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**SUSTAINABLE INFRASTRUCTURE AND BUILDINGS**

Effective Date: October 26, 2018

Approved By: MVRD/MVHC/GVWD/GVS&amp;DD

**Policy No. UT-007**

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**PURPOSE**

This Policy establishes standards for sustainable design and construction of Metro Vancouver infrastructure and buildings, in support of the following objectives:

- Reduce environmental impacts and increase social and environmental benefits;
- Demonstrate fiscal responsibility by considering the life cycle costs of assets; and
- Show leadership in sustainable design.

The Policy applies to new construction as well as significant upgrades and significant renovations.

**DEFINITIONS**

**“BC Energy Step Code”** refers to a voluntary provincial standard for achieving more energy-efficient buildings that go beyond the requirements of the BC Building Code, enacted in April 2017;

**“Eligible Infrastructure”** refers to water treatment plants, wastewater treatment plants, pump stations, reservoirs, transfer stations, waste-to-energy facilities, works yards, and other industrial facilities;

**“Integrated Design Process”** refers to a holistic approach to design and construction that involves collaboration of an inter-disciplinary team from building conception to post-occupancy, in order to optimize systems, minimize life cycle impacts, and maximize operational and maintenance savings;

**“Occupied Building”** refers to a building used by the public or with a primary function of housing or office space that is occupied by people on a regular basis;

**“Performance Level”** refers to the levels of achievement within a Rating System (e.g. Platinum, Gold, or Silver). These generally correspond to the number of points and/or credits achieved in different categories defined in the Rating System; and

**“Rating System”** refers to an existing, established rating system that provides a framework to guide and document the delivery of sustainable, high-performance infrastructure or buildings. For Eligible Infrastructure, Rating System refers to the current version of Envision. For Occupied Buildings, Rating Systems include the current versions of Leadership in Energy and Environmental Design (LEED), Living Building Challenge, and Passive House.

## POLICY

Metro Vancouver is committed to reducing the environmental impacts and increasing the social and environmental benefits of its infrastructure and buildings in a fiscally responsible manner. This Policy establishes standards for sustainable design and construction of Metro Vancouver infrastructure and buildings.

## SUSTAINABLE DESIGN AND CONSTRUCTION STANDARDS

Metro Vancouver will use Performance Levels within established Rating Systems or standards to guide and document the design and construction of sustainable, high-performance infrastructure and buildings.

- For **Eligible Infrastructure**, the Rating System is Envision and the Performance Level is Gold, and
- for **Occupied Buildings**, the Rating System is LEED and the Performance Level is Gold; in addition, Occupied Buildings will achieve, at a minimum, BC Energy Step Code Level 3.

Performance Levels or Rating Systems that vary from the above standards may be considered on a case-by-case basis.

## RATING SYSTEM CERTIFICATION

Rating System certification is not a requirement. However, certification will be pursued when required, such as through local governments as a condition of permitting or other orders of government as a condition of grant funding.

## PRIORITY PERFORMANCE OBJECTIVES

Metro Vancouver undertakes a broad range of infrastructure and building project types. As part of achieving Envision Gold or LEED Gold or equivalent, the project team will use an Integrated Design Process to develop project-specific sustainability goals that balance fiscal responsibility with the priority performance objectives listed below, as applicable for the project type.

1. Energy Efficiency and Greenhouse Gas (GHG) Emissions
  - a) Reduce operational energy consumption.
  - b) Reduce embodied energy of priority construction materials.
  - c) Reduce lifecycle GHG emissions.
  - d) Generate or recover renewable energy on-site.
  - e) Install advanced energy metering.
  - f) Facilitate accessibility to low-carbon and active modes of transportation.
2. Materials and Resource Allocation
  - a) Use reclaimed or recycled materials in construction.
  - b) Divert construction and demolition waste from landfills.
  - c) Reduce potable water use and overall water use.

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- d) Minimize the impact on stormwater runoff quantity, rate and quality.
3. Ecological Health
- a) Select site to protect sensitive ecosystems and preserve and enhance habitat function.
  - b) Develop and implement an invasive species management plan.
  - c) Preserve soils and restore disturbed areas with appropriate soil to support healthy vegetation.
  - d) Prevent pollutants from contaminating surface water and groundwater.
  - e) Reduce air pollutant sources during construction.

### **OTHER INFRASTRUCTURE AND BUILDING PROJECTS**

Projects that fall outside the definitions of Eligible Infrastructure and Occupied Buildings, such as linear infrastructure, shall be evaluated to determine the feasibility of incorporating the priority performance objectives listed above that are applicable to those projects.