,846 SF	1	4,352.13 m²	46,846 SF
LEVEL 02	3,882.64 m²	41,792 SF	1	3,882.64 m²	41,792 SF
LEVEL 03	3,046.43 m²	32,792 SF	1	3,046.43 m²	32,792 SF
LEVEL 04	1,934.93 m²	20,827 SF	1	1,934.93 m²	20,827 SF
LEVEL 05	1,802.04 m²	19,397 SF	1	1,802.04 m²	19,397 SF
TYP	1,675.58 m²	18,036 SF	4	6,702.34 m²	72,143 SF
TYP	1,685.90 m²	18,147 SF	4	6,743.60 m²	72,588 SF
TYP	1,694.57 m²	18,240 SF	4	6,778.27 m²	72,961 SF
TYP L12; L13 & L52; L53	849.13 m²	9,140 SF	4	3,396.50 m²	36,560 SF
TYP	1,700.44 m²	18,303 SF	61 / 45	54,413.95 m²	585,707 SF
TYP L44; L45	835.13 m²	8,989 SF	2	1,670.25 m²	17,978 SF
LEVEL MPH	835.13 m²	8,989 SF	1	835.13 m²	8,989 SF
UPPER ROOF	173.20 m²	1,864 SF	1	173.20 m²	1,864 SF
UPPER ROOF	165.97 m²	1,786 SF	1	165.97 m²	1,786 SF
TOTAL	**30,108.37 m²**	**324,084 SF**		**102,202.99 m²**	**1,100,104 SF**

UNIT SUMMARY 1

UNIT CATEGORY	SIZE RANGE MINIMUM	SIZE RANGE MAXIMUM	COUNT	%
1B	508 SF	595 SF	752	63%
2B	616 SF	895 SF	346	29%
3B	761 SF	999 SF	100	8%
TOTAL			1198	

UNIT SUMMARY 2

UNIT TYPE	SIZE RANGE MINIMUM	SIZE RANGE MAXIMUM	COUNT	%
1B	508 SF	556 SF	299	25%
1B+D	552 SF	595 SF	453	38%
2B	616 SF	895 SF	346	29%
3B	761 SF	999 SF	100	8%
TOTAL			1198	100%

AREA BY TYPE

AREA TYPE	TOTAL AREA (SM)	TOTAL AREA (SF)
EXTERIOR	1,326.40 m²	14,277 SF
INDOOR AMENITY	3,648.26 m²	39,270 SF
OFFICE COMMON AREA - OFFICE	99.50 m²	1,071 SF
OFFICE LEASEABLE	1,027.15 m²	11,056 SF
OTHER	6,272.29 m²	67,514 SF
OUTDOOR AMENITY	1,480.77 m²	15,939 SF
RES. COMMON AREA	7,155.41 m²	77,020 SF
RES. SERVICE	2,841.02 m²	30,580 SF
RETAIL COMMON AREA	46.44 m²	500 SF
RETAIL LEASABLE	2,692.80 m²	28,985 SF
SALEABLE	67,572.32 m²	727,342 SF

UNIT SUMMARY (PER LEVEL)

LEVEL	UNIT CATEGORY	MINIMUM (SF)	MAXIMUM (SF)	COUNT
LEVEL 04	1B	523 SF	587 SF	7
LEVEL 04	2B	620 SF	895 SF	11
LEVEL 04	3B	814 SF	999 SF	6
				24
LEVEL 05	1B	523 SF	587 SF	11
LEVEL 05	2B	631 SF	794 SF	11
LEVEL 05	3B	804 SF	805 SF	2
				24
LEVEL 06	1B	508 SF	595 SF	64
LEVEL 06	2B	659 SF	707 SF	28
LEVEL 06	3B	812 SF	812 SF	4
				96
LEVEL 08	1B	521 SF	595 SF	64
LEVEL 08	2B	659 SF	667 SF	24
LEVEL 08	3B	761 SF	812 SF	8
				96
LEVEL 10	1B	523 SF	595 SF	60
LEVEL 10	2B	616 SF	667 SF	28
LEVEL 10	3B	800 SF	812 SF	8
				96
LEVEL 12	1B	523 SF	595 SF	12
LEVEL 12	2B	656 SF	663 SF	12
LEVEL 12	3B	812 SF	812 SF	4
				48
LEVEL 14	1B	523 SF	595 SF	466
LEVEL 14	2B	662 SF	667 SF	218
LEVEL 14	3B	812 SF	812 SF	84
				768
LEVEL 44	1B	523 SF	587 SF	14
LEVEL 44	2B	655 SF	667 SF	10
				24
LEVEL 60	1B	523 SF	592 SF	14
LEVEL 60	2B	663 SF	663 SF	4
LEVEL 60	3B	815 SF	983 SF	4
				22
TOTAL				1198

OVERALL VEHICLE PARKING SCHEDULE

LEVEL	PARKING TYPE	COUNT
LEVEL P1	COMMERCIAL - ACCESSIBLE B (5700 x 2700)	1
LEVEL P1	COMMERCIAL - STANDARD (5700 x 2700)	39
LEVEL P1	VISITOR - STANDARD (5700 x 2700)	39
LEVEL P1		79
LEVEL P2	VISITOR - ACCESSIBLE A (5700 x 3650)	2
LEVEL P2	VISITOR - ACCESSIBLE B (5700 x 2700)	2
LEVEL P2	VISITOR - STANDARD (5700 x 2700)	124
LEVEL P2		128
LEVEL P3	RESIDENTIAL - ACCESSIBLE A (5700 x 3650)	3
LEVEL P3	RESIDENTIAL - ACCESSIBLE B (5700 x 2700)	1
LEVEL P3	RESIDENTIAL - STANDARD (5700 x 2700)	108
LEVEL P3	VISITOR - STANDARD (5700 x 2700)	13
LEVEL P3		125
LEVEL P4	RESIDENTIAL - ACCESSIBLE A (5700 x 3650)	3
LEVEL P4	RESIDENTIAL - ACCESSIBLE B (5700 x 2700)	1
LEVEL P4	RESIDENTIAL - STANDARD (5700 x 2700)	121
LEVEL P4		125
LEVEL P5	RESIDENTIAL - ACCESSIBLE A (5700 x 3650)	3
LEVEL P5	RESIDENTIAL - STANDARD (5700 x 2700)	122
LEVEL P5		125
LEVEL P6	RESIDENTIAL - ACCESSIBLE A (5700 x 3650)	3
LEVEL P6	RESIDENTIAL - ACCESSIBLE B (5700 x 2700)	1
LEVEL P6	RESIDENTIAL - STANDARD (5700 x 2700)	121
LEVEL P6		125
LEVEL P7	RESIDENTIAL - ACCESSIBLE A (5700 x 3650)	3
LEVEL P7	RESIDENTIAL - ACCESSIBLE B (5700 x 2700)	1
LEVEL P7	RESIDENTIAL - STANDARD (5700 x 2700)	108
LEVEL P7		112
TOTAL PARKING		819

RESIDENTIAL VEHICLE PARKING

LEVEL	TYPE	TOTAL
LEVEL P3	RESIDENTIAL - ACCESSIBLE A (5700 x 3650)	3
LEVEL P3	RESIDENTIAL - ACCESSIBLE B (5700 x 2700)	1
LEVEL P3	RESIDENTIAL - STANDARD (5700 x 2700)	108
LEVEL P3		112
LEVEL P4	RESIDENTIAL - ACCESSIBLE A (5700 x 3650)	3
LEVEL P4	RESIDENTIAL - ACCESSIBLE B (5700 x 2700)	1
LEVEL P4	RESIDENTIAL - STANDARD (5700 x 2700)	121
LEVEL P4		125
LEVEL P5	RESIDENTIAL - ACCESSIBLE A (5700 x 3650)	3
LEVEL P5	RESIDENTIAL - STANDARD (5700 x 2700)	122
LEVEL P5		125
LEVEL P6	RESIDENTIAL - ACCESSIBLE A (5700 x 3650)	3
LEVEL P6	RESIDENTIAL - ACCESSIBLE B (5700 x 2700)	1
LEVEL P6	RESIDENTIAL - STANDARD (5700 x 2700)	121
LEVEL P6		125
LEVEL P7	RESIDENTIAL - ACCESSIBLE A (5700 x 3650)	3
LEVEL P7	RESIDENTIAL - ACCESSIBLE B (5700 x 2700)	1
LEVEL P7	RESIDENTIAL - STANDARD (5700 x 2700)	108
LEVEL P7		112
TOTAL PARKING		599

VISITOR VEHICLE PARKING

LEVEL	TYPE	TOTAL
LEVEL P1	VISITOR - STANDARD (5700 x 2700)	39
LEVEL P1		39
LEVEL P2	VISITOR - ACCESSIBLE A (5700 x 3650)	2
LEVEL P2	VISITOR - ACCESSIBLE B (5700 x 2700)	2
LEVEL P2	VISITOR - STANDARD (5700 x 2700)	124
LEVEL P2		128
LEVEL P3	VISITOR - STANDARD (5700 x 2700)	13
LEVEL P3		13
TOTAL PARKING		180

COMMERCIAL OR NON-RES. PARKING

LEVEL	TYPE	TOTAL
LEVEL P1	COMMERCIAL - ACCESSIBLE B (5700 x 2700)	1
LEVEL P1	COMMERCIAL - STANDARD (5700 x 2700)	39
LEVEL P1		40
TOTAL PARKING		40

TOWN OF OAKVILLE ZONING BY-LAW 2014-014

SITE AREA	TOTAL = **9,630 m²**	
	AREA OF ROAD CONVEYANCES = **3,586.45 m²**	
	PRIVATELY OWNED PUBLIC ACCESSIBLE SPACES = **1,057.92 m²**	
SITE INFORMATION	SITE AREA PROVIDED BY: **J. D. BARNES LTD**	
PROGRAM	MULTI-TOWER RESIDENTIAL DEVELOPMENT WITH 6-STY PODIUM; TOWER A @ 61 STY + MPH; TOWER B @ 45 STY + MPH; WITH A TOTAL OF ***1198*** RESIDENTIAL UNITS	
	REQUIRED / PERMITTED	PROVIDED
MAXIMUM BUILDING HEIGHT	--	TOWER A @ 61 STY + MPH; TOWER B @ 45 STY + MPH
WASTE LOADING	13.0 m (L) x 4.0 m (W) x 7.5 M (H)	13.0 m (L) x 4.0 m (W) x 7.5 M (H)
GROSS CONSTRUCTION AREA	**102,202.99 m²**	
GROSS FLOOR AREA	**97,858.28 m²**	*FLOOR AREA, GROSS (GFA)* DEFINITION AS PER TOWN OF OAKVILLE BY-LAW NUMBER 2023-065 "MEANS THE TOTAL AREA OF ALL OF THE FLOORS IN A BUILDING MEASURED FROM THE EXTERIOR FACES F THE EXTERIOR WALLS, BUT SHALL NOT INCLUDE AN ATTIC, *BASEMENT OR MECHANICAL PENTHOUSE*.
FLOOR SPACE INDEX	**97,858.28 m²** (TOTAL GFA) / **9,630 m²** (LOT AREA) = **10.17**	*FLOOR SPACE INDEX (FSI)* DEFINITION PER TOWN OF OAKVILLE BY-LAW 2014-014 & AMENDED IN BY-LAW 2023-040 "MEANS THE *GROSS FLOOR AREA* OF ALL *BUILDINGS* ON A LOT DIVIDED BY THE *LOT AREA*."
NUMBER OF UNITS	***1198*** RESIDENTIAL UNITS	

AMENITY AREA PROVISIONS

INDOOR AMENITY SPACE	**3,648.26 m²**	/	***1198***	UNITS	**3.04 m² PER UNIT**
OUTDOOR AMENITY SPACE	**1,480.77 m²**	/	***1198***	UNITS	**1.30 m² PER UNIT**

PARKING PROVISIONS

		REQUIRED / PERMITTED		PROVIDED
VEHICULAR PARKING	RESIDENTIAL	***1198*** x (0.50) = **599**		**599**
	VISITOR	***1198*** x (0.15) = **180**		**180**
	RETAIL / COMMERCIAL	**2,692.80 m²** (1.08/100 m²) = **29**		**40**
	OFFICE	**1,027.15 m²** (1.08/100 m²) = **11**		
	TOTAL REQUIRED		**819**	**819**
BICYCLE PARKING *(NON-RESIDENTIAL PARKING REQUIREMENT - THE GREATER OF 2 OR 1.0 PER 1,000 m²)*	RESIDENTIAL	***1198*** x (1.00) = **1198** →	**899**	**292** BICYCLE STACKER - SHORT-TERM VISITOR (600x1800) **900** BICYCLE STACKER - LONG-TERM RESIDENTIAL (600x1800) **8** BICYCLE SINGLE - SHORT-TERM VISITOR (600x1800) **4** BICYCLE SINGLE - SHORT-TERM COMMERCIAL (600x1800)
	VISITOR *(25% OF TOTAL)*	***1198*** x (0.25) = (**300**)		
	RETAIL / COMMERCIAL	**2,692.80 m²** (1.00/1,000 m²) = **3**		
	OFFICE	**1,027.15 m²** (1.00/1,000 m²) = **1**		
	TOTAL REQUIRED		**1203**	**1204**

VEHICULAR PARKING PROVISION BREAKDOWN BY FLOOR LEVEL

LEVEL	RESIDENTIAL	VISITOR	NON-RES. 1 & 2*	TOTAL
	599			**819**
P7	**112**			**112**
P6	**125**			**125**
P5	**125**			**125**
P4	**125**			**125**
P3	**112**	**13**		**125**
P2		**128**		**128**
P1		**39**	**40**	**79**
TOTAL	**599**	**180**	**40**	**819**

BICYCLE PARKING PROVISION BREAKDOWN BY FLOOR LEVEL

LEVEL	RESIDENTIAL	VISITOR	NON-RES. 1 & 2	TOTAL
MEZZ	**430**			**430**
L01	**26**	**300**		**330**
P2	**444**			**444**
TOTAL				**1204**

STORAGE LOCKERS PROVIDED

TOTAL	

BUILDING STATISTICS - TOWER A

GCA BY LEVEL (ABOVE GRADE) TOWER A

LEVELS	AREA PER LEVEL (SM)	AREA PER LEVEL (SF)	NO. OF TYP LEVELS	TOTAL AREA (SM)	TOTAL AREA (SF)
LEVEL 01	2,229.53 m²	23,998 SF	1	2,229.53 m²	23,998 SF
LEVEL MEZZANINE	1,866.97 m²	20,096 SF	1	1,866.97 m²	20,096 SF
LEVEL 02	1,949.72 m²	20,987 SF	1	1,949.72 m²	20,987 SF
LEVEL 03	1,443.06 m²	15,533 SF	1	1,443.06 m²	15,533 SF
LEVEL 04	971.03 m²	10,452 SF	1	971.03 m²	10,452 SF
LEVEL 05	900.66 m²	9,695 SF	1	900.66 m²	9,695 SF
TYP L06; L07 & L58; L59	835.13 m²	8,989 SF	4	3,340.50 m²	35,957 SF
TYP L08; L09 & L56; L57	840.46 m²	9,047 SF	4	3,361.84 m²	36,186 SF
TYP L10; L11 & L54; L55	845.44 m²	9,100 SF	4	3,381.76 m²	36,401 SF
TYP L12; L13 & L52; L53	849.13 m²	9,140 SF	4	3,396.50 m²	36,560 SF
TYP TOWER L14 TO L51	850.22 m²	9,152 SF	38	32,308.28 m²	347,763 SF
TYP L60; L61	830.44 m²	8,939 SF	2	1,660.88 m²	17,878 SF
LEVEL MPH	830.44 m²	8,939 SF	1	830.44 m²	8,939 SF
UPPER ROOF	165.97 m²	1,786 SF	1	165.97 m²	1,786 SF
TOTAL	**15,408.18 m²**	**165,852 SF**		**57,807.15 m²**	**622,231 SF**

UNIT SUMMARY 1 TOWER A

UNIT CATEGORY	MINIMUM (SF)	MAXIMUM (SF)	COUNT	%
1B	508 SF	595 SF	464	67%
2B	616 SF	776 SF	168	24%
3B	804 SF	999 SF	62	9%
TOTAL			694	

UNIT SUMMARY 2 TOWER A

UNIT TYPE	SIZE RANGE MINIMUM	SIZE RANGE MAXIMUM	COUNT	%
1B	508 SF	554 SF	174	23%
1B+D	552 SF	595 SF	290	39%
2B	616 SF	776 SF	168	23%
3B	804 SF	999 SF	62	8%
TOTAL			694	93%

UNIT SUMMARY (PER LEVEL) TOWER A

LEVEL	UNIT CATEGORY	MINIMUM (SF)	MAXIMUM (SF)	COUNT
LEVEL 04	1B	523 SF	570 SF	4
LEVEL 04	2B	631 SF	670 SF	5
LEVEL 04	3B	824 SF	999 SF	3
				12
LEVEL 05	1B	523 SF	587 SF	6
LEVEL 05	2B	639 SF	776 SF	5
LEVEL 05	3B	804 SF	804 SF	1
				12
LEVEL 06	1B	508 SF	595 SF	36
LEVEL 06	2B	663 SF	663 SF	8
LEVEL 06	3B	812 SF	812 SF	4
				48
LEVEL 08	1B	521 SF	595 SF	36
LEVEL 08	2B	663 SF	663 SF	8
LEVEL 08	3B	812 SF	812 SF	4
				48
LEVEL 10	1B	523 SF	595 SF	32
LEVEL 10	2B	616 SF	663 SF	12
LEVEL 10	3B	812 SF	812 SF	4
				48
LEVEL 12	1B	523 SF	595 SF	32
LEVEL 12	2B	656 SF	663 SF	12
LEVEL 12	3B	812 SF	812 SF	4
				48
LEVEL 14	1B	523 SF	595 SF	304
LEVEL 14	2B	663 SF	667 SF	114
LEVEL 14	3B	812 SF	812 SF	38
				456
LEVEL 60	1B	523 SF	592 SF	14
LEVEL 60	2B	663 SF	663 SF	4
LEVEL 60	3B	815 SF	983 SF	4
				22
TOTAL				694

BUILDING STATISTICS - TOWER B

GCA BY LEVEL (ABOVE GRADE) TOWER B

LEVELS	AREA PER LEVEL (SM)	AREA PER LEVEL (SF)	NO. OF TYP LEVELS	TOTAL AREA (SM)	TOTAL AREA (SF)
LEVEL 01	1,584.76 m²	17,058 SF	1	1,584.76 m²	17,058 SF
LEVEL MEZZANINE	455.13 m²	4,899 SF	1	455.13 m²	4,899 SF
LEVEL 02	1,295.28 m²	13,942 SF	1	1,295.28 m²	13,942 SF
LEVEL 03	1,603.37 m²	17,259 SF	1	1,603.37 m²	17,259 SF
LEVEL 04	963.90 m²	10,375 SF	1	963.90 m²	10,375 SF
LEVEL 05	901.38 m²	9,702 SF	1	901.38 m²	9,702 SF
TYP L06; L07 & L42; L43	840.46 m²	9,047 SF	4	3,361.84 m²	36,186 SF
TYP L08; L09 & L40; L41	845.44 m²	9,100 SF	4	3,381.76 m²	36,401 SF
TYP L10; L11 & L38; 39	849.13 m²	9,140 SF	4	3,396.50 m²	36,560 SF
TYP TOWER L12 TO L37	850.22 m²	9,152 SF	26	22,105.67 m²	237,943 SF
TYP L44; L45	835.13 m²	8,989 SF	2	1,670.25 m²	17,978 SF
LEVEL MPH	835.13 m²	8,989 SF	1	835.13 m²	8,989 SF
UPPER ROOF	173.20 m²	1,864 SF	1	173.20 m²	1,864 SF
TOTAL	**12,032.51 m²**	**129,517 SF**		**41,728.17 m²**	**449,158 SF**

UNIT SUMMARY 1 TOWER B

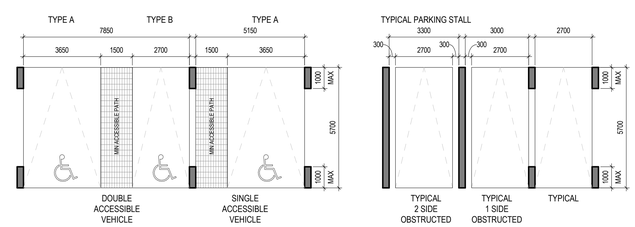
UNIT CATEGORY	MINIMUM (SF)	MAXIMUM (SF)	COUNT	%
1B	523 SF	587 SF	288	57%
2B	620 SF	895 SF	178	35%
3B	761 SF	892 SF	38	8%
TOTAL			504	

UNIT SUMMARY 2 TOWER B

UNIT TYPE	SIZE RANGE MINIMUM	SIZE RANGE MAXIMUM	COUNT	%
1B	523 SF	556 SF	125	23%
1B+D	552 SF	587 SF	163	30%
2B	620 SF	895 SF	178	33%
3B	761 SF	892 SF	38	7%
TOTAL			504	92%

UNIT SUMMARY (PER LEVEL) TOWER B

LEVEL	UNIT CATEGORY	MINIMUM (SF)	MAXIMUM (SF)	COUNT
LEVEL 04	1B	523 SF	587 SF	3
LEVEL 04	2B	620 SF	895 SF	6
LEVEL 04	3B	814 SF	892 SF	3
				12
LEVEL 05	1B	523 SF	587 SF	5
LEVEL 05	2B	631 SF	794 SF	6
LEVEL 05	3B	805 SF	805 SF	1
				12
LEVEL 06	1B	523 SF	587 SF	28
LEVEL 06	2B	659 SF	707 SF	20
				48
LEVEL 08	1B	523 SF	587 SF	28
LEVEL 08	2B	659 SF	667 SF	16
LEVEL 08	3B	761 SF	761 SF	4
				48
LEVEL 10	1B	523 SF	587 SF	28
LEVEL 10	2B	659 SF	667 SF	16
LEVEL 10	3B	800 SF	800 SF	4
				48
LEVEL 14	1B	523 SF	587 SF	182
LEVEL 14	2B	662 SF	667 SF	104
LEVEL 14	3B	812 SF	812 SF	26
				312
LEVEL 44	1B	523 SF	587 SF	14
LEVEL 44	2B	655 SF	667 SF	10
				24
TOTAL				504



PARKING SPACE DIAGRAM
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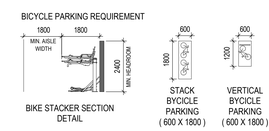

BICYCLE PARKING REQUIREMENTS
1 : 100

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LICENCE
10178
SEAL

SHEET LIST, ZONING REQUIREMENTS

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23-107	**As indicated**	**ARCH E**	**2024-02-16**
PROJ NO	SCALE	FORMAT	PLOT DATE

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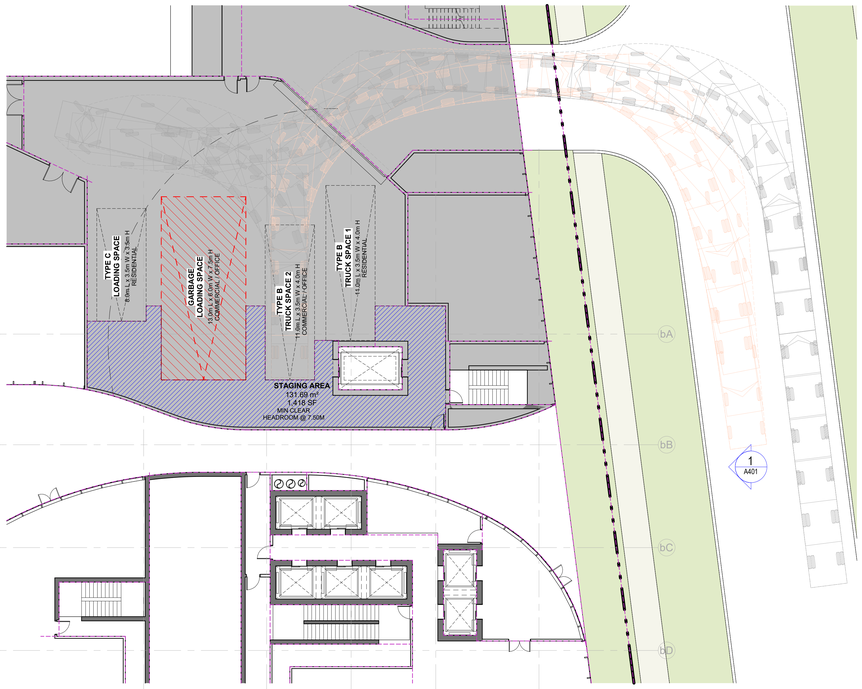
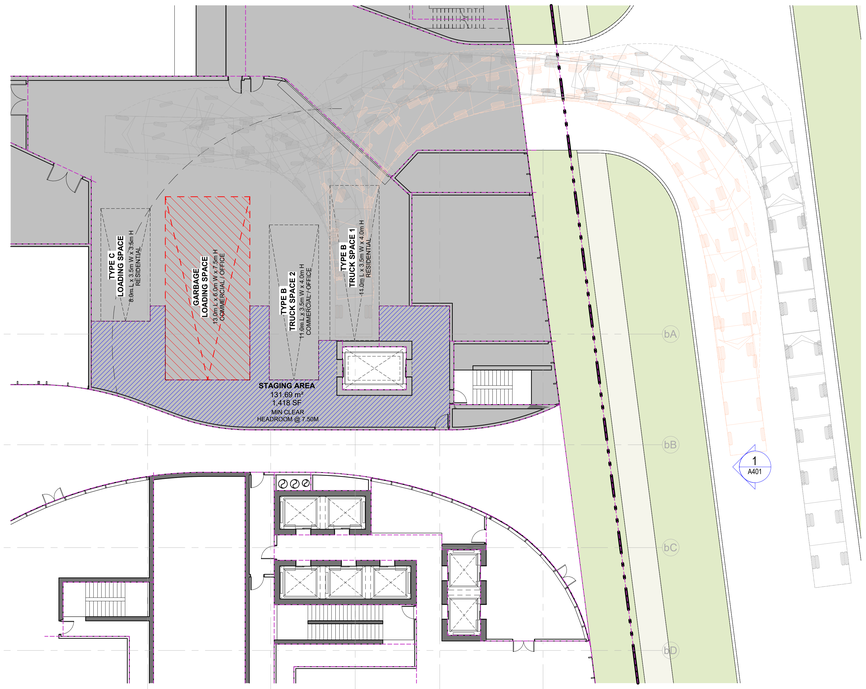


1 MANOEUVERING DIAGRAM - SINGLE UNIT TRUCK 01

1 : 150

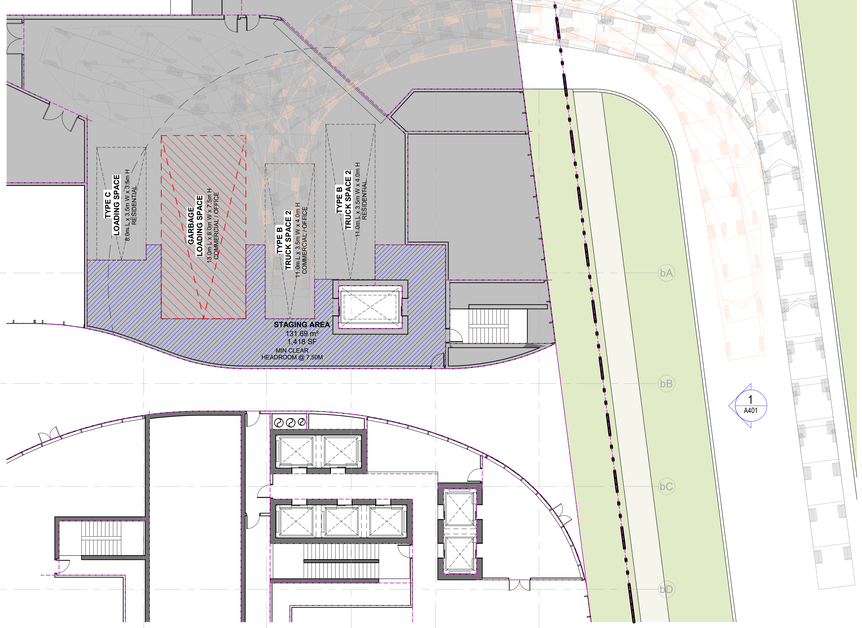
b1 b2 b3 b4 b5



2 MANOEUVERING DIAGRAM - SINGLE UNIT TRUCK 02

1 : 150

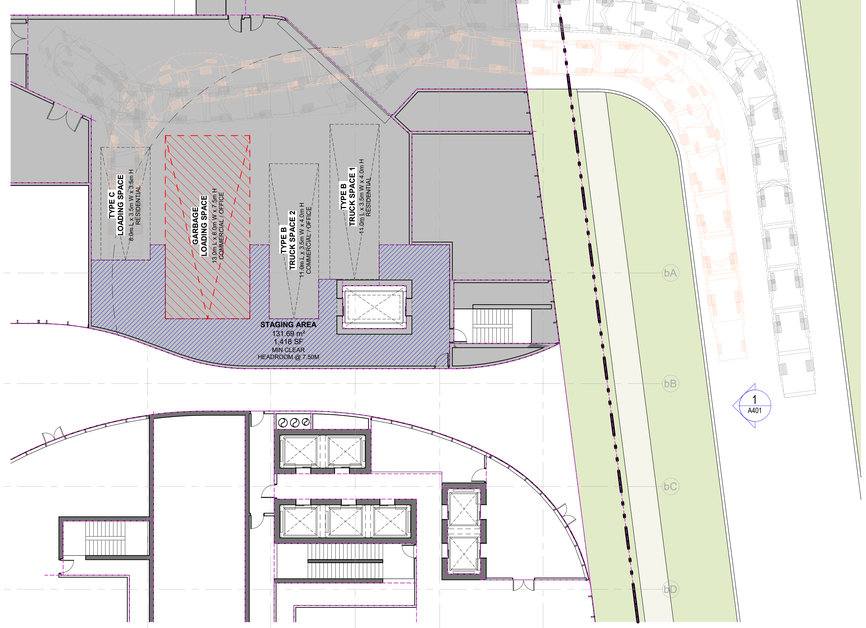
b1 b2 b3 b4 b5



3 MANOEUVERING DIAGRAM - HEAVY SINGLE UNIT TRUCK

1 : 150

b1 b2 b3 b4 b5



4 MANOEUVERING DIAGRAM - CUBE VAN

1 : 150

b1 b2 b3 b4 b5

WASTE MANAGEMENT NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUCTION WITH SHEET A211 & A206 (LEVEL 1 AND P1 PLANS RESPECTIVELY)
2. SOLID WASTE MANAGEMENT WILL PROVIDE BULK LIFT COMPACTED GARBAGE, RECYCLING AND ORGANIC COLLECTION SERVICES FOR THE RESIDENTIAL COMPONENT OF THIS DEVELOPMENT.
3. A TRAINED ON-SITE STAFF MEMBER MUST BE AVAILABLE TO MANOEUVER BINS FOR THE COLLECTION DRIVER AND ALSO ACT AS A FLAGMAN WHEN THE TRUCK IS REVERSING. IN THE EVENT THE ON-SITE STAFF MEMBER IS UNAVAILABLE AT THE TIME THE RESIDENTIAL COLLECTION VEHICLE ARRIVES AT THE SITE, THE COLLECTION VEHICLE WILL LEAVE THE SITE AND NOT RETURN UNTIL THE NEXT SCHEDULED COLLECTION DAY.
4. ALL ACCESS DRIVEWAYS TO BE USED BY THE COLLECTION VEHICLE WILL BE LEVEL (±8%) AT LEAST 4.5m WIDE THROUGHOUT THE SITE AND 6m WIDE AT ENTRANCES AND EXITS, HAVING A MINIMUM 4.5m CLEARANCE UNDER OVERHEAD DOORS.
5. THE WASTE LOADING SPACE WILL BE CONSTRUCTED OF AT LEAST 200mm THICK (MIN.) REINFORCED CONCRETE, BE LEVEL (±2%), AND BE AT LEAST 6m WIDE X 13m LONG AND HAVE VERTICAL CLEARANCE OF 7.5m.
6. IN ALL AREAS WHERE A COLLECTION VEHICLE IS REQUIRED TO DRIVE ONTO OR OVER A SUPPORT STRUCTURE, THE STRUCTURE IS TO BE DESIGNED TO SAFELY SUPPORT A FULLY LOADED COLLECTION VEHICLE AT 35 METRIC TONNES.
7. SHARING OF WASTE LOADING SPACE FOR PURPOSES OF MOVING WILL BE SCHEDULED ACCORDING TO GARBAGE PICK UP TIMES. SHOULD THE WASTE LOADING SPACE BE NEEDED FOR USE BY COMMERCIAL SECTORS, THE COMMERCIAL COMPONENT MUST ARRANGE THIS USE SUCH THAT IT DOES NOT CONFLICT WITH ANY RESIDENTIAL USES.
8. TYPE B TRUCK SPACE 2 WILL BE RESTRICTED TO USE OUTSIDE THE WASTE COLLECTION WINDOW.
9. THE STAGING PAD ABUTTING THE FRONT OF THE WASTE LOADING SPACE SHALL BE LEVEL (+/-2%), AND SHALL BE CONSTRUCTED OF A MINIMUM OF 200 mm REINFORCED CONCRETE.
10. THE WASTE LOADING SPACE WILL BE USED BY BOTH RESIDENTIAL AND NON RESIDENTIAL/RETAIL SECTORS. THE NON RESIDENTIAL RETAIL MANAGEMENT MUST ARRANGE FOR THEIR COLLECTION DAYS TO BE SCHEDULED ON DIFFERENT DAYS FROM THOSE OF THE RESIDENTIAL COLLECTION DAYS. FAILURE TO COMPLY WITH THIS ARRANGEMENT WILL RESULT IN THE CANCELLATION OF RESIDENTIAL COLLECTION AT THIS SITE.
11. BEFORE SOLID WASTE COLLECTION SERVICES ARE TO BEGIN, THE TOWN OF OAKVILLE & REGION OF HALTON WILL NEED TO BE PROVIDED WITH A LETTER CERTIFIED BY A PROFESSIONAL ENGINEER THAT IN ALL CASES WHERE A COLLECTION VEHICLE IS REQUIRED TO DRIVE ONTO OR OVER A SUPPORTED STRUCTURE, THAT THE STRUCTURE CAN SAFELY SUPPORT A FULLY LOADED COLLECTION VEHICLE (35 METRIC TONNES) AND CONFORM TO THE FOLLOWING:

    i) DESIGN CODE - ONTARIO BUILDING CODE
    ii) DESIGN LOAD - CITY BULK LIFT VEHICLE IN ADDITION TO BUILDING CODE REQUIREMENTS
    iii) IMPACT FACTOR - 5% FOR MAXIMUM VEHICULAR SPEEDS TO 15KM/H AND 30% FOR HIGHER SPEEDS
12. DOUBLE DOORS (MINIMUM 2.2m WIDTH) TO BE PROVIDED TO ACCESS EACH WASTE STORAGE (AND BULKY WASTE STORAGE) ROOM. THESE DOORS SHALL OPEN OUTWARDS TO MAXIMIZE STORAGE SPACE.
13. WASTE STORAGE ROOMS TO HAVE A HOSE BIB AND FLOOR DRAIN FOR WASHING AND CLEANING OF THE ROOM AND WASTE CONTAINERS.
14. THE AIR EXCHANGE RATE FOR WASTE STORAGE ROOMS TO BE A MINIMUM OF ONE-CUBIC FOOT PER MINUTE PER SQUARE FOOT OF FLOOR SPACE (1 CFM/FT^2).
15. THIS DRAWING TO BE READ IN CONJUNCTION WITH R.J. BURNSIDE & ASSOCIATES LIMITED, SOLID WASTE MANAGEMENT PLAN.
16. WASTE BINS AND CARTS SHOWN ON THESE DRAWINGS ARE REPRESENTATIONAL ONLY.

TABLE 1: WASTE CONTAINER COMPUTATION

WASTE STREAM	CONTAINER TYPES	AREA (SQM)	NUMBER OF RESIDENTIAL UNITS SERVICED PER BIN
GARBAGE (COMPACTED)	**3 CUBIC YARD FRONT-LIFT BIN**	2.27	**54**
RECYCLING (UNCOMPACTED)	**4 CUBIC YARD FRONT-LIFT BIN**	2.78	**56**
ORGANICS	**360 L SEMI-AUTOMATED CART**	0.80	**25**

TABLE 2: REQUIRED RESIDENTIAL WASTE STORAGE ROOM AREA

	NUMBER OF RESIDENTIAL UNITS	APPROXIMATE WASTE STORAGE ROOM SPATIAL REQUIREMENT (SQM) **
BUILDING A	*694*	191.01
BUILDING B	*504*	201.77
TOTAL	***1198***	392.78

** EXCLUDES 10 SQM REQUIRED FOR BULKY WASTE STORAGE

TABLE 3: WASTE CONTAINER COUNTS

NUMBER OF RESIDENTIAL UNITS		*694*	*504*
WASTE STREAM	**CONTAINER**	**BUILDING A # BINS**	**BUILDING B # BINS**
GARBAGE (COMPACTED)	3 YARD³ FRONT-LIFT	14	11
RECYCLING	4 YARD³ YARD FRONT-LIFT	14	10
ORGANICS	360 L SEMI-AUTOMATED CART	29	22

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LOADING PLAN

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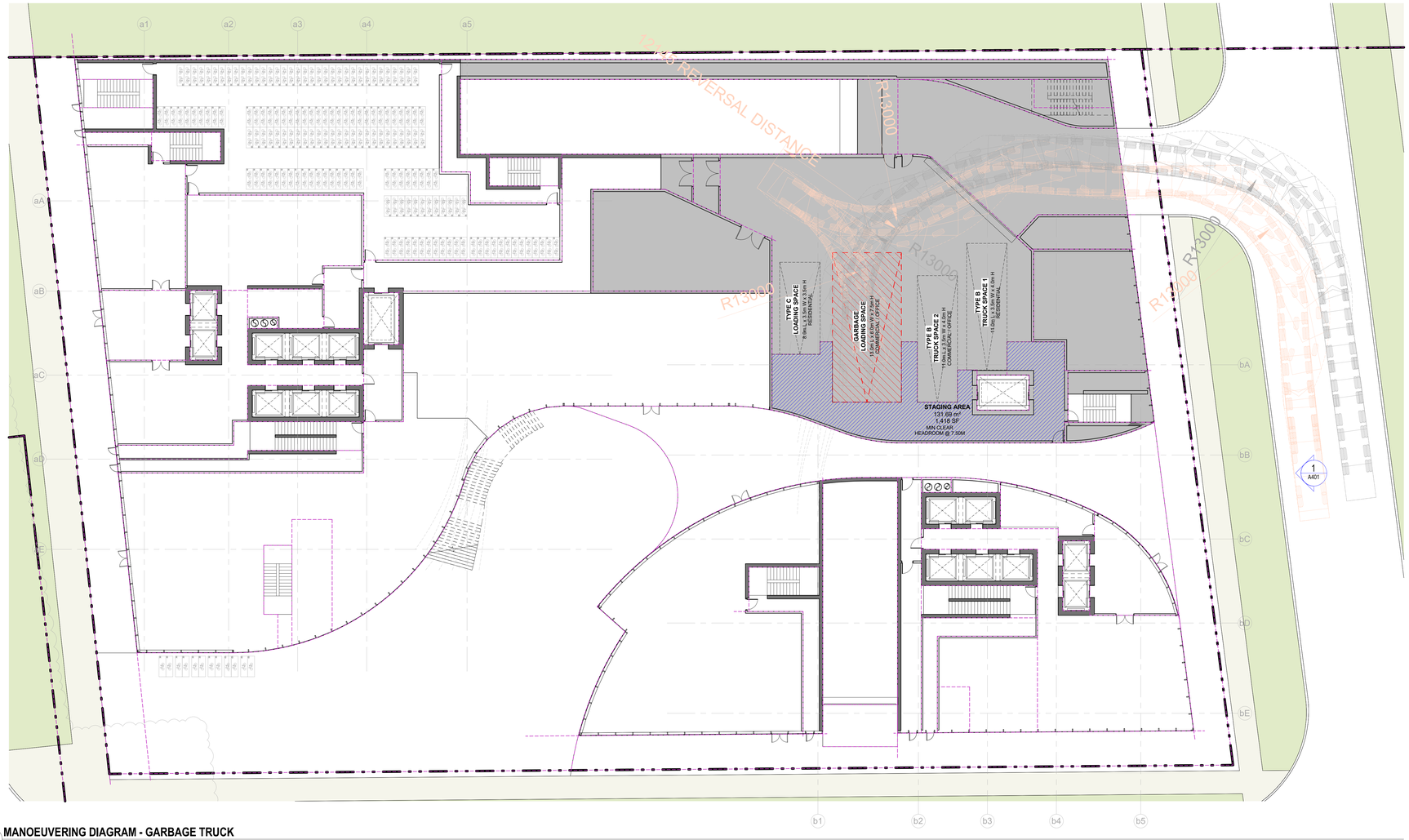

1 **MANOEUVERING DIAGRAM - GARBAGE TRUCK**
1 : 150

WASTE MANAGEMENT NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUCTION WITH SHEET A211 & A206 (LEVEL 1 AND P1 PLANS RESPECTIVELY)
2. SOLID WASTE MANAGEMENT WILL PROVIDE BULK LIFT COMPACTED GARBAGE, RECYCLING AND ORGANIC COLLECTION SERVICES FOR THE RESIDENTIAL COMPONENT OF THIS DEVELOPMENT.
3. A TRAINED ON-SITE STAFF MEMBER MUST BE AVAILABLE TO MANOEUVER BINS FOR THE COLLECTION DRIVER AND ALSO ACT AS A FLAGMAN WHEN THE TRUCK IS REVERSING. IN THE EVENT THE ON-SITE STAFF MEMBER IS UNAVAILABLE AT THE TIME THE RESIDENTIAL COLLECTION VEHICLE ARRIVES AT THE SITE, THE COLLECTION VEHICLE WILL LEAVE THE SITE AND NOT RETURN UNTIL THE NEXT SCHEDULED COLLECTION DAY.
4. ALL ACCESS DRIVEWAYS TO BE USED BY THE COLLECTION VEHICLE WILL BE LEVEL (±8%) AT LEAST 4.5m WIDE THROUGHOUT THE SITE AND 6m WIDE AT ENTRANCES AND EXITS, HAVING A MINIMUM 4.5m CLEARANCE UNDER OVERHEAD DOORS.
5. THE WASTE LOADING SPACE WILL BE CONSTRUCTED OF AT LEAST 200mm THICK (MIN.) REINFORCED CONCRETE, BE LEVEL (±2%), AND BE AT LEAST 6m WIDE X 13m LONG AND HAVE VERTICAL CLEARANCE OF 7.5m.
6. IN ALL AREAS WHERE A COLLECTION VEHICLE IS REQUIRED TO DRIVE ONTO OR OVER A SUPPORT STRUCTURE, THE STRUCTURE IS TO BE DESIGNED TO SAFELY SUPPORT A FULLY LOADED COLLECTION VEHICLE AT 35 METRIC TONNES.
7. SHARING OF WASTE LOADING SPACE FOR PURPOSES OF MOVING WILL BE SCHEDULED ACCORDING TO GARBAGE PICK UP TIMES. SHOULD THE WASTE LOADING SPACE BE NEEDED FOR USE BY COMMERCIAL SECTORS, THE COMMERCIAL COMPONENT MUST ARRANGE THIS USE SUCH THAT IT DOES NOT CONFLICT WITH ANY RESIDENTIAL USES.
8. TYPE B TRUCK SPACE 2 WILL BE RESTRICTED TO USE OUTSIDE THE WASTE COLLECTION WINDOW.
9. THE STAGING PAD ABUTTING THE FRONT OF THE WASTE LOADING SPACE SHALL BE LEVEL (+/-2%), AND SHALL BE CONSTRUCTED OF A MINIMUM OF 200 mm REINFORCED CONCRETE.
10. THE WASTE LOADING SPACE WILL BE USED BY BOTH RESIDENTIAL AND NON RESIDENTIAL/RETAIL SECTORS. THE NON RESIDENTIAL RETAIL MANAGEMENT MUST ARRANGE FOR THEIR COLLECTION DAYS TO BE SCHEDULED ON DIFFERENT DAYS FROM THOSE OF THE RESIDENTIAL COLLECTION DAYS. FAILURE TO COMPLY WITH THIS ARRANGEMENT WILL RESULT IN THE CANCELLATION OF RESIDENTIAL COLLECTION AT THIS SITE.
11. BEFORE SOLID WASTE COLLECTION SERVICES ARE TO BEGIN, THE TOWN OF OAKVILLE & REGION OF HALTON WILL NEED TO BE PROVIDED WITH A LETTER CERTIFIED BY A PROFESSIONAL ENGINEER THAT IN ALL CASES WHERE A COLLECTION VEHICLE IS REQUIRED TO DRIVE ONTO OR OVER A SUPPORTED STRUCTURE, THAT THE STRUCTURE CAN SAFELY SUPPORT A FULLY LOADED COLLECTION VEHICLE (35 METRIC TONNES) AND CONFORM TO THE FOLLOWING:

    i) DESIGN CODE - ONTARIO BUILDING CODE
    ii) DESIGN LOAD - CITY BULK LIFT VEHICLE IN ADDITION TO BUILDING CODE REQUIREMENTS
    iii) IMPACT FACTOR - 5% FOR MAXIMUM VEHICULAR SPEEDS TO 15KM/H AND 30% FOR HIGHER SPEEDS
12. DOUBLE DOORS (MINIMUM 2.2m WIDTH) TO BE PROVIDED TO ACCESS EACH WASTE STORAGE (AND BULKY WASTE STORAGE) ROOM. THESE DOORS SHALL OPEN OUTWARDS TO MAXIMIZE STORAGE SPACE.
13. WASTE STORAGE ROOMS TO HAVE A HOSE BIB AND FLOOR DRAIN FOR WASHING AND CLEANING OF THE ROOM AND WASTE CONTAINERS.
14. THE AIR EXCHANGE RATE FOR WASTE STORAGE ROOMS TO BE A MINIMUM OF ONE-CUBIC FOOT PER MINUTE PER SQUARE FOOT OF FLOOR SPACE (1 CFM/FT^2).
15. THIS DRAWING TO BE READ IN CONJUNCTION WITH R.J. BURNSIDE & ASSOCIATES LIMITED, SOLID WASTE MANAGEMENT PLAN.
16. WASTE BINS AND CARTS SHOWN ON THESE DRAWINGS ARE REPRESENTATIONAL ONLY.

TABLE 1: WASTE CONTAINER COMPUTATION

WASTE STREAM	CONTAINER TYPES	AREA (SQM)	NUMBER OF RESIDENTIAL UNITS SERVICED PER BIN
GARBAGE (COMPACTED)	**3 CUBIC YARD FRONT-LIFT BIN**	2.27	**54**
RECYCLING (UNCOMPACTED)	**4 CUBIC YARD FRONT-LIFT BIN**	2.78	**56**
ORGANICS	**360 L SEMI-AUTOMATED CART**	0.80	**25**

TABLE 2: REQUIRED RESIDENTIAL WASTE STORAGE ROOM AREA

	NUMBER OF RESIDENTIAL UNITS	APPROXIMATE WASTE STORAGE ROOM SPATIAL REQUIREMENT (SQM) **
BUILDING A	*694*	191.01
BUILDING B	*504*	201.77
TOTAL	***1198***	392.78

** EXCLUDES 10 SQM REQUIRED FOR BULKY WASTE STORAGE

TABLE 3: WASTE CONTAINER COUNTS

NUMBER OF RESIDENTIAL UNITS		*694*	*504*
WASTE STREAM	**CONTAINER**	**BUILDING A # BINS**	**BUILDING B # BINS**
GARBAGE (COMPACTED)	3 YARD³ FRONT-LIFT	14	11
RECYCLING	4 YARD³ YARD FRONT-LIFT	14	10
ORGANICS	360 L SEMI-AUTOMATED CART	29	22

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WASTE MANAGEMENT PLAN

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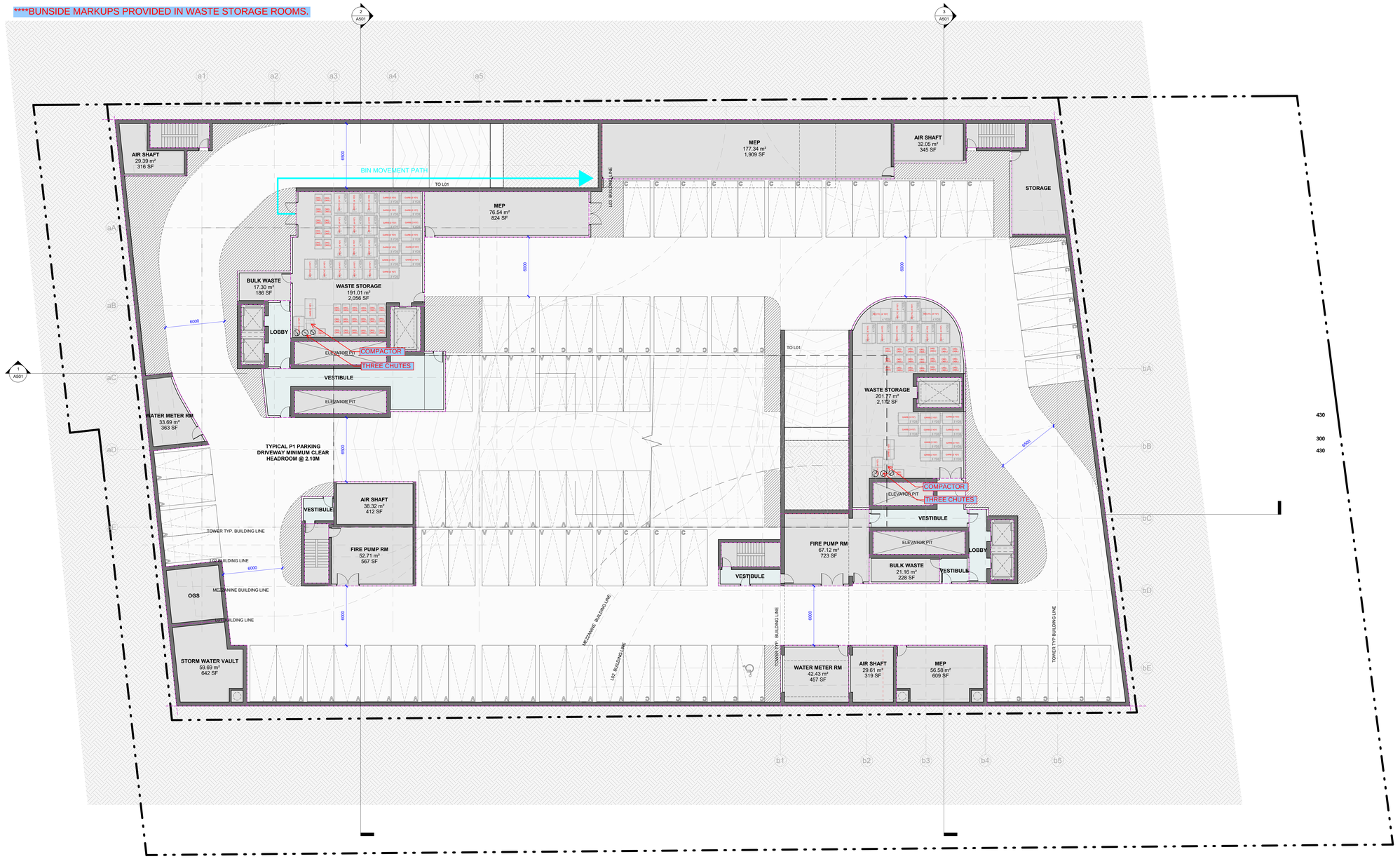
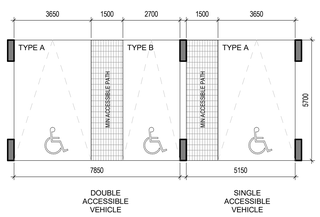
A113

***BUNSIDE MARKUPS PROVIDED IN WASTE STORAGE ROOMS.



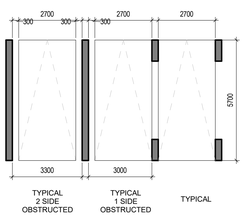
ACCESSIBLE PARKING STALL



DOUBLE ACCESSIBLE VEHICLE

SINGLE ACCESSIBLE VEHICLE

TYPICAL PARKING STALL



TYPICAL 2 SIDE OBSTRUCTED

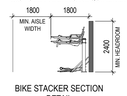
TYPICAL 1 SIDE OBSTRUCTED

TYPICAL

VEHICULAR PARKING SUMMARY PER LEVEL	
	RESIDENTIAL
40	NON-RESIDENTIAL*
39	VISITOR
79	TOTAL

POTENTIAL RETAIL AMAYOR POTENTIAL DAYCARE, TBC

BICYCLE PARKING REQUIREMENT



BIKE STACKER SECTION DETAIL

STACK BYCICLE PARKING (600 X 1800)

VERTICAL BYCICLE PARKING (600 X 1800)

BICYCLE PARKING SUMMARY PER LEVEL	
	RESIDENTIAL
	NON-RESIDENTIAL*
	VISITOR
	TOTAL

POTENTIAL RETAIL AMAYOR POTENTIAL DAYCARE, TBC

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LEVEL P1 PLAN

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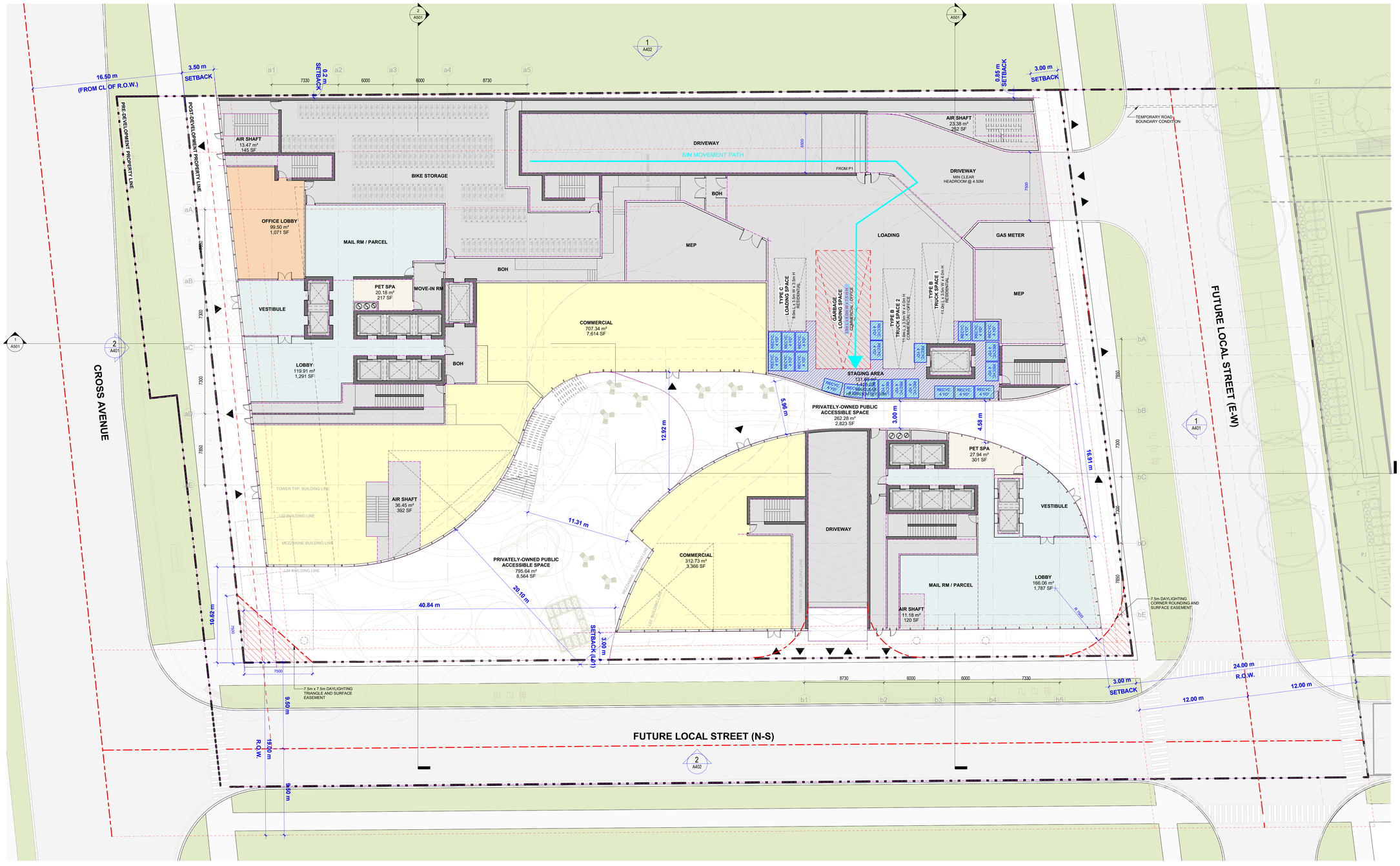
****BUNSIDE MARKUPS PROVIDED IN STAGING AND LOADING AREA.



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LEVEL 1 PLAN

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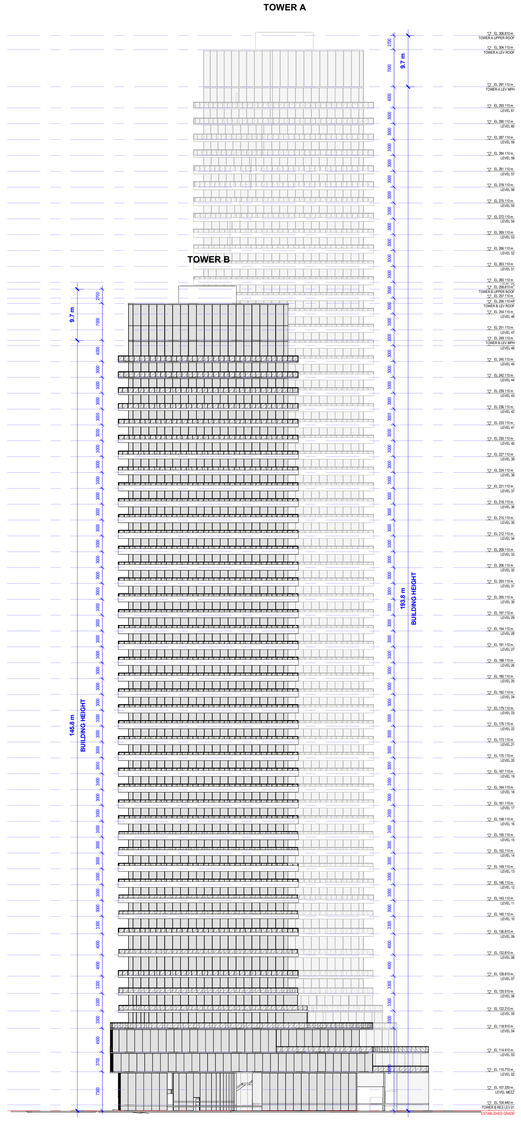

1 NORTH ELEVATION
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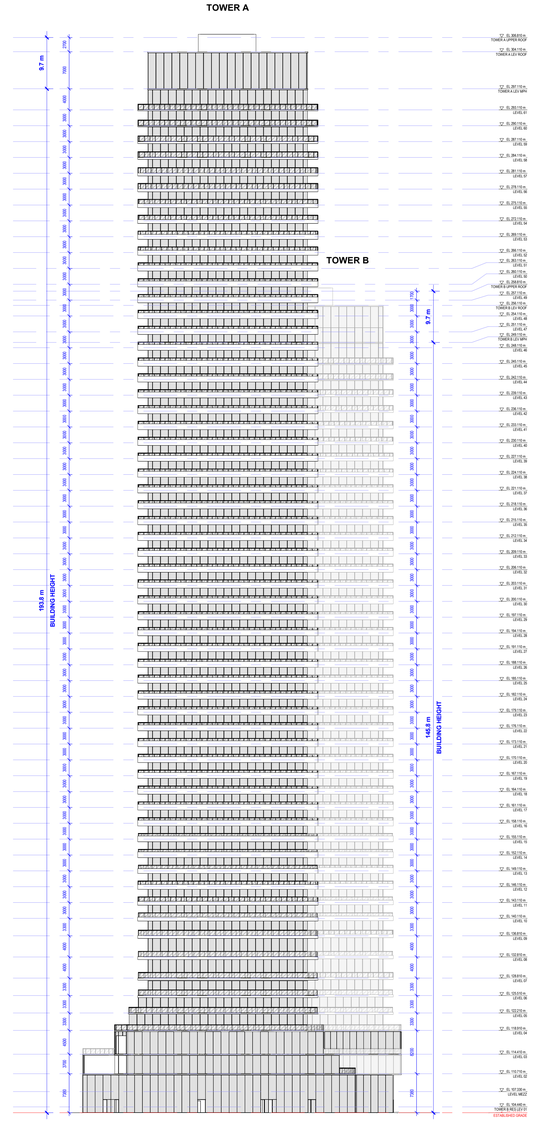

2 SOUTH ELEVATION
1 : 400

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NORTH & SOUTH ELEVATIONS

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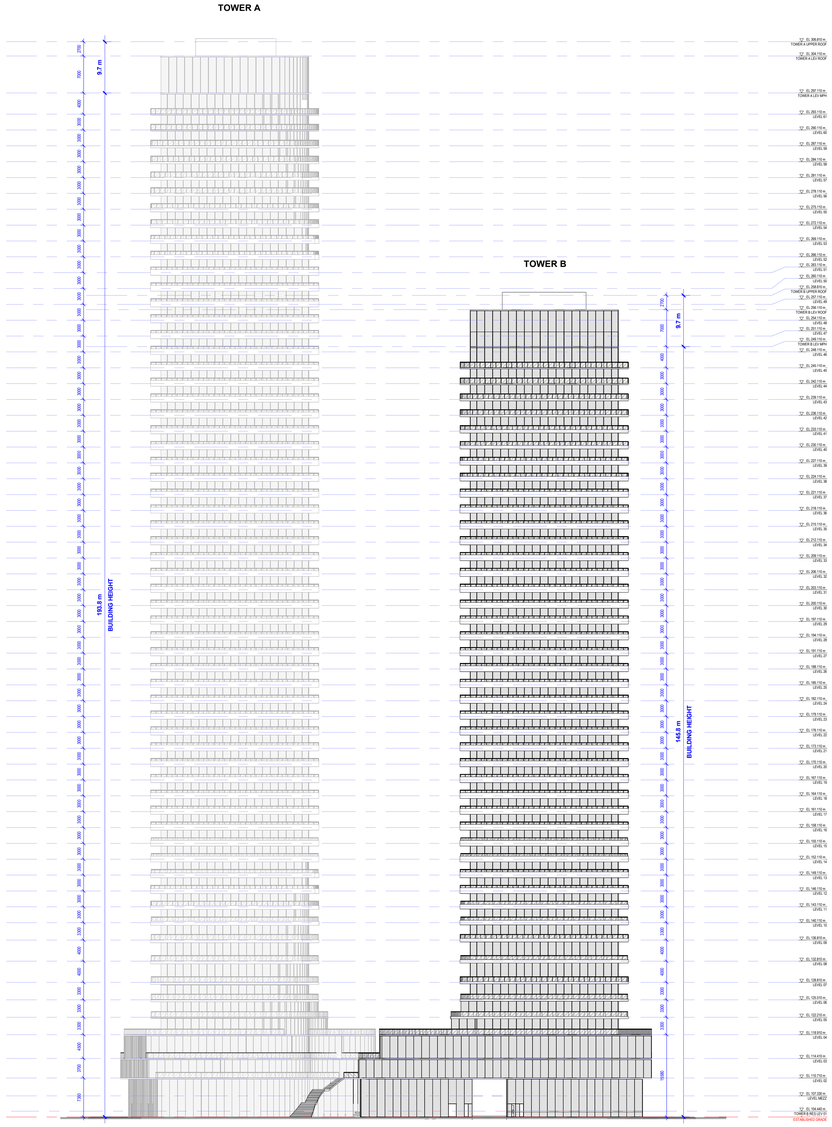

2 **EAST ELEVATION**
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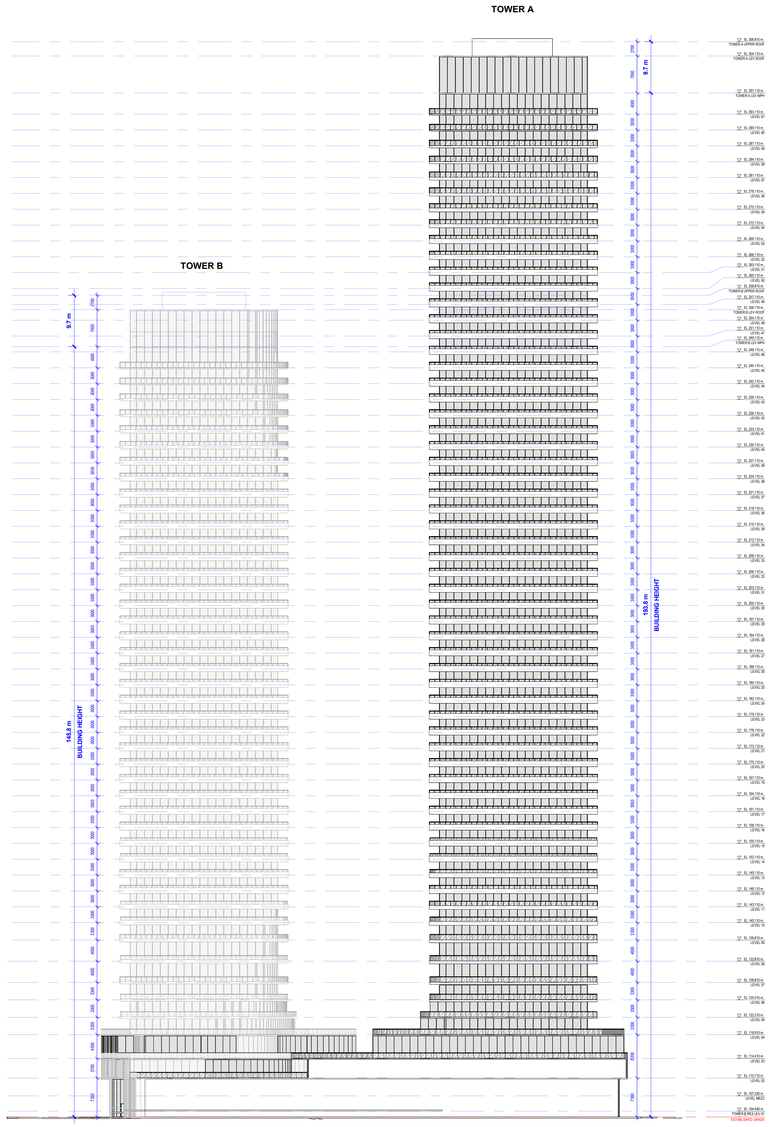

1 **WEST ELEVATION**
1 : 400

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EAST & WEST ELEVATIONS

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BURNSIDE

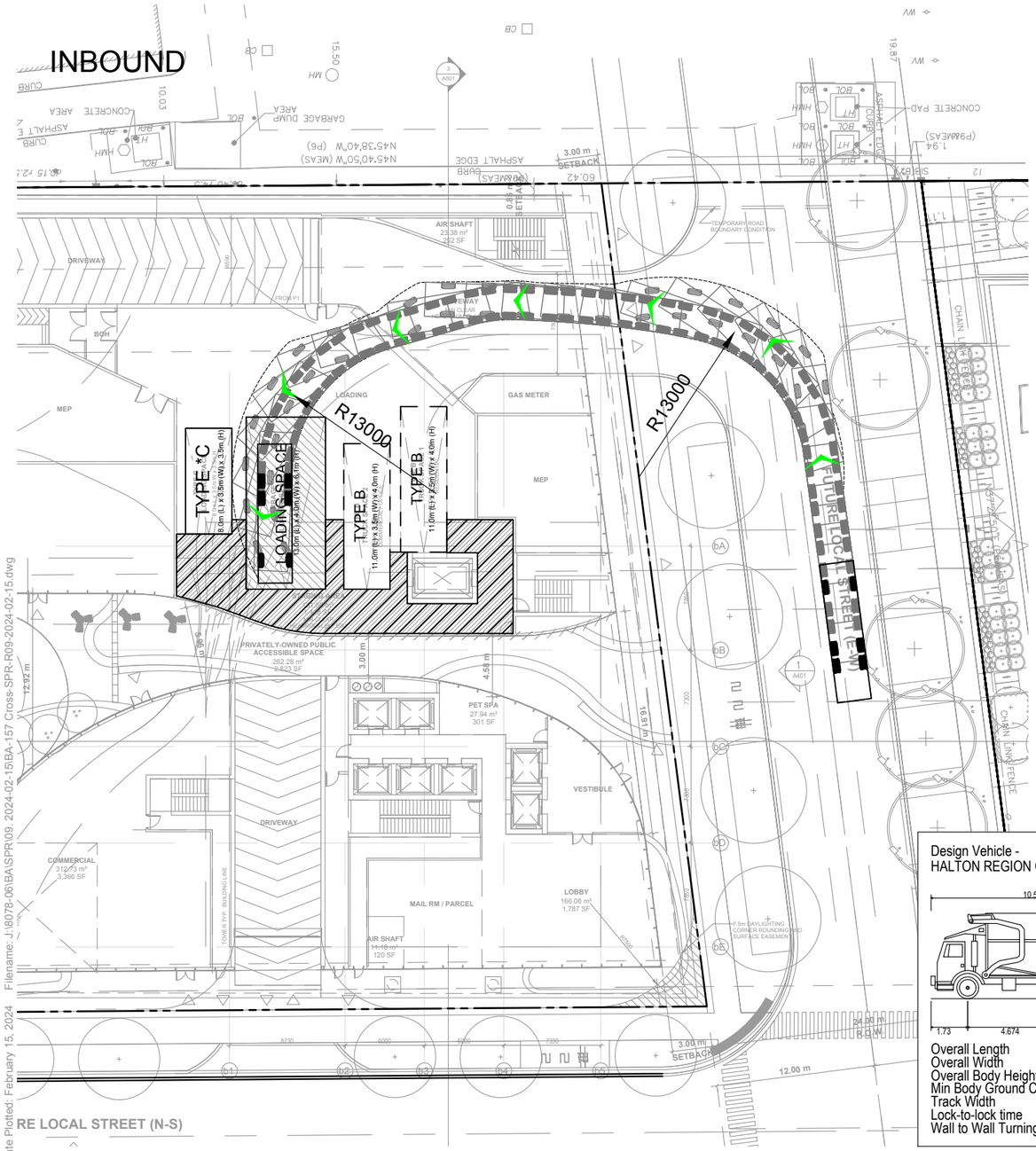
[THE DIFFERENCE IS OUR PEOPLE]

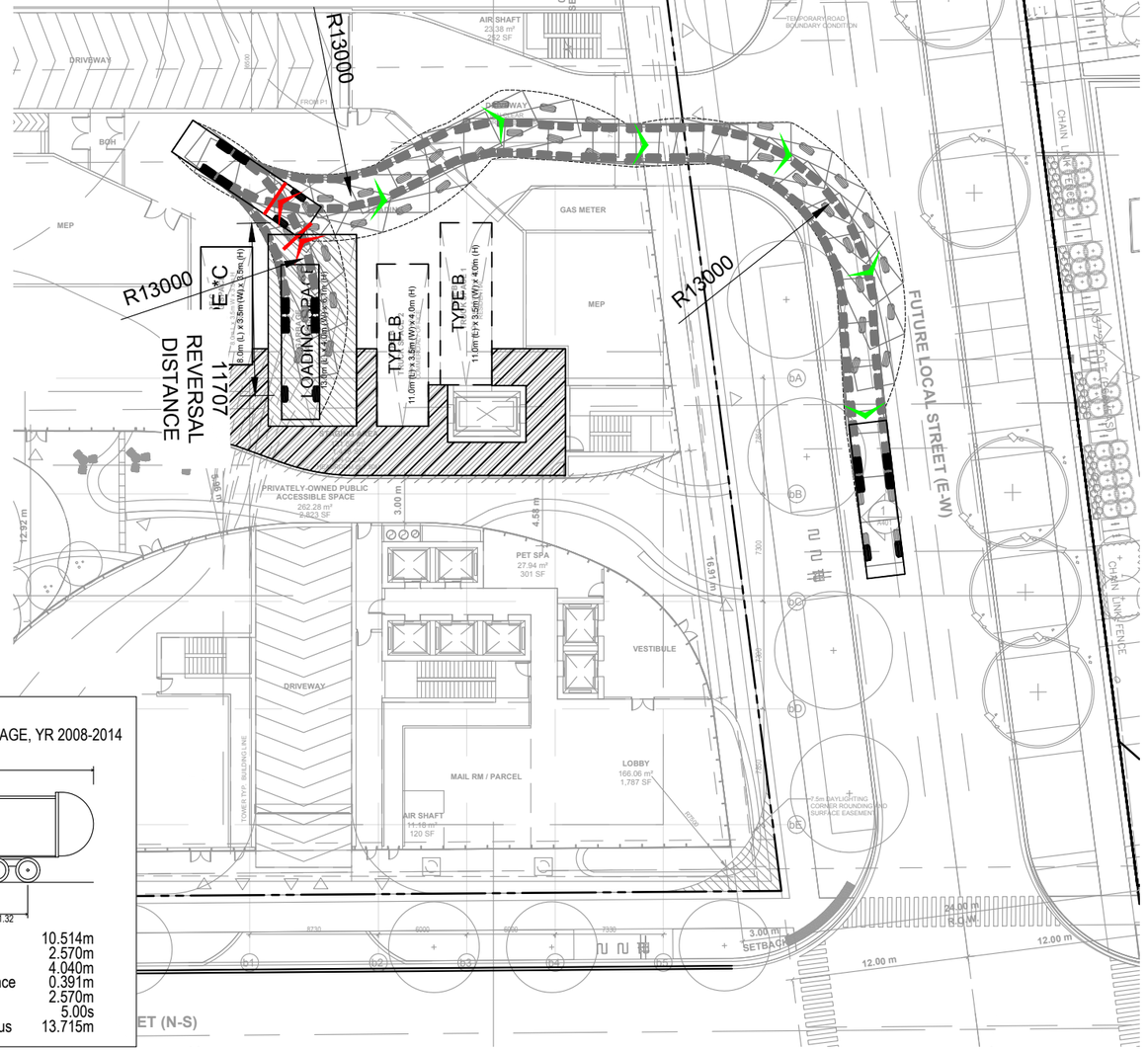
Appendix B

Waste Collection Vehicle Turning Path Analysis

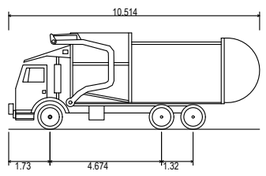
INBOUND

OUTBOUND





Design Vehicle -
HALTON REGION GARBAGE, YR 2008-2014



Overall Length	10.514m
Overall Width	2.570m
Overall Body Height	4.040m
Min Body Ground Clearance	0.391m
Track Width	2.570m
Lock-to-lock time	5.00s
Wall to Wall Turning Radius	13.715m

Filename: J:\8078-06\BA\SPR\09. 2024-02-15\BA-157 Cross-SPR-R09-2024-02-15.dwg
Date Plotted: February 15, 2024

BA Group

157 CROSS AVENUE

Vehicular Manoeuvring Diagram
Halton Region Waste Collection Vehicle

Project:	157 CROSS
Project No.	8078-06
Date:	October 02, 2023
Revised:	February 15, 2024

Scale 1:400 — 0 2 4 6 8 10 20m

Drawing No. VMD-01

R.J. Burnside & Associates Limited