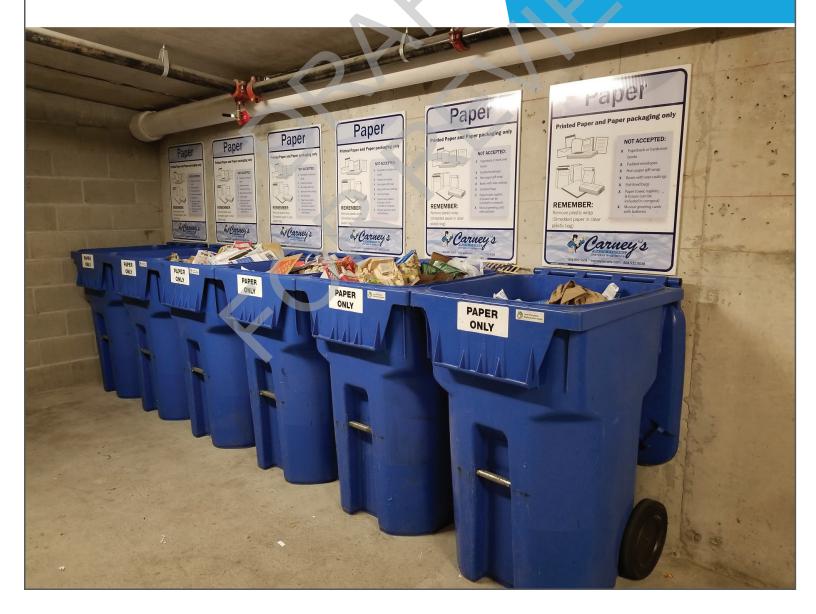


### Solid Waste Storage Technical Design Guidelines



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## INTRODUCTION

Recycling, organics, and waste management are an integral part of the development and planning process for commercial, institutional and multi-unit buildings.

These Solid Waste Storage Technical Design Guidelines (the *Guidelines*) will assist developers in meeting these service requirements.

The District of Squamish (the District) has developed solid waste management goals that are detailed in Council's Strategic Plan (2019-2022), the Zero Waste Strategy (2016), and the Official Community Plan (2017, s. 21.9). These goals include:

- Increasing the diversion rate of waste from landfill to 80% and reduce per capita landfill waste to 300kg by 2021;
- Promoting waste management leadership;
- Maintaining Bear Smart status; and,
- Developing a culture of waste minimization.

The District's Development Permit Area guidelines require that new multi-unit, industrial, and commercial developments contain centralized, communal waste rooms that are designed to the specifications outlined in these Guidelines (OCP, DPA 3, Section 36.7 (a)(d)).

Poorly designed waste management spaces can lead to human-wildlife conflicts.

#### THESE GUIDELINES:

- Help with the design of suitable solid waste management spaces that meet District regulations and diversion targets;
- Create waste management spaces that are safe, easy to use, and help prevent human-wildlife conflicts;
- **Streamline** the development process by ensuring key requirements are considered and met as part of the initial application;
- Detail the key assessment criteria as part of design planning;
- **Provide** tips and formulas for calculating the space required based on use, to ensure that sufficient collection services can be accommodated; and,
- Outline property owner and developer responsibilities for the development of waste management facilities that properly manage wildlife attractants and meet these Guidelines.

Please note that this document should be used with, not in place of, all applicable building codes, municipal standards and other relevant legislation.

# GOALS & OBJECTIVES

These Guidelines were developed to make waste management spaces safe, properly sized, and accessible, which will help achieve targeted waste diversion, minimize contamination and reduce human-wildilfe conflicts.

#### **OBJECTIVES:**

- Support building design that provides tenants convenient access to a full range of waste storage services;
- Create efficient centralized waste management spaces with sufficient area for solid waste storage containers, minimizing contamination;
- Support building design that provides sufficient space for access to- and the removal of- solid waste by collection vehicles, including the necessary turn radius, height, length, and width clearance;
- · Support easy to read and updated instructional material (e.g. signage); and,
- · Reduce human-wildlife conflict.

## WHY IS DIVERSION IMPORTANT?



The Squamish Landfill is expected to reach capacity by 2026, so anything residents and businesses can do to reduce the amount they send to the landfill will help expand its lifespan.

## **DEFINITIONS**

PRODUCT STEWARDSHIP means products whose end-of-life disposal is managed by the producers or manufacturers. The list of materials is outlined in the BC Recycling Regulation, including, but not limited to: beverage containers, electronics, batteries, paints, solvents, pesticides and gasoline, pharmaceuticals, tires, light bulbs and used oil and antifreeze.

RECYCLABLE MATERIAL (OR RECYCLING) means a product or substance that should be diverted from landfill disposal, and usually includes the following:

- Organics (including food waste, wood and yard waste;
- Mixed containers (plastic and metal);
- Glass:
- Mixed papers (cardboard, office paper, newspapers);
- Soft plastic;
- Styrofoam; and,
- Recyclable items listed in the Solid Waste Utility Bylaw.

REFUSE (GARBAGE OR WASTE) means any discarded or abandoned substance, material, or object, whether from domestic, commercial, industrial, institutional or other use that cannot be recycled or composted.

WASTE MANAGEMENT SPACE means the centralized physical space allocated within a property for communal deposit and collection of garbage, organic and recyclable materials.

WILDLIFE ATTRACTANT means any substance or material, with or without an odour, which attracts or is likely to attract wildlife; and without limitation includes food or other edible products, whether intended for humans, animals, or birds, grease, oil, antifreeze, paint, petroleum products, and compost other than grass clippings, leaves or branches.

WILDLIFE PROOF ENCLOSURE means a fully enclosed structure having four enclosed sides, a roof, doors and a latching device, designed to discourage and prevent access by wildlife, and for clarity, includes a garage, shed, or other structure that is inaccessible to wildlife and that is designed and constructed in accordance with the specifications for a District standard wildlife proof enclosure.

WILDLIFE RESISTANT CONTAINER means a refuse container that is sufficient to accommodate normal use of the property, is designed to discourage and prevent access by wildlife, and:

- has a sturdy cover capable of being completely closed and secured with a latching device; and
- b. if intended for use other than residential, is made of metal and is self-latching.

## GENERAL RESPONSIBILITIES

## 1. DESIGN ADEQUATE SPACE FOR STORAGE & COLLECTION

An owner or designate is responsible for meeting the property's needs by:

- Providing adequate storage for solid waste collection and diversion (recycling, garbage, and organic containers) based on regular service;
- Ensuring any refuse that is a wildlife attractant is stored in such a manner that it is not accessible to wildlife;
- Ensuring there are collection services in place; and,
- Ensuring there is sufficient space for collection vehicles to access the collection and loading areas.

The District does not provide garbage, organic, or recycling services to commercial properties or multi-unit residential homes. Cost is a private arrangement between the property's management and a waste service provider. Work with your waste service provider to establish if your regular service is 2 times per week, weekly, biweekly or another arrangement.

# 2. COMPLY WITH DISPOSAL REQUIREMENTS IN THE SOLID WASTE BYLAW

Developers must design the waste management space so occupants can comply with the District of Squamish's Solid Waste Utility Bylaw. The following materials must be recycled instead of put in the garbage:

- Corrugated cardboard
- Food scraps and yard trimmings
- Recyclable paper
- All product stewardship items
- Clean wood
- Beverage containers
- Containers made of glass, metal, or recyclable plastic

This is a representative list only. Please refer to Solid Waste Utility Bylaw for more information.

# 3. COMPLY WITH STORAGE & DISPOSAL REQUIREMENTS IN THE WILDLIFE ATTRACTANT BYLAW

The Wildlife Attractant Bylaw outlines expectations for a waste storage facility that is resistant to tampering by wildlife, including bears.

See Attachment #6 Wildlife Proof Solid Waste Enclosure diagram.



# 4. MEET GOVERNMENT REGULATIONS RELATED TO WASTE MANAGEMENT

Attachment 4 outlines key regulations related to waste management that affect the development and management of multi-unit and commercial buildings.

## DID YOU KNOW?



Recycle BC offers a rebate for Multi-Unit Buildings with an active Recycling program. Contact your local hauler for details.

# BARRIERS & COMMON SOLUTIONS

Since every development is different, it's important for developers to identify specific challenges for their building and develop solutions that will make it easier for occupants to maximize recycling and reduce landfill waste.

Some common barriers that a developer (or occupant) may face include:

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#### Storage Area Size and Locations

Containers for recycling, food scraps and/or garbage are stored in different locations within the building complex.

#### Ambiance of waste storage locations

Poorly lit, odorous and inconvenient to access locations can deter occupants from properly sorting their materials.

#### Solution and Resources

It's more convenient for occupants when all containers are in one location.

Design and designate a centralized location within the complex so that there is a one-stop disposal for all waste. Consider accessibility for wheelchair users.

See section 5 for further information.

#### rage locations Ensure waste management areas are:

- well-lit internally and externally;
- · conveniently located;
- · kept clean; and
- accessible.

Emptying and cleaning containers frequently will help reduce odours.

See section 5 for further information.

#### **Diversion confusion**

Figuring out what goes where can be confusing and may be complicated by language barriers.

Signs that use images and graphics along with clear colour coding can help explain what can and cannot go into each container.

Visit squamish.ca for free signage and communication materials that can be downloaded and used to reduce confusion.

#### Barrier

#### **Clearance Requirements**

Clearance is too low and the cost of waste collection will be more expensive if collection vehicles cannot drive into the space to empty the containers.

#### **Wildlife Accessibility**

Wildlife, especially bears, can be attracted to the odours from waste, creating an unsafe situation for both waste room users and bears.

#### Solution

Design the waste management spaces to ensure that the access dimensions are large enough for collection vehicles to enter and maneuver.

See Section 6 and Attachment 5 for truck measurements, clearance and turning radius.

To reduce the potential for human-bear conflicts, ensure the waste room is: constructed in such a way that a bear cannot gain access; is well lit externally and internally; kept clean and odours are minimized; and of sufficient capacity to prevent refuse overflowing.

See attachment 6 for guidance.

# DESIGN GUIDELINES & CRITERIA

The following eight steps are intended to assist developers with planning for a waste management space in new commercial and multi-unit residential buildings.

Following these steps will help to accelerate permit processing time by ensuring the design meets all regulations and developer responsibilities.

#### **SUMMARY OF STEPS**

- 1. Determine type and volume of materials that will be generated on site
- 2. Determine your recycling and garbage collection service provider
- 3. Calculate the number and type of containers required
- 4. Calculate the storage space required
- 5. Design the storage/collection area
- 6. Determine access route for collection vehicles and turning radius
- 7. Design collection/loading area
- 8. Develop a solid waste management plan

## 1. DETERMINE TYPE & VOLUME OF MATERIALS THAT WILL BE GENERATED ON SITE

The first step involves assessing the types of organic, recyclable and landfill materials that are likely to be generated by the occupants of the building.

In addition to the common items listed here, specialized recyclable items may include: grease, clean wood, hazardous materials, glass, beverage containers, Styrofoam or other items banned from disposal in the landfill.

#### Occupants must have access to recycle or dispose of:













#### The following charts show the approximate waste volume generated for different types of building use\*.

WASTE CATEGORIES	ESTIMATED VOLUME GENERATED (LITRES/UNIT/WEEK)
MULTI-UNIT RESIDENTIAL BUILD	ING
Garbage	53.00
Glass Jars & Bottles	2.10
Mixed Containers	18.50
Mixed Papers (including cardboard)	42.90
Mixed Papers (excluding cardboard)	15.00
Cardboard	27.50
Food Scraps & Yard Trimmings	14.00
HOSPITALITY BUILDING	
Garbage	47.50
Mixed Containers	3.50
Mixed Papers	8,30
Cardboard	14.30
Oil/Grease	0.33
Food Scraps & Yard Trimmings	27.50

COMMERCIAL BUILDINGS	OFFICE BUILDING	COMMERCIAL, OTHER	INDUSTRIAL/ INSTITUTIONS
Garbage	1.00	2.25	3.10
Mixed Papers	0.65	2.05	1.50
Mixed Containers	0.375	2.00	1.70
Cardboard	0.65	3.75	2.00
Food Scraps & Yard Trimming	0.57	2.00	1.86
Oil/Grease	N/A	0.35	N/A

Data used with permission from the City of Vancouver.

<sup>\*</sup>Note the generated rates listed are only general estimates and may vary from actual rates. It is recommended that developers consult with a waste hauler to assist with estimating the anticipated waste management space requirements.

## 2. DETERMINE RECYCLING & GARBAGE COLLECTION SERVICE PROVIDER

Garbage and recycling services must be contracted through private waste haulers. A development is not required to have the same hauler for every single material (i.e. garbage vs. organic material).

Individual totes serviced through curbside collection for multi-unit developments, are no longer supported by the Official Community Plan.

# 3. CALCULATE THE NUMBER & TYPE OF CONTAINERS REQUIRED

It is important for developers to provide enough space for the containers required for a development before making a land development application.

The following is an overview of the types and quantity of containers required. This will help with designing centralized collection areas with enough space. Remember, you can combine different types of containers depending on what type and the number of occupants or users.

- For a detailed guide to estimate the number of containers required for your building, please see Attachment 1.
- For information about **general container measurements**, **types**, **size**, **weight and footprint**, see Attachment 2.

#### **Commercial Grease Collection**

Fats, oil, and grease should never be disposed of down sinks, drains or garburators as the material hardens and builds up on the inside of sewage lines, causing blockages. This can lead to breaks, sewage spills and overflows.

Ideally, grease collection containers are stored in a separate area from regular waste and recycling materials, to increase safety and reduce potential spillage. If stored outside, grease must be stored in a wildlife resistant container and be secured to prevent tipping.

Businesses that produce grease by-products must have proper containers and systems in place to collect and safely dispose of oils, grease, and other liquids as per the Sewer Use Bylaw and Wildlife Attractant Bylaw.

#### 4. CALCULATE THE STORAGE SPACE REQUIRED

Use the formula below to estimate the total waste management space required to house the required number of containers



NUMBER OF CONTAINERS

Refer to calculation from step 3.



FOOTPRINT OF EACH CONTAINER

Based on individual container and cart dimensions.



MANOEUVRE FACTOR

Space required to move containers around inside the storage facility.

Please see Attachment 2 for details.

### 5. DESIGN THE STORAGE/COLLECTION AREA

A waste management space should be designed to allow containers to be easily accessed and easily moved.

Ideally, there is a separate waste management room or structure designated in new developments. If a separate room is not feasible, a wildlife-proof shed or enclosure can be a viable option. The area must be large enough to store all recycling, garbage, and organics generated between designated collection days while permitting movement of people accessing the containers, and the movement of the containers on collection day.

Designated areas must also meet requirements around fire safety, the Floodplain Bylaw, and the management of wildlife attractants. All waste management structures must be built in a wildlife proof manner (as outlined in the Wildlife Attractant Bylaw). The waste management space should include the following at a minimum.

ELEMENT	DESIGN CONSIDERATIONS
FLOOR	<ul> <li>A hard surface (concrete is required if installing a compactor) that will bear the weight of a 28-tonne collection truck.</li> </ul>
DRAINAGE	<ul> <li>Drain to sanitary sewer.</li> </ul>
·····	<ul> <li>Oil separator required for food service and restaurants.</li> </ul>

ELEMENT	DESIGN CONSIDERATIONS
DOOR	Double doors with a minimum 2.5m opening.
	<ul> <li>Can be propped or locked open with a bumper guard on the inside facing the door.</li> </ul>
	<ul> <li>Personnel entrance doors must be constructed of 18-gauge steel, open outwards, have a reinforced window, a self-closing device, and a lever opening on the interior. The exterior doorknob must be of such design that is accessible to persons with disabilities.</li> </ul>
	<ul> <li>Installed with a minimum gap on tracks and latches on both sides and must close tightly to prevent access by wildlife.</li> </ul>
	<ul> <li>Service door must be constructed of heavy duty commercial grade steel and be a garage door style with no latches or opening mechanisms located on the exterior. The bottom of the service door must have slide bolts on each side.</li> </ul>
	<ul> <li>Service door must have an 8' minimum opening to allow garbage containers to be removed for service.</li> </ul>
SIZE	<ul> <li>Should be able to accommodate an appropriate number of containers that prevent overflow between collection days.</li> </ul>
	<ul> <li>Total area of the facility should be about 2.0 to 2.25 times the physical footprint of the containers to allow for adequate space for maneuvering.</li> </ul>
CONFIGURATION	<ul> <li>Configure to allow each garbage and recycling container to be individually accessed, removed and replaced without having to take out other containers.</li> </ul>
	<ul> <li>No horizontal dimension (width or depth) is less than 2 metres to allow for access to waste containers.</li> </ul>
	<ul> <li>Have at least 2.5m in height clearance to allow complete opening of container lids.</li> </ul>
VENTILATION	Have adequate ventilation to the exterior of the building, in compliance with the BC Building Code requirements for ventilation.
SECURITY	<ul> <li>Sufficiently secure to minimize pest and wildlife access through the use of roofs, fencing, and wheels under gate doors.</li> </ul>
	Be protected from unlawful entry.
	<ul> <li>Be equipped with locked doors or the containers should also be locked if they are accessible from outside the building to avoid illegal dumping.</li> </ul>
	<ul> <li>Lock should be by code and key/FOB. Avoid key/FOB-only locks.</li> </ul>

ELEMENT	DESIGN CONSIDERATIONS
LOCATION	The location must be:
	Within the legal parcel.
	<ul> <li>Located in/on the ground level.</li> </ul>
	<ul> <li>Located where road access exists for the collection provider, i.e. at the lane or adjacent the principal driveway.</li> </ul>
	<ul> <li>Located in a well-lit, area that is easily accessed by tenants.</li> </ul>
	<ul> <li>Co-located with community services such as a postal boxes or events board is recommended.</li> </ul>
	<ul> <li>Containers should be grouped separately by material type to reduce confusion and cross-contamination.</li> </ul>
	<ul> <li>Recycling facilities are located within close proximity to garbage facilities allowing occupants to conveniently recycle and dispose of garbage.</li> </ul>
	Location of storage facility should NOT be:
	<ul> <li>On publicly owned right-of-ways where it may disrupt traffic circulation patterns.</li> </ul>
	<ul> <li>In any required driveways, parking aisles, or parking spaces.</li> </ul>
	<ul> <li>In any location that may block or impede fire exits, public right-of-ways, or pedestrian and vehicular access.</li> </ul>
WILDSAFE	<ul> <li>The type of material used for doors, windows, and the structure must be inaccessible by wildlife.</li> </ul>
	<ul> <li>Must be wildlife-proof in keeping with Wildlife Attractant Bylaw.</li> </ul>
LIGHTING	<ul> <li>Be well lit, both as a security measure and for ease of access.</li> </ul>
	<ul> <li>Adequate lighting discourages improper use of the containers and surrounding area (ex. white or pale-coloured interior walls).</li> </ul>
ACCESS FOR OCCUPANTS	<ul> <li>Accessible to all occupants of the development, including those with restricted mobility.</li> </ul>
	<ul> <li>If an auxiliary area is designated for the facility outside the building, the area should be located adjacent for an entry point into the building for easy access by users.</li> </ul>
SIGNAGE	<ul> <li>Must have clear signage on and around containers to ensure that materials go in the appropriate container to help prevent contamination.</li> </ul>
ELECTRICITY	<ul> <li>Provide power for equipment inside the solid waste storage space.</li> </ul>
HOSE BIB	<ul> <li>Provide at least one (1) hose connection for cleaning the area.</li> </ul>

#### Is Your Waste Management Space in a Separate Structure?

If your waste management space is located in an accessory structure, rather than within the principal building, please also consider the following items:

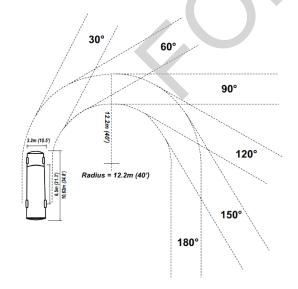
- If located within a Secondary Floodway, as defined in the District of Squamish Floodplain Bylaw, the structure must allow for the passage of floodwaters. Please consult with your Geotechnical Engineer.
- The structure must meet the wildlife-proof enclosure guidelines in the Wildlife Attractant Bylaw.
- An accessory building must comply with the District of Squamish Zoning Bylaw No. 2200, 2011 s. 4.4. (Accessory Buildings, Structures and Uses).
- A covered roof with adequate drainage is required.

## 6. DETERMINE ACCESS ROUTE FOR COLLECTION VEHICLES

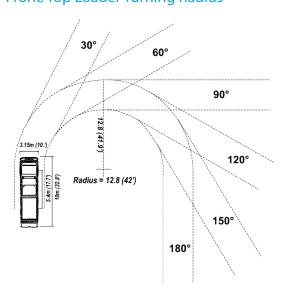
The following design elements address the need to allow a collection vehicle to enter the site, collect the materials and exit safely (ideally without having to back up). Parking areas and driveways must comply with the standards outlined in the both the Zoning Bylaw and Subdivision and Development Control Bylaw.

ELEMENT	DESIGN CONSIDERATIONS
ENTRY AND EXIT	<ul> <li>Allow collection vehicles to enter the site, collect the material and leave the site in a forward motion or via the use of a turnabout area allowing for a three point turn of no less than one truck length.</li> </ul>
	<ul> <li>If backing up is the only option, it must not compromise building structure, traffic operations or safety.</li> </ul>
DRIVEWAY ACCESS	<ul> <li>Minimum width of 6 metres at the points of entrance and exit for the site.</li> </ul>
SLOPE	<ul> <li>Ensure slope of access does not exceed 6%.</li> </ul>
VEHICLE ACCESS ROUTE	Minimum width of 4.5 metres throughout vehicle access route.
VEHICLE CLEARANCE	<ul> <li>Maintain a minimum vehicle clearance of 4.5 metres throughout the entire access route.</li> </ul>
TURNING RADIUS	<ul> <li>Provide the collection vehicle a minimum turning radius of 12.5 metres throughout the entire access route.</li> </ul>
	<ul> <li>Building structure, such as an overhang, cannot extend pass the turning radius to prevent damage to the building.</li> </ul>

#### Manual Collection Vehicle Turning Radius



#### Front/Top Loader Turning Radius



#### 7. DESIGN COLLECTION/LOADING AREA

With automated collection and the mix of containers used for collection services, loading and collection areas must be able to accommodate a mix of truck sizes and design. Trucks must have plenty of height clearance and room to turn.

The chart below outlines the minimum dimensions for collection/loading trucks. For specific details on collection trucks, contact private service providers. See Attachment 4 for examples of collection trucks.

TYPICAL TRUCK DI	MENSIONS (A	PPROXIMATE)			
COLLECTION TYPE	TRUCK SIZE	LOADING	LENGTH	WIDTH	HEIGHT
Cardboard and garbage container	Varies	Front/Top loading	10m (collection 12.36m)	3.15m	4.2m (collection 6.9m)
Low profile garbage compactor	Varies	Hauling to off site location	7.62m	2.4m	2.4m (haul offsite to lift to 6.7m)
Garbage and organics carts	Varies	Back loading	14m (collection 15.5m)	2.74m	4.2m-6m

The following are general guidelines for designing the collection/loading area:

ELEMENT	DESIGN CONSIDERATIONS
CLEARANCE	<ul> <li>Maintain a minimum dimension: Height: 7.5m Width: 6m Length: 15m</li> </ul>
	<ul> <li>All dimensions are unencumbered (e.g. unrestricted by fixtures such as sprinkler systems, meters, surveillance cameras, mirrors, landscaping, etc.)</li> </ul>
FLOOR	<ul> <li>Accommodate a 28-tonne collection vehicle</li> </ul>
SIZE	<ul> <li>Dimension of pad should accommodate the number of containers used in the building</li> </ul>
LOCATION	<ul> <li>Away from fresh air intakes for the building to discourage odour going into the building</li> </ul>
	<ul> <li>Avoid location that interferes with pedestrian traffic and other vehicular access</li> </ul>
	<ul> <li>Connected to the garbage and recycling storage space or temporary storage area via a level grade or continuous slope of no more than 6%</li> </ul>

## 8. DEVELOP A SOLID WASTE MANAGEMENT PLAN

Steps 1 through 7 will help you develop a Solid Waste Management Plan. This document should be submitted with land development applications for multi-unit residential, mixed use, and industrial/commercial developments.

A Solid Waste Management Plan will show the location and dimension of waste management spaces, including the dimensions and locations of collection/loading areas, including collection truck access and egress and will include specifications related to wildlife resistance.

This plan should show the functional design of garbage and recycling services (organic waste, mixed paper, mixed containers, and others) including the following:

- 1. User access to the solid waste room;
- 2. Access and egress to the solid waste room for collection services (garbage/recycling trucks);
- 3. Size, capacity, and function of the waste management space(s);
- 4. Layout of the waste management space, including an overlay specifying the quantity, type, dimensions, and locations of collection containers;
- 5. Based on the proposed building uses and the frequency of collection, provide a rationale for the number and size of containers to be used for each stream; and,
- 6. Describe how the waste management space meets the design standard for Wildlife-Proof Enclosures as per the Wildlife Attractant Bylaw requirements.

The Plan will demonstrate that the applicant has considered and addressed all regulations and design requirements covered in these Guidelines. The Plan will provide a clear overview of how the design provides for effective garbage and recycling services and addresses the District's goals and objectives for waste diversion.

## **ATTACHMENTS**

- Guide to Estimating the Recycling and Garbage Containers Your Complex Needs for Weekly Collection
- **2** Container Measurements and Storage Space Required & General Specifications for Different Waste Containers
- **2** Example of Waste Management Overlay Plan
- Overview of District of Squamish Bylaws Related to Waste Management Spaces
- 5 Collection Truck Measurements (Approximate)
- **6** Wildlife-proof Enclosure Guidelines

## Attachment #1: Guide to Estimating the Recycling and Garbage Containers Your Complex Needs for Weekly Collection

#### **Residential Building**

	360 LITRE CARTS (#)		240 LITRE CAR	ΓS (#)	FRONT E	ND BINS (# X	SIZE)	
NUMBER OF UNITS (2 residents per unit)	MIXED CONTAINERS	MIXED PAPER (without a cardboard bin)	MIXED PAPER (with a cardboard bin)	FOOD SCRAPS & YARD TRIMMINGS (high participation)	GLASS	CARDBOARD	GARBAGE (Moderate recycling)	GARBAGE (Extensive recycling)
5-10	1	1	N/A	1	1	0	1 x 2 yd <sup>3</sup>	1 x 2 yd <sup>3</sup>
11-20	1	2	N/A	1	1	0	$1 \times 3 \text{ yd}^3$	1 x 2 yd <sup>3</sup>
21-30	1	3	1	1	1	1 x 3 yd <sup>3</sup> *	$1 \times 4 \text{ yd}^3$	1 x 2 yd <sup>3</sup>
31-40	2	4	1	2	1	1 x 3 yd <sup>3</sup> *	$1 \times 6 \text{ yd}^3$	1 x 3 yd <sup>3</sup>
41-50	2	5	2	2	1	1 x 3 yd <sup>3</sup> *	1 x 8 yd <sup>3</sup>	1 x 4 yd <sup>3</sup>
51-60	3	6*	2	3	1	1 x 3 yd <sup>3</sup> *	$1 \times 8 \text{ yd}^3$	1 x 4 yd <sup>3</sup>
61-70	3	7*	2	3	1	1 x 3 yd <sup>3</sup> *	$2 \times 6 \text{ yd}^3$	1 x 6 yd <sup>3</sup>
71-80	4	8*	3	3	1	1 x 3 yd <sup>3</sup> *	2 x 6 yd <sup>3</sup>	1 x 6 yd <sup>3</sup>
81-90	4	9*	3	4	1	1 x 3 yd <sup>3</sup> *	2 x 8 yd <sup>3</sup>	1 x 6 yd <sup>3</sup>
91-100	4	10*	3	4	1	1 x 3 yd <sup>3</sup> *	$2 \times 8 \text{ yd}^3$	1 x 8 yd <sup>3</sup>
101-110	5	11*	3	4	2	1 x 3 yd <sup>3</sup> *	$3 \times 6 \text{ yd}^3$	1 x 8 yd <sup>3</sup>
111-120	5	12*	4	5*	2	1 x 3 yd <sup>3</sup> *	$3 \times 8 \text{ yd}^3$	1 x 8 yd <sup>3</sup>
121-130	6	13*	4	5*	2	1 x 3 yd <sup>3</sup> *	$3 \times 8 \text{ yd}^3$	1 x 8 yd <sup>3</sup>
131-140	6	14*	4	6*	2	1 x 4 yd <sup>3</sup>	$3 \times 8 \text{ yd}^3$	$2 \times 6 \text{ yd}^3$
141-150	6	15*	5	6*	2	1 x 4 yd <sup>3</sup>	$3 \times 8 \text{ yd}^3$	$2 \times 6 \text{ yd}^3$
151-160	7	16*	5	6*	2	1 x 4 yd <sup>3</sup>	4 x 8 yd <sup>3</sup>	$2 \times 6 \text{ yd}^3$
161-170	7	16*	5	7*	2	1 x 4 yd <sup>3</sup>	4 x 8 yd <sup>3</sup>	$2 \times 6 \text{ yd}^3$
171-180	8	17*	5	7*	2	1 x 6 yd <sup>3</sup>	$4 \times 8 \text{ yd}^3$	2 x 8 yd <sup>3</sup>
181-190	8	18*	6*	8*	2	1 x 6 yd <sup>3</sup>	$4 \times 8 \text{ yd}^3$	2 x 8 yd <sup>3</sup>
191-200	8	19*	6*	8*	2	1 x 6 yd <sup>3</sup>	$4 \times 8 \text{ yd}^3$	2 x 8 yd <sup>3</sup>
201-210	9	20*	6*	8*	2	1 x 6 yd <sup>3</sup>	5 x 8 yd <sup>3</sup>	2 x 8 yd <sup>3</sup>
211-220	9	21*	7*	9*	2	1 x 6 yd <sup>3</sup>	5 x 8 yd <sup>3</sup>	2 x 8 yd <sup>3</sup>
221-230	10	22*	7*	9*	2	1 x 6 yd <sup>3</sup>	5 x 8 yd <sup>3</sup>	2 x 8 yd <sup>3</sup>
231-240	10	23*	7*	9*	2	1 x 6 yd <sup>3</sup>	5 x 8 yd <sup>3</sup>	3 x 6 yd <sup>3</sup>
241-250	11	24*	7*	10*	2	1 x 6 yd <sup>3</sup> *	5 x 8 yd <sup>3</sup> *	3 x 6 yd <sup>3</sup> *
251-260	11	25*	8*	10*	2	1 x 6 yd <sup>3</sup> *	6 x 8 yd <sup>3</sup> *	3 x 8 yd <sup>3</sup> *
261-270	11	26*	8*	11*	2	1 x 8 yd <sup>3</sup> *	6 x 8 yd <sup>3</sup> *	3 x 8 yd <sup>3</sup> *
271-280	12	27*	8*	11*	3	1 x 8 yd <sup>3</sup> *	6 x 8 yd <sup>3</sup> *	3 x 8 yd <sup>3</sup> *
281-290	12	28*	9*	11*	3	1 x 8 yd <sup>3</sup> *	6 x 8 yd <sup>3</sup> *	3 x 8 yd <sup>3</sup> *
291-300	13	29*	9*	12*	3	1 x 8 yd <sup>3</sup> *	6 x 8 yd <sup>3</sup> *	3 x 8 yd <sup>3</sup> *

Courtesy of the City of Vancouver and the City of Richmond

<sup>\*</sup>It may be more space efficient to use an alternative type of container. Consult with a waste services provider to discuss which containers are most suitable.

#### **Residential Building**

#### **Assumptions:**

- 1. Once per week collection pick-up schedule.
- 2. An average of two persons occupying each unit.
- 3. There are no on-site compactors (e.g. garbage, cardboard, recycling).
- 4. Residents flatten their cardboard boxes and some plastic containers before putting them in the bin.
- 5. Sufficient height clearance is available for garbage collectors to tip the container.

#### **Notes:**

- Complexes with very active recycling communities will require more recycling bins and garbage volumes will decrease accordingly.
- For efficient use of space, a garbage compactor and a cardboard compactor are suggested for large complexes greater than 240 units.
- Consult with a recycling and waste hauler to assist with estimating the number and size of containers required.

#### **Accommodation Provider**

	360 LITRE CARTS (#)		240 LITRE CARTS (#)	FRONT END B	INS (# X SIZE)	18.6 LITRE JUG-IN-BOX (JIB)
NUMBER OF GUEST ROOMS	MIXED CONTAINERS	MIXED PAPER (including newspapers)	FOOD SCRAPS & YARD TRIMMINGS	CARDBOARD	GARBAGE	GREASE/TALLOW
5-10	1	1	1	0	1 x 2 yd <sup>3</sup>	1
11-20	1	1	2	0	1 x 3 yd <sup>3</sup>	1
21-30	1	1	3	1 x 3 yd <sup>3</sup> *	1 x 4 yd <sup>3</sup>	1
31-40	1	1	4	1 x 3 yd <sup>3</sup> *	1 x 6 yd <sup>3</sup>	1
41-50	1	1	4	1 x 3 yd <sup>3</sup> *	1 x 8 yd <sup>3</sup>	1
51-60	1	2	5*	1 x 3 yd <sup>3</sup> *	1 x 8 yd <sup>3</sup>	1
61-70	1	2	6*	1 x 3 yd <sup>3</sup> *	2 x 6 yd <sup>3</sup>	1
71-80	1	2	7*	1 x 3 yd <sup>3</sup> *	2 x 6 yd <sup>3</sup>	1
81-90	1	2	8*	1 x 3 yd <sup>3</sup> *	2 x 8 yd <sup>3</sup>	1
91-100	1	3	9*	1 x 3 yd <sup>3</sup> *	2 x 8 yd <sup>3</sup>	2

<sup>\*</sup>It may be more space efficient to use an alternative type of container. Consult with a waste services provider to discuss which containers are most suitable.

#### Office

	360 LITRE	CARTS (#)	240 LITRE CARTS (#)	CUBIC YARD B	BINS (# X SIZE)
FLOOR AREA (M²)	MIXED CONTAINERS	MIXED PAPER (including newspapers)	FOOD SCRAPS & YARD TRIMMINGS	CARDBOARD	GARBAGE
1-500	1	1	1	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>
501-600	1	1	2	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>
601-900	1	2	2	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>
901-1,000	1	2	3	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>
1,001-2,000	2	4	5*	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>
2,001-3,000	3	6*	7*	1 x 3 yd <sup>3</sup>	1 x 4 yd <sup>3</sup>
3,001-4,000	4	7*	10*	1 x 3 yd <sup>3</sup>	2 x 3 yd <sup>3</sup>
4,001-5,000	5*	9*	12*	1 x 4 yd <sup>3</sup>	2 x 3 yd <sup>3</sup>

<sup>\*</sup>It may be more space efficient to use an alternative type of container. Consult with a waste services provider to discuss which containers are most suitable.

#### Retail

	360 LITRE	CARTS (#)	FRONT END BINS (# X SIZE)		
FLOOR AREA (M²)	MIXED CONTAINERS	MIXED PAPER (including newspapers)	CARDBOARD	GARBAGE	
1-200	1	1_1	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	
201-500	1	2	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	
501-600	1	3	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	
601-700	1	3	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	
701-1,000	1	4	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	
1,001-2,000	4	9*	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	
2,001-3,000	6*	13*	1 x 3 yd <sup>3</sup>	1 x 4 yd <sup>3</sup>	
3,001-4,000	7*	17*	1 x 3 yd <sup>3</sup>	2 x 3 yd <sup>3</sup>	
4,001-5,000	9*	21*	1 x 4 yd <sup>3</sup>	2 x 3 yd <sup>3</sup>	

<sup>\*</sup>It may be more space efficient to use an alternative type of container. Consult with a waste services provider to discuss which containers are most suitable.

#### Restaurant

	360 LITR	E CARTS (#)	240 LITRE CA	ARTS (#)	FRONT END BI	NS (# X SIZE)	18.6 LITRE JUG-IN-BOX (JIB)
FLOOR AREA (M²)	MIXED CONTAINERS	MIXED PAPER (including newspapers)	FOOD SCRAPS & YARD TRIMMINGS (high participation)	GLASS	CARDBOARD	GARBAGE (Moderate recycling)	GREASE/ TALLOW
1-100	1	1	1	1	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	1
101-200	1	1	2	1	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	1
201-300	2	2	3	1	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	1
301-400	2	3	4	1	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	1
401-500	3	3	4	1	1 x 3 yd <sup>3</sup>	$1 \times 3 \text{ yd}^3$	1
501-600	4	4	4	1	1 x 3 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	1
601-700	5	5	6*	1	1 x 3 yd <sup>3</sup>	$1 \times 3 \text{ yd}^3$	2
701-800	5	5	7*	1	1 x 4 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	2
801-900	5	5	8*	1	1 x 4 yd <sup>3</sup>	$1 \times 3 \text{ yd}^3$	2
901-1,000	6*	6*	9*	1	1 x 4 yd <sup>3</sup>	1 x 3 yd <sup>3</sup>	2
1,001-2,000	11*	12*	17*	2	$3 \times 4 \text{ yd}^3$	1 x 4 yd <sup>3</sup>	4
2,001-3,000	17*	17*	17*	2	3 x 4 yd <sup>3</sup>	2 x 4 yd <sup>3</sup>	6
3,001-4,000	22*	23*	34*	2	4 x-5 yd <sup>3</sup>	2 x 4 yd <sup>3</sup>	8
4,001-5,000	28*	29*	42*	2	$4 \times 6 \text{ yd}^3$	$3 \times 4 \text{ yd}^3$	11

<sup>\*</sup>It may be more space efficient to use an alternative type of container. Consult with a waste services provider to discuss which containers are most suitable.

# ATTACHMENT #2: CONTAINER MEASUREMENTS AND STORAGE SPACE REQUIRED & GENERAL SPECIFICATIONS FOR DIFFERENT CONTAINERS

	HEIGHT	LENGTH	WIDTH	FOOTPRINT (Length x Width)	MANOEUVRE FACTOR	STORAGE AREA REQUIRED FOR 1 CONTAINER (Footprint x Maneuver Factor)
3 yd <sup>3</sup> Front-end top loading	1.22 m (4')	1.07 m (3.5')	1.83 m (6.0′)	1.96 m <sup>2</sup>	2.25	4.41 m²
4 yd <sup>3</sup> Front-end top loading	1.22 m (4')	1.37 m (4.5')	1.83 m (6.0′)	2.51 m <sup>2</sup>	2.25	5.64 m <sup>2</sup>
6 yd <sup>3</sup> Front-end top loading	1.52 m (5')	1.68 m (5.5')	1.83 m (6.0′)	3.07 m <sup>2</sup>	2.25	6.91 m <sup>2</sup>
46.5 L Cart*	0.69 m (2.25')	0.30 m (1')	0.28 m (0.92')	0.084 m <sup>2</sup>	N/A	N/A
80 L Cart*	0.88 m (2.88')	0.51 m (1.67')	0.41 m (1.33')	0.21 m <sup>2</sup>	2.25	0.47 m <sup>2</sup>
120 L Cart*	0.95 m (3.13')	0.55 m (1.79')	0.48 m (1.58')	0.26 m <sup>2</sup>	2.25	0.59 m <sup>2</sup>
240 L Cart*	1.09 m (3.58')	0.70 m (2.29')	0.62 m (2.04')	0.43 m <sup>2</sup>	2.25	0.97 m <sup>2</sup>
360 L Cart*	1.13 m (3.71′)	0.88 m (2.88')	0.64 m (2.08')	0.56 m <sup>2</sup>	2.25	1.26 m <sup>2</sup>
Glass Recycling Bin*	0.36 m (1.17')	0.36 m (1.19')	0.27 m (0.88')	0.10 m <sup>2</sup>	N/A	N/A

#### FRONT-END TOP LOADING CONTAINERS - ADDITIONAL DIMENSIONS

The dimensions noted above reflect the internal measurement of the container. Please allow for an additional 20.32 cm (8") in width for the side brackets on the container.

#### **COMPACTORS**

Waste compactors range in size from 4 yd<sup>3</sup> to 25 yd<sup>3</sup> cubic yard and connect to various sizes of front-end containers. Models have different space and location requirements. Consult a private service provider for details.

The following is a general overview of the various waste containers commonly used for solid waste and recyclable storage. The District of Squamish does not guarantee the accuracy of the dimensions listed below due to the variation between different manufacturers. Every manufacturer has slightly different measurements for their containers and may or may not include in their measurements the width of metal side brackets or additional heights if container has wheels.

It is the sole responsibility of the developer to ensure the design of the waste management space can accommodate the containers to be used. Please consult with a private hauler to discuss which containers are suitable for different applications.

Some examples of collection containers that are often offered by waste haulers:

#### **Carts or Totes**



#### **Large Containers**



#### 1. Compactor

Compacting systems may be appropriate to deal with materials such as cardboard or garbage in some buildings. Compactors range in size from 4yd³ to 25yd³ and connect to various sizes of front-end bins. Models have differing space and location requirements. A service provider can assist with choosing the best containers and collection system for different commercial buildings. Before ordering or installing a compactor, confirm the size and ability to service the compactor with your waste hauler.





TYPE	IDEAL USER	MINIMUM CEILING HEIGHT CLEARANCE	MINIMUM CLEARANCE IN FRONT OF BIN	MINIMUM CLEARANCE OVERHEAD OF BIN
Low Profile Compactor	Multi-unit Residential Building	2.1 m	12.2 m long	
Ground Level Compactor	Multi-unit Residential Building	2.5 m	15.2 m long	7 m high
Commercial Compactor	Commercial and institutional buildings	6.1 m	15.2 m long	

#### **Potential Benefits**

- Less servicing frequency required compared to other container use
- Can store more when compacted
- Less messy; less overflow
- Ideal for large volume generation (more than 100 units)
- Long life span (15-20 years) if properly maintained

#### **Potential Challenges**

- Most compactors require a 3 phase power.
- Cardboard jams easily if not placed in compactor correctly.
- Odour concern if not serviced frequently.
- Not suitable for food scraps collection.
- Requires electricity, drainage; extra cost needed.
- Noise/vibration concerns may need isolator to lessen.
- Capital cost may be higher than containers.
- Underground storage may have limited space for truck maneuver.
- Must carry entire compactor back and forth to dispose waste; limited number of servicing per collection route.
- Everyone must be trained to operate the compactor.
- Not eligible for Leadership in Energy and Environmental Design® (LEED) points.

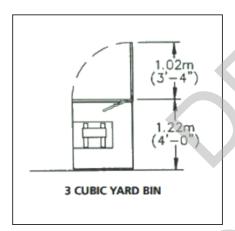
#### 2. Front End Bins

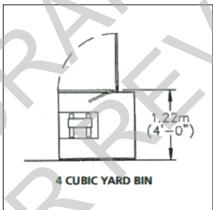
Split bins are recommended in rare circumstances where there may be restrictions on storage space as they can store more than one waste stream at a time in a single container. Consult with your waste service provider on availability and options for this type of bin.

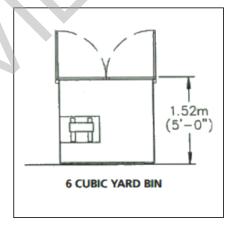




Examples of clearance required for opening the lids of front-end bins:







Courtesy: City of Richmond

#### **Potential Benefits**

- Applicable for most waste streams including cardboard and food scraps
- Capital cost is less than a compactor
- Ideal for less than 100 units
- No electricity required to operate
- Easily accessible for most occupants

#### **Potential Challenges**

- Require more collection frequency compared to compactors
- Odour concern if not serviced frequently
- Surface damage to concrete pad due to frequent collection
- May cost more than compactor when extra service costs are included

#### 3. Carts or Totes

Totes vary in size and clearance requirements.





Minimum concrete pad area	Minimum ceiling height clearance	Minimum truck clearance in front of Container	Minimum truck clearance overhead of Container
0.88 m x 0.64 m	2.5 m	N/A	5.29 m high

Example of clearance required for opening the lids of front-end bins:

Courtesy: City of Richmond



#### **Potential Benefits**

- Smallest footprint compared to a frontend bin or a compactor.
- Less expensive than a front-end bin or a compactor.
- Sealed container such that drainage is not a major concern.
- No electricity required to operate.
- Easier to maneuver than large containers.

#### **Potential Challenges**

- Requires high service frequency compared to larger containers.
- Odour may be a concern if not routinely serviced.
- No extra capacity for overflowing waste, may require extra pickup which would result in higher cost.
- Can easily be vandalized or stolen.
- Totes must be secured against wildlife and require storage inside a wildlife proof area.

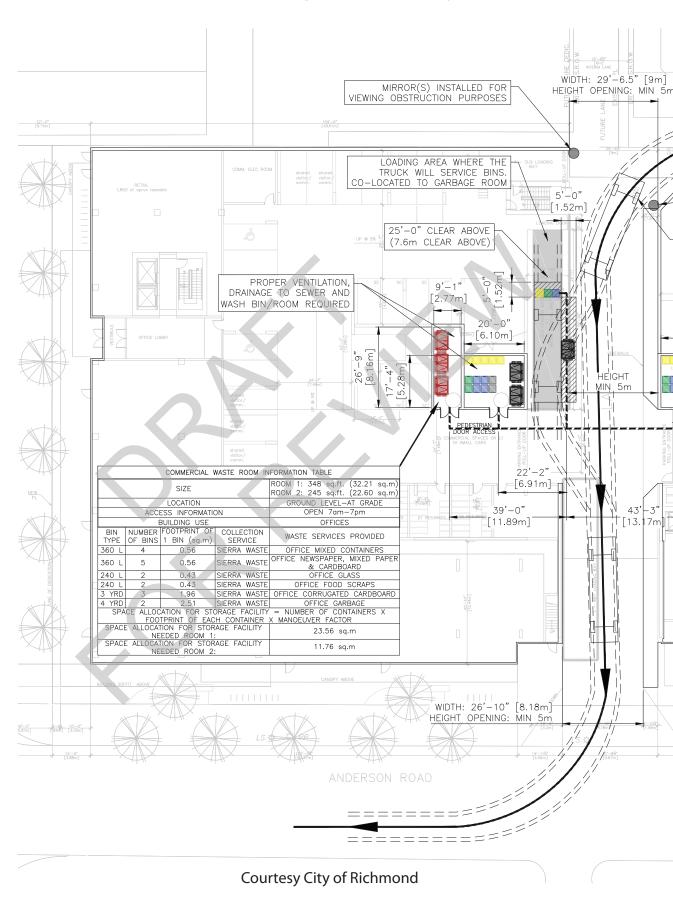
#### 4. Cooking Oil and Grease Containers

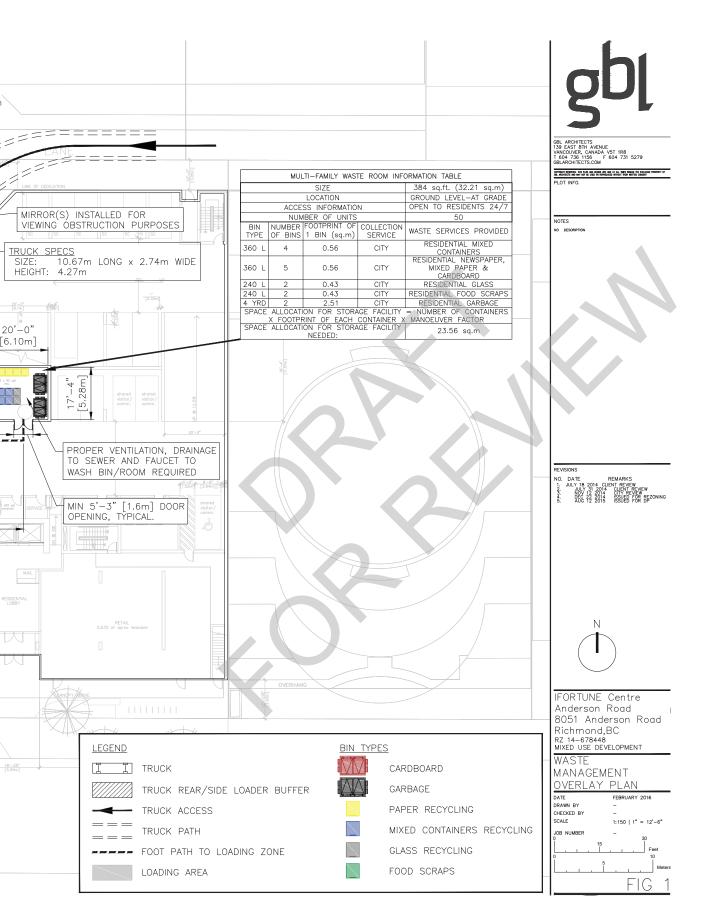
As noted in municipal bylaws, food sector establishments must properly manage used cooking oils and grease to ensure no grease or oil is poured in any sink or floor drain. Proper management includes installing and maintaining grease interceptors and recycling quantities of used oil and grease.

Establishments may require space to store a grease container internal or external to their operation. This storage space should be separated from the recycling and garbage storage areas and must be built or managed in a wildlife-proof manner. To learn more, including companies that recycle used cooking oil and grease, contact the Recycling Council of B.C. Hotline at 604-732-9253.

	DRUM	CONTAINER
DESCRIPTION	<ul> <li>Specially-designed trucks to collect</li> <li>Sits stationary on the ground and require a drip-tray below the drums. Drum must be anchored and/or be kept in a wildlife proof enclosure to prevent bears from tipping it over.</li> </ul>	<ul> <li>Specially-designed trucks to collect</li> <li>Requires room for collection.</li> <li>Containers may have wheels to move around.</li> </ul>
TYPE/SIZE	45 gallon (170 L)	<ul> <li>90cm tall, 107cm wide, 84cm deep and taper to 56cm (2.2 yard³)</li> <li>90cm tall, 107cm wide, 109 cm deep and taper to 81cm (2.75 yard³)</li> </ul>
FULL WEIGHT	180 kg	545 kg - 910 kg

#### **Attachment #3: Example of Waste Management Overlay Plan**





#### **Attachment #4:** District of Squamish Bylaws

Solid Waste Utility And Regulation Bylaw No. 2547, 2017	Requires an adequate number and type of collection containers. Requires that recyclable materials, including food scraps, be separated from the garbage. Requires that written information be provided on how to separate into the appropriate collection containers. Requires signage to be posted with information on separating and the Wildlife Attractant Bylaw. Outlines exemptions from curbside collection services.
Wildlife Attractant Bylaw No. 2053, 2009  •	Ensure any refuse that is an wildlife attractant is stored in such a manner that it is not accessible to wildlife and/or animals.  Outlines what qualifies as a wildlife resistant container and wildlife-proof enclosure (foundation, structure, exterior and door materials, etc.).  Ensure that containers are kept in a clean and sanitary condition.  Requires that refuse be kept in a closed and secure manner when not being deposited or emptied.
Unsightly Premises Bylaw • No. 1868, 2005	Ensure the property does not become unsightly. This includes preventing garbage from accumulating and removing any accumulations.
<b>Traffic Bylaw</b> • No. 2220, 2012	Ensure containers are not placed so as to interfere with the ordinary passage of vehicles, pedestrians, and cyclists riding within marked cycling lanes.
Sanitary Sewer And Storm • Sewer Use Bylaw No. 2474	Manages oil and grease from a food sector establishment to ensure that no oil or grease is discharged into a sanitary sewer or drainage system within the District.
Floodplain Bylaw • No. 2526, 2017 •	Structures must allow for the passage of floodwaters, if located within a Secondary Floodway.  Designates land as floodplain and makes provisions in relation to flood management throughout the District of Squamish.
Zoning Bylaw No. 2200, • 2011 & Subdivision And Development Control • Bylaw No. 2649, 2018	Parking areas and driveways must comply with the standards outlined in both bylaws. Auxiliary structures must comply with regulations in both bylaws.

### Squamish Official • Community Plan Bylaw

No. 2500, 2017

- Provide on-site facilities dedicated to the storage and removal of solid waste to serve the entire development. Adequate space for source-separation of garbage, recyclables, compost, and grease or oil, if appropriate, should be provided
- Individual totes for townhouse units are not supported.
- Locate waste management facilities in a convenient, well-lit, universally accessible location in a central area or at the rear of the development.
- Enclose waste storage in a dedicated room within the development. If not possible, a gated, fully-enclosed, wildlife-proof accessory enclosure should be used that complements the building design and is screened from public roads and residential properties.
- Ensure the design and size of the solid waste storage area comply with these Guidelines.
- Provide waste storage areas that are accessible for collection purposes and that provide safe, adequate maneuvering, and vertical clearance for collection trucks.
- Facilitate the continued expansion of recycling and organic services to multiple-unit developments, commercial, and institutional facilities; and provide educational materials and technical assistance.

#### **Other Related Regulations and Policies**

#### Zero Waste Strategy

2016

 Prioritizes ensuring mandatory service is in place for recycling and organics diversion at apartments, condos, institutions, and businesses in the District. Recommendations for this includes developing size requirements for waste management spaces, for multiple-unit developments.

#### BC Public Health Section 5.2

Ensure there is no accumulation of materials which could constitute a public health hazard.

#### BC Building Code 2012 Section 3.5.2.5 except

as required in sentence 3.6.3.3(9)

- Ensure rooms for temporary storage of combustible refuse, such as garbage or waste paper, are separated from the remainder of the building by a fire separation with a fire-resistance rating of not less than one hour, and be sprinklered.
- A refuse chute shall discharge only into room or container separated form the remainder of the building by a fire separation with a fireresistance rating of not less than 2 hours.

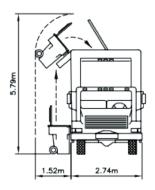
#### **Attachment #5:** Collection Truck General Measurements

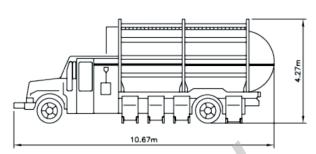
The following figures show the general vehicle measurements for collection trucks.

#### **Blue Cart Recycling**

SU9/medium size trucks Side loading

Dimensions: Length: 10.67 m Width: 2.74 m Height: 4.27 m (collection 5.79 m)





#### Garbage and Cardboard Containers

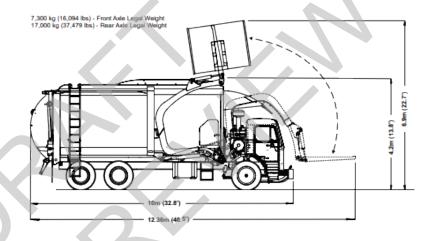
SU9/medium size trucks Front/Top loading

Dimensions:

Length: 10 m (collection 12.36 m)

Width: 3.15 m

Height: 4.2 m (collection 6.9 m)

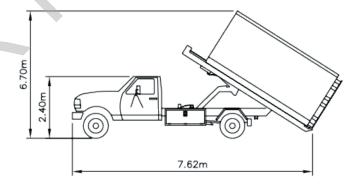


#### Garbage and Cardboard Low Profile Compactor

SU9/medium size trucks Hauling to offsite location

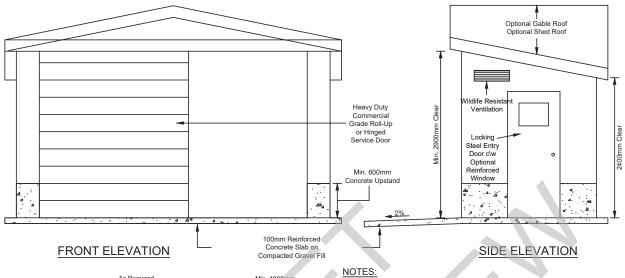
Dimensions: Length: 7.62 m Width: 2.4 m

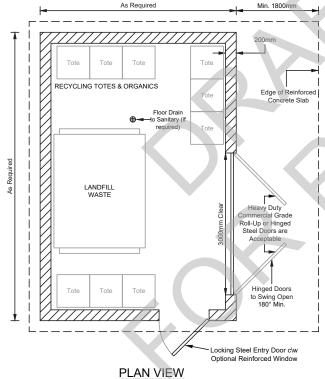
Height: 2.4 m truck height (Haul off site to lift – 6.7m to lift bin)



Collection of garbage and/or cardboard using low profile compactor trucks involves a multi-step process. A compactor room is required on site and the smaller "pick-up" like truck is required to load bins from the compactor on site and then haul off site for disposal. The containers then have to be returned to the development. This limits the amount of sites that can be serviced in one day by the hauler compared to traditional larger garbage trucks that service multiple locations on one route. As well, the low profile trucks add additional trips to the road system to complete the collections service as disposal occurs off site, which typically involves higher collection costs.

#### **Attachment #6:** Wildlife Proof Enclosure Guideline





All structures must comply with the District of Squamish Floodplain Management Bylaw No. 2676, 2019, as well as all other applicable Municipal **Bylaws** 

- 1. Enclosure architecture (materials, etc) is to conform to Municipal Building and Development Permit requirements (as required).
- 2. Design concept only. Alternative designs meeting the intent of these requirements are invited.
- 3. Structures are to be constructed in accordance with the BC Building Code. Enclosures are to be designed to withstand snow loading, vehicular damage, operational damage, and bears.
- 4. Roofs should be designed to avoid snow shed in front of service and entry doors.
- 5. Service door(s) are to have dual locking mechanisms. Hinged doors require a heavy-duty cane bolt at the bottom and a slide bolt at the top of the stationary door. Roll-up doors require slide bolt locking mechanisms on the bottom of the door, each side. All locking mechanisms to be located on the interior; no hardware should be located on the service door(s) exterior.
- 6. Steel entry door is to be 36" wide (915mm) and be equipped with a self-closing mechanism. Door may have a round turning knob complete with a covered keyed knob guard on the exterior for access and panic hardware on interior for egress. Alternatively a push button lock with a turning knob is acceptable.
- 7. Adequate motion activated interior and exterior lighting is to be provided (if required).
- 8. Bear proof vent and steel entry door window openings should be sized such that a bear could not gain access in the case of breakage.
- 9. Units in mm unless otherwise noted.
- 10. Roll-up doors are preferable in areas that may have ice and snow build up but hinged doors are acceptable.
- 11. Separate enclosures for Commercial & Residential uses on the same property are strongly recommended.

Dimensions shown serve as a quideline only, the ultimate size and configuration of the garbage enclosure will be dependant on the owners preference and services being provided.



Thank you to RMOW for the copy of the original design drawings.

DISTRICT OF SQUAMISH			
SOLID WASTE WILDLIFE-PROOF ENCLOSURE			
DRAWN BY: BL	DATE: JULY 2017		
SCALE: N.T.S.	DWG. NO.: G11		



**District of Squamish** 37955 Second Avenue | Squamish, BC squamish.ca