



City of Vancouver *Land Use and Development Policies and Guidelines*

Planning, Urban Design and Sustainability Department

453 West 12th Avenue, Vancouver, BC V5Y 1V4 | tel: 3-1-1, outside Vancouver 604.873.7000 | fax: 604.873.7100
website: vancouver.ca | email: planning@vancouver.ca | app: VanConnect

REZONING POLICY FOR SUSTAINABLE LARGE DEVELOPMENTS

Adopted by City Council on July 25, 2018

*Effective Date September 1, 2018**

Amended on XX, 2020

Note: This policy replaces Revised Action A-2 of the EcoDensity/EcoCity Revised Charter and Initial Actions

** Note: The affordable housing requirements in this policy apply to all large developments city-wide, except those areas that have recently adopted community plans (e.g. Cambie Corridor Unique Sites, large inclusionary housing projects in the West End) and large developments that have submitted a formal rezoning enquiry (application for rezoning advice) as of June 20, 2018. Those projects with an accepted letter of enquiry will proceed under the previous affordable housing requirements contained in the Rezoning Policy for Sustainable Large Developments amended December 16, 2014.*

This policy is effective September 1, 2018 and is mandatory for all large development rezoning applications accepted as complete on or after September 1, 2018.

Large developments are those that:

- (a) Involve a land parcel or parcels having a total site size of 8,000 sq. m (1.98 acres) or more, or
- (b) Contain 45,000 sq. m (484,375 sq. ft) or more of new development floor area

Projects that are limited in scope may be excluded from the requirements of this policy, including:

- (a) Text amendments to the existing zoning for minor changes to large developments
- (b) Projects that contain less than 4,700 sq. m (50,590 sq. ft) of new development.

In such cases, a request for partial or total exemption from the policy requirements should be discussed with the rezoning planner prior to rezoning application submission. Alternatives can be considered and, if warranted, some of the requirements may be waived by the Director of Planning in cases of hardship or conflict between requirements.

OVERALL POLICY INTENT

Large developments are expected to demonstrate leadership in sustainable design. While the policy is divided into sections for ease of readability and implementation, it is expected that large developments will use an integrated design approach and employ district-scale solutions where appropriate.

Note that City staff may involve external agencies such as TransLink, Vancouver School Board, and Vancouver Coastal Health to inform the rezoning review.

REQUIREMENTS

A. Sustainable Site Design

A.1 Objective

The proposal must contribute to meeting the City's Greenest City 2020 Action Plan targets of improving access to nature and planting trees. The proposal must also contribute to meeting the Urban Forest Strategy, Biodiversity Strategy and Rain City Strategy objectives

A.2 Intent

Principles of sustainable site design should be applied to large site land development and management practises. This can be done by retaining or mimicking natural processes and re-modelling healthy systems. Including nature in the city improves the health and wellbeing of the community, provides habitat, enhances ecosystem function and services, creates public open spaces for people to gather and socialize, and creates opportunities for people to directly experience nature in the city. Sustainable site design is directly linked to rainwater management and proposed designs should reflect this by providing integrated solutions that meet the requirements of Sections A and E. In addition to natural systems, large developments should ensure a rich mix of uses to bring the majority of daily needs within a 5 minute walk of residents, contributing to walkable communities with the associated health, social, and environmental benefits. Consideration of building orientation and shading will be important for meeting energy performance requirements of the Green Buildings Policy for Rezoning.

A.3 Requirement

A.3.1 Development projects should consider current and future need for parks and incorporate design responses suitable for the site. Provision of parks space and recreation amenities shall be determined on a case by case basis, in consultation with the Vancouver Board of Parks and Recreation (Park Board).

Park dedication will be required where the Park Board determines that the site size is able to support it. At times, the Park Board may consider park dedication on smaller sites. On smaller sites where park dedication is not achievable, sites should be evaluated to determine how they can contribute to improving the connectivity of the park system. Anticipated population density and site size will be significant drivers in determining appropriate land dedicated for park. The Park Board's 1992 Management Plan metric of 1.1ha/1000 residents will be updated as Vancouver Board of Parks and Recreation strategies are updated.

Reference should be made to Vancouver Board of Parks and Recreation city wide strategic plans to guide delivery of parks and recreation opportunities, these plans will assist in identifying requirements, including, but not limited to, site area per capita metrics.

A.3.2 At the parcel scale, maximize opportunities for a variety of open spaces that are contiguous, such as accessible rooftops, courtyards, or ground-level spaces. Non-accessible roofs should include extensive green roof treatment in combination with other sustainable features (e.g. solar panels, water storage). Accessible rooftops should prioritize common use (rather than private) with intensive green roof areas. Residential uses proposing significant private rooftop patios and decks may be subject to rooftop vegetative cover targets that strike a balance between hardscape and softscape ratio.

A.3.3 Setbacks to some underground parking structures will be required to achieve benefits such as:

- (a) access to continuous soil volumes for rainwater management practises
- (b) soil conservation by minimizing site disturbance
- (c) significant tree retention
- (d) establishing long lived trees, planting, habitat and food production

Note: Consideration to relax this requirement may be given to highly urbanized or sites with unique conditions causing conflict with this requirement.

- A.3.4 Sites should explore and identify opportunities to maximize ecosystem benefits, biodiversity, and habitat provision through the redevelopment. Sites with existing high value ecosystems or significant established habitat or biodiversity should explore retention and enhancement of those items where possible. This could include creating connections between adjacent existing parks or biodiversity hotspots, habitat corridors, etc.
- A.3.5 Protect and retain healthy site trees and their soil protection zones, where feasible.
- A.3.6 Projects should strive to meet the canopy cover and vegetative cover targets specified in the Sustainable Large Developments Admin Bulletin.
- A.3.7 Incorporate opportunities for long-living “legacy” trees and landscape approaches that mimic natural environments (such as forest succession and habitat) by providing adequate growing conditions to support large species (e.g. typology A as per the Sustainable Large Developments Admin Bulletin).
- A.3.8 Adequate soil volumes are required for all plantings. For soil depth requirements on development projects, refer to the most recent version of the Canadian Landscape Standard. In many cases, staff will require that the standards be exceeded, and specify a performance standard for soil volumes, depending on the particular application and site context. Also, refer to recommended topsoil/ growing medium requirements specified in the City’s Integrated Rainwater Management Plan
- A.3.9 To protect natural and planted areas from damage, residential buildings with an occupant load greater than 30 (excluding townhouse developments) shall have at least one dog relief area marked with a legible sign.

Note: A dog relief area is for the sole purpose of allowing dogs to relieve themselves. It is not intended to be an off leash space for socialising of dogs, and should not be fully enclosed. Dog relief areas are well-draining areas, ideally at grade, that are easily cleaned, designed and constructed to be low maintenance, and suitable for intensive use.

A.4 Submission Checklist

- A.4.1 At time of rezoning application, applicants must provide the following that show how items A.3.1 to A.3.9 will be achieved, noting that for large master-planned sites, staff may defer some detailed submission documents to development permit stage.
- (a) A Parks and/or Open Space plan(s), as per the Sustainable Large Developments Admin Bulletin.
 - (b) A schematic Site plan, Landscape plans and sections for each development parcel to verify the location of open spaces in relation to the parking garage setbacks, tree retention (where applicable) and excavation limits. Additional details can be provided in the design guidelines for the project.
 - (c) A written Landscape/ Planting Strategy with landscape plans showing details for soft and hard landscaping, including a plant palette for drought tolerant, native, or adaptive plant species.
 - (d) Provide an assessment of existing high value ecosystems or significant established habitat or biodiversity, both on-site and adjacent to the site.
 - (e) Incorporate retained and proposed elements on Open Space Plan or Landscape plan and written strategy to highlight ecological and biodiversity benefits, in response to the Biodiversity Strategy, Bird-Friendly Guidelines and Re-Wilding Strategy.
 - (f) Overlay sheets showing vegetation cover area and ratio percentage, including: overall vegetative cover locations and calculations,
 - (g) Separate calculations for types of vegetative cover, including soft landscape area, tree canopy, extensive and intensive green roof cover, (excluding hardscape area). Note: the calculations should forecast canopy cover of trees at time of maturity.
 - (h) An overall Tree Strategy, including: detailed arborist report documenting status of all existing trees, a written rationale for proposed retention plan, proposed tree planting plan, proposed tree management plan.

- (i) A Soils Strategy (written and plans) with an accurate soil volume overlay sheet to describe the area and type/quality of soils. This is to be informed by the Rainwater
- (j) Management Plan, but should consider soil conservation practises, low impact construction practises, site constraints, enhancement opportunities and landscape soil standards.

A.4.2 At time of development permit application, for individual development parcels, applicants must provide the following to show how requirements A.3.1. to A.3.9 will be achieved:

- (a) A detailed site plan, landscape plans, sections for each development parcel to verify the location of open spaces in relation to the parking garage setbacks, tree retention (where applicable) and excavation limits. Additional details can be provided in the design guidelines for the project.
- (b) A written rationale and Landscape Plan/Planting Plan verifying details for soft and hard landscaping, including a plant palette for drought tolerant, native, or adaptive plant species.
- (c) A written rationale and verification on the Landscape plan of retained and proposed ecological and biodiversity benefits, in response to the Biodiversity Strategy, Bird-Friendly Guidelines and Re-Wilding Strategy. This should include a detailed assessment of existing high value ecosystem resources or significant established habitat or biodiversity, both on-site and adjacent to the site.
- (d) Detailed overlay sheets showing vegetation cover area and ratio percentage, including: overall vegetative cover locations and calculations, separate calculations for types of vegetative cover, including soft landscape area, tree canopy, extensive and intensive green roof cover, (excluding hardscape area). Note: the calculations should forecast canopy cover of trees at time of maturity.
- (e) A detailed Arborist Report and Tree Management Plan;
- (f) A site specific soil volume overlay sheet to describe the area, volume and type/quality of soils with emphasis on specifications for tree planting, re-landscape specifications, special soils and rainwater infiltration/absorption.

B. Sustainable Food Systems

B.1 Objective

The proposal will contribute to increasing city and neighbourhood food assets and supporting local and sustainable food systems as outlined in the Greenest City 2020 Action Plan and the Vancouver Food Strategy.

B.2 Intent

The City will require the applicant to demonstrate the overall increase of food system assets. Food assets are defined as resources, facilities, services, and spaces that are available to residents of the city (either at the citywide or neighbourhood scale) that enable a healthy, just, and sustainable food system.

B.3 Requirements

B.3.1 Deliver a minimum of three food assets.

B.3.2 If site is greater than 40,470 sq. m (10 acres), food assets will be expected to have more significant presence and impact than for smaller sites. Arrangements must be made for programming and maintenance of food assets for a minimum of five years (starting from date of occupancy).

B.4 Submission Checklist

B.4.1 At time of rezoning application, applicants must provide the following to show how items B.3.1 to B.3.2 will be achieved:

- (a) Identification and description of a **minimum of three food assets** to be delivered
- (b) Description of how selected food assets fit with the site context
- (c) Early indication of how the food asset may be effectively programmed and maintained
- (d) Drawings showing food asset locations and adequate space provision and infrastructure

- (e) If site is greater than 40,470 sq.m (10 acres), provide a summary of arrangements for programming and maintenance of food assets for a minimum of five years

B.4.2 At time of development permit application, applicants must provide the following to show how items B.3.1 to B.3.2 will be achieved:

- (a) Detailed design and layout for the three food assets:
- (b) If site is greater than 40,470 sq.m (10 acres), provide documentation for operationalizing the asset, including any confirmed programmers, coordinators, or operators where relevant and outline of maintenance plans.

C. Green Mobility

C.1 Objective

The proposal will contribute to meeting the following citywide goals:

- (a) Transportation 2040 and Greenest City targets of having walking, cycling, and public transit trips make up at least 66% of all trips by 2040 and to reduce motor-vehicle kilometer traveled per resident by 20% from 2007 levels.
- (b) Greenest City target to reduce community-based greenhouse gas emissions by 33% by 2020 levels and the Renewable City target to reduce greenhouse gas emissions 80% below 2007 levels before 2050
- (c) Greenest City Clean Air target to always meet or beat the most stringent air quality guidelines.

C.2 Intent

The intent is to encourage sustainable transportation to:

- (a) Make walking and cycling safe, convenient and enjoyable
- (b) Support access to fast, frequent, and reliable transit
- (c) Reduce reliance on private automobiles
- (d) Accelerate the transition to electric vehicles, particularly for shared vehicles
- (e) Improve air quality and resident health

C.3 Requirements

C.3.1 Provide a Transportation Demand Management Plan as per the Parking Bylaw.

C.3.2 For sites 40,470 sq. m (10 acres) and larger, provide one publically-accessible fast charging hub with at least two chargers.

C.4 Submission Requirements:

At time of rezoning application, applicants must provide the following to show how items C.3.1 to C.3.3 will be achieved:

- (a) Submit a Transportation Demand Management Plan
- (b) Include a summary of electric vehicle charging provision in the project statistics.
- (c) Identify fast charging hubs on site plans, where applicable.

At time of development permit application, applicants must provide the following to show how items C.3.1 to C.3.3 will be achieved:

- (a) Submit a Transportation Demand Management Plan
- (b) Include a summary of electric vehicle charging provision in the project statistics.
- (c) Identify fast charging hubs on site plans, where applicable.

D. Potable Water Management

D.1 Objective

The proposal will contribute to the Greenest City goals of reducing potable water use by 33% from 2006 levels and meeting stringent water quality standards.

D.2 Intent:

The City of Vancouver is moving to an integrated water management approach, where all water within and around the city will be managed together as one system. This approach improves resiliency against climate change, allows the City to address current and future water demands and to protect aquatic systems. The City's objective for potable water management (conservation and efficiency) is to promote the sustainable use of the City's potable water supply, aspiring to offset growth impacts on water demand and avoid, defer, or minimise the financial, environmental and social costs associated with expanding potable water infrastructure. At a building scale, water conservation and efficiency can provide a beneficial reduction in water use by reducing waste, using less water to accomplish the same function or task and by using alternative non-potable sources water that match the appropriate level of water quality to its end use. Water conservation and efficiency can provide operation cost management benefits and on site supply resiliency.

D.3 Requirements

Integrated Water Management Approach

- D.3.1 An integrated approach to water management at the site scale should be used. Opportunities to conserve water and use it more efficiently, as well as methods for managing rainwater more effectively through green infrastructure and harvesting rainwater for non-potable use should be taken advantage of.

The integrated water management approach for the building(s) and the site shall be demonstrated through the production of a Water Balance for the building(s) and parcel that quantifies water inputs, uses, and outputs. This shall include input water sources including potable water, and rainwater, and outflows to the sanitary, combined, and storm sewers. The Water Balance shall be produced for the 'baseline' and 'proposed' scenarios and demonstrate compliance with the minimum potable water use reductions over baseline specified in D.3.2 and D.3.3, achieved by taking an integrated approach to water management at the site scale.

Note: The Water Balance and accompanying supporting data, calculations, plans, reports and other materials shall be prepared by subject matter experts (such as an Engineer, Geoscientist, or other professional) and signed/sealed by same, subject to review by the City. Refer to Sustainable Large Developments Admin Bulletin for baseline calculation assumptions and other details.

- D.3.2 A minimum 20 per cent reduction in indoor potable water use is to be achieved through any combination of water conservation, efficiency and/or onsite non-potable water re-use. The reduction in potable water use shall be demonstrated by provision of 'baseline' and 'proposed' indoor water use figures, which shall be calculated as outlined in the Sustainable Large Developments Admin Bulletin.
- D.3.3 A minimum 50 per cent reduction in outdoor potable water is to be achieved through a combination of water conservation, efficiency and/or onsite non-potable water re-use. The reduction in potable water use shall be demonstrated through the use of the City of Vancouver's Water Wise Landscape Guidelines and the provision of 'baseline' and 'proposed' outdoor water use figures, calculated using the most recent version of the LEED Outdoor Water Use Reduction Calculator or other approved method. Note that planted landscapes on structures will require irrigation and as such these areas must be included when preparing the landscape plan and determining outdoor water use.

D.4 Submission Checklist

At time of rezoning application, applicants must provide the following to show how items D.3.1 to D.3.3 will be achieved:

- (a) Provide a preliminary Water Balance for the building(s) and parcel with the content and supporting documentation as per the specifications outlined in the Sustainable Large Developments Admin Bulletin.

At time of development permit application, applicants must provide the following to show how items D.3.1 to D.3.3 will be achieved:

- (a) Provide a refined Water Balance for the building(s) and parcel using final proposed occupancy figures.

E. Rainwater & Groundwater Management

E.1 Objective

The proposal will contribute to the City's Rain City Strategy and Integrated Rainwater Management Plan's target of capturing and treating 90% of annual rainfall on public and private property. It also aims to preserve sewer capacity, reduce the risk of combined sewer overflows and maintain wastewater treatment effectiveness through the reduction of groundwater flows entering the sewer system in alignment with the Metro Vancouver 2010 Integrated Liquid Waste and Resource Management Plan.

E.2 Intent

Rainwater should be recognized as a resource to enhance the community and environment. The use of water sensitive site design and green infrastructure practices or source controls adds resiliency to the City's drainage system in a changing climate and keeps harmful stormwater pollutants from entering our receiving waters. Green infrastructure approaches are to be maximized on site to the greatest extent possible, following a tiered approach, with onsite infiltration and rainwater re-use and being the most preferred approach, and detention being the least preferred.

City sewers are limited in their capacity and are not designed to convey groundwater. Problems arise when developments such as those with deep basements and/or underground parkades that intercept the water table implement sub-drain systems that pump water to the sewer as a means to intercept groundwater seepage and limit hydrostatic forces on foundation walls and floor slabs. The intent of this policy is to prevent permanent groundwater discharges to the City sewers. Accordingly, developments are required to wholly manage groundwater onsite.

Definitions:

- (i) Groundwater: Water occurring below the surface of the ground within voids in a rock or soil matrix
- (ii) Water table: The level below which the soil or rock voids are saturated with water at a pressure of 1 atmosphere or greater

E.3 Requirements

E.3.1 All buildings and the site as a whole shall be designed such that no groundwater from systems at or below the yearly high water table is discharged to City sewers. Exceptions may be made for temporary construction dewatering.

E.3.2 A Hydrogeological Study shall be undertaken at the site that evaluates the potential for the proposed building(s) and site design to intercept the yearly high water table. The study shall be prepared by a subject matter expert, and include at minimum the items identified in the Groundwater Management Administrative Bulletin. If any groundwater interception is

proposed (post-construction), a Groundwater Management Plan must be submitted as part of the Hydrogeological Study. The Groundwater Management Plan will demonstrate that no permanent groundwater discharge to City sewers will occur, and must include at a minimum the items identified in the Groundwater Management Administrative Bulletin.

Note: If temporary construction dewatering is proposed, an Impact Assessment must be submitted as part of the Hydrogeological Study. The Impact Assessment will demonstrate that no significant negative impacts result from groundwater extraction, and must include at a minimum the items identified in the Groundwater Management Administrative Bulletin.

E.3.3 The rainwater management system for the building(s) and site shall be designed such that the peak stormwater flow rate discharged to the sewer under post-development conditions is not greater than the pre-development peak flow rate for the return period specified in the City of Vancouver's Intensity-Duration-Frequency curves (IDF curves). The City of Vancouver's 2014 IDF curve shall be utilized for pre-development design flow calculations, and the City of Vancouver's 2100 IDF curve, which takes into account the effects of climate change, shall be utilized for post-development design flow calculations. Refer to the Groundwater Management Administrative Bulletin for further details.

E.3.4 The first 24 mm of rainfall falling on all pervious and impervious surfaces across the site shall be retained on site by means of infiltration, evapotranspiration, and/or re use for the purpose of reducing the volume of rainfall entering the City's sewers. To achieve this on-site retention target the rainwater management system shall manage rainfall in accordance with the green infrastructure tiered approach outlined in the Sustainable Large Developments Admin Bulletin.

Note: Landscaped areas designed with the appropriate depth of growing medium over native subsoil may be deemed to meet the 24 mm retention criteria. Appropriate growing medium depths shall be based on providing sufficient storage volume within the media to meet the retention criteria as outlined in the Metro Vancouver Source Control Guidelines and meet horticultural needs as outlined in the Canadian Landscape Standard.

E.3.5 The first 24 mm of rainfall from all pervious and impervious surfaces shall be treated to remove 80% Total Suspended Solids (TSS) by mass prior to discharge from the site. For impervious surfaces with high pollutant loads, including roads, driveways, and parking lots the rainfall depth to be treated increases to the first 48 mm of rainfall. Treatment can be provided by either one green infrastructure practice or by means of a treatment train comprised of multiple green infrastructure practices that can be demonstrated to meet the 80% TSS reduction target.

E.4 Submission Checklist

At time of rezoning application, applicants must provide the following to show how items E.3.1 to E.3.5 will be achieved:

- (a) Provide a preliminary Rainwater Management Plan completed by a registered professional Engineer as per the specifications outlined in the Sustainable Large Developments Admin Bulletin.
- (b) Provide a preliminary Hydrogeological Study completed by a professional with experience in hydrogeology as per the specifications outlined in the Groundwater Management Administrative Bulletin.
- (c) Geotechnical Study shall be undertaken at the site that evaluates the potential and risks for onsite rainwater infiltration. The study shall be prepared by a subject matter expert and registered professional, and include at minimum:
 - (i) Infiltration testing at likely locations for infiltration practices and a proposed design infiltration rate;
 - (ii) Soil stratigraphy;
 - (iii) Depth to bedrock and seasonally high groundwater; and
 - (iv) Assessment of infiltration risks such as slope stability and soil contamination.

At time of development permit application, applicants must provide the following to show how items E.3.1 to E.3.5 will be achieved:

- (a) Provide a final signed and sealed Rainwater Management Plan completed by a professional engineer and signed and sealed Geotechnical Study prepared by a subject matter expert and registered professional. The content and supporting documentation is to be updated to reflect all material changes to the proposed development and new/refined supporting data, calculations, plans, reports and other materials following submission of the preliminary Plan and preliminary Geotechnical Study
- (b) Provide a final signed and sealed Hydrogeological Study, including Groundwater Management Plan and Impact Assessment, if applicable, completed by a certified professional with experience in hydrogeology. The content and supporting documentation is to be updated to reflect all material changes to the proposed development and new/refined supporting data, calculations, plans, reports and other materials following submission of the preliminary Hydrogeological Study submitted at time of Rezoning Application.

F. Zero Waste Planning

F.1 Objective

The proposal will contribute to the City's Greenest City target on Zero Waste and the objectives set out in the City's Zero Waste 2040 strategic plan with respect to waste avoidance, reduction, increased opportunities for material re-use and recycling, and reduced greenhouse gas emissions, and the overall goal of eliminating Vancouver waste disposed to landfill and incinerator by 2040

F.2 Intent

Projects are expected to be leaders in waste minimization and waste diversion. The ultimate objective is to facilitate the reorientation of peoples' habits and practices toward the City's zero waste target. The key objectives of a project's Zero Waste Design and Operations Plan are to foster ongoing waste reduction and increased diversion of products and materials from the waste stream through avoidance, re-use, composting and recycling. The intent is to achieve the following:

- (a) Infrastructure and systems to facilitate product repair and re-use.
- (b) Infrastructure and systems to enable the reduction and/or elimination of single-use items (e.g. dishwashers to enable use of reusable dishware).
- (c) Innovative and leading edge measures to support waste diversion and minimize the environmental impacts of waste collection activities, such as the use of a pneumatic collection system, high-capacity waste containers (i.e. deep burial), and communal composting.
- (d) Increased opportunities to re-use/donate/exchange materials.
- (e) Connections with charities and other non-profit organizations to support the rescue and redistribution of nutritious food that would otherwise be disposed.
- (f) Reduce waste operations-related environmental emissions, notably GHG emissions, through strategies such as reduced service-vehicle trips.

F.3 Requirements:

- F.3.1 Buildings must be designed with adequate and well-designed storage spaces/collection points for waste management materials, including multi-stream recycling, food scraps, and extended producer take back items - as described in the Sustainable Large Developments Admin Bulletin.
- F.3.2 Zero waste/waste management communications and education programs for residents and businesses must be created and implemented, including a minimum number of actions from the Sustainable Large Developments Admin Bulletin.
- F.3.3 Buildings must incorporate zero waste efforts beyond the provision of standard recycling bins. A number of additional zero waste actions are required, as per the Sustainable Large Developments Admin Bulletin.

F.3.4 Post Occupancy Plan Implementation Report. The applicant must provide the City with a report on implementation of the Zero Waste Design and Operations Plan within 18 months of occupancy. The implementation report shall include:

- (a) Types and quantities of waste diverted.
 - (b) Types and quantities of waste disposed.
 - (c) Names and locations of recycling processing facilities used.
 - (d) Description of on-site re-use options, product stewardship facilities, NGO drop-off bins, etc. and estimates of the amount of waste reduced through those initiatives.
 - (e) Description of annual education initiatives undertaken.
 - (f) Overview of exterior litter removal program.
- Summary of initiatives to reduce GHG emissions related to waste.
- (g) Summary of other initiatives undertaken to facilitate zero waste on-site.

F.4 Submission Checklist

At time of rezoning application, applicants must provide the following to show how items F.3.1 to F.3.4 will be achieved:

- (1) A Zero Waste Design and Operations Plan that includes the sections outlined below. The Plan should identify which zero waste actions are included in the design (see Sustainable Large Developments Admin Bulletin for details on required actions):
 - (a) Vision/goal statement
 - (b) Description of project and diversion objectives
 - (c) Space Allocations (site-wide and/or building scale)
 - (d) Operations
 - (i) Occupant/public education and outreach
 - (ii) Facility operations training and support
- (2) Acknowledgement of intent to provide a Plan Implementation Report post-occupancy, with details regarding who will be responsible for submitting.

At time of development permit application, applicants must provide the following to show how items F.3.1 to F.3.4 will be achieved:

- (a) A refined, detailed Zero Waste Design and Operations Plan for each building. The refined Plan should reference, in the Space Allocation section, plan drawings confirming physical spaces provided.
- (b) Prior to DP issuance, a Letter of Commitment to supply a Plan Implementation Report post-occupancy will be required with details regarding who will be responsible for submitting.

G. Affordable Housing

G.1 Objective

The proposal will contribute to meeting the affordable housing objectives and targets of the Housing Vancouver Strategy (2018-2027), in particular to achieve the target of 12,000 new units of social, supportive and co-op housing through the delivery mechanisms outlined in the Affordable Housing Delivery and Financial Strategy (2018-2027).

G.2 Intent

The intent of this policy is to clarify the minimum requirements and priorities for delivering affordable housing on large development sites while providing flexibility in delivery to ensure financial viability and to accommodate varying development contexts. The Affordable Housing Delivery and Financial strategy identifies large developments as important sites to contribute to the delivery of social and supportive housing options for lower-income households and housing for moderate-income households. The priority for securing dirt sites under this policy contributes to the City's ability to provide publicly-owned sites for affordable housing development in a sustainable way to meet both current and future housing needs.

The affordable housing requirements in this policy apply to all large developments city-wide, except those areas that have recently adopted community plans (e.g. Cambie Corridor Unique Sites, large inclusionary housing projects in the West End) and large developments that have submitted a formal rezoning enquiry (application for rezoning advice) as of June 20, 2018. Those projects with an accepted letter of enquiry will proceed under the previous affordable housing requirements (the 20% policy) contained in the Rezoning Policy for Sustainable Large Developments amended December 16, 2014.

G.3 Requirements

The inclusionary housing requirements for large developments are a minimum of 30% of total residential floor area set aside for affordable housing. This includes two components: a minimum 20% social housing target and minimum 10% moderate income housing target, as detailed below:

- G.3.1 A minimum of 20% of total residential floor area set aside for social housing, prioritizing the transfer of unencumbered dirt site(s) to the City of sufficient size to accommodate the 20% of floor area as social housing.

Note: If it can be demonstrated by the proponent that providing dirt site(s) is not possible due to project context, consideration will be given to delivery of all or a portion of the 20% floor area requirement as turn-key social housing designed in accordance with the Housing Design and Technical Guidelines, with ownership transferred to the City in the form of an Air Space Parcel.

- G.3.2 A minimum of 10% of total residential floor area set aside for affordable rental housing targeted to households with moderate incomes of \$30,000 to \$80,000/year provided in a variety of unit types (studios, 1, 2 and 3 bedrooms). Rental rates for these units will be secured through a Housing Agreement with the City.

The approach described above clarifies the City's policy priorities and outlines a standard approach to affordable housing delivery on large development sites. However, given the diversity amongst large development sites in Vancouver, the General Manager of Planning, Urban Design and Sustainability may recommend alternative approaches to Council where there is clear rationale and evidence in the context of individual projects that demonstrates an alternative approach is merited and would contribute to the goals of the Affordable Housing Delivery and Financial Strategy.

G.4 Submission Checklist

Refer to the Sustainable Large Developments Admin Bulletin.

H. Resilience

H.1 Objective

To better position the city to deal with significant shocks and stresses, particularly: earthquakes, extreme weather, extreme temperatures, sea level rise; and to assist in improving disaster preparedness and social connection. To meet the objectives of the Climate Change Adaptation Strategy, including the objective to increase resilience of the built environment to future climate conditions.

H.2 Intent:

The City of Vancouver is undertaking two initiatives related to resilience:

- (a) A broader Resilience Strategy, with forthcoming policies related to Vancouver specific shocks and stresses
- (b) The Climate Change Adaptation Strategy update, adopted by Council in 2012, the adaptation strategy is being updated with new climate projections and actions

While specific resilience policies are being developed, development projects should consider social and physical resilience and incorporate design responses where possible. Projects must identify building strategies that eliminate, reduce, and mitigate adverse impacts including those due to changing climate conditions.

H.3 Requirement

H.3.1 Show how resilience is incorporated in the design. Submit a resilience worksheet summarizing design features that improve resilience for the development.

Notes: that this submission should be treated as a public disclosure and the City may display some or all of the information publically. Submission of the completed worksheet will meet this requirement, no further action is required.

H.3.2 All buildings with an occupant load greater than 30 (except townhouse developments) shall have at least one accessible, self-closing drinking water fountain, located in a common area inside buildings at or near the level 1 entrance and visible from the exterior. The fountain must be capable of operating on city water pressure alone and without electricity. The apparatus must also include an appropriate fitting for filling water bottles. Fountains are to be installed on the shortest dead leg possible off of a line that is flowing regularly; this line would preferably be serving a washroom

H.4 Submission Checklist

At time of rezoning application, applicants must provide the following to show how items H.3.1 to H.3.2 will be achieved:

- (a) A preliminary resilience worksheet and text summary of any design features that contribute to site/building resilience.

At time of development permit application, applicants must provide the following to show how items H.3.1 to H.3.2 will be achieved:

- (a) An updated resilience checklist and text summary of any design features that contribute to site/building resilience.