65 Sunray Street
Whitby, Ontario L1N 8Y3
Canada
www.ghd.com

Our ref: 12558418

October 13, 2021

Mr. Peter Horn
Burlington 2020 Lakeshore Inc.
366 King Street West
Hamilton, ON L8P 1B3

2020 Lakeshore Road, City of Burlington – Waste Management Plan

Dear Mr. Horn,

1. Introduction

GHD Limited (GHD) was retained by Burlington 2020 Lakeshore Inc. to complete a Waste Management Plan (WMP) in support of the Official Plan Amendment and Zoning By-Law Amendment for the proposed development at 2020 Lakeshore Road in the City of Burlington. The proposed development consists of a new two-tower high-rise building with tower heights of 35 and 30 storeys and a 5- to 6-storey podium (based on grade changes). The proposed uses include:

– West Tower (317 residential dwelling units)
– East Tower (240 residential dwelling units)
– Commercial space (4,445 m^2 gross floor area)
– Office space (4,348 m^2 gross floor area)
– A hotel with 122 suites
– Complimentary uses and spaces for the hotel, including:
    - Bar (309 m^2 gross floor area)
    - Bar/Restaurant (206 m^2 gross floor area)
    - Restaurant (186 m^2 gross floor area)
    - Banquet Hall (619 m^2 gross floor area)
    - Lounge (252 m^2 gross floor area)
– Vehicular access (including waste collection vehicles) off of Elizabeth Street

The WMP has been prepared to address requirements of the Region of Halton's waste collection application requirements in relation to the proposed development (layout and use).

The WMP was prepared using the Region's Regional Official Plan Guideline that relates to waste management titled *Development Design Guidelines for Source Separation of Solid Waste* (Guideline)[1]. This letter discusses the waste management issues related to the Site and should therefore be considered to be the "Waste Management Plan" to satisfy the approval authority's requirements. The following elements are discussed herein:

[1] Halton Region. (2014). Development Design Guidelines for Source Separation of Solid Waste

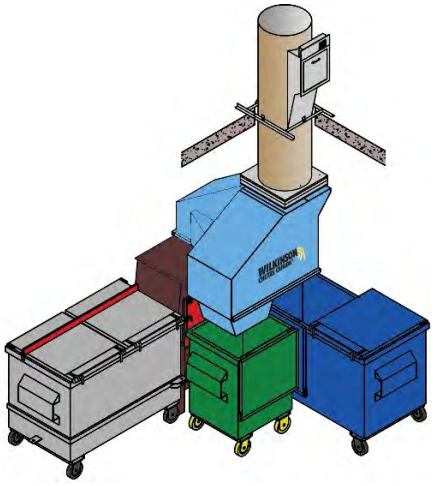
– Proposed Site Plan
– Anticipated commercial and residential waste types and amounts
– Retail and residential waste storage options
– Retail and residential waste collection details
– Best management practices to address common waste-related complaints
– Recommendations

2. Waste Management Plan

2.1 Site Plan

As stated above the proposed development consists of 557 units in two high-rise towers; a hotel with 122 suites and complimentary uses and spaces for the hotel, including a bar, bar/restaurant, restaurant, lounge, and banquet hall; commercial, and office spaces (see Figures 1a, 1b, and 1c for Site Plan). West Tower and East Tower have their own dedicated residential Garbage Rooms on Level Lake/P1, connected with waste chutes that are accessible to all residents on all floors of the building. Each waste chute will discharge into a three-waste stream sorting compaction system. Since these residential waste storage areas will have the waste tri-sorter and compactor system, for safety reasons residents will not have access to these areas. This is in keeping with the Guideline:

> *1.9.3.4 Should the design require a Compactor for garbage, the Compactor must be secured at all times with no general access. A Garbage Compactor system may be used with or without a chute system (i.e. through a small garbage access door from the Recyclable Material/Organic Waste room).*



There are four dedicated Garbage Rooms for commercial/non-residential waste (one of Level Lake/P1, two on Level City, one on Mezzanine).

Collection Vehicle Routing

Both residential and commercial/non-residential waste will be collected from the loading bay located on City Level. Waste vehicles will access the loading bay by reversing into it from Elizabeth Street, with the assistance of an on-site staff member (see Figure 2 AutoTURN).

2.2 Waste Volume

Although there are no requirements for demonstrating the volume or types of waste generated, understanding this information assists in determining the appropriate waste bin storage method and capacity requirements.

Residential

In terms of West Tower and East Tower, the estimated residential waste volumes were determined by working backwards from the Region's Guideline standards for waste capacity requirements. Halton Region collects 3 cubic yard garbage bins and 95 gallon carts for recycling and organics, based on the types of collection vehicles utilized. Private collection is estimated in 3 cubic yard bins for garbage, recycling and organics. Based on the number of units, GHD completed calculations to determine the minimum number of bins/carts required for garbage, recycling, and organics as well as the bin/cart footprints (see Attachment 1 for detailed waste capacity calculations). The breakdown is as follows:

West Tower (317 Units)

Item	Value	Unit
Minimum Number of Bins Required - Residential		
Public Collection		
Garbage (compacted)	4	3 cu. yd. bin(s)
Recycling	46	95 gallon cart(s)
Organics	13	95 gallon cart(s)
Private Collection		
Garbage (compacted)	4	3 cu. yd. bin(s)
Recycling	8	3 cu. yd. bin(s)
Organics	3	3 cu. yd. bin(s)

East Tower (240 Units)

Item	Value	Unit
Minimum Number of Bins Required - Residential		
Public Collection		
Garbage (compacted)	3	3 cu. yd. bin(s)
Recycling	35	95 gallon cart(s)
Organics	10	95 gallon cart(s)
Private Collection		
Garbage (compacted)	3	3 cu. yd. bin(s)
Recycling	6	3 cu. yd. bin(s)
Organics	2	3 cu. yd. bin(s)

As per the waste management requirements in the Region's Guideline, there will be:

– Dedicated storage areas, with enough space to store waste for a minimum of one week
– Recyclable and organic waste systems that are as convenient as the garbage system
– Collection point locations for waste that are accessible to all residents/occupants
– A water hose connection and floor drain to allow storage areas and waste receptacles to be easily cleaned

– Adequate and well-maintained mechanical ventilation and cooling mechanisms to suppress odour during periods of hot weather in the waste storage areas
– A sprinkler and fire prevention system in the waste storage areas
– Secure access to the compactor with no general access

Garbage

– As per the Region's Guideline, developments with 200 plus units should have a 3-yard compacter with three bins on wheels.
– Using the dimensions of a 3-yard bin included in the Region's Guideline and keeping in mind that as per industry standards the bins should be separated by a minimum of 0.76 m, the total space required for garbage storage (public or private collection) is as follows:
    - West Tower – 9.1 m^2
    - East Tower – 6.8 m^2

Recyclable Material

– As per the Region's Guideline, space allotment for recycling carts for public collection should be 0.8 m by 1 m per cart. Total storage space is as follows for recycling (public collection):
    - West Tower – 46 m^2
    - East Tower – 35 m^2
– Using the dimensions of a 3-yard bin included in the Region's Guideline and keeping in mind that as per industry standards the bins should be separated by a minimum of 0.76 m, the total space required for recycling (private collection) is as follows:
    - West Tower – 18.2 m^2
    - East Tower – 13.6 m^2

Organic Waste

– As per the Region's Guideline, space allotment for organics carts should be 0.8 m by 1 m per cart. Total storage space is as follows for organic waste (public collection):
    - West Tower – 13 m^2
    - East Tower – 10 m^2
– Using the dimensions of a 3-yard bin included in the Region's Guideline and keeping in mind that as per industry standards the bins should be separated by a minimum of 0.76 m, the total space required for organic waste (private collection) is as follows:
    - West Tower – 7 m^2
    - East Tower – 5.3 m^2

Bulk Waste

A clear and accessible area of 10 m^2 is located within each tower for the storage of large, bulk waste items. These rooms may not be accessed through the garbage rooms, as garbage rooms are to be restricted to public access for safety reasons due to the tri-sorter and compactor systems.

Commercial/Non-Residential Uses

There are typically no requirements for demonstrating the volume or types of waste generated, however understanding the volume and types of waste generated assist in determining the appropriate level of storage capacity and method of storage. We are using industry standards as a proxy for the Site in order to demonstrate an appropriate storage and collection solution, which is also based on the type of uses proposed.

The total minimum number of bins required and associated minimum garbage room footprint requirements for all proposed Commercial/Non-Residential uses is provided in the following table and broken down by proposed use in the subsections below:

Item	Bins	Unit	Footprint
Minimum Number of Bins and Footprint Requirements – Commercial/Non-Residential			
Garbage (compacted)	25	3 cu. yd. bin(s)	54.3 m^2
Recycling	14	3 cu. yd. bin(s)	30.4 m^2
TOTAL	**39**	**3 cu. yd. bin(s)**	**84.7 m^2**

Typical waste storage and collection practices for commercial/non-residential developments that are relevant to the proposed development are as follows:

– All waste containers must be housed within a designated area or structure as appropriate
– All waste containers must be easily accessible to the user
– Storage points and collection points should be convenient for both the user and the service crews to access without presenting a risk to health and safety
– Collection points should be hard-surfaced and should be of a size capable of accommodating the required number of bins so there is no overflow onto the public right of way
– Ensure collection contracts are established and executed

Commercial

For the commercial area GHD have calculated a conservative estimate of 2,223 L/day of commercial garbage waste generation and 2,223 L/day of commercial recycling generation. This is based on a total Gross Floor Area for commercial of 4,445 m^2 and the typical waste/recycling generation rate of approximately 0.5 L/m^2/day for commercial (non-food) uses. With this waste and recycling generation in mind, the following number of bins are required for the Commercial use:

Item	Value	Unit
Minimum Number of Bins Required – Commercial		
Garbage (compacted)	7	3 cu. yd. bin(s)
Recycling	7	3 cu. yd. bin(s)

Office

For the office area GHD have calculated a conservative estimate of 435 L/day of office garbage waste generation and 1,087 L/day of office recycling generation. This is based on a total Gross Floor Area for office of 4,348 m^2 and the typical waste generation rate of approximately 0.1 L/m^2/day and recycling generation rate of approximately 0.25 L/m^2/day for office uses. With this waste and recycling generation in mind, the following number of bins are required for the Office use:

Item	Value	Unit
Minimum Number of Bins Required – Office		
Garbage (compacted)	2	3 cu. yd. bin(s)
Recycling	4	3 cu. yd. bin(s)

Hotel

For the hotel, consisting of 122 rooms, GHD have calculated a conservative estimate of 12 L/day of garbage waste generation and 1 L/day of recycling generation. This is based on 122 hotel rooms and the typical waste generation rate of approximately 0.1 L/bed/day and recycling generation rate of approximately 0.01 L/bed/day for hotel uses. With this waste and recycling generation in mind, the following number of bins are required for the Hotel use:

Item	Value	Unit
Minimum Number of Bins Required – Hotel		
Garbage (compacted)	1	3 cu. yd. bin(s)
Recycling	1	3 cu. yd. bin(s)

Bar

For the bar area GHD have calculated a conservative estimate of 155 L/day of bar garbage waste generation and 155 L/day of bar recycling generation. This is based on a total Gross Floor Area for bar of 309 m^2 and the typical waste generation rate of approximately 0.5 L/m^2/day and recycling generation rate of approximately 0.5 L/m^2/day for bar uses. With this waste and recycling generation in mind, the following number of bins are required for the Bar use:

Item	Value	Unit
Minimum Number of Bins Required – Bar		
Garbage (compacted)	1	3 cu. yd. bin(s)
Recycling	1	3 cu. yd. bin(s)

Bar/Restaurant

For the bar/restaurant GHD have calculated a conservative estimate of 1,374 L/day of bar/restaurant garbage waste generation and 274 L/day of bar/restaurant recycling generation. This is based on a total Gross Floor Area for bar/restaurant of 206 m^2 and the typical waste generation rate of approximately 6.67 L/m^2/day and recycling generation rate of approximately 1.33 L/m^2/day for bar/restaurant uses. With this waste and recycling generation in mind, the following number of bins are required for the Bar/Restaurant use:

Item	Value	Unit
Minimum Number of Bins Required – Bar/Restaurant		
Garbage (compacted)	5	3 cu. yd. bin(s)
Recycling	1	3 cu. yd. bin(s)

Restaurant

For the restaurant area GHD have calculated a conservative estimate of 1,241 L/day of restaurant garbage waste generation and 247 L/day of restaurant recycling generation. This is based on a total Gross Floor Area for restaurant of 186 m^2 and the typical waste generation rate of approximately 6.67 L/m^2/day and recycling generation rate of approximately 1.33 L/m^2/day for restaurant uses. With this waste and recycling generation in mind, the following number of bins are required for the Restaurant use:

Item	Value	Unit
Minimum Number of Bins Required – Restaurant		
Garbage (compacted)	4	3 cu. yd. bin(s)
Recycling	1	3 cu. yd. bin(s)

Banquet Hall

For the banquet hall area GHD have calculated a conservative estimate of 2,386 L/day of banquet hall garbage waste generation and 497 L/day of banquet hall recycling generation. This is based on a total Gross Floor Area for banquet hall of 619 m^2 and the typical waste generation rate of approximately 3.85 L/m^2/day and recycling generation rate of approximately 0.80 L/m^2/day for banquet hall uses. With this waste and recycling generation in mind, the following number of bins are required for the Banquet Hall use:

Item	Value	Unit
Minimum Number of Bins Required – Banquet Hall		
Garbage (compacted)	8	3 cu. yd. bin(s)
Recycling	2	3 cu. yd. bin(s)

Lounge

For the lounge area GHD have calculated a conservative estimate of 227 L/day of lounge garbage waste generation and 76 L/day of lounge recycling generation. This is based on a total Gross Floor Area for lounge of 252 m^2 and the typical waste generation rate of approximately 0.9 L/m^2/day and recycling generation rate of approximately 0.3 L/m^2/day for lounge uses. With this waste and recycling generation in mind, the following number of bins are required for the Lounge use:

Item	Value	Unit
Minimum Number of Bins Required – Lounge		
Garbage (compacted)	1	3 cu. yd. bin(s)
Recycling	1	3 cu. yd. bin(s)

2.3 Waste Collection

As stated above, waste collection will occur at the dedicated waste collection point (labelled as Residential & Commercial Staging Area on Figure 1b) at the loading bay. Signs will be posted to indicate that the area is a waste collection point and that there shall be no parking or blocking of the waste collection containers. An on-site staff member will assist the driver of the waste collection vehicle in accessing the collection point, jockeying the bins, and exiting the Site.

2.3.1 Residential

On the scheduled waste collection day(s), the on-site staff member will be responsible for moving all bins and carts located in the residential Garbage Rooms to the loading area on the City Level, utilizing the freight elevator.

Section 1.9.3.5 of the Guideline requires that internal waste storage room(s) must be on the ground floor and have direct access to the waste collection point through 2.2 metre-wide double doors. Therefore, based on the current Site Plan, this development is not eligible for residential waste collection by the Region, and waste collection services will be provided by a private firm.

Schedule and Frequency

Based on number of bins required for the residential units, it is anticipated that the collection frequency will be a minimum of once a week. All collections would occur during the hours of 8:00 a.m. to 5:00 p.m. and will be contracted to a private waste hauler. The collection frequency and hours of collection will be determined and set-out in the contract between the private hauler and the developer.

2.3.2 Commercial/Non-Residential

As stated in Part 3.4 of the Region's Guideline, garbage and recycling collection is available for commercial developments that include residential dwellings; however, as per Section 1.9.3.5, the internal waste storage room(s) must be on the ground floor and have direct access to the waste collection point through 2.2 metre-wide double doors. Therefore, this development is not eligible for commercial/non-residential waste collection by the Region. As such, a contract with a private waste hauler will be established before the commercial space is occupied. At this time, it is not certain who will be renting the commercial and office units, so their potential uses cannot be confirmed. As such, it is not possible to provide a letter confirming private pick-up of commercial/non-residential waste. However, based on the current private waste collection market we are confident that a company will be more than willing to collect private commercial/non-residential waste from the proposed development. Furthermore, based on our experience, we are confident that private companies' standard waste collection vehicles will be able to collect waste from the Site, as the design for the commercial waste storage area and loading area, satisfies both waste storage best management practices and the Region's requirements.

Schedule and Frequency

Based on the number of waste collection containers allocated for the commercial/non-residential space, it is anticipated that the collection frequency will be a minimum of once a week. All collections would occur during the hours of 8:00 a.m. to 5:00 p.m. and as stated above will be contracted to a private waste hauler. The collection frequency and hours of collection will be determined and set-out in the contract between the private hauler and the developer.

2.4 Best Management Practices

In addition to the above, we have provided Best Management Practices (BMPs) that will mitigate any potential issues or complaints from residents as it relates to the management of waste on-site:

Continuous communication with tenants/owners about the waste management system

As stated above a letter will be provided to all tenants/owners informing them of the waste management system in place and the services provided by the Region. In addition to this, we suggest that quarterly notifications be sent out to tenants/owners indicating issues related to waste management that have been experienced such as people not sorting waste correctly and providing information and facts promoting waste diversion and reduction.

The lids of the waste storage containers should be kept closed at all times, except when depositing waste/collection is to occur

Keeping the lids securely fashioned, (except when depositing waste/ waste collection), will reduce nuisance related effects, such as odour, and attraction of vermin.

Clean up litter from around waste collection point

Waste collection point should be checked for litter after waste has been collected each week.

Noise

Ensure that collection hours are written into the contract with the private waste haulers and are established for normal business hours to reduce the noise effects from back-up beepers.

2.5 Recommendations and Conclusions

The following recommendations are provided:

– Number of bins as recommended above be implemented for each of the Buildings/ Garbage Rooms for both Residential and Commercial/Non-Residential

– Ensure lids of the waste bins are closed at all times, except for when depositing waste/ waste vehicles are collecting the material
– Implement standard waste management BMPs

By implementing the recommendations set out in this Waste Management Plan, the Region's requirements for a development application as it relates to Waste Management will be satisfied.

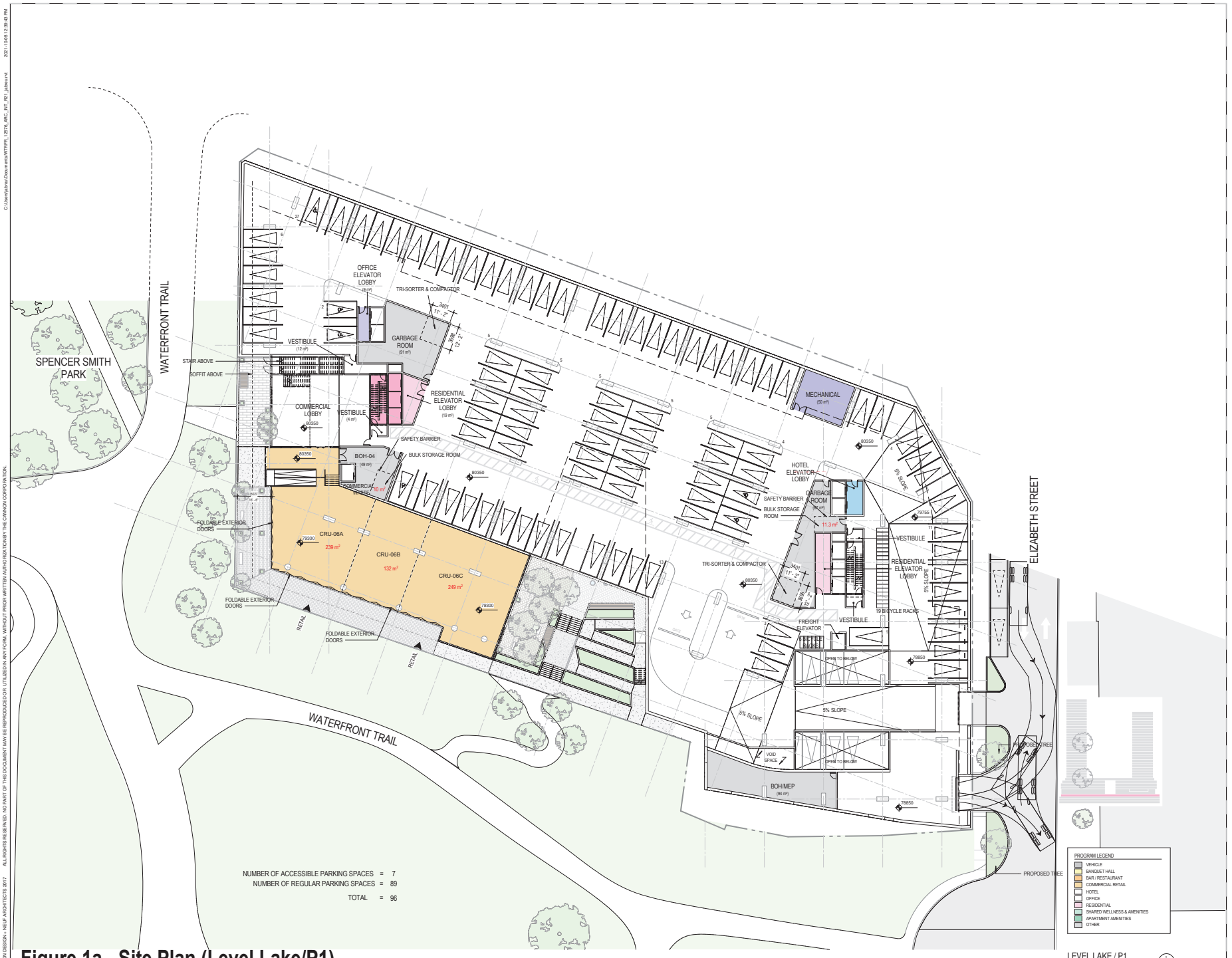
Should you have any questions on the above, please do not hesitate to contact us.

Regards,



Blair Shoniker, MA, RPP
Senior Waste & Environmental Planner
+1 905 429 5040
blair.shoniker@ghd.com

Figures



LEVEL LAKE / P1
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1 / A210

Figure 1a - Site Plan (Level Lake/P1)

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PROJECT
2020 LAKESHORE

LOCATION
2020 LAKESHORE ROAD, BURLINGTON ON

PROJET NO.
12576.00

CLIENT
BURLINGTON 2020 LAKESHORE INC.
396 King Street West
Hamilton ON L8P 1B3

CIVIL ENGINEERING
S. Llewellyn & Associates
4499 Bloor Street, Suite 109, East Wing
North Bloor ON L9V 0C4

TRAFFIC ENGINEERING
Paradigm
8A - 190 Pinebush Road
Cambridge ON N1R 8J8

PLANNING CONSULTANT
Bousfields Inc.
3 Church Street, Suite 200
Toronto ON M5E 1M2

LANDSCAPE ARCHITECT
adesso design inc.
236 Lyons Street South, 2nd Floor
Hamilton ON L8P 4S5

ARCHITECT
NEUF architect(e)s CANADA INC.
8 Market Street Suite 600
Toronto, ON M5E 1M6

PROJECT MANAGER
Horn Design & Consulting Inc.
1801 Mid Bonnie Crescent
Mississauga ON L5K 1J4

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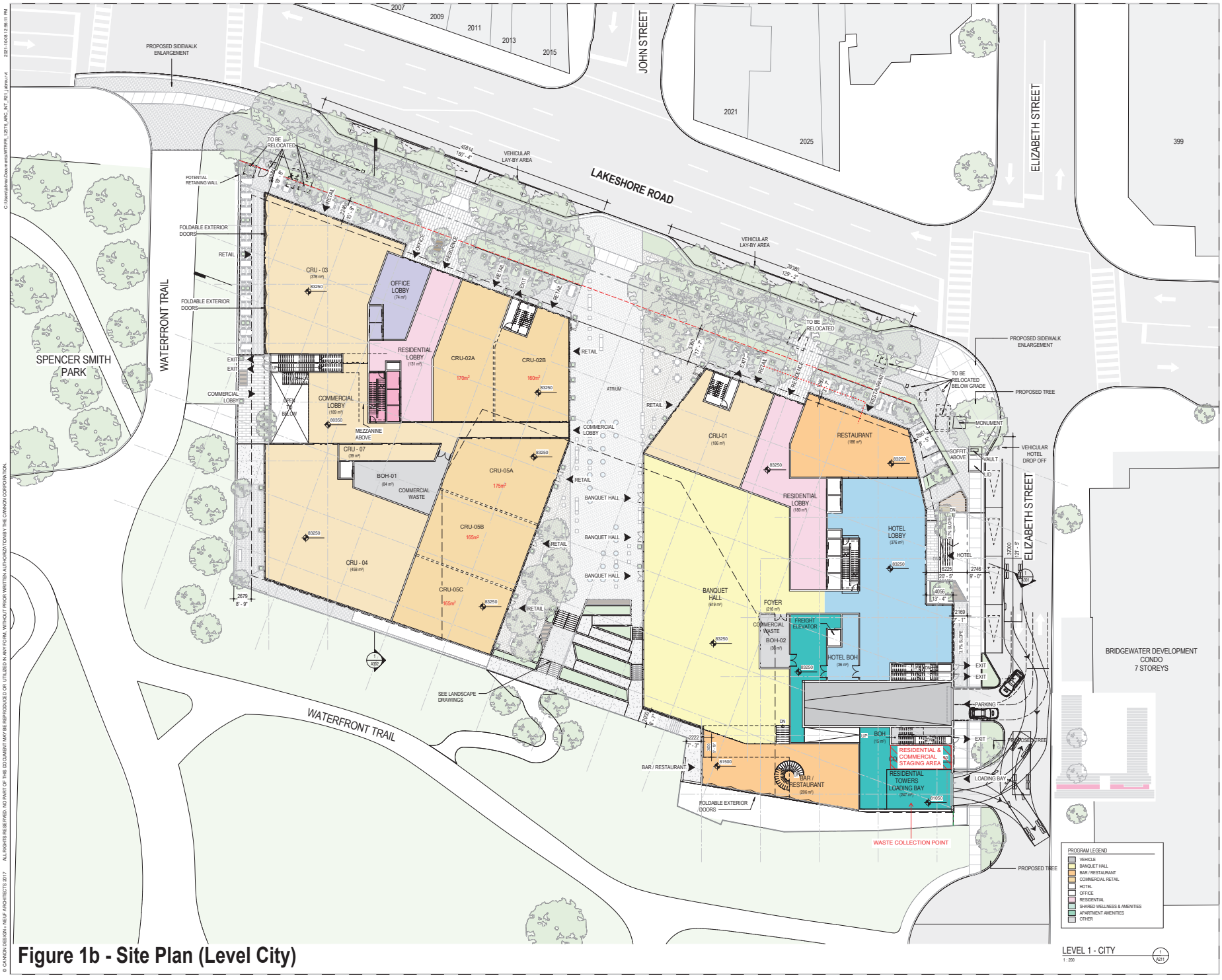
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yyyy-mm-dd: 2021-02-26
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FORMAT: 30" x 42" (Full-scale)

DRAWING TITLE
FLOOR PLAN - LEVEL LAKE / P1

REVISION: 0
DRAWING NUMBER: A210



LEVEL 1 - CITY
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Figure 1b - Site Plan (Level City)

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PROJECT
2020 LAKESHORE

LOCATION
2020 LAKESHORE ROAD, BURLINGTON ON

PROJET NO.
12576.00

CLIENT
BURLINGTON 2020 LAKESHORE INC.
396 King Street West
Hamilton ON L8P 1B3

CIVIL ENGINEERING
S. Llewellyn & Associates
3679 Victoria Street North, Suite 100, East Wing
Jordan Station ON L0R 1S0

TRAFFIC ENGINEERING
Paradigm
8A - 1625 Pilgrim Road
Cambridge ON N1H 6J8

PLANNING CONSULTANT
Bousfields Inc.
3 Church Street, Suite 200
Toronto ON M5E 1M2

LANDSCAPE ARCHITECT
adesso design inc.
208 Lakes Bridge Road, 2nd Floor
Hamilton ON L8P 4B5

ARCHITECT
NEUF architect(e)s CANADA INC.
6 Market Street Suite 600
Toronto, ON M5C 1WA

PROJECT MANAGER
Horn Design & Consulting Inc.
1801 Mid Duncan Dr.
Mississauga ON L5E 1J4

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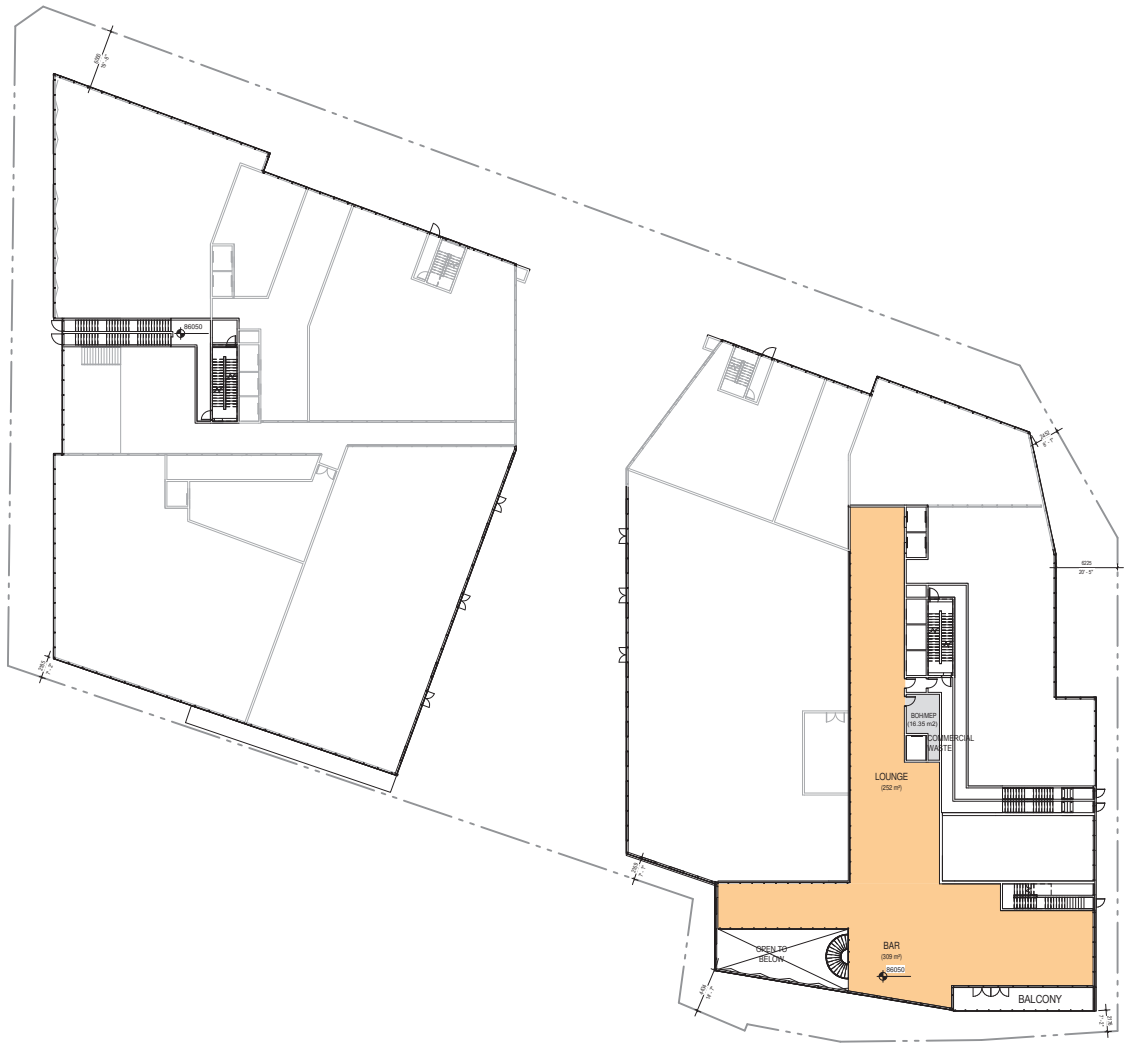
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FLOOR PLAN - LEVEL CITY

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PROGRAM LEGEND

- VEHICLE
- BANQUET HALL
- BAR / RESTAURANT
- COMMERCIAL RETAIL
- HOTEL
- OFFICE
- RESIDENTIAL
- SHARED WELLNESS & AMENITIES
- APARTMENT AMENITIES
- OTHER

MEZZANINE
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Figure 1c - Site Plan (Mezzanine)

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PROJECT
2020 LAKESHORE

LOCATION
2020 LAKESHORE ROAD, BURLINGTON ON

PROJET NO.
12576.00

CLIENT
BURLINGTON 2020 LAKESHORE INC.
396 King Street West
Hamilton ON L8P 1B2

CIVIL ENGINEERING
S. Llewellyn & Associates
648 Error Street, Suite 100, East Wing
Burlington ON L7L 6L2

TRAFFIC ENGINEERING
Paradigm
8A - 190 Pinebush Road
Cambridge ON N1R 8J8

PLANNING CONSULTANT
Bousfields Inc.
1 Main Street East, Suite 200
Hamilton ON L8N 1E7

LANDSCAPE ARCHITECT
adesso design inc.
236 Lyons Street South, 2nd Floor
Hamilton ON, L8P 3S5

ARCHITECT
NEUF architect(e)s CANADA INC.
8 Market Street Suite 600
Toronto, ON M5E 1M6

PROJECT MANAGER
Horn Design & Consulting Inc.
1801 Mid Section Rd
Mississauga, ON L5K 1J6

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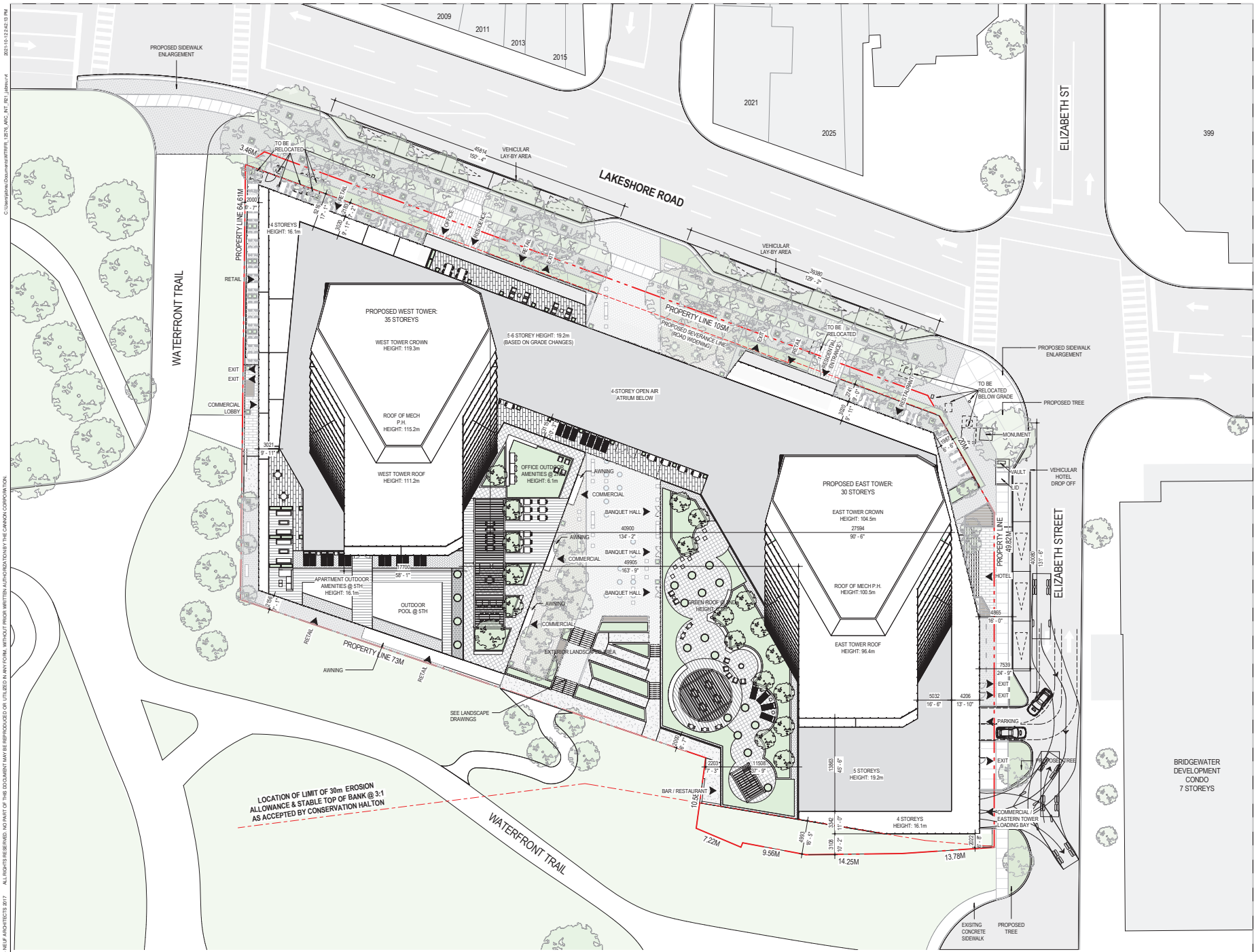
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FLOOR PLAN - MEZZANINE

REVISION
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DRAWING NUMBER
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SITE PLAN
1 : 200

Figure 2 - AutoTURN

PROJECT
2020 LAKESHORE

LOCATION
2020 LAKESHORE ROAD, BURLINGTON ON

PROJET NO.
12576.00

CLIENT
BURLINGTON 2020 LAKESHORE INC.
396 King Street West
Hamilton ON L8P 1B3

CIVIL ENGINEERING
S. Llewellyn & Associates
64 Simcoe Street, Suite 104, East Wing
Bolton ON L7E 1E

TRAFFIC ENGINEERING
Paradigm
8A - 150 Pinebush Road
Cambridge ON N1R 8J8

PLANNING CONSULTANT
Bousfields Inc.
1 Main Street East, Suite 200
Hamilton ON L8N 1E7

LANDSCAPE ARCHITECT
adesso design inc.
208 Lakha Bridge South, 2nd Floor
Hamilton ON L8P 4W5

ARCHITECT
NEUF architect(e)s CANADA INC.
8 Market Street Suite 800
Toronto, ON M5E 1M6

PROJECT MANAGER
Horn Design & Consulting Inc.
1801 Mid Broken Rd
Mississauga ON L5K 1J6

NEUF ARCHITECTES

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SITE PLAN

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Attachment 1

Waste Capacity Calculations

Table 1
Tower West Building - Residential
Waste Capacity Calculations

Residential Waste Storage Room			
Stats	**Value**	**Unit**	**Comments**
Number of Storeys	35	storeys	
Dwelling Units on Second Floor and Higher	317	units	
Dwelling Units on Ground Floor	0	units	These units will have their own receptacles and are not included in further calculations. 2 - 95 gallon cart for recycling, 1 - 95 gallon cart for organics, 1 - 3 cu. yd. bin for garbage.
Bulk Waste Room Space Requirement	10	m²	A clear and accessible area of 10 square meters within the building that can be used for the storage of larger items such as Bulk Waste, shall be included in the design.
Collection Frequency	Weekly	-	Assumed waste collection frequency

Item	**Value**	**Unit**	**Comments**
Number of Bins Required - Residential			**Option 1 - Region Collection**
Garbage (compacted)	4	3 cu. yd. bin(s)	Compacted garbage, Ref #1, one 3 cu. yd. per 80 units, used with Regions and private collection system
Recycling	46	95 gallon cart(s)	Ref #1, (does not compact), one 95 gal (360L) per 7 units, used with Regions collection system
Organics	13	95 gallon cart(s)	Ref #1, (does not compact), one 95 gal (360L) per 25 units, used with Regions collection system
Number of Bins Required - Residential			**Option 2 - Private Collection**
Garbage (compacted)	4	3 cu. yd. bin(s)	Compacted garbage, Ref #1, one 3 cu. yd. per 80 units, used with Regions and private collection system
Recycling	8	3 cu. yd. bin(s)	Ref #3, (does not compact), one 3 cu. yd. per 45 units, reference used as proxy, used with private collection system
Organics	3	3 cu. yd. bin(s)	95 gal = 0.470358 cu. yd., (does not compact)
Bin/Cart Footprint			
95 Gallon Cart	1	m²	Ref #2, 1 m (W) X 1 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.3	m²	Ref #1, 2.03 m (W) X 1.12 m (D), may slightly differ from various manufactures
4 Cubic Yard Bin	2.8	m²	Ref #1, 2.03 m (W) X 1.37 m (D), may slightly differ from various manufactures
6 Cubic Yard Bin	3.1	m²	Ref #1, 2.03 m (W) X 1.68 m (D), may slightly differ from various manufactures
Total Footprint Required - bins and carts			**Option 1 - Region Collection**
Garbage (compacted)	9.1	m²	bins
Recycling	46.0	m²	carts
Organics	13.0	m²	carts
Trisorter/Compactor Footprint	21.5	m²	This may vary by model/ company, 3.464 m (W) X 6.120 m (L)
Total Bin/Cart Footprint Required in Residential Waste Storage Room	89.6	m²	(Estimate), this footprint does not include spacing for alleyway or other movement
Total Footprint Required - bins ONLY			**Option 2 - Private Collection**
Garbage (compacted)	9.1	m²	bins
Recycling	18.2	m²	bins
Organics	7.0	m²	bins
Trisorter/Compactor Footprint	21.5	m²	This may vary by model/ company, 3.464 m (W) X 6.120 m (L)
Total Bin/Cart Footprint Required in Residential Waste Storage Room	55.7	m²	(Estimate), this footprint does not include spacing for alleyway or other movement

References

1. Halton Region. (2009). Development Design Guidelines for Source Seperation of Solid Waste. Halton Region. Retrieved from https://www.halton.ca/Repository/Development-Design-Guidelines-for-Source-Separatio
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3. City of Melbourne. (2017). Guidelines for Preparing a Waste Management Plan.

Table 2
Tower East Building - Residential
Waste Capacity Calculations

Residential Waste Storage Room			
Stats	**Value**	**Unit**	**Comments**
Number of Storeys	30	storeys	
Dwelling Units on Second Floor and Higher	240	units	
Dwelling Units on Ground Floor	0	units	These units will have their own receptacles and are not included in further calculations. 2 - 95 gallon cart for recycling, 1 - 95 gallon cart for organics, 1 - 3 cu. yd. bin for garbage.
Bulk Waste Room Space Requirement	10	m²	A clear and accessible area of 10 square meters within the building that can be used for the storage of larger items such as Bulk Waste, shall be included in the design.
Collection Frequency	Weekly	-	Assumed waste collection frequency

Item	**Value**	**Unit**	**Comments**
Number of Bins Required - Residential			**Option 1 - Region Collection**
Garbage (compacted)	3	3 cu. yd. bin(s)	Compacted garbage, Ref #1, one 3 cu. yd. per 80 units, used with Regions and private collection system
Recycling	35	95 gallon cart(s)	Ref #1, (does not compact), one 95 gal (360L) per 7 units, used with Regions collection system
Organics	10	95 gallon cart(s)	Ref #1, (does not compact), one 95 gal (360L) per 25 units, used with Regions collection system
Number of Bins Required - Residential			**Option 2 - Private Collection**
Garbage (compacted)	3	3 cu. yd. bin(s)	Compacted garbage, Ref #1, one 3 cu. yd. per 80 units, used with Regions and private collection system
Recycling	6	3 cu. yd. bin(s)	Ref #3, (does not compact), one 3 cu. yd. per 45 units, reference used as proxy, used with private collection system
Organics	2	3 cu. yd. bin(s)	95 gal = 0.470358 cu. yd., (does not compact)
Bin/Cart Footprint			
95 Gallon Cart	1	m²	Ref #2, 1 m (W) X 1 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.3	m²	Ref #1, 2.03 m (W) X 1.12 m (D), may slightly differ from various manufactures
4 Cubic Yard Bin	2.8	m²	Ref #1, 2.03 m (W) X 1.37 m (D), may slightly differ from various manufactures
6 Cubic Yard Bin	3.1	m²	Ref #1, 2.03 m (W) X 1.68 m (D), may slightly differ from various manufactures
Total Footprint Required - bins and carts			**Option 1 - Region Collection**
Garbage (compacted)	6.8	m²	bins
Recycling	35.0	m²	carts
Organics	10.0	m²	carts
Trisorter/Compactor Footprint	21.5	m²	This may vary by model/ company, 3.464 m (W) X 6.120 m (L)
Total Bin/Cart Footprint Required in Residential Waste Storage Room	73.3	m²	(Estimate), this footprint does not include spacing for alleyway or other movement
Total Footprint Required - bins ONLY			**Option 2 - Private Collection**
Garbage (compacted)	6.8	m²	bins
Recycling	13.6	m²	bins
Organics	5.3	m²	bins
Trisorter/Compactor Footprint	21.5	m²	This may vary by model/ company, 3.464 m (W) X 6.120 m (L)
Total Bin/Cart Footprint Required in Residential Waste Storage Room	47.3	m²	(Estimate), this footprint does not include spacing for alleyway or other movement

References

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3. City of Melbourne. (2017). Guidelines for Preparing a Waste Management Plan.

Table 3
Tower East Building - Commercial
Waste Capacity Calculations

Stats	Value	Unit	Comments
Number of Bins Required - Non-residential			
Garbage Generation Rate	0.5	L/m²/day	Ref #1, 50L/100 m2 floor area/day, assuming Retail Store (non food, over 100m2 floor area)
Recycling Generation Rate	0.5	L/m²/day	Ref #1, 50L/100 m2 floor area/day, assuming Retail Store (non food, over 100m2 floor area)
Floor Space	4,445	m²	Total space
Garbage Waste Generation Rate	2223	L/day	Using generation numbers
Recycling Waste Generation Rate	2223	L/day	Using generation numbers
Days between collection	7	day(s)	Assuming weekly collection
Estimated Garbage Waste Generated	15,557.5	L	
Estimated Recycling Waste Generated	15,557.5	L	
Estimated Garbage Waste Generated	4,105	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Recycling Waste Generated	4,105	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Garbage Waste Generated	20.3	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Estimated Recycling Waste Generated	20.3	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Number of Bins Required - Non-residential			**Private Collection Only**
Garbage	7	3 cu. yd. bin(s)	
Recycling	7	3 cu. yd. bin(s)	
			- or -
Garbage	44	95 gallon	
Recycling	44	95 gallon	
Bin/Cart Footprint			
1 Cubic Yard Bin	2.0	m²	Ref #4, 2.09 m (W) X 0.97 m (D), may slightly differ from various manufactures
2 Cubic Yard Bin	1.8	m²	Ref #3, 2.03 m (W) X 0.91 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.2	m²	Ref #2, 2.03 m (W) X 1.07 m (D), may slightly differ from various manufactures
35 Gallon	0.3	m²	Ref #5, 120L, .513 m (W) X .584 m (D)
95 Gallon	0.6	m²	Ref #5, 360L, .729 m (W) X .857 m (D)

Footprint Required			Option 1 - Option dependant on private contractor
3 Cu yd. Garbage	15.2	m²	
3 Cu yd. Recycling	15.2	m²	
Total Footprint Required in Waste Storage Room	30.4	m²	(Estimate)

Footprint Required			Option 2 - Option dependant on private contractor
95 g. Garbage	27.5	m²	
95 g. Recycling	27.5	m²	
Total Footprint Required in Waste Storage Room	55.0	m²	(Estimate)

References

1. Earle, J., & Monckton, R. (2004). Waste Management Guidelines for Proposed Developments. Randwick: GHD Pty Ltd. Retrieved from https://www.randwick.nsw.gov.au/__data/assets/pdf_file/0008/38249/Waste-Management-Appendices-A-K.pdf
2. City of Richmond. (2018). Commercial and Multi-Family Developments Waste Management Design Guidelines. Retrieved from: https://www.richmond.ca/__shared/assets/Waste_Management_Design_Guidelines48945.pdf
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Table 4
Tower East Building - Office
Waste Capacity Calculations

Stats	Value	Unit	Comments
Number of Bins Required - Non-residential			
Garbage Generation Rate	0.1	L/m²/day	Ref #1, 10L/100 m2 floor area/day, assuming Office
Recycling Generation Rate	0.25	L/m²/day	Ref #1, 25L/100 m2 floor area/day, assuming Office
Floor Space	4,348	m²	Total space
Garbage Waste Generation Rate	435	L/day	Using generation numbers
Recycling Waste Generation Rate	1087	L/day	Using generation numbers
Days between collection	7	day(s)	Assuming weekly collection
Estimated Garbage Waste Generated	3,043.6	L	
Estimated Recycling Waste Generated	7,609.0	L	
Estimated Garbage Waste Generated	804	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Recycling Waste Generated	2,008	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Garbage Waste Generated	4.0	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Estimated Recycling Waste Generated	9.9	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Number of Bins Required - Non-residential			**Private Collection Only**
Garbage	2	3 cu. yd. bin(s)	
Recycling	4	3 cu. yd. bin(s)	
			- or -
Garbage	9	95 gallon	
Recycling	22	95 gallon	
Bin/Cart Footprint			
1 Cubic Yard Bin	2.0	m²	Ref #4, 2.09 m (W) X 0.97 m (D), may slightly differ from various manufactures
2 Cubic Yard Bin	1.8	m²	Ref #3, 2.03 m (W) X 0.91 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.2	m²	Ref #2, 2.03 m (W) X 1.07 m (D), may slightly differ from various manufactures
35 Gallon	0.3	m²	Ref #5, 120L, .513 m (W) X .584 m (D)
95 Gallon	0.6	m²	Ref #5, 360L, .729 m (W) X .857 m (D)
Footprint Required			**Option 1 - Option dependant on private contractor**
3 Cu yd. Garbage	4.3	m²	
3 Cu yd. Recycling	8.7	m²	
Total Footprint Required in Waste Storage Room	13.0	m²	(Estimate)
Footprint Required			**Option 2 - Option dependant on private contractor**
95 g. Garbage	5.6	m²	
95 g. Recycling	13.7	m²	
Total Footprint Required in Waste Storage Room	19.4	m²	(Estimate)

References

1. Earle, J., & Monckton, R. (2004). Waste Management Guidelines for Proposed Developments. Randwick: GHD Pty Ltd. Retrieved from https://www.randwick.nsw.gov.au/__data/assets/pdf_file/0008/38249/Waste-Management-Appendices-A-K.pdf
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Table 5
Tower East Building - Hotel
Waste Capacity Calculations

Stats	Value	Unit	Comments
Number of Bins Required - Non-residential			
Garbage Generation Rate	0.1	L/bed/day	Ref #1, 10L/bed/day, assuming Hotel
Recycling Generation Rate	0.01	L/bed/day	Ref #1, 1L/bed/day, assuming Hotel
Rooms	122	units	Number of units
Garbage Waste Generation Rate	12	L/day	Using generation numbers
Recycling Waste Generation Rate	1	L/day	Using generation numbers
Days between collection	7	day(s)	Assuming weekly collection
Estimated Garbage Waste Generated	85.4	L	
Estimated Recycling Waste Generated	8.5	L	
Estimated Garbage Waste Generated	23	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Recycling Waste Generated	3	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Garbage Waste Generated	0.1	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Estimated Recycling Waste Generated	0.0	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Number of Bins Required - Non-residential			**Private Collection Only**
Garbage	1	3 cu. yd. bin(s)	
Recycling	1	3 cu. yd. bin(s)	
			- or -
Garbage	1	95 gallon	
Recycling	1	95 gallon	
Bin/Cart Footprint			
1 Cubic Yard Bin	2.0	m²	Ref #4, 2.09 m (W) X 0.97 m (D), may slightly differ from various manufactures
2 Cubic Yard Bin	1.8	m²	Ref #3, 2.03 m (W) X 0.91 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.2	m²	Ref #2, 2.03 m (W) X 1.07 m (D), may slightly differ from various manufactures
35 Gallon	0.3	m²	Ref #5, 120L, .513 m (W) X .584 m (D)
95 Gallon	0.6	m²	Ref #5, 360L, .729 m (W) X .857 m (D)
Footprint Required			**Option 1 - Option dependant on private contractor**
3 Cu yd. Garbage	2.2	m²	
3 Cu yd. Recycling	2.2	m²	
Total Footprint Required in Waste Storage Room	4.3	m²	(Estimate)
Footprint Required			**Option 2 - Option dependant on private contractor**
95 g. Garbage	0.6	m²	
95 g. Recycling	0.6	m²	
Total Footprint Required in Waste Storage Room	1.2	m²	(Estimate)

References

1. Earle, J., & Monckton, R. (2004). Waste Management Guidelines for Proposed Developments. Randwick: GHD Pty Ltd. Retrieved from https://www.randwick.nsw.gov.au/__data/assets/pdf_file/0008/38249/Waste-Management-Appendices-A-K.pdf
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Table 6
Tower East Building - Bar
Waste Capacity Calculations

Stats	Value	Unit	Comments
Number of Bins Required - Non-residential			
Garbage Generation Rate	0.5	L/m²/day	Ref #1, 50L/100 m2 floor area/day, assuming Bar
Recycling Generation Rate	0.5	L/m²/day	Ref #1, 50L/100 m2 floor area/day, assuming Bar
Floor Space	309	m²	Total space, 309 m2
Garbage Waste Generation Rate	155	L/day	Using generation numbers
Recycling Waste Generation Rate	155	L/day	Using generation numbers
Days between collection	7	day(s)	Assuming weekly collection
Estimated Garbage Waste Generated	1,081.5	L	
Estimated Recycling Waste Generated	1,081.5	L	
Estimated Garbage Waste Generated	286	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Recycling Waste Generated	286	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Garbage Waste Generated	1.4	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Estimated Recycling Waste Generated	1.4	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Number of Bins Required - Non-residential			**Private Collection Only**
Garbage	1	3 cu. yd. bin(s)	
Recycling	1	3 cu. yd. bin(s)	
			- or -
Garbage	4	95 gallon	
Recycling	4	95 gallon	
Bin/Cart Footprint			
1 Cubic Yard Bin	2.0	m²	Ref #4, 2.09 m (W) X 0.97 m (D), may slightly differ from various manufactures
2 Cubic Yard Bin	1.8	m²	Ref #3, 2.03 m (W) X 0.91 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.2	m²	Ref #2, 2.03 m (W) X 1.07 m (D), may slightly differ from various manufactures
35 Gallon	0.3	m²	Ref #5, 120L, .513 m (W) X .584 m (D)
95 Gallon	0.6	m²	Ref #5, 360L, .729 m (W) X .857 m (D)
Footprint Required			**Option 1 - Option dependant on private contractor**
3 Cu yd. Garbage	2.2	m²	
3 Cu yd. Recycling	2.2	m²	
Total Footprint Required in Waste Storage Room	4.3	m²	(Estimate)
Footprint Required			**Option 2 - Option dependant on private contractor**
95 g. Garbage	2.5	m²	
95 g. Recycling	2.5	m²	
Total Footprint Required in Waste Storage Room	5.0	m²	(Estimate)

References

1. Earle, J., & Monckton, R. (2004). Waste Management Guidelines for Proposed Developments. Randwick: GHD Pty Ltd. Retrieved from https://www.randwick.nsw.gov.au/__data/assets/pdf_file/0008/38249/Waste-Management-Appendices-A-K.pdf
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Table 7
Tower East Building - Bar/Restaurant
Waste Capacity Calculations

Stats	Value	Unit	Comments
Number of Bins Required - Non-residential			
Garbage Generation Rate	6.67	L/m²/day	Ref #1, 667L/100 m2 floor area/day, assuming Restaurant
Recycling Generation Rate	1.33	L/m²/day	Ref #1, 133L/100 m2 floor area/day, assuming Restaurant
Floor Space	206	m²	Total space,
Garbage Waste Generation Rate	1374	L/day	Using generation numbers
Recycling Waste Generation Rate	274	L/day	Using generation numbers
Days between collection	7	day(s)	Assuming weekly collection
Estimated Garbage Waste Generated	9,618.1	L	
Estimated Recycling Waste Generated	1,917.9	L	
Estimated Garbage Waste Generated	2,538	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Recycling Waste Generated	507	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Garbage Waste Generated	12.6	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Estimated Recycling Waste Generated	2.5	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Number of Bins Required - Non-residential			**Private Collection Only**
Garbage	5	3 cu. yd. bin(s)	
Recycling	1	3 cu. yd. bin(s)	
			- or -
Garbage	27	95 gallon	
Recycling	6	95 gallon	
Bin/Cart Footprint			
1 Cubic Yard Bin	2.0	m²	Ref #4, 2.09 m (W) X 0.97 m (D), may slightly differ from various manufactures
2 Cubic Yard Bin	1.8	m²	Ref #3, 2.03 m (W) X 0.91 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.2	m²	Ref #2, 2.03 m (W) X 1.07 m (D), may slightly differ from various manufactures
35 Gallon	0.3	m²	Ref #5, 120L, .513 m (W) X .584 m (D)
95 Gallon	0.6	m²	Ref #5, 360L, .729 m (W) X .857 m (D)
Footprint Required			**Option 1 - Option dependant on private contractor**
3 Cu yd. Garbage	10.9	m²	
3 Cu yd. Recycling	2.2	m²	
Total Footprint Required in Waste Storage Room	13.0	m²	(Estimate)
Footprint Required			**Option 2 - Option dependant on private contractor**
95 g. Garbage	16.9	m²	
95 g. Recycling	3.7	m²	
Total Footprint Required in Waste Storage Room	20.6	m²	(Estimate)

References

1. Earle, J., & Monckton, R. (2004). Waste Management Guidelines for Proposed Developments. Randwick: GHD Pty Ltd. Retrieved from https://www.randwick.nsw.gov.au/__data/assets/pdf_file/0008/38249/Waste-Management-Appendices-A-K.pdf
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Table 8
Tower East Building - Restaurant
Waste Capacity Calculations

Stats	Value	Unit	Comments
Number of Bins Required - Non-residential			
Garbage Generation Rate	6.67	L/m²/day	Ref #1, 667L/100 m2 floor area/day, assuming Restaurant
Recycling Generation Rate	1.33	L/m²/day	Ref #1, 133L/100 m2 floor area/day, assuming Restaurant
Floor Space	186	m²	Total space, 189 m2 (restaurant)
Garbage Waste Generation Rate	1241	L/day	Using generation numbers
Recycling Waste Generation Rate	247	L/day	Using generation numbers
Days between collection	7	day(s)	Assuming weekly collection
Estimated Garbage Waste Generated	8,684.3	L	
Estimated Recycling Waste Generated	1,731.7	L	
Estimated Garbage Waste Generated	2,292	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Recycling Waste Generated	457	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Garbage Waste Generated	11.4	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Estimated Recycling Waste Generated	2.3	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Number of Bins Required - Non-residential			**Private Collection Only**
Garbage	4	3 cu. yd. bin(s)	
Recycling	1	3 cu. yd. bin(s)	
			- or -
Garbage	25	95 gallon	
Recycling	5	95 gallon	
Bin/Cart Footprint			
1 Cubic Yard Bin	2.0	m²	Ref #4, 2.09 m (W) X 0.97 m (D), may slightly differ from various manufactures
2 Cubic Yard Bin	1.8	m²	Ref #3, 2.03 m (W) X 0.91 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.2	m²	Ref #2, 2.03 m (W) X 1.07 m (D), may slightly differ from various manufactures
35 Gallon	0.3	m²	Ref #5, 120L, .513 m (W) X .584 m (D)
95 Gallon	0.6	m²	Ref #5, 360L, .729 m (W) X .857 m (D)
Footprint Required			**Option 1 - Option dependant on private contractor**
3 Cu yd. Garbage	8.7	m²	
3 Cu yd. Recycling	2.2	m²	
Total Footprint Required in Waste Storage Room	10.9	m²	(Estimate)
Footprint Required			**Option 2 - Option dependant on private contractor**
95 g. Garbage	15.6	m²	
95 g. Recycling	3.1	m²	
Total Footprint Required in Waste Storage Room	18.7	m²	(Estimate)

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Table 9
Tower East Building - Banquet Hall
Waste Capacity Calculations

Stats	Value	Unit	Comments
Number of Bins Required - Non-residential			
Garbage Generation Rate	3.85	L/m²/day	Ref #1, weighted average, assuming Restaurant [substitute for banquet] for 4 days (667L/100 m2 floor area/day), assuming social assembly room for 3 days (50L/100 m2 floor area/day)
Recycling Generation Rate	0.80	L/m²/day	Ref #1, weighted average, assuming Restaurant [substitute for banquet] for 4 days (133L/100 m2 floor area/day), assuming social assembly room for 3 days (10L/100 m2 floor area/day)
Floor Space	619	m²	Total space, 619 m2 (banquet hall)
Garbage Waste Generation Rate	2386	L/day	Using generation numbers
Recycling Waste Generation Rate	497	L/day	Using generation numbers
Days between collection	7	day(s)	Assuming weekly collection
Estimated Garbage Waste Generated	16,700.6	L	
Estimated Recycling Waste Generated	3,478.8	L	
Estimated Garbage Waste Generated	4,407	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Recycling Waste Generated	918	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Garbage Waste Generated	21.8	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Estimated Recycling Waste Generated	4.5	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Number of Bins Required - Non-residential			**Private Collection Only**
Garbage	8	3 cu. yd. bin(s)	
Recycling	2	3 cu. yd. bin(s)	
			- or -
Garbage	47	95 gallon	
Recycling	10	95 gallon	
Bin/Cart Footprint			
1 Cubic Yard Bin	2.0	m²	Ref #4, 2.09 m (W) X 0.97 m (D), may slightly differ from various manufactures
2 Cubic Yard Bin	1.8	m²	Ref #3, 2.03 m (W) X 0.91 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.2	m²	Ref #2, 2.03 m (W) X 1.07 m (D), may slightly differ from various manufactures
35 Gallon	0.3	m²	Ref #5, 120L, .513 m (W) X .584 m (D)
95 Gallon	0.6	m²	Ref #5, 360L, .729 m (W) X .857 m (D)
Footprint Required			**Option 1 - Option dependant on private contractor**
3 Cu yd. Garbage	17.4	m²	
3 Cu yd. Recycling	4.3	m²	
Total Footprint Required in Waste Storage Room	21.7	m²	(Estimate)
Footprint Required			**Option 2 - Option dependant on private contractor**
95 g. Garbage	29.4	m²	
95 g. Recycling	6.2	m²	
Total Footprint Required in Waste Storage Room	35.6	m²	(Estimate)

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Table 10
Tower East Building - Lounge
Waste Capacity Calculations

Stats	Value	Unit	Comments
Number of Bins Required - Non-residential			
Garbage Generation Rate	0.9	L/m²/day	Ref #1, 90L/100 m2 floor area/day, assuming Coffee Lounge
Recycling Generation Rate	0.3	L/m²/day	Ref #1, 30L/100 m2 floor area/day, assuming Coffee Lounge
Floor Space	252	m²	Total space
Garbage Waste Generation Rate	227	L/day	Using generation numbers
Recycling Waste Generation Rate	76	L/day	Using generation numbers
Days between collection	7	day(s)	Assuming weekly collection
Estimated Garbage Waste Generated	1,587.6	L	
Estimated Recycling Waste Generated	529.2	L	
Estimated Garbage Waste Generated	419	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Recycling Waste Generated	140	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Garbage Waste Generated	2.1	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Estimated Recycling Waste Generated	0.7	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Number of Bins Required - Non-residential			**Private Collection Only**
Garbage	1	3 cu. yd. bin(s)	
Recycling	1	3 cu. yd. bin(s)	
			- or -
Garbage	5	95 gallon	
Recycling	2	95 gallon	
Bin/Cart Footprint			
1 Cubic Yard Bin	2.0	m²	Ref #4, 2.09 m (W) X 0.97 m (D), may slightly differ from various manufactures
2 Cubic Yard Bin	1.8	m²	Ref #3, 2.03 m (W) X 0.91 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.2	m²	Ref #2, 2.03 m (W) X 1.07 m (D), may slightly differ from various manufactures
35 Gallon	0.3	m²	Ref #5, 120L, .513 m (W) X .584 m (D)
95 Gallon	0.6	m²	Ref #5, 360L, .729 m (W) X .857 m (D)
Footprint Required			**Option 1 - Option dependant on private contractor**
3 Cu yd. Garbage	2.2	m²	
3 Cu yd. Recycling	2.2	m²	
Total Footprint Required in Waste Storage Room	4.3	m²	(Estimate)
Footprint Required			**Option 2 - Option dependant on private contractor**
95 g. Garbage	3.1	m²	
95 g. Recycling	1.2	m²	
Total Footprint Required in Waste Storage Room	4.4	m²	(Estimate)

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Table 11
Tower East Building - Total Non-Residential
Waste Capacity Calculations

Stats	Value	Unit	Comments
Number of Bins Required - Non-residential			
Estimated Garbage Waste Generated	56,358.7	L	
Estimated Recycling Waste Generated	31,914.0	L	
Estimated Garbage Waste Generated	14,874.0	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Recycling Waste Generated	8,424.0	gallon	Converted units, retail, Conversion factor: 3.79L/gallon
Estimated Garbage Waste Generated	73.7	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Estimated Recycling Waste Generated	41.7	cu. yd.	Converted units, retail, Conversion factor: 765L/cubic yard
Number of Bins Required - Non-residential			**Private Collection Only**
Garbage	25	3 cu. yd. bin(s)	
Recycling	14	3 cu. yd. bin(s)	
			- or -
Garbage	157	95 gallon	
Recycling	89	95 gallon	
Bin/Cart Footprint			
1 Cubic Yard Bin	2.0	m²	Ref #4, 2.09 m (W) X 0.97 m (D), may slightly differ from various manufactures
2 Cubic Yard Bin	1.8	m²	Ref #3, 2.03 m (W) X 0.91 m (D), may slightly differ from various manufactures
3 Cubic Yard Bin	2.2	m²	Ref #2, 2.03 m (W) X 1.07 m (D), may slightly differ from various manufactures
35 Gallon	0.3	m²	Ref #5, 120L, .513 m (W) X .584 m (D)
95 Gallon	0.6	m²	Ref #5, 360L, .729 m (W) X .857 m (D)
Footprint Required			**Option 1 - Option dependant on private contractor**
3 Cu yd. Garbage	54.3	m²	
3 Cu yd. Recycling	30.4	m²	
Total Footprint Required in Waste Storage Room	84.7	m²	(Estimate)
Footprint Required			**Option 2 - Option dependant on private contractor**
95 g. Garbage	98.1	m²	
95 g. Recycling	55.6	m²	
Total Footprint Required in Waste Storage Room	153.7	m²	(Estimate)

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