

NO: R248

COUNCIL DATE: December 18, 2017

REGULAR COUNCIL

TO: **Mayor & Council** DATE: **December 14, 2017**

FROM: **General Manager, Engineering** FILE: **5360-01**
General Manager, Planning & Development

SUBJECT: **Demolition and New Construction Waste Management Bylaw**

RECOMMENDATION

The Engineering Department recommends that Council:

1. Receive this report as information; and
2. Authorize the City Clerk to bring forward the *Demolition and New Construction Waste Management Bylaw, 2017, No. 19453*, for the required readings and adoption, attached as Appendix "I".

INTENT

The purpose of this report is to seek Council approval to adopt the *Demolition and New Construction Waste Management Bylaw, 2017, No. 19453* (the "Bylaw") for the management of waste created during new construction or demolition of buildings or structures. The Bylaw will support the Metro Vancouver regional waste diversion goals by ensuring that waste containing recyclable materials at demolition work sites are either reused or delivered to licensed processing facilities for recycling.

BACKGROUND

The Metro Vancouver ("MV") Integrated Solid Waste and Resource Management Plan ("ISWRMP") established the goal of achieving 80% waste diversion (recycling) within the region by 2020. To achieve this goal, the ISWRMP identified a priority action to increase the recycling of Construction and Demolition ("C&D") material.

A significant amount of the MV region's total solid waste is comprised of C&D material, of which 25% (400,000 tonnes) is currently being sent to landfill. Approximately 90% (360,000 tonnes) of the C&D landfill waste is comprised of demolition material, with the remaining 10% stemming from new construction. The majority of this material waste is made up of wood, concrete, metals, plastics, organics and glass that can be recycled at licensed processing facilities.

The priority action identified in the ISWRMP stipulates that MV member municipalities and industry groups collaborate to develop a policy to mandate increased recycling of C&D waste in the region. Through consultation with stakeholder groups that occurred over a three-year period, it was determined that a regulatory approach that focused on demolition waste would be the most effective solution to encourage diversion of C&D material waste from being sent to landfill.

Stakeholders reviewed including provisions for new construction; however, it was determined that it would have minimal impacts toward increasing recycling at these work sites. New construction generates a low volume of waste which consists of clean materials that are easily recyclable. The industry also has been recycling its waste at new construction sites for years without mandatory provisions in place. The main driver for the high diversion is the cost of building materials which increases reuse and recycling as much as possible at the work sites.

The proposed regulatory approach requires the introduction of a municipal Bylaw, as local governments are the most common authority with respect to building construction and demolition. Introducing a Bylaw at the municipal level creates the necessary authority to establish recycling requirements that incorporate a refundable fee deposit on all demolition projects at the permitting stage. The refundable fee is returned to the applicant upon the City receiving documentation from the applicant that recyclable materials from the demolition project were delivered to appropriate processing and recycling facilities.

Accordingly, a Bylaw template was developed by MV for demolition waste and recyclable materials that can be appropriately customized and implemented by regional municipalities based on their processes, requirements and available resources. The Bylaw template was adopted by the MV Board and referred to member municipalities for consideration and implementation.

To date, Vancouver, Richmond, North Vancouver, West Vancouver, New Westminister and Port Moody have implemented the regulatory approach, and others are considering adopting the same approach. Some of these municipalities are realizing between 70% to 90% diversion of demolition material. In addition, many cities across North America have implemented similar regulations.

DISCUSSION

To support the ISWRMP goal of increasing recycling in the region, the Engineering Department, in collaboration with the Planning & Development Department, have prepared a Bylaw for Council's consideration (Appendix "I"). The Bylaw incorporates separate provisions for demolition and new construction work which has been customized to align with the City's processes, policies and procedures.

Demolition Work

The following provides a high-level overview of the features related to demolition work in the Bylaw:

- Applies to all buildings and structures (single-family residential, multi-family and commercial) that will be demolished;
- \$250.00 non-refundable application fee as part of the demolition permit application process;

- \$5,000.00 refundable waste disposal and recycling services fee;
 - Full refund if 70% or greater diversion of demolition waste is achieved, and the refund decreases on a sliding scale based on the percentage of demolition waste diverted;
- Submission of a Waste Disposal and Recycling Services Plan which is a checklist of waste and recyclable material present at the demolition site, including the estimated weight of each material;
- Requirement that demolition materials be taken to licensed recycling and/or waste facilities or reused in accordance with the approved Waste Disposal and Recycling Services Plan; and
- Submission of a Compliance Report which provides proof that waste and recyclable materials were taken to licensed or authorized facilities in order to claim a refund of the waste disposal and recycling services fee deposit.

Estimated Surrey Demolition Material Diversion

On average, 641 demolition permits are issued annually in Surrey, based on a six-year data trend as indicated in Table 1 below. Approximately 95% of the total demolition permits are from the residential sector, primarily consisting of single-family dwelling demolition projects.

Table 1: Demolition Permits

Year	Total Demo Count
2012	603
2013	529
2014	555
2015	655
2016	775
2017	727
Average	641

MV waste composition studies indicate that over 72% of demolition waste is generated from the residential sector. Given that most of Surrey’s demolition permits are issued for residential projects, the Bylaw will have significant impacts towards increasing the regional diversion rate.

As noted previously, approximately 360,000 tonnes of the region’s demolition waste is sent to landfill. Surrey’s portion of the region’s demolition waste ranges from 15% to 20%. The implementation of the Bylaw will increase the regional waste diversion between 51,000 tonnes to 72,000 tonnes on an annual basis.

Permit Fees for Demolition Work

The Bylaw will require the permit applicant for demolition work to submit a refundable deposit fee. The refundable deposit provides an incentive for permit holders to comply with the requirements of the Bylaw with provisions for refund upon providing documentation that the demolition waste is recycled. A full refund will be provided if 70% or greater diversion of demolition waste is achieved at the work site, and the refund will decrease on a sliding scale based on the percentage of demolition waste diverted. Staff will assess increasing the 70% diversion requirement on an annual basis and adjust based on the performance of the program.

The refundable fee is approximately \$1 per square foot based on an assessment completed by MV of similar programs in different jurisdictions that have implemented similar requirements. Municipalities that have implemented these requirements advise that refundable deposits typically range from \$2,000 to \$7,000.

It is recommended that the refundable waste disposal and recycling services fee be set at a fixed amount of \$5,000 regardless of the demolition size. This deposit amount will provide sufficient incentive to applicants to divert demolition waste to recycling facilities, streamline the demolition permit application process and reduce fee disputes. This fee can be adjusted if necessary in the future.

In addition, a non-refundable application fee of \$250 will also be required for additional costs expected to be incurred by the City to cover the added resource requirements needed for compliance follow up, enforcement activities, ongoing training, outreach and education.

Provisions for New Construction

Staff have reviewed taking the same demolition approach with new construction projects. Introducing similar provisions and fees for new construction will have limited added benefit towards increasing recycling, given the low volume of construction waste generated at these work sites and diversion rates are already very high (approximately 75%). Additionally, the reporting process will be challenging, given that construction materials will be difficult to estimate by permit applicant(s) at the onset of the application, and staff will have challenges with confirming the actual amounts of waste materials that were sent for disposal versus recycling.

On this basis, staff recommend that provisions be included in the Bylaw that require permit applicant(s) to have recycling programs in place at new construction projects as follows:

- Implementation of a mandatory waste management plan that will act as a guide for contractors, workers, design professionals and building owners to help them maximize diversion of construction waste through salvage, reuse and recycling;
- Mandatory separation of waste and recyclable material and provisions for collection and disposal of material that originate from new construction;
- Deliver waste that is recyclable material to recycling facility or reuse for different application; and
- Deliver waste, other than recyclable material, to a disposal facility.

Staff estimate that approximately 5,000 to 8,000 of new construction material will be diverted from landfill through the implementing the above provisions.

Impacts on Illegal Dumping

In 2015, the City established a five-year goal of reducing illegal dumping costs and incidents by 50%. A comprehensive work plan was developed to achieve this target which includes increasing education, promoting existing programs, enhancing services and implementing new policies.

A review of data indicates that approximately 30% of illegal dumping is associated with C&D sites. While certain contractors are careful to properly dispose of waste materials at disposal facilities, others try to avoid paying the disposal fees and illegally dump the material in the City, which further attracts other incidents of illegal dumping.

The new Bylaw will have positive impacts towards reducing illegal dumping. For demolition projects, reporting requirements will be imposed at the permit process to ensure proper disposal of demolition materials. Prior to issuing the demolition permit, the applicant will be required to submit a Waste Disposal and Recycling Services Plan detailing the demolition activities at the work site. Following completion of the work, a Compliance Report must be submitted by the applicant confirming that demolition materials were delivered to a licensed processing facility. If the applicant fails to adhere to the permit requirements, then staff will follow up with applicant. Based on staff's review, the refundable fee may be withheld until proper documentation is submitted.

Conversely, the provisions established for new construction will have the same impacts on illegal dumping. Owner(s) or applicant(s) for new construction projects will be required to have a Waste Management Plan which includes that waste and/or recyclable materials must be source separated and delivered to appropriate waste or recycling facilities. To ensure that these provisions are being followed at new construction sites, staff will conduct spot checks to ensure compliance.

Education

Efforts need to be made to ensure that permit applicants are well informed of their responsibilities and requirements pertaining to the new Bylaw. Therefore, it is recommended that there be a six-month education period before the new requirements come fully into effect, starting July 1, 2018. During this education period, no permit fees will be collected.

The Bylaw requirements will be communicated to the community through the following education and promotion plan:

- Information sessions with developers, demolition applicants and contractors;
- Information packages providing step-by-step information on the requirements at each phase of the Bylaw application process and new construction;
- Guidelines will be available on the City's website and provided in hardcopy format at the permit and/or building application stage of a development or renovation project; and
- Advertise the proposed Bylaw in an effort to prepare permit applicants for the new diversion requirements.

Recycling Facilities

There are sufficient licensed recycling facilities in Surrey and the region that accept demolition and new construction waste. These facilities range in scale and capacity from small wood refinishers and reused building materials stores to larger automated material recovery facilities. In addition, MV is currently assessing the feasibility of an advanced material recovery facility to receive C&D waste to facilitate increase diversion of these materials.

SUSTAINABILITY CONSIDERATIONS

Implementation of a Demolition and New Construction Waste Management Bylaw supports the objectives of the City's Sustainability Charter. In particular, implementing this Bylaw supports the Sustainability Charter theme of Infrastructure. Specifically, this Bylaw supports the following Desired Outcomes and Strategic Directions:

- Materials and Waste DO₁₉: Residents and businesses are conscious of their consumer choices and reuse existing materials first;
- Materials and Waste DO₂₀: Materials and resources are used efficiently, sourced locally where feasible, and repurposed or recycled at the end of their life cycle;
- Materials and Waste DO₂₁: The City is moving toward a zero-waste target, in line with regional waste diversion goals;
- Materials and Waste SD₁₃: Work with local businesses and organizations to maximize the recovery and reuse of local materials and waste products as part of the circular economy; and
- Materials and Waste SD₁₄: Provide tools and educational resources that support residents and businesses to reduce consumption.

CONCLUSION

Based on the above discussion, it is recommended that Council:

- Receive this report as information; and
- Authorize the City Clerk to bring forward the *Demolition and New Construction Waste Management Bylaw, 2017, No. 19453*, for the required readings and adoption, attached as Appendix “I”.

Fraser Smith, P.Eng., MBA
General Manager,
Engineering

Jean Lamontagne
General Manager,
Planning & Development

FS/TA/HJ/cc

Appendix “I” - Demolition and New Construction Waste Management Bylaw, 2017, No. 19453



Demolition and New Construction Waste
Management Bylaw, 2017, No. 19453

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CITY OF SURREY

BYLAW NO. 19453

A Bylaw to regulate and impose fees in relation to the management of waste and recyclable materials from demolition and new construction work within the City of Surrey

.....

WHEREAS the *Community Charter*, S.B.C. 2003, c. 26 authorizes the City to regulate, prohibit, and impose requirements in relation to the protection and enhancement of the well-being of its community in relation to refuse, garbage or other material that is noxious, offensive or unwholesome, and in relation to the use of waste disposal and recycling services;

AND WHEREAS it is necessary to fix the fees, charges and terms and conditions in respect of the exercise of authority to regulate, prohibit or impose requirements;

It is deemed desirable to regulate, prohibit, and impose requirements with respect to the use of waste disposal and recycling services to ensure that waste and recyclable materials resulting from demolition work are managed in a manner that enhances and protects the well-being of the community and the target diversion rate is achieved,

THEREFORE the City Council of City of Surrey ENACTS AS FOLLOWS:

PART 1 – CITATION

1. This Bylaw shall be cited for all purposes as "Demolition and New Construction Waste Management Bylaw, 2017, No. 19453".

PART 2 – DEFINITIONS

2. In the construction of and for the purposes of this Bylaw, unless the context otherwise requires:

AGENT means a person authorized in writing to act on behalf of the **owner** in connection with a **building permit**, including a hired tradesperson or contractor;

APPLICATION FEE means the fee set out in Schedule A;

BUILDING BYLAW means the *Surrey Building Bylaw*, 2012, No. 17850;

BUILDING OFFICIAL means a "Building Official" as defined in the *Building Bylaw*;

BUILDING PERMIT has the same meaning as the term "Permit" as defined in the *Building Bylaw*;

BUSINESS LICENSE means a business license as described in and issued by the City pursuant to the *Business License By-law, 1999, No. 13680*;

CITY means the City of Surrey;

COMMUNITY CHARTER means the *Community Charter, SBC 2003, c. 26*;

COUNCIL means the Council of the **City**;

COMPLIANCE REPORT means a report substantially in the form attached to this Bylaw as Schedule B, as modified from time to time by the General Manager;

CONTRACTOR means the any company or persons contracted by the **owner** to carry out the **demolition**;

DEMOLITION means whole or partial demolition, deconstruction or systematic disassembly of an existing building, structure or improvement regulated by the *Building Bylaw*;

DISPOSAL means:

- a. the removal, abandonment, discard, or destruction of any materials, substances, or objects; and
- b. the application, release, or incorporation of materials, substances or objects in or to land;

DISPOSAL FACILITY means a **facility** that:

- a. has a valid and subsisting permit, license, or operational certificate issued under **GVS&DD's Municipal Solid Waste and Recyclable Material Regulatory Bylaw** for the operation of a disposal facility regulated under that bylaw;
- b. is approved as a disposal facility under the **Integrated Solid Waste and Resource Management Plan**; or
- c. destroys or landfills **waste** in the course of conducting an industry, trade, or business;

FACILITY means any land, building, site, or structure;

FEE REFUND means the refund of a **waste disposal and recycling services fee** paid in respect of a **waste disposal and recycling services plan** as calculated in accordance with Schedule B attached to this Bylaw;

GENERAL MANAGER means the General Manager, Engineering and shall include his or her duly appointed assistants and representatives;

GVS&DD means the Greater Vancouver Sewerage and Drainage District;

HAZARDOUS MATERIALS means any materials, products, or substances that are:

- a. regulated as a hazardous substance or other substance that is potentially harmful to workers under the *B.C. Workers Compensation Act*; or
- b. a hazardous waste as defined in the *B.C. Environmental Management Act*,

and that is present on a **site** or is produced, originates, or results from **demolition**;

INTEGRATED SOLID WASTE AND RESOURCE MANAGEMENT PLAN means GVS&DD's approved **Integrated Solid Waste and Resource Management Plan**;

MUNICIPAL SOLID WASTE AND RECYCLABLE MATERIAL REGULATORY BYLAW means the GVS&DD's Municipal Solid Waste and Recyclable Material Regulatory Bylaw No. 181, 1996, as amended or replaced from time to time;

NEW CONSTRUCTION means the process or activity by which any building or structure is erected, repaired, altered, renovated, added to, or installed;

OWNER means an owner of a parcel of real property including:

- a. the registered owner of an estate in fee simple;
- b. the tenant for life under a registered life estate;
- c. the registered holder of the last registered agreement for sale; or
- d. the holder or occupier of land held in the manner referred to in the definition of "Owner" in the Schedule to the *Community Charter*, S.B.C. 2003, c.26 as may be amended or replaced from time to time;

PROJECT COMPLETION means final acceptance of a demolition permit by the **Building Official** and closing of the permit in accordance with the **Building Bylaw**;

RECYCLABLE MATERIAL means a material, substance, or object that is produced, originates or results from **demolition** or **new construction** and satisfies at least one of the following:

- a. is organic material and is capable of being composted;
- b. is managed as a marketable commodity with an established market by the **owner** or operator of a **recycling facility**;

- c. is being used in the manufacture of a new product that has an established market or is being processed as an intermediate stage of an existing manufacturing process;
- d. is being **reused** by the **owner**, or the **agent** on or off the **site** for construction;
or
- e. is a material, product or substance prescribed in Schedule C attached to this Bylaw as a **recyclable material**, but excluding **hazardous materials**;

RECYCLING FACILITY means a **facility** or licensed business, other than a **disposal facility** or an incinerator facility, that:

- a. has a valid and subsisting permit, license, or operational certificate issued under the **GVS&DD's Municipal Solid Waste and Recyclable Material Regulatory Bylaw**;
- b. is required to provide information on quantities of received and transferred material to the **GVS&DD** through the **GVS&DD's Municipal Solid Waste and Recyclable Material Regulatory Bylaw**;
- c. is approved as (i) a new organics processing facility; or (ii) a publicly-owned transfer station or landfill, under the **Integrated Solid Waste and Resource Management Plan** for purposes other than **disposal**;
- d. is a drop off depot which is owned or operated by a charitable organization registered under the *Income Tax Act* (Canada) or a non-profit organization to which section 149 of the *Income Tax Act* applies;
- e. is a **facility** where the owner or operator purchases or otherwise pays valuable consideration for all **recyclable material** received, cleaned, sorted, baled or packaged at the **facility**;
- f. accepts only asphalt and concrete for the purposes of reprocessing, resale and **reuse**; or
- g. builds products using recycled or **reused** building materials or resells salvaged building materials under a valid business license;

REUSE means further or repeated use of building materials;

SITE means any land, where **demolition** is or is intended to be performed that may include **building**, structure or other improvements;

WASTE means any discarded or abandoned material, substance, or object that is produced, originates, or results from **demolition** or **new construction**, and any other prescribed material, substance or object.

WASTE DISPOSAL AND RECYCLING SERVICES FEE means the fee set out in Schedule A; and

WASTE DISPOSAL AND RECYCLING SERVICES PLAN means the form of plan attached to this Bylaw as Schedule A.

3. References in this Bylaw to enactments, bylaws of the **City**, or the bylaws or plans of **GVS&DD**, include those enactments, bylaws, and plans as they may be amended or replaced from time to time.
4. Unless otherwise defined in this Bylaw, all words or expressions used in this Bylaw have the same meaning as the same or like words or expressions used in the ***Building Bylaw***.

PART 3 – APPLICATION AND AGREEMENT

5. No person shall commence or continue, or cause or allow the commencement or continuation of, any **demolition** except in accordance with the provisions of this Bylaw.
6. This Bylaw does not apply to any **demolition** of a building, structure or improvement that the **Building Official** deems is required to protect public health or safety in an emergency.
7. Nothing in this Bylaw precludes or relieves a person from complying with any provision of the ***Building Bylaw***, other bylaws of the **City**, or any federal, provincial, or local government laws or regulations applicable to **demolition**.
8. Neither the review nor acceptance of a **waste disposal and recycling services plan**, or **compliance report** constitutes a representation, warranty, assurance or statement by the **City** that the **owner** has complied with the ***Building Bylaw***, this Bylaw, or any other applicable enactment, law, or regulation respecting safety.
9. The **contractor** that is carrying out the **demolition** shall have a **business license** to carry out the **demolition** which must be identified in the **waste disposal and recycling services plan**.

PART 4 – MANDATORY RECYCLING

10. The **owner** or **agent** of any **new construction** shall:
 - a. implement a waste management plan, which meets the minimum City requirements, that will act as a guide for contractors, workers, design professionals and building owners, to help them maximize diversion of **waste** and **recyclable material** through salvage, reuse and recycling;
 - b. separate **waste** and **recyclable material**, and make provisions for collection and disposal of materials that originate from **new construction**;
 - c. deliver **waste** that is **recyclable material** to a **recycling facility** or reuse it for a different application; and
 - d. deliver residual **waste**, other than **recyclable material**, from **new construction** to a **disposal facility**.

11. At the time of submitting an application for a **demolition** permit, a properly completed **waste disposal and recycling services plan** regarding the management of **waste** and **recyclable material** must be signed by the **owner** or **agent** and submitted to the **General Manager**.
12. No person shall commence or continue, or cause or allow the commencement or continuation of, any **demolition** unless the **General Manager** has accepted a **waste disposal and recycling services plan** for that **demolition**.
13. If **recyclable material** is removed from a **site**, the **recyclable material** must be removed:
 - a. to a **recycling facility**; or
 - b. in accordance with an approved **waste disposal and recycling services plan**, including **reuse** by the **owner** or **agent**, removal to a **recycling facility**, or as otherwise set out in the **waste disposal and recycling services plan**.
14. If **waste**, other than **recyclable material**, is removed from a **site**, the **waste** must be removed to a **disposal facility**.

PART 5 – COMPLIANCE REPORTING AND RECORD KEEPING

15. To ensure compliance with this Bylaw, the **owner** or **agent** must keep records of the surveying, removal, handling, management, and **disposal** of **waste** and **recyclable material**, including:
 - a. payment receipts, donation receipts, weigh bills, inspection reports, clearance letters, sampling reports, waste transport manifests, and recycling verification letters from mixed load **recycling facilities** detailing the percentage of **waste** recycled, **reused** or **disposed**;
 - b. photographs, if applicable, recording the removal of **recyclable material** from the **site** as specified in an approved **waste disposal and recycling services plan**; and
 - c. any other records that the **General Manager** specifies, at the time of application for a permit for **demolition**, must be kept.
16. Within ninety (90) days after **project completion**, the **owner** or **agent** must submit the following to the **General Manager**:
 - d. a properly completed **compliance report**; and
 - e. originals of the records required to be kept under Section 14 of this Bylaw.

PART 6 – FEES

17. Every person who performs, or causes or allows the performance of **demolition**, must pay the non-refundable **application fee** and the **waste disposal and recycling services fee** at the time of submitting the **waste disposal and recycling services plan**.
18. The holder of the permit for the **demolition** is eligible for a **fee refund**, as calculated in accordance with Schedule B attached to this Bylaw, if the following have also been completed to the satisfaction of the **General Manager**:
 - a. a **waste disposal and recycling services plan**;
 - b. within ninety (90) days after **project completion**;
 - i. a **compliance report**;
 - ii. submission of the originals of the records required to be kept under Section 14 of this Bylaw; and
 - iii. an application to the **General Manager** for the **fee refund**;
 - c. within seven (7) days of being requested to do so, submit to the **General Manager** any of the records required to be kept under this Bylaw, in addition to those submitted under Section 17(b)(ii) above, in order to evaluate eligibility for the **fee refund**.
19. Any **owner** or **agent** that does not claim the **fee refund** within one year from **project completion** shall forfeit the **fee refund**.

PART 7 – OFFENCES, PENALTIES AND ENFORCEMENT

Offences

20. Every person who violates any of the provisions of this Bylaw or who suffers or permits any act or thing to be done in contravention of any of the provisions of this Bylaw, or who neglects to do or refrains from doing anything required to be done by any of the provisions of this Bylaw, or who does any act, or who violates any of the provisions of this Bylaw shall be deemed to be guilty of an infraction and liable to the penalties imposed in this Bylaw.

Penalties

21. Every person who violates any of the provisions of this Bylaw, or who suffers or permits any act or thing to be done in contravention of this Bylaw, or who refuses, omits, or neglects to fulfill, observe, carry out, or perform any duty or obligation imposed by this

Bylaw is liable, on summary conviction, to a fine of not less than two hundred dollars (\$200.00) and not more than ten thousand dollars (\$10,000.00).

22. Where there is an offence that continues for more than one day, separate fines may be issued for each day or part thereof in respect of which the offence occurs or continues.
23. Any person who contravenes any provision of this Bylaw is liable to the **City** for and must indemnify the **City** from all costs, expenses, damages and injuries resulting from the contravention. This does not in any way limit any other provision or any other remedy the **City** may have under this Bylaw or otherwise at law.
24. Nothing in this Bylaw limits the **City** from utilizing any other remedy that is otherwise available to the **City** at law.
25. Any person who gives false information required under this Bylaw is deemed to have committed an infraction of, or an offence against, this Bylaw, and is liable on summary conviction to a penalty of not more than ten thousand dollars (\$10,000) in addition to the costs of the prosecution, and each day that such violation is caused or allowed to continue constitutes a separate offence.

PART 8 – SEVERABILITY

26. Each provision of this Bylaw is severable from each other provision, and, if any provision is determined to be void or unenforceable in whole or in part, this determination shall not be deemed to affect or impair the validity of any other provision, unless a Court otherwise determines.

PASSED FIRST READING on the th day of , 2017.

PASSED SECOND READING on the th day of , 2017.

PASSED THIRD READING on the th day of , 2017.

RECONSIDERED AND FINALLY ADOPTED, signed by the Mayor and Clerk, and sealed with the Corporate Seal on the th day of , 2017.

MAYOR

CLERK

SCHEDULE A

Waste Disposal and Recycling Services Plan

Date: _____		Project Address: _____	
Building Type	<input type="checkbox"/> Residential	<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____
Building Structure Type	<input type="checkbox"/> Wood Frame	<input type="checkbox"/> Concrete	<input type="checkbox"/> Other: _____
Project Floor Space (square feet): _____		Estimated Total Waste and Recyclable Material Generation = _____ tonnes (from Table 1)	
Expected Project Completion Date (DD/MM/YYYY) ____/____/____			
Estimated Waste and Recyclable Material Generation (from Tables 1 and 2 of Schedule C) Walls and flooring = _____ kg (for complete demolition, or for walls and flooring calculated separately) Roofing = _____ kg Foundations and footings = _____ kg Other material = _____ kg Total = (Walls/Flooring _____ + Roofing _____ + Foundations _____ + Other _____) ÷ 1000 = _____ tonnes			
Name of Permit Applicant: _____ (please print)			
Signature of Permit Applicant _____ Date _____			

NOTE TO APPLICANT: Please complete the other side of the form

STAFF USE ONLY			
Building Permit No. _____			
Waste Disposal and Recycling Services Package	<input type="checkbox"/> Package provided to applicant	<input type="checkbox"/> Form 1 – Project information and checklist received from permit applicant	
Application Fee:	Waste Disposal and Recycling Services Fee		
Application Fee Received of \$250.00 (non-refundable): <input type="checkbox"/>	Fee Received (\$2,500): <input type="checkbox"/> (fee will be refunded if the reuse and recycling requirements are met)		
Waste Disposal and Recycling Services that will be required: <input type="checkbox"/> Removal of all recyclable materials to an authorized recycling facility or to a disposal facility for a purpose other than disposal <input type="checkbox"/> Re-use of recyclable materials as proposed in this Waste Disposal and Recycling Services Plan or in another acceptable manner			
Signature of Application Reviewer: _____			
<i>Keep a copy of this page and Form 1 in file</i>			

Planning how you will manage the recyclable materials generated at your site will help you meet the recycling requirements. **Please complete the following checklist of the types of recyclable materials that your project is expected to generate and submit as part of Form 1.** Use this checklist for discussion with waste collection, recycling and disposal companies. A list of recycling facilities is available from the Permits Department or <http://www.metrovancouver.org/services/permits/Permits%20%20Regulations/ActiveSolidWasteLicenceList.pdf>

You must keep track of all materials generated over the duration of the project by keeping receipts from all recycling and disposal facilities **or signed forms** from all salvagers for material re-use (Form 3 –Compliance Report).

Materials	Will the Work generate this material?	Will this material be reused or used as backfill? If yes, specify how and where.	Estimate of material generated as waste (incl. recyclable material) (kg)	For information
Asphalt				Can be recycled
Cardboard				Can be recycled.
Cement and concrete				Can be recycled
Untamminated excavated soil and rocks				Can be reused or recycled
Drywall / Gypsum				All must be recycled.
Green waste (incl. shrubs, lawn, small trees)				Can be reused or composted
Glass				May be recyclable
Metal				Can be recycled
Plastic - rigid buckets, etc. (no PVC)				Can be recycled
Plastic - wrapping and bags				Can be recycled
Roofing - Asphalt shingles				Can be recycled
Wood – clean				Can be recycled
Wood – roofing				Can be recycled
Other recycled/reused materials (Please list)				
Estimate of Total Waste (incl. Recyclable Material) Generated from Demolition (kg):				
<i>Note: Do not include Hazardous Materials in this Form. All hazardous materials must be disposed of according to Work Safe BC and BC Ministry of Environment requirements, as well as any additional requirements imposed by the disposal facility.</i>				

SCHEDULE B

Sample Form 3 – Compliance Report

Submit this form following the completion of project and attach documentation (copies of receipts, weigh bills, etc.)

Project Site Address _____			
Building Permit No. _____		Name of permit holder: _____	
Project Start Date (DD/MM/YYYY) ___/___/___		Project Completion Date (DD/MM/YYYY) ___/___/___	
Building Type	<input type="checkbox"/> Residential	<input type="checkbox"/> Commercial	<input type="checkbox"/> Other: _____
Building Structure Type	<input type="checkbox"/> Wood Frame	<input type="checkbox"/> Concrete	<input type="checkbox"/> Other: _____
Project Floor Space (square feet): _____		Estimated Total Waste and Recyclable Material Generation = _____ tonnes (from Table 1)	
Waste Disposal and Recycling Services Plan Compliance			
<input type="checkbox"/> Diversion Form and documentation (i.e., receipts and weigh bills) attached			
Tonnes recyclable material managed as authorized (i.e. non-hazardous materials removed to a Recycling Facility or as approved in Waste Disposal and Recycling Services Plan) = _____ = "A"			
Tonnes disposed (i.e. non-hazardous materials removed to a Disposal Facility) = _____ = "B"			
Total tonnages of non-hazardous materials from demolition = _____ = A+B = Total			
Level of Compliance = $(A \div \text{Total}) \times 100 =$ _____ % = "C" (use for refund calculation)			
Waste Disposal and Recycling Services Fee Refund Calculation			
Waste Disposal and Recycling Services Fee paid (from Form 1) \$ _____ = "D" (use for refund calculation)			
Refund calculated as follows:			
If C is 70% or greater, then D = Refund = \$ _____			
If C is less than 70%, then $(C \div 70) \times (D) =$ Refund = \$ _____			

CITY STAFF USE ONLY			
Compliance Report	Amount of Waste Disposal and Recycling Services Fee paid (Form 1) = \$ _____		
<input type="checkbox"/> Complete	Amount of fee refunded = \$ _____		
<input type="checkbox"/> Approved			
Compliance with Waste Disposal and Recycling Services requirements	<input type="checkbox"/> Yes	<input type="checkbox"/> Partial	<input type="checkbox"/> No

Signature of Permit Holder

DATE: _____

Signature of Compliance Report Reviewer

DATE: _____

SCHEDULE C

TABLE 1 - ESTIMATING WASTE GENERATION

Material type	Quantity	Lbs	Kg
New Construction			
New Structure (with foundation)	1 sq ft	8	3.6
New Structure	1 sq ft	4	1.8
New Deck/Similar (wood)	1 sq ft	2	0.9
Demolition			
Complete Wood-frame Demolition	1 sq ft	40	18.2
Demolition - per linear foot of wall	1 sq ft	20	9.1
Concrete slab	1 lin ft	50	22.7
Asphalt	1 sq ft	50	22.7
Brick/masonry	1 sq ft	50	22.7
Spread footing	1 sq ft	150	68.2
Remodel			
Mixed Debris (interior remodel)	1 sq ft	20	9.1
Remodel	2 sq ft	10	4.5
Carpeting	3 sq ft	0.5	0.2
Ceiling Tiles	4 sq ft	1.1	0.5
Sheetrock/Drywall	1 cu yd	394	179.1
Tile Flooring	1 sq ft	3	1.4

TABLE 2 - VOLUME TO WEIGHT CONVERSION

Mixed C&D	Quantity	Lbs	Kg
Mixed C&D (structural)			
Mixed inerts (concrete, brick, dirt, asphalt)	1 cu yd	500	227.3
Separated inerts	1 cu yd	2000	909.1
Wood	1 cu yd	2000	909.1
Metals	1 cu yd	375	170.5
Roofing Materials	1 cu yd	906	411.8
Asphalt shingles/Composition			
Asphalt shingles/Composition	1 cu yd	419	190.5
Asphalt Tar Roofing	1 sq ft	3	1.4
Wood Shake/Shingle Roofing	1 cu yd	2919	1326.8
Wood Shake/Shingle Roofing	1 cu yd	435	197.7
Tiles (concrete roofing)	1 sq ft	2	0.9
Tiles (concrete roofing)	1 cu yd	10	4.5
Yard Waste	1 sq ft	2900	1318.2
Green waste (shrubs, turf, etc.)	1 cu yd	500	227.3
Yard trimmings	1 cu yd	108	49.1

Recyclable Material List:

1. Appliances
2. Architectural detail elements (decorative trim, finials, railings, etc.)
Asphalt
3. Asphalt roofing shingles
4. Bricks, blocks, ceramic tile
5. Cabinetry
6. Cardboard
7. Concrete
8. Doors
9. Drywall
10. Fixtures and hardware (lighting, plumbing, bathtubs, sinks, doorknobs, etc.)
11. Glass
12. Glass windows in frames
13. Green waste (shrubs, trees, sod, etc.)
14. Metal (steel, aluminum, coppers, brass, etc.)
15. Metal – cable and wiring
16. Metal – window frames
17. Paper
18. Plastic – ridged (buckets, pails, etc.)
19. Plastic – soft (wrapping, bags, etc.)
20. Wood – structural (including pallets)
21. Wood – plywood, particle board, OSB, etc.
22. Wood – shingles/siding (shakes, etc.)
23. Wood – flooring