



**BOMA** Building  
**BEST<sup>®</sup>** Environmental  
Standards

**BOMA BEST Sustainable  
Buildings 3.0**

**Enclosed Shopping Center  
Questionnaire**



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## BUILDING INFORMATION

1. Is the building being recertified?
  - Yes
  - No
2. In what era was the building constructed?
  - Prior to 1900
  - 1900-1950
  - 1951-1989
  - 1990-2004
  - After 2005
3. Please choose the preferred unit of area for building measurements.
  - Square metres
  - Square feet
4. What is the building's interior floor area?

Floor area measurements have many different names (Gross Measured Area, Interior Gross Area, and Exterior Gross Area). For the purposes of BOMA BEST, the term Gross Floor Area (GFA) will be used to refer to the floor measurement that includes the following areas:

- Lobbies
- Tenant Areas
- Common Areas
- Meeting Rooms
- Break Rooms
- Atriums (ground floor only)
- Restrooms
- Elevator Shafts
- Stairwells
- Mechanical Equipment Areas
- Basements
- Storage Rooms

The following spaces should not be included in this measurement:

- Exterior spaces
- Balconies
- Patios
- Exterior Loading Docks
- Driveways
- Covered Walkways
- Outdoor Courts (Tennis, Basketball, etc.)
- The interstitial plenum space between floors (which house pipes and ventilation)
- Crawl Spaces
- Parking (indoor or outdoor)

5. Does the Gross Floor Area provided include any areas that should have been excluded?



Please list the areas that should have been excluded. You will not be able to receive points for your Energy Star Score or Water Use Intensity unless these spaces are excluded.

6. What measurement standard was used to obtain the Gross Floor Area?
  - BOMA 2010 Retail Standard – This measurement includes the parking areas. These must be excluded from the values entered here.
  - BOMA 2009 Gross Area Standard – This measurement includes the parking areas. These must be excluded from the values entered here.
  - Other that provides an accurate measurement of the required spaces

If None is selected, indicate how the floor area is known.

7. Where is the building located?
  - Central Business District (CBD)
  - Suburban Area
  - Rural Area
8. How many floors are there?
  - Above ground
  - Below ground

Enter the number of floors for each in the space provided.

9. Is there mechanically ventilated underground parking?
  - Yes
  - No

Enter number of levels.

10. Is the building owner-occupied or leased?
  - Owner-occupied
  - Owner-occupied and leased
  - Leased (1-5 tenants)
  - Leased (5+ tenants)
  - Other

11. What was the occupancy rate over the past 12 months (in percentage)?

*Occupancy Rate* refers to the amount of leasable area that is leased divided by the total leasable area in the building (i.e. it is the percentage of the total rentable space that has been occupied)

12. What are the building hours of operation?
  - Monday to Friday:
  - Saturday:
  - Sunday:

Provide hours of operation when the building is 75% occupied.

13. Who are the Anchor Tenants? Describe

14. What types of other use are present and what are their respective areas?

Enter area in the unit previously selected.

- Restaurant/food court area



- Hotel
- Gym
- Other

15. Provide a brief general description of the building.

Provide a short description of the building. Note massing, placement on the lot, landscaping, any significant physical, historical or functional characteristics, and any significant renovations or retrofits within the last five (5) years. (Document Upload)



## BEST PRACTICES



## ENERGY

BEST Practice 1	Is a Preventative Maintenance Program in place at the building?	
<b>Explanation &amp; Evaluation</b>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> Preventative maintenance recognizes that certain systems and their components require scheduled periodic maintenance, as well as overhauling or replacement after a certain age, at certain intervals, or due to specific causes. The Preventative Maintenance Program is a systematic approach that outlines what equipment under the landlord’s control must be reviewed, the corrective action that must be taken and how frequently this must occur.</p> <p><b>Requirements:</b> The Preventative Maintenance Program must outline when preventative and corrective maintenance is required to be performed on the building’s equipment. Demonstration of implementation is required. The program must have been updated in the last five (5) years. Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b> Preventative maintenance involves inspecting and testing units for operation and faults. Corrective maintenance involves repairing a unit to bring it back to operability at its most efficient capability.</p>	
<b>Scoring</b>	Yes	Certification is permitted
	No	Certification is not permitted

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BEST Practice 2	Has an ASHRAE Level 1 Energy Assessment been conducted in the last five (5) years?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> An ASHRAE Level 1 assessment refers to a simple audit of the building’s configuration and energy systems. It focuses on the identification of the potential for energy efficiency improvements.</p> <p><b>Requirements:</b> An ASHRAE Level 1 Energy Assessment must have been conducted on the building in the last five (5) years.</p> <p>The Energy Assessment report must contain the following elements:</p> <ul style="list-style-type: none"> <li>• Analysis of energy consumption through monthly utility bill review and benchmarking. For benchmarking purposes utility bills must cover a minimum of 12 months of continuous data. If major renovations or retrofits to the building systems have occurred, use data after the time of major renovation, if possible. Major renovations include upgrades to mechanical systems, upgrades to building envelope systems and electric system upgrades including procurement of new lighting for more than 50% of the building’s lighting fixtures.</li> <li>• List major current performance of energy-consuming equipment.</li> <li>• Prioritized list of proposed low-cost and no cost energy conserving measures (ECMs) to enable greater energy efficiency.</li> <li>• Provision of estimates of financial savings the building owner will realize as a result of investing in ECMs. At a minimum, savings and cost estimates should be based on a generalized understanding of the systems.</li> </ul> <p>Data used for this assessment must represent complete building data for all building spaces and uses.</p> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b> The BOMA-Accepted Equivalent is available for buildings where 75% or more of the building’s energy is purchased directly by tenants or if the building has been occupied for fewer than two (2) years.</p>	
<p><b>Scoring</b></p>	Yes	Certification is permitted
	BOMA Accepted Equivalent	Certification is permitted
	No	Certification is not permitted

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BEST Practice 3	Is an Energy Management Plan in place at the building?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> Energy management is the continuous process of managing behavioral, organizational and technical change to improve the building’s energy performance.</p> <p><b>Requirements:</b> The Energy Management Plan must have been reviewed and updated in the last three (3) years.</p> <p>Create a plan that identifies Energy Conservation Measures (ECM) for the building (such as those provided in the Energy Audit, as available). For each initiative, identify the following:</p> <ul style="list-style-type: none"> <li>• Whether a particular ECM will be pursued or not;</li> <li>• The person responsible for the implementation of the ECM;</li> <li>• The budget associated with the ECM; and</li> <li>• A timeline for completion.</li> </ul> <p>If a particular measure will not be followed-up for the building, indicate why this is the case. Although demonstration of implementation is preferable, it is not necessary. The plan can be common to a portfolio or campus of buildings however building-specific information is required.</p> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b> In the case of Recertification, building managers are expected to demonstrate which ECMs listed in the previous Reduction Management Plan have been implemented since certification.</p> <p>The BOMA-Accepted Equivalent is available for buildings that have been occupied for fewer than two (2) years.</p>	
<p><b>Scoring</b></p>	Yes	Certification is permitted
	BOMA Accepted Equivalent	Certification is permitted
	No	Certification is not permitted

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BEST Practice 4	Is an energy reduction target in place at the building?	
<b>Explanation &amp; Evaluation</b>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> Clear, long-term outcome-oriented targets can help shape expectations and create the conditions in which all actors have the confidence to develop solutions to common problems. By establishing targets and indicators, progress can be assessed and appropriate actions taken.</p> <p><b>Requirements:</b> An energy reduction target must be identified along with a timeframe for completion.</p> <p>Targets must be put into writing, signed by senior management and reviewed annually, as well as be integrated into the Energy Management Plan.</p> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b> The energy reduction target can be established to encompass either all utilities as a whole or divided into each type (electricity, gas) of utility under the property owner’s control.</p> <p>In the case of Recertification, building managers are expected to demonstrate what targets have been reached since certification.</p> <p>The BOMA-Accepted Equivalent is available for buildings where 75% or more of the building’s energy is purchased directly by tenants.</p>	
<b>Scoring</b>	Yes	Certification is permitted
	BOMA Accepted Equivalent	Certification is permitted
	No	Certification is not permitted

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## WATER

BEST Practice 5	Has a Water Assessment been conducted in the last five (5) years?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> A water assessment refers to a simple audit of the building’s configuration and water systems. It focuses on the identification of potential water conserving measures.</p> <p><b>Requirements:</b> A water assessment must have been conducted on the building in the last five (5) years.</p> <p>The water assessment report must contain the following elements:</p> <ul style="list-style-type: none"> <li>• Analysis of water consumption through monthly utility bill analysis and benchmarking. For benchmarking purposes utility bills must cover a minimum of 12 months of continuous data.</li> <li>• List of current performance of water-consuming equipment.</li> <li>• Prioritized list of proposed low-cost and no cost water conserving measures (WCM's) to enable greater water efficiency.</li> <li>• Provision of estimates of financial savings the building owner will realize as a result of investing in WCM.</li> </ul> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b> The BOMA-Accepted Equivalent is available for buildings where 75% or more of the building’s energy is purchased directly by tenants or if the building has been occupied for fewer than two (2) years.</p>	
<p><b>Scoring</b></p>	Yes	Certification is permitted
	BOMA Accepted Equivalent	Certification is permitted
	No	Certification is not permitted

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BEST Practice 6	Is a Water Management Plan in place at the building?	
<b>Explanation &amp; Evaluation</b>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> Water management is the continuous process of managing behavioural, organizational and technical change to improve the building’s water performance.</p> <p><b>Requirements:</b> The Water Management Plan must have been reviewed and updated in the last three (3) years. Create a plan that identifies Water Conservation Measures (WCM) for the building (such as those provided in the Water Assessment, as available). For each initiative, identify whether or not a particular WCM will be pursued, the person responsible for its implementation, the associated budget and a timeline for completion. If a particular measure will not be followed-up for the building, indicate why this is the case.</p> <p>Although demonstration of implementation is preferable, it is not necessary. The plan can be common to a portfolio or campus of buildings however building-specific information is required.</p> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b> In the case of Recertification, building managers are expected to demonstrate which WCMs listed in the previous Water Management Plan have been implemented since certification.</p> <p>The BOMA-Accepted Equivalent is available for buildings that have been occupied for fewer than two (2) years.</p>	
<b>Scoring</b>	Yes	Certification is permitted
	BOMA Accepted Equivalent	Certification is permitted
	No	Certification is not permitted

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## AIR

BEST Practice 7	Is an Indoor Air Quality Monitoring Plan in place at the building?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> Indoor Air Quality (IAQ) is achieved through the selection of appropriate and achievable air quality goals, regular surveillance and testing to verify HVAC performance and hygiene, efficient and effective procedures for addressing occupant IAQ concerns and training for all property management and maintenance personnel.</p> <p><b>Requirements:</b> The Air Quality Monitoring Plan must contain the following elements:</p> <ul style="list-style-type: none"> <li>• Determine and state the IAQ goals for the building including targets for air quality parameters such as carbon dioxide, carbon monoxide, temperature, relative humidity, dust, volatile organic compounds and other known contaminants of concern.</li> <li>• Set a schedule for HVAC inspection and maintenance tasks to ensure good hygiene (cleanliness, no standing water, etc.).</li> <li>• Identify HVAC systems that will impact the IAQ goals listed above.</li> <li>• Create a preventative maintenance schedule for these systems (may overlap with the Preventative Maintenance Program BEST Practice). Equipment and systems should be checked at least annually.</li> <li>• Develop procedures for responding to occupant IAQ concerns, including identifying key personnel and their responsibilities, contact information, documentation, and follow-up plan (may overlap with Occupant Service Request Program BEST Practice).</li> <li>• Identify training requirements for property management and building maintenance staff relating to IAQ. and</li> <li>• Review the plan annually and update as necessary.</li> </ul> <p>Where ventilation systems are owned and maintained by the tenants, the building owner/manager must provide an Indoor Air Quality Monitoring Plan for their use.</p> <p>Although demonstration of implementation is preferable, it is not necessary. The plan can be common to a portfolio or campus of buildings however building-specific information is required.</p> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b></p> <p>The BOMA-Accepted Equivalent is available for buildings where ventilation systems are owned and maintained exclusively by the tenants. In these cases, the building owner or manager must provide tenants with an Indoor Air Quality Monitoring Plan for their use.</p> <p>Refer to the USEPA I-BEAM for more information on developing an IAQ Monitoring Plan &lt; <a href="https://www.epa.gov/indoor-air-quality-iaq/indoor-air-quality-building-education-and-assessment-model">https://www.epa.gov/indoor-air-quality-iaq/indoor-air-quality-building-education-and-assessment-model</a> &gt;</p>	
<p><b>Scoring</b></p>	Yes	Certification is permitted
	BOMA Accepted Equivalent	Certification is permitted
	No	Certification is not permitted

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## COMFORT

BEST Practice 8	Is an Occupant Service Request Program in place?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> Service request for maintenance are used to identify issues pertaining to the building. Having a formal process in place allows tracking of various Key Performance Indicators such as critical equipment maintenance and critical building maintenance.</p> <p><b>Requirements:</b></p> <p>Establish an Occupant Service Request Program for the building. The Program must include the following components:</p> <ul style="list-style-type: none"> <li>• A mechanism to ensure that all service requests are reviewed and acted upon within 1-2 weeks, unless otherwise specified (e.g., critical area or critical equipment).</li> <li>• Information on the origins of the service request;</li> <li>• Information on the status of the service request (e.g. in progress, resolved, etc.); and</li> <li>• Information on the corrective action taken.</li> </ul> <p>Documentation must be kept on file for a minimum of three (3) months. Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b> Service requests can be made by all building occupants, including tenants, visitors and staff.</p>	
<p><b>Scoring</b></p>	Yes	Certification is permitted
	No	Certification is not permitted

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## HEALTH AND WELLNESS

BEST Practice 9	Is a Hazardous Building Materials Management Program in place at the building?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> The presence and condition of hazardous building materials must be identified and managed for the safety of building occupants.</p> <p><b>Requirements:</b> The Hazardous Building Materials Management Program must include:</p> <ul style="list-style-type: none"> <li>• Inventory of all building materials known or presumed to contain asbestos, lead, PCBs, silica and mercury (at a minimum);</li> <li>• Inspection of known/presumed asbestos-containing materials within the past 12 months, where present;</li> <li>• Inspection of materials known/presumed to contain lead, mercury, PCBs or other hazardous building materials or equipment within the last three (3) years, where present;</li> <li>• Corrective actions identified during the inspections completed;</li> <li>• Management protocols for unexpected disturbance of asbestos;</li> <li>• Pre-construction assessment of materials and equipment impacted by renovation activities for the presence of hazardous building materials;</li> <li>• A proactive plan for the abatement of accessible asbestos-containing materials (including in the areas above acoustic tiles) and PCB-containing equipment and ballasts;</li> <li>• Awareness training for building maintenance staff on asbestos safety; and</li> <li>• Review and updating as changes occur to the location of hazardous materials in the building, at a minimum every three (3) years.</li> </ul> <p>As with any management program, one should strive for continuous improvement. Review of the management program must occur as changes to the responsibilities, personnel, plans, quantity or condition of the materials occur.</p> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p>	
<p><b>Scoring</b></p>	<p>Yes</p>	<p>Certification is permitted</p>
	<p>No</p>	<p>Certification is not permitted</p>

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BEST Practice 10 (A)	Is a Hazardous Chemical Products Management Program in place at the building?	
<b>Explanation &amp; Evaluation</b>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> Identification and management of chemical products in use or storage at the building is essential to manage health hazards and safety risks, as well as potential environmental impacts.</p> <p><b>Requirements:</b> The Hazardous Chemical Products Management Program must include:</p> <ol style="list-style-type: none"> <li>1. Periodic inventory of in-use, base-building hazardous chemical products (at least annually, or as procurement is revised);</li> <li>2. Storage of chemical products in accordance with product Safety Data Sheets</li> <li>3. Safety Data Sheets available for all hazardous chemical products dated within the past three (3) years;</li> <li>4. Chemical products labeled in accordance with WHMIS/GHS/HAZCOM</li> <li>5. Training of building maintenance staff (including safe handling and use of chemicals pertaining to their work, symbol recognition, safety data sheets, first aid and spill response, storage and disposal);</li> <li>6. Review and updating of the Plan as products are changed and at least annually.</li> </ol> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific. Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p>	
<b>Scoring</b>	Yes	Certification is permitted
	No	Certification is not permitted

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## CUSTODIAL

BEST Practice 11	Is a Green Cleaning Program in place at the building?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> A Green Cleaning Program emphasizes the use of environmentally preferred products, maintenance of cleaning equipment and effective cleaning practices.</p> <p><b>Requirements:</b> Develop a Green Cleaning Program for the facility. It must include the following components:</p> <ul style="list-style-type: none"> <li>• Standard operating procedures (SOP) for cleaning activities.</li> <li>• Cleaning products certified by a third party.</li> <li>• Cleaning logs (describing the activities carried out, the times they were carried out and by whom).</li> <li>• Training for building cleaning staff.</li> <li>• Annual review and updating.</li> <li>• Cleaning product must be certified by a third-party (EcoLogo or Green Seal) to reduce both occupant and building cleaning staff exposure.</li> </ul> <p>Where custodial services are contracted, communicate custodial goals and green cleaning initiatives to the contracted company. The contracted company must provide the building owner/manager with detailed maintenance SOPs. Confirm the contracted company is meeting these objectives through detailed cleaning logs supplied by the contractor.</p> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b> The BOMA-Accepted Equivalent is available for buildings where cleaning is performed exclusively by individual tenants. In these cases, the building owner or manager must provide tenants with a guidance document regarding developing a Green Cleaning Program for the building.</p>	
<p><b>Scoring</b></p>	<p>Yes</p>	<p>Certification is permitted</p>
	<p>BOMA Accepted Equivalent</p>	<p>Certification is permitted</p>
	<p>No</p>	<p>Certification is not permitted</p>

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## WASTE

BEST Practice 12 (A)	Is a Source Separation Program in place at the building?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> A Source Separation Program facilitates the separation of waste at the point of generation for recycling and waste destined for disposal.</p> <p><b>Requirements:</b> The source separation program must, at a minimum, include the collection of paper, metal cans, glass, plastic containers and cardboard unless there is no regional collection service for a specific material category (demonstrate that this is the case) and the separate collection of waste destined for disposal.</p> <p>The source separation program must consists of the following components:</p> <ul style="list-style-type: none"> <li>• Facilities that are adequately sized for the collection, handling and storage of source-separated wastes. The collection and storage of the various materials destined for recycling may be co-mingled based on the requirements of the local markets as long as they are always kept separate from waste destined for disposal and as long as the separation is done at a Materials Recycling Facility and not at a transfer station.</li> <li>• The provision of information and guidance to users (e.g., signs), potential users and custodial staff describing the expectations of the program and encouraging effective source separation of waste to minimize contamination and to ensure full use of the program.</li> <li>• Measures to ensure that the source-separated collected wastes are removed by a licensed service provider and taken to destination sites designed for the proper processing and/or disposal of each material category (reports from the service provider should transparently demonstrate this).</li> <li>• Reasonable efforts are made to ensure that the separated waste is reused or recycled.</li> </ul> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> The contamination of recyclable material does not disqualify this requirement, though continued contamination should be addressed in the Waste Reduction Work Plan.</p> <p>Off-site sorting such as at a transfer station from a single common receptacle does not qualify as source-separation in the context of the BOMA BEST application.</p> <p>Buildings that have achieved a certification through the 3RCertified program can answer “Yes” and show their certification to the verifier. 3RCertified &lt;<a href="http://3rcertified.ca/home">http://3rcertified.ca/home</a>&gt; is a certification program for buildings in the Industrial, Commercial and Institutional (IC&amp;I) sectors that reviews how organizations manage solid waste reduction and diversion operations. It is available across Canada.</p> <p>Although demonstration of implementation is preferable, it is not necessary. The plan can be common to a portfolio or campus of buildings however building specific information is necessary in most cases.</p>	
<p><b>Scoring</b></p>	Yes	Certification is permitted
	No	Certification is not permitted

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BEST Practice 13	Has a Waste Audit been completed for the building in the past three (3) years?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Requirements:</b> Following the <a href="#">BOMA BEST Waste Auditing Requirements</a>, the Waste Audit must address:</p> <ul style="list-style-type: none"> <li>• The time period and duration of the waste sampling;</li> <li>• The sample size (representing at least 10% of the total building’s waste and recycling materials);</li> <li>• Details specific to each collected waste stream; and</li> <li>• How the waste data was categorized, evaluated and analyzed based on its composition (the site must be equipped with a minimum number of work tables, precise scales and mobile containers for weighing the waste).</li> </ul> <p>The resulting Waste Audit Report must include:</p> <ul style="list-style-type: none"> <li>• Summary of the sampling protocol and methodology used.</li> <li>• Annualization of daily waste as well as other waste stream such as construction, renovation and demolition (CRD) waste and hazardous materials.</li> <li>• Total of each waste stream and overall total.</li> <li>• Diversion rate.</li> <li>• Capture rate.</li> <li>• Summary of recommendations for improving waste diversion.</li> </ul> <p>The audit must be performed by a person with adequate qualifications as well as suitable training and experience.</p> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b> In the case of tenant-managed waste streams, these need not be included in the waste audit however best practices recommend that tenants provide annual generation and disposal weight reporting for all materials that they collect independent of the building system in order to calculate current diversion. If tenant-managed waste streams are included, both the divertible materials and disposal material must be included. If tenant-managed waste streams are included in the diversion rate, they must also be included in the audit.</p> <p>The Waste Audit must be performed at the building and must not be based on generalized waste facility averages.</p> <p>Buildings that have achieved a certification through the 3RCertified program can answer “Yes” and show their certification to the verifier. 3RCertified <a href="http://3rcertified.ca/home">http://3rcertified.ca/home</a> is a certification program for buildings in the Industrial, Commercial and Institutional (IC&amp;I) sectors that reviews how organizations manage solid waste reduction and diversion operations. It is available across Canada.</p>	
<p><b>Scoring</b></p>	Yes	Certification is permitted
	No	Certification is not permitted

(Document Upload)



BEST Practice 14	Is a Waste Reduction Work Plan in place at the building?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> A waste reduction plan an action plan prepared in to reflect the updated waste audit.</p> <p><b>Requirements:</b> The Waste Reduction Work Plan must consist of the following components:</p> <ul style="list-style-type: none"> <li>• The Waste Reduction Work Plan must be prepared in conjunction with the waste audit (conducted in the past three (3) years). Its content should reflect the updated audit. The waste reduction work plan must address all recycling streams in the building, describing ways to increase recycling levels and reduce the waste generated.</li> <li>• The Waste Reduction Work Plan must include, to the extent that is reasonable, plans to address the 3R's (Reduce, Reuse, and Recycle) hierarchy: Reduction first, followed by Reuse and then Recycling. The waste reduction work plan may fit under a larger waste management plan, but must be action oriented and include identification and planning for the prevention, reduction and diversion of each identified waste stream.</li> <li>• The Waste Reduction Work Plan sets out, for each initiative or action, those who will implement that action or initiative, timelines for implementation and the expected results. The results should be expressed as a specific diversion target, and can be an overall target for all combined waste categories or a target per waste material category.</li> <li>• The Waste Reduction Work Plan must be available and communicated to all members of management, the maintenance, custodial and contracted cleaning staff, and all tenants or occupants including food service providers and other retail tenants (for example via the building's website or intranet service, posting in waste and recycling depot, or in the tenant manual).</li> </ul> <p>The Waste Reduction Work Plan must be reviewed every three (3) years to reflect changes in the building strategy, challenges and achievement. In the case of a BOMA BEST Recertification, previous Waste Reduction Work Plans must be reviewed to examine whether previous goals and objectives have been met.</p> <p>Although demonstration of implementation is preferable, it is not necessary. The plan can be common to a portfolio or campus of buildings however building-specific information is required.</p> <p><b>Additional Information:</b> The Waste Reduction Work Plan targets the collection programs for which the building manager or owner is responsible.</p> <p>Buildings that have achieved a certification through the 3RCertified program can answer "Yes" and show their certification to the verifier. 3RCertified &lt;<a href="http://3rcertified.ca/home">http://3rcertified.ca/home</a>&gt; is a certification program for buildings in the Industrial, Commercial and Institutional (IC&amp;I) sectors that reviews how organizations manage solid waste reduction and diversion operations. It is available across Canada.</p>	
<p><b>Scoring</b></p>	Yes	Certification is permitted
	No	Certification is not permitted

(Document Upload)



## STAKEHOLDER ENGAGEMENT

BEST Practice 15	Is an overarching Environmental Policy guiding the building's management?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> An Environmental Policy or vision establishes the direction building management wishes to take in regards to future improvements in the building's environmental performance. Such formal statements can guide decision making and establish credible leadership to adequately address environmental issues that could result in improved operations, reductions in operational expenses, and improved management-tenant relationships.</p> <p><b>Requirements:</b> Create an overarching Environmental Policy (or vision) which contains the following components:</p> <ul style="list-style-type: none"> <li>• A specific objective or vision statement for each of the ten (10) categories in the BOMA BEST assessment. In each case, provide a clear objective or vision in regards to what your organization (or building) hopes to achieve within a specified timeline (e.g. achieve a 5% reduction in energy consumption in five years; perform the building's first air quality audit, etc.).</li> <li>• Enter the vision statement for each assessment category in the space provided in the online portal.</li> </ul> <p><b>Additional Information:</b> The statements provided for each category can pull directly from objectives established in previous questions in this BOMA BEST assessment. This BEST Practice seeks to bring them together into an overarching document.</p> <p>Demonstration of implementation is not required, nor is building-specific information. The policy can be common to a portfolio or campus of buildings.</p>	
<p><b>Scoring</b></p>	Yes	Certification is permitted
	No	Certification is not permitted

(Document Upload)



BEST Practice 16	Is an Occupant Environmental Communication Program in place at the building?	
<p><b>Explanation &amp; Evaluation</b></p>	<p>This question is a BEST Practice and is required for all levels of certification.</p> <p><b>Description:</b> Increasing building occupant awareness and engagement in environmental and sustainable practices can have a significant positive or negative impact on the performance of the building. Improving the environmental performance of the building can lead to many positive outcomes for building management, staff and tenants, including but not limited to lower operational costs, lower utility bills, improved indoor air quality, improved management-tenant relationships, etc.</p> <p><b>Requirements:</b> The Occupant Environmental Communication Program must address the following components:</p> <ul style="list-style-type: none"> <li>• Selecting the communication strategies that will be used;</li> <li>• Selecting the activities that will be encouraged;</li> <li>• Identifying responsible individuals among management for moving each aspect of the plan forward; and</li> <li>• Creating a timeline for implementation.</li> <li>• Demonstrate that at least two (2) communication strategies have been implemented in the past 12 months.</li> </ul> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p>Consult the <a href="#">BEST Practice Guidelines</a> for a complete list of requirements concerning this BEST Practice.</p> <p><b>Additional Information:</b> <i>Occupants</i> are the permanent/regular occupants of the building, such as tenants and staff. If the building is owner-occupied, surveys should be directed to staff. Visitors to the building are not considered occupants.</p>	
<p><b>Scoring</b></p>	Yes	Certification is permitted
	No	Certification is not permitted

(Document Upload)



## 1.0 ENERGY





## 1.1 DEMONSTRATION OF INTENT

01.01.01	<b>Does building staff participate in a formalized training program focused on energy efficiency?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Provide annual training and educational opportunities for building staff to ensure their knowledge and skills remain up-to-date on the following topics:</p> <ul style="list-style-type: none"> <li>• Monitoring and efficiency</li> <li>• Preventative and corrective maintenance</li> </ul> <p><b>Requirements:</b> List the external training courses or internal training completed by operations staff in the past two (2) years and those planned during the next 12 months. Training may be provided by equipment manufacturers, through college courses, designation courses (e.g., offered by BOMI Canada &lt; <a href="http://www.bomicanada.com/en-us/coursesdeliveryoptions/designations.aspx">http://www.bomicanada.com/en-us/coursesdeliveryoptions/designations.aspx</a>&gt;), online courses (e.g., <a href="http://www.bomalearning.com/home2">BOMA e-energy training &lt; http://www.bomalearning.com/home2&gt;</a>), and/or by qualified building staff members.</p> <p>Records (such as completion certificates, transcripts, etc.) must be kept outlining who has taken what courses, when they were taken, and if they are working towards a certain designation (such a Certified Energy Manager).</p> <p>Training must be provided on the equipment and systems for which the property owner is responsible. If duties are sub-contracted the above information must be provided for personnel assigned or have visited the site.</p> <p>The level of training can be adjusted to reflect the level of owner responsibility for building systems. For example, in the case of RTUs owned by the property manager but controlled and maintained by the tenant, training could focus on equipment start-up, commissioning, operation (to advise tenants on operation) and specification. In the case where the RTUs are owned and maintained by the property manager but controlled by the tenant, training could focus on the above plus maintenance.</p> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> “Monitoring and efficiency” refers to sub-metering and reviewing utility bills to track equipment performance over time to ensure optimal operation. .  “Preventative maintenance” involves inspecting and testing units for operation and faults.  “Corrective maintenance” involves repairing a unit to bring it back to operability at its most efficient capability.</p> <p>Over time, technologies and preferred practices in building operations and maintenance change. Providing regular professional development opportunities is a good way to help retain staff. Offering training and educational opportunities related to environmental/sustainable building performance not only benefit staff, but improve the performance of the building when staff training is applied at the building level. Staff should receive certificates of completion for each training/educational opportunity they complete as this signals that they were in attendance, and achieved the requirements set out by the trainer/educator.</p> <p>Select Not Applicable if all HVAC equipment is owned, managed and maintained solely by tenants.</p>	
<b>Scoring</b>	Yes	14/14
	No	0/14
	N/A	0/0

(Document Upload)



<b>01.01.02</b>	<b>List the training courses or internal training completed by operations staff in the last two (2) years and those planned during the next 12 months.</b>

Nested

<b>01.01.03</b>	<b>Does the capital plan include measures to ensure continuous improvement of the energy efficiency of the building envelope?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Improving the envelope can improve the performance of the building; however these are typically capital intensive projects.</p> <p><b>Requirements:</b> Measures to ensure continuous improvement of the energy efficiency of the building envelope include (but are not limited to): increasing the roof insulation, improving the glazing/framing systems, and increasing opaque wall insulation.</p> <p>The capital plan must demonstrate that at least one (1) high-impact measure to improve the energy efficiency of the building envelope has received a dedicated budget, a dedicated responsible person and a timeline for implementation.</p> <p>Provide details surrounding the extent to which the measure is expected to improve the energy efficiency of the building envelope.</p> <p>The capital plan must have been approved and signed by senior management in the last five (5) years.</p> <p><b>Additional Information:</b> Measures accepted in a previous certification cannot be used again in a recertification for the purpose of obtaining these points. New measures must be provided.</p>	
<b>Scoring</b>	Yes	13/13
	No	0/13

(Describe)



01.01.04	Have three (3) years of energy consumption data been analyzed in order to establish trends?	
Explanation & Evaluation	<p><b>Description:</b> Analyzing energy consumption data and establishing trends can assist facilities staff and building owners with better building management by detecting anomalies in energy use and by harnessing the power of data extrapolated over time.</p> <p><b>Requirements:</b> Analysis of the building’s energy consumption (electricity, natural gas, etc.) must include data from at a minimum, three (3) continuous years of energy consumption. Establish a baseline and assess consumption patterns over time. The analysis must clearly show trends and anomalies in relation to established energy savings goals. Trends need not be positive.</p> <p>Ensure you are comparing the same areas and are applying the same rules in regards to whether or not to use normalized data (such as weather). If renovations have occurred during this time, special consideration must be applied in the analysis.</p> <p><b>Additional Information:</b> Select Not Applicable if the building has been occupied for fewer than three (3) years.</p>	
Scoring	Yes	7/7
	No	0/7
	N/A	0/0



## 1.2 ASSESSMENT

01.02.01	Do you benchmark energy performance using either the BOMA BEST or ENERGY STAR Portfolio Manager portals?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Benchmarking informs organizations about how they use energy, where they use it, and what drives their energy use. It is a key step in identifying opportunities to increase profitability by lowering energy and operating costs. By comparing energy use to historical data and to comparable buildings building management teams can better manage and optimize energy use.</p> <p><b>Requirements:</b> Using either the BOMA BEST or ENERGY STAR Portfolio Manager portal, enter energy consumption data representing 12-consecutive months, at a minimum. Enter consumption information for all fuel types used in the building. The entered data must not be any older than the past 18 months nor should it represent consumption during periods of major renovations (such as upgrades to mechanical systems, building envelope systems and electric system upgrades including procurement of new lighting for more than 50% of the building’s lighting fixtures).</p> <p><b>Additional Information:</b> The data entered does not need to be representative of the entire building however should represent as much as possible. Ensure you have indicated the areas to which this data can be attributed in Question 01.02.02.</p> <p>ENERGY STAR Portfolio Manager is a secure online tool that is used to review and record water and energy consumption and greenhouse gas emissions. It allows users to benchmark their building(s) energy performance to others in their category based on location, age, size, and function.</p> <p>To enter data using the BOMA BEST portal, follow <a href="#">these instructions</a>.</p> <p>If you are an existing user of the ENERGY STAR Portfolio Manager portal, you do not need to re-enter your information. Please follow <a href="#">these instructions</a> to link your accounts.</p>	
<b>Scoring</b>	BOMA BEST	10/10
	ENERGY STAR	10/10
	No	0/10

01.02.02	Indicate the areas for which you have energy consumption data available.	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> In order to properly benchmark energy consumption, it is first necessary to understand which areas are represented in the data.</p> <p><b>Requirements:</b> Indicate for which areas and which type of fuel energy consumption data will be provided.</p>	
<b>Scoring</b>	For informational purposes	

	Area	Electricity	Natural Gas	Other Fuel
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Total Building				
All tenants (excluding anchor)				
Some tenants (excluding anchor)				
Anchor tenants				
Pad/Ground tenants				
Interior common area				
Exterior common area (e.g., lighting)				
None				

Pad or ground leases are often used for restaurant premises or for premises where the tenant will be responsible for building and maintaining the structure.

01.02.03		For what percentage of occupied gross leasable area is energy consumption data available?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Obtaining whole building consumption information (including tenant-managed energy data) provides building managers a better understanding of the building's performance and the opportunities that exist for improvement.</p> <p><b>Requirements:</b> Indicate for what percentage of occupied gross leasable area you have energy consumption data (either through sub-metering or by other means). The data must represent consumption from the most recent 12-month period and must not be any older than the past 18 months.</p>		
	<b>Scoring</b>		
	Less than 24%	0/20	
	25-39%	4/20	
	40-64%	8/20	
	65-79%	12/20	
	80-94%	16/20	
	95-100%	20/20	



01.02.04	Can you provide a weather-normalized Site Energy Use Intensity (EUI) for this building?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Using the BOMA BEST or the ENERGY STAR Portfolio Manager portals, generate a weather-normalized site EUI for the building.</p> <p><b>Requirements:</b> The data used to generate the EUI must represent 12 consecutive months of consumption, at a minimum. Data must not be any older than the past 18 months nor should it represent consumption during periods of major renovations (such as upgrades to mechanical systems, building envelope systems and electric system upgrades including procurement of new lighting for more than 50% of the building’s lighting fixtures).</p> <p><b>Additional Information:</b> Only EUIs generated by the BOMA BEST or the ENERGY STAR Portfolio Manager portals can be accepted.</p> <p>Use Site EUI (not Source EUI).</p> <p>Provide the EUI in your preferred unit. Include up to two decimals.</p> <p>Leave blank if no EUI could be calculated.</p>	
<b>Scoring</b>	Yes	3/3
	No	0/3

Select your preferred unit

- GJ/ft<sup>2</sup>/year
- kBtu/ft<sup>2</sup>/year (thousand Btu)
- kWh/ft<sup>2</sup>/year (thousand Watt-hours)
- MBtu/ft<sup>2</sup>/year (million Btu)
- MWh/ft<sup>2</sup>/year (million Watt-hours)
  
- GJ/m<sup>2</sup>/year
- kBtu/m<sup>2</sup>/year (thousand Btu)
- kWh/m<sup>2</sup>/year (thousand Watt-hours)
- MBtu/m<sup>2</sup>/year (million Btu)
- MWh/m<sup>2</sup>/year (million Watt-hours)



01.02.05	Have you compared the building's current energy consumption with consumption from past years?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Analyzing energy consumption data and detecting anomalies can assist facilities staff and building owners with better building management by harnessing the power of data extrapolated over time.</p> <p><b>Requirements:</b> All building fuels under the responsibility of the building owner/manager must be included in the analysis (electricity, natural gas, etc.). At a minimum, compare consumption from the same seasons over two (2) years in order to detect anomalies. Conclusions drawn from the analysis must be presented.</p> <p><b>Additional Information:</b> Ensure you are comparing the same areas (if you originally looked only at common area consumption, continue looking at this area) as well as applying the same rules in regards to whether or not to use normalized data (such as weather). If renovations have occurred during this time, special consideration should be applied in the analysis.</p>	
<b>Scoring</b>	Yes	6/6
	No	0/6

01.02.06	Has a thermal imaging scan of the roof or walls been performed within the last five (5) years?		
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> A thermal imaging scan of the building will help identify the areas where energy is flowing to and from the building, areas that may allow for higher than normal thermal transfer.</p> <p><b>Requirements:</b> A scan of the building envelope (walls, curtain walls) and roof is recommended. The thermal scan must be performed by a certified thermographer. The scan must have been performed in the last five (5) years.</p> <p><b>Additional Information:</b> The most common tool to do this work is a thermal camera, which shows the heat patterns of an item on a built-in screen on the device. Depending on the size and shape of the building a scan can range from an hour to multiple days.</p>		
<b>Scoring</b>		Yes	No
	Only Roof	4/8	0/8
	Only Walls	4/8	0/8



### 1.3 OPERATIONS AND MAINTENANCE

01.03.01	Are operation manuals and/or sequence of operations for the major mechanical equipment easily accessible?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Operation manuals and sequence of operations (SOP) for major equipment are needed to ensure proper system maintenance and operation.</p> <p><b>Requirements:</b> A copy (hard copy or electronic) of the major system operation manual(s) and/or SOP must be easily accessible on-site.</p> <p><b>Additional Information:</b> These documents list and describe the operation of the systems and equipment in a building. They should contain such information as modes of operation, diagrams, system interaction, etc. These documents are essential for proper recommissioning practices and ongoing building optimization and maintenance as well as troubleshooting and calibration. Copies of sequence of operation and system operation manuals should be kept in a secure, dry, location to ensure there is always a clean copy available.</p> <p>Major mechanical items include: air handlers, central plant equipment, motor controllers, and custom equipment.</p> <p>Select Not Applicable if there is no major mechanical equipment or if said equipment is owned, managed and maintained solely by tenants.</p>	
<b>Scoring</b>	Yes	15/15
	No	0/15
	N/A	0/0

(Describe)

01.03.02	Does building management track and monitor building performance and consumption patterns?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Monitoring and tracking building energy usage can highlight irregularities which, when corrected, can improve building performance.</p> <p><b>Requirements:</b> At a minimum, track and monitor the building’s performance and consumption patterns for all sub-metered items on a quarterly basis. Monitoring and analysis must be done by either a dedicated staff member (for example using an in-house spreadsheet) or by dedicated software.</p> <p><b>Additional Information:</b> Monitoring includes a review of the energy use over specific time periods, costs, and consumption patterns with events highlighted. An “event” refers to a noticeable spike or dip in the trend data. Other equipment and systems to monitor include (as applicable): BAS, lighting, HVAC, envelope efficiency, etc.</p> <p>Monitoring report logs will assist with analysis of the building’s operations.</p> <p>Select Not Applicable if there is no major mechanical equipment or if said equipment is owned, maintained and managed solely by tenants.</p>	
<b>Scoring</b>	Yes	8/8
	No	0/8
	N/A	0/0

(Describe)





01.03.03		Are maintenance work orders created digitally?	
Explanation & Evaluation	<p><b>Description:</b> Automated work orders facilitate direct communication between the order placer and the order taker, minimizing the possibility of the issue escalating into something worse. Such work orders are easily tracked.</p> <p><b>Requirements:</b> Demonstrate that equipment maintenance work orders are created digitally and that follow up and resolution is provided in a timely manner, based on the company-specified timeframe.</p>		
	Scoring	Yes	5/5
		No	0/5

01.03.04		Has a low-cost energy conservation measure been implemented in the last three (3) years?	
Explanation & Evaluation	<p><b>Description:</b> The Energy Management Plan is a plan with timelines, budgets and a responsibility matrix for implementing energy conservation measures (ECMs). Implementing ECMs will improve the energy performance of the facility.</p> <p><b>Requirements:</b> At least one (1) low-cost ECM from the Energy Management Plan (or equivalent) must have been implemented in the last three (3) years. In addition to this, provide documentation on all no cost energy conservation measures implemented in the last three (3) years. To be considered implemented, construction of measures/initiatives must be completed and the measure must be commissioned and operational.</p> <p><b>Additional Information:</b> Measures cannot be considered if they are included in the Capital Plan but not yet implemented or if the implementation has not been completed at the time of the verification.</p>		
	Scoring	Yes	25/25
		No	0/25

Describe)



01.03.05	Are control strategies used on the mechanical equipment to reduce energy consumption and demand?			
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Building energy use can be reduced by putting in place control strategies such as reducing the operating time of a piece of equipment or using equipment during off-peak hours.</p> <p><b>Requirements:</b> Implement control strategies on the mechanical equipment. Strategies can be applied using the BAS to control mechanical units or by using stand-alone controls.</p> <p><b>Additional Information:</b> Select all that apply.</p> <p><i>Unoccupied setback</i> means reducing the set point during the heating season and increasing the set point during the cooling season when the space is unoccupied.</p> <p><i>Outdoor air temperature reset</i> means adjusting the heating water and/or chiller water supply temperature based on the outdoor air temperature.</p> <p><i>Demand control ventilation</i> means adjusting the outdoor air rate based on the internal air quality.</p> <p><i>Scheduling</i> entails setting a time to activate the HVAC equipment to maintain space temperature; commonly based on the average occupancy hours.</p> <p><i>Economizer control</i> means using outdoor air when the outdoor air temperature allows for cooling of the building instead of using mechanical cooling.</p> <p>Select Not Applicable if the strategy cannot be implemented. Rationale for why this is the case must be provided to the verifier (for example, if maintenance or construction required certain strategies to be overridden for a prolonged period of time).</p>			
<b>Scoring</b>		Yes	No	N/A
	Unoccupied setback	2/10	0/10	0/0
	Outdoor air temperature reset	2/10	0/10	0/0
	Demand control ventilation	2/10	0/10	0/0
	Scheduling (Specify how)	2/10	0/10	0/0
	Economizer Control (specify type)	2/10	0/10	0/0



01.03.06	Are the equipment and energy systems regularly commissioned or retro-commissioned?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Commissioning is a well-planned and documented engineering approach that ensures that new equipment and systems are installed properly and functioning as designed. Retro-commissioning is similar to recommissioning in its objectives however applies specifically to equipment that was never commissioned upon installation.</p> <p><b>Requirements:</b> Demonstrate that periodic re(retro-)commissioning is in place for building equipment and systems. Provide a clear schedule of equipment that has been re(retro-)commissioned in the past 12 months along with a log of what work was performed, when and by whom. Equipment for which the property owner is not responsible (owned, maintained or managed) can be excluded.</p> <p>Work must be performed by accredited professionals or trained staff.</p> <p>Consult Natural Resource Canada’s “Building Operation Optimization: Recommissioning Guide for Building Owners and Managers” for more information on these practices &lt;<a href="http://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/canmetenergy/pdf/fichier.php/codecte/En/2008-167/NRCan_RCx_Guide.pdf">http://www.nrcan.gc.ca/sites/www.nrcan.gc.ca/files/canmetenergy/pdf/fichier.php/codecte/En/2008-167/NRCan_RCx_Guide.pdf</a>&gt;.</p> <p>In the case where the major mechanical equipment is owned, maintained and managed solely by tenants, the property manager must provide communication document to the tenants regarding the importance of re(retro-)commissioning</p> <p><b>Additional Information:</b> Periodic (also ongoing or continuous) recommissioning is a systematic approach for the re-optimization of previously commissioned equipment and systems. Equipment and systems are reviewed on a regular basis in order to identify and adjust less-than-optimal performance in the facility’s equipment, lighting and control systems. Failure to recommission equipment can lead to reduced efficiency, improper fluid flows and temperatures, and premature decommissioning/replacement.</p> <p>Periodic recommissioning or retro-commissioning examines equipment performance through a different lens than preventative maintenance. Periodic recommissioning or retro-commissioning is performed to ensure the system as a whole continues to operate as designed whereas preventative maintenance refers specifically to maintenance of individual components (e.g., air filters and fan belts) of these systems.</p> <p>Select Not Applicable if there is no major mechanical equipment.</p>	
<b>Scoring</b>	Yes	9/9
	No	0/9
	N/A	0/0

(Document Upload)



01.03.07	Are newly installed energy systems and equipment appropriately commissioned?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Commissioning is a well-planned and documented engineering approach that ensures that new equipment and systems are installed properly and functioning as designed.</p> <p><b>Requirements:</b> Provide records demonstrating that new major equipment and systems purchased by the owner are commissioned either by the equipment/system provider or by an accredited independent third party following installation. If no major equipment or systems have been installed in the past 12 months, demonstrate that there is a policy committing to commissioning new major equipment installed in the building.</p> <p>In the case where the major mechanical equipment is owned, maintained and managed solely by tenants, the property manager must provide communication documents to the tenants regarding the importance of proper commissioning.</p> <p><b>Additional Information:</b> Major equipment includes (but is not limited to) central plant equipment, air handling units, packaged rooftop units, and custom equipment.</p> <p>Commissioning of equipment is vital to the entire system's operation and ensures that everything functions as designed. Failure to commission new equipment could result in less than optimal performance.</p> <p>Commissioning should be performed to the level of owner's responsibility for example if a building owner is responsible for equipment purchase but the tenant is responsible for operations the owner is still required to commission equipment.</p> <p>Select Not Applicable if there is no major mechanical equipment.</p>	
<b>Scoring</b>	Yes	9/9
	No	0/9
	N/A	0/0

(Describe

01.03.08	Have corrective actions been taken to address deficiencies identified in the thermal imaging scan?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Addressing envelope deficiencies will improve the building performance and assist with asset preservation.</p> <p><b>Requirements:</b> Demonstrate that at least one (1) deficiency raised in the thermal imaging scan has been addressed.</p> <p><b>Additional Information:</b> The thermal imaging report will highlight challenges with the building envelop like air leakage, water penetration and thermal bridging. The items identified during the imaging typically range from low cost to capital cost to address.</p> <p>Select Not Applicable if a thermal imaging scan was not performed.</p>	
<b>Scoring</b>	Yes	5/5
	No	0/5
	N/A	0/0



01.03.09	Is a boiler maintenance program in place at the building?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> A boiler maintenance program helps ensure proper boiler operation and optimal performance.</p> <p><b>Requirements:</b> The boiler maintenance program must meet the minimum requirements of ASHRAE Standard 180 “Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems”.</p> <p>The following components must be integrated into the program:</p> <ul style="list-style-type: none"> <li>• Demonstration of knowledge of local codes, standards and regulations which apply to the operation of the boiler;</li> <li>• Regular inspection, cleaning and maintenance in accordance with manufacturer’s specifications;</li> <li>• Calibration of sensors to optimize burning efficiency;</li> <li>• Annual flue gas testing to identify contaminant levels;</li> <li>• Record keeping; and,</li> <li>• Demonstration of required licensing/certification for individuals working on boiler equipment.</li> </ul> <p>The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> Select Not Applicable if there are no boilers or they are owned, managed and maintained solely by tenants.</p> <p>Demonstration of implementation includes showing the maintenance scope of work in a service contract.</p>	
<b>Scoring</b>	Yes	7/7
	No	0/7
	N/A	0/0

(Document Upload)

01.03.10	Are strategies in place to control escalator based on use patterns?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Putting in place measures to reduce the operation of people moving equipment reduces energy consumption.</p> <p><b>Requirements:</b> Demonstrate that strategies have been put in place to operate escalators in a way that reflects their use patterns.</p> <p><b>Additional Information:</b> Strategies include shutting escalators down completely overnight or using motion sensors throughout the day to determine when they should be activated. All escalators in the building must be controlled by these strategies in order to comply.</p> <p>Select Not Applicable if there are no escalators in the building.</p>	
<b>Scoring</b>	Yes	5/5
	No	0/5
	N/A	0/0

(Describe)



## 1.4 BUILDING SYSTEMS

01.04.01	What type of Building Automation System is in place at the building?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> A building automation system (BAS) automates major building components (e.g., HVAC, lighting, etc.) to assist in operating equipment more effectively based on certain set points. BAS systems allow users to log and trend data for use in maintenance and various analyses.</p> <p><b>Requirements:</b> Demonstrate what type of Building Automation System is in place at the building.</p> <p><b>Additional Information:</b></p> <p><b>Direct Digital Control (DDC):</b> Uses electrical signals or wireless technologies to operate and communicate with parts of a system. Operators use an interface device, typically computer, to monitor and communicate with devices.</p> <p><b>Pneumatic:</b> Uses a compressor to keep systems at a constant pressure. Pressure increases or decreases as a valve or actuator moves. Desired operation on a device is based on the pressure set point of the valve or actuator connected to it.</p> <p><b>Hybrid:</b> A combination of both DDC and Pneumatic.</p> <p>If the building operates on small-scale HVAC equipment (e.g., furnaces, rooftop units under 20 tons, etc.), then they typically utilize Smart Controllers. Smart Controllers integrate wireless thermostats and lighting controls and can be controlled via a user interface (such as a tablet or smartphone). By utilizing the Smart Controllers, each rooftop unit and/or lighting fixture can be controlled and monitored much like they are on a larger scale BAS system. Smart Controllers fall under Direct Digital Controls.</p> <p>Select Not Applicable if the building area is less than 25,000 square feet.</p>	
<b>Scoring</b>	Direct Digital Control (DDC)	8/8
	Hybrid	5/8
	Pneumatic	2/8
	None	0/8
	N/A	0/0



01.04.02		What percentage of the building's energy consumption is sub-metered?	
Explanation & Evaluation	<p><b>Description:</b> Sub-meters measure the energy consumption of specific areas or equipment. Metering major mechanical equipment will reveal how often it runs and how much energy it consumes during operation, as well as identify when equipment drifts away from set point (should it occur).</p> <p><b>Requirements:</b> Provide outputs from sub-meters along with information on each sub-meter such as make, model, and serial number.</p>		
	Scoring	50% or more	7/7
		25-50%	5/7
		10-24%	3/7
		Less than 10%	0/7

01.04.03		Do you maintain a list of every energy meter installed within the building that you own and manage?	
Explanation & Evaluation	<p><b>Description:</b> Maintaining a list of the meters operating within the building can assist building managers in their energy tracking and monitoring efforts as well as help answer any questions related to consumption anomalies. A list allows for a methodic approach to energy analysis.</p> <p><b>Requirements:</b> The list must indicate meter location and tag number (if available).</p> <p><b>Additional Information:</b> Select Not Applicable if all meters are owned and managed solely by the tenants.</p>		
	Scoring	Yes	3/3
		No	0/3
		N/A	0/0



01.04.04	What building areas incorporate at least 50% of ENERGY STAR or DesignLight Consortium (DLC) approved lighting lamps and ballasts?			
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> ENERGY STAR and DesignLight Consortium (DLC) approved lighting have been tested and shown to consume less energy than those that are not approved.</p> <p><b>Requirements:</b> Refer to the item’s manufacturer data sheet or the ENERGY STAR or DLC website to look up the product’s model number to verify it is ENERGY STAR or DLC approved.</p> <p>Eligible products must be ENERGY STAR or DLC approved at the time of installation.</p> <p>Fixtures which are not ENERGY STAR or DLC certified can be considered as equivalent if a Measurement and Verification Report is prepared which shows that the energy consumption of the fixture is within 10% of the product specification and there is an equivalent (i.e. similar type and design) ENERGY STAR or DLC certified fixture. The Measurement and Verification report cannot be prepared by someone who is connected to the fixture manufacturer.</p> <p><b>Additional Information:</b> Select all that apply. Common areas include all corridors, service spaces, elevator lobbies and entry lobbies)</p> <p>Select Not Applicable if a particular area is not present in the building.</p> <p>References:            ENERGY STAR commercial lighting fixtures  <a href="https://www.energystar.gov/products/lighting_fans/commercial_light_fixtures/eligible_commercial_fixture_types">https://www.energystar.gov/products/lighting_fans/commercial_light_fixtures/eligible_commercial_fixture_types</a>            EnergyStar certified products (<a href="https://www.energystar.gov/products/certified-products">https://www.energystar.gov/products/certified-products</a>)            EnergyStar residential lighting fixtures  <a href="https://www.energystar.gov/products/lighting_fans/light_fixtures/eligible_residential_fixture_types">https://www.energystar.gov/products/lighting_fans/light_fixtures/eligible_residential_fixture_types</a>            DLC (<a href="https://www.designlights.org/qpl">https://www.designlights.org/qpl</a>)</p>			
<b>Scoring</b>		Yes	No	N/A
	Food Court and Cafeteria	2/8	0/8	0/0
	Warehouse	2/8	0/8	0/0
	Building Exterior	2/8	0/8	0/0
	Common Areas	2/8	0/8	0/0





01.04.05		What percentage of the building exterior and parking lot fixtures have LED lamps and automated controls	
Explanation & Evaluation	<p><b>Description:</b> Building exterior and parking lot fixtures should be outfitted with LED lamps with photo cells and/or timers since these fixtures typically operate nightly. Using LED lamps will decrease the cost of power consumed when they are in operation.</p> <p><b>Requirements:</b> Demonstrate what percentage of exterior and parking lot fixtures have LED lamps or automated controls.</p> <p><b>Additional Information:</b> Select Not Applicable if there are no exterior or parking lot fixtures.</p>		
	Scoring	80-100%	14/14
	60-79%	11/14	
	40-59%	8/14	
	20-39%	5/14	
	1-19%	2/14	
	None	0/14	
	N/A	0/0	

01.04.06		What percentage of lighting fixtures are controlled by sensors?	
Explanation & Evaluation	<p><b>Description:</b> Lighting fixtures can be controlled by sensors (e.g., occupancy sensors, vacancy sensors, and daylight/photocell sensors) in order to reduce energy consumption. Where appropriate, these sensors can be incorporated with a Building Automation System or be stand-alone.</p> <p><b>Requirements:</b> Lighting control sensors must be installed within areas where the building owner is responsible for lighting system maintenance.</p> <p><b>Additional Information:</b> Select Not Applicable if all lighting fixtures are owned, maintained and managed solely by tenants. If the property manager did not implement, but knows the percentage of sensors, select the appropriate answer range.</p>		
	Scoring	75 – 100%	10/10
	50 – 74%	8/10	
	25 - 49%	5/10	
	10 - 24%	3/10	
	Less than 10%	0/10	
	N/A	0/0	



01.04.07	What percentage of the total installed pump and fan motors are actively controlled by variable speed drives (VSD) or variable frequency drives (VFD)?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> VSDs and VFDs control motor speed by varying the motor speed/frequency of electrical supply to match actual load requirements, reducing energy consumption and improving control and lifespan of the equipment. By utilizing these drives, energy can be saved by using equipment only at the minimum output to maintain set points.</p> <p><b>Requirements:</b> These units cannot be manually locked to 100% or run at 100% consistently.</p> <p><b>Additional Information:</b> Select Not Applicable if there are no pump and fan motors (5 HP or greater); if said equipment is owned, managed and maintained solely by tenants; or if variable flow is not feasible for the design, as stated by a Professional Engineer or CEM accredited person.</p>	
<b>Scoring</b>	75 – 100%	14/14
	50 – 74%	10/14
	25 - 49%	6/14
	Less than 25%	4/14
	None	0/14
	N/A	0/0

01.04.08	What percentage of the building’s lighting is connected to an addressable lighting control system?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Eligible addressable light control systems allow the building operator to control lamps at a zone level via a Building Automation System. It is possible to allow tenants this level of control also via a desktop application.</p> <p><b>Requirements:</b> Addressable lighting systems must be installed in areas where the building owner is responsible for lighting system maintenance.</p>	
<b>Scoring</b>	75 – 100%	8/8
	50 – 74%	6/8
	25 - 49%	3/8
	Less than 25%	0/8



## 1.5 INNOVATION

<b>01.05.01</b>	<b>Is 75% or more of the total installed pump and fan motor horsepower considered premium efficiency?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> NEMA (National Electrical Manufacturers Association) premium efficiency motors consume less energy than even their code mandated high-efficiency counterparts.</p> <p><b>Requirements:</b> Provide nameplate information on motors. 75% of the total capacity must be considered efficient.</p> <p><b>Additional Information:</b> For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p> <p>Reference: <a href="#">NEMA premium motors</a></p>	
<b>Scoring</b>	Yes	24/24
	N/A	0/0

<b>01.05.02</b>	<b>Is 75% or more of the central heating equipment efficient?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Heating equipment, such as boilers or burners, that have a high efficiency ratio utilize their fuel more effectively and heat the fluid (air, water) to the same set point with less fuel consumed relative to a lower efficiency unit.</p> <p><b>Requirements:</b> Efficient central heating equipment must have a combustion efficiency that is 85% or greater. 75% of the total capacity must be considered efficient.</p> <p>For each piece of central heating equipment (boiler, burners, furnaces, etc.) provide a copy of preventative maintenance procedures and combustion efficiency test results performed within the last year. Combustion efficiency tests must include analysis of temperature and CO2 or O2 levels of the flue gases as well efficiency measurements for at least two firing rates (e.g., low fire and high fire).</p> <p><b>Additional Information:</b> Electric boilers that meet outlined efficiency requirements are also eligible for points under this question.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	24/24
	N/A	0/0



01.05.03		Are 75% of the rooftop package units efficient?			
Explanation & Evaluation	<p><b>Description:</b> Rooftop air handling units that have a higher energy efficiency ratio utilize their fuel more effectively when cooling to the same set point with less fuel consumed relative to a lower Energy Efficiency Ratio (EER) unit.</p> <p><b>Requirements:</b> Efficient rooftop package units have an EER rating of 11.5 or greater. 75% of the total capacity must be considered efficient.</p> <p><b>Additional Information:</b> To convert the Seasonal Energy Efficiency Ratio (SEER) to EER, use the following formula:  <math display="block">EER = (1.12 * SEER) - (0.02 * SEER^2)</math> For all innovation questions, if you are unable to answer "Yes", select "Not Applicable" instead. No points will be lost.</p>				
	Scoring	<table border="1"> <tr> <td>Yes</td> <td>24/24</td> </tr> <tr> <td>N/A</td> <td>0/0</td> </tr> </table>	Yes	24/24	N/A
Yes	24/24				
N/A	0/0				

01.05.04		Are 75% of the chillers and air conditioning systems efficient?			
Explanation & Evaluation	<p><b>Description:</b> Chillers and air conditioning systems that have a higher Coefficient Of Performance (COP) utilize their energy more effectively and cool fluid to the same set point with less fuel consumed relative to a lower COP unit.</p> <p><b>Requirements:</b> Efficient chillers and air conditioning systems have a COP of 2.8 or greater for air-cooled systems or 5.1 or greater for water-cooled systems. 75% of the total capacity must be considered efficient.</p> <p><b>Additional Information:</b> To calculate the installed capacity that meets the criteria for high efficiency, use the following formula:  Installed capacity = (sum of capacity x COP) / sum of all capacities  For all innovation questions, if you are unable to answer "Yes", select "Not Applicable" instead. No points will be lost.</p>				
	Scoring	<table border="1"> <tr> <td>Yes</td> <td>24/24</td> </tr> <tr> <td>N/A</td> <td>0/0</td> </tr> </table>	Yes	24/24	N/A
Yes	24/24				
N/A	0/0				



01.05.05	Is 75% of the domestic water heating equipment efficient?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Using energy efficient water heaters reduce energy associated with heating domestic hot water.</p> <p><b>Requirements:</b> Efficient domestic water equipment must be compliant with ENERGY STAR or equivalent. 75% of the total capacity must be considered efficient.</p> <p><b>Additional Information:</b> Examples of ENERGY STAR-compliant water heating equipment include (but are not limited to) condensing, tankless and solar water heaters. ENERGY STAR rated equipment use energy effectively while minimizing fuel consumption.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p> <p>Reference: <a href="#">ENERGY STAR-compliant equipment</a></p>	
<b>Scoring</b>	Yes	24/24
	N/A	0/0

01.05.06	Does 75% of the building’s exhaust air pass through a Ventilation Heat/Energy Recovery system?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Ventilation Heat/Energy Recovery systems recover energy from exhaust airstreams and transfer said energy into the incoming ventilation airstream. Less energy is required to condition ventilation air.</p> <p><b>Requirements:</b> Demonstrate that at least 75% of the building’s exhaust air passes through Ventilation Heat/Energy Recovery systems.</p> <p><b>Additional Information:</b> For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	24/24
	N/A	0/0



01.05.07		Are 75% of the building's exterior windows and/or skylights considered efficient?			
Explanation & Evaluation	<p><b>Description:</b> Energy efficient windows and skylights can reduce energy consumption by reducing thermal losses to the exterior.</p> <p><b>Requirements:</b> Provide evidence that the windows are energy efficient. Windows are considered energy efficient when the following four (4) conditions have been met:</p> <ul style="list-style-type: none"> <li>• They are double- or triple-paned Insulating Glass Units (IGU).</li> <li>• They have a thermally broken frame, as demonstrated through shop drawings or a letter from the manufacturer indicating that some thermal breaking material is present as part of the framing assembly, with a minimum thickness of 3 mm.</li> <li>• They have a thermally reflective coating such as glazing tint, hard coat/soft coat low-e coating, or retrofit applied glazing film (to the interior or exterior).</li> <li>• Air sealing is intact with no evidence of condensation or fogging between the panes.</li> </ul> <p><b>Additional Information:</b> For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>				
	Scoring	<table border="1"> <tr> <td>Yes</td> <td>24/24</td> </tr> <tr> <td>N/A</td> <td>0/0</td> </tr> </table>	Yes	24/24	N/A
Yes	24/24				
N/A	0/0				

01.05.08		Are strategies or systems in place to allow peak shedding?			
Explanation & Evaluation	<p><b>Description:</b> <i>Peak shedding (or load leveling)</i> is a strategy through which peak energy demand can be reduced.</p> <p><b>Requirements:</b> Peak shedding and load leveling strategies must be implemented on all central HVAC equipment used during the majority of the building occupancy period.</p> <p><b>Additional Information:</b> Examples of ways this can be done include staging – where equipment activation is staggered so that instantaneous demand does not skyrocket, or by using thermal storage so peak energy load can be reduced at certain points of the day when demand is high.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>				
	Scoring	<table border="1"> <tr> <td>Yes</td> <td>15/15</td> </tr> <tr> <td>N/A</td> <td>0/0</td> </tr> </table>	Yes	15/15	N/A
Yes	15/15				
N/A	0/0				

(Describe)



01.05.09		Are the building's real-time consumption patterns shared with building occupants?	
Explanation & Evaluation	<p><b>Description:</b> By visually showing how the building is operating in real-time, occupants can better understand how the building performs and how their habits and personal/work equipment effects consumption.</p> <p><b>Requirements:</b> The building's energy consumption trends must be proactively shared (along with context to ensure is the data is well understood) with building occupants in a manner which encourages education and enhances awareness. Data must be shared with tenants, occupants and visitors (if applicable).</p> <p>Quarterly summaries are not sufficient. The data must be real-time or near real-time (with a lag of one day or so).</p> <p>For all innovation questions, if you are unable to answer "Yes", select "Not Applicable" instead. No points will be lost.</p>		
	Scoring	Yes	12/12
	N/A	0/0	

(Describe)

01.05.10		Are renewable-energy certificates or low-impact electricity purchased?	
Explanation & Evaluation	<p><b>Description:</b> Low-impact energy or renewable-energy certificates (RECs) can be purchased in order to increase energy generation from renewable energy sources.</p> <p><b>Requirements:</b> Eligible low-impact energy or RECs must be purchased from a vendor (e.g., generators, aggregators, distributors, etc.) certified under EcoLogo or Green-e Energy National Standard.</p> <p>Demonstrate that low-impact energy or RECs are helping to offset the electricity consumed by the property in the past 12 months.</p> <p><b>Additional Information:</b> For all innovation questions, if you are unable to answer "Yes", select "Not Applicable" instead. No points will be lost.</p> <p>References:</p> <p><a href="#">EcoLogo</a></p> <p><a href="#">Green-e Energy National Standard</a></p>		
	Scoring	Yes	9/9
	N/A	0/0	

(Describe)



01.05.11	<b>Are renewable natural resources used on-site to generate at least 1% of the building's energy?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Renewable natural resources include solar, wind, and biomass. Using such renewable sources of energy for electricity or heating (for example) can provide building owners with a reliable, sustainable energy source that offsets grid consumption.</p> <p><b>Requirements:</b> Demonstrate that renewable energy has been generated on-site during the past 12 months. The energy generated must be sufficient to offset 1% of the total energy consumed on-site.</p> <p><b>Additional Information:</b> Installations that use these resources include photovoltaic panels, wind turbines, and biomass burning equipment (not including Energy from Waste equipment). Such on-site generation can provide advantages such as reduced utility costs, and reductions in GHG emissions generation through increased use of renewable energy sources and reduction in energy transmission and "line loss".</p> <p>For all innovation questions, if you are unable to answer "Yes", select "Not Applicable" instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	9/9
	N/A	0/0

(Describe)

01.05.12	<b>Is the building connected to any form of energy cogeneration system, or to a district or community energy system?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> District energy systems produce steam, hot water, or chilled water at a central plant, which is then piped to individual buildings to achieve space heating, domestic hot water heating, and/or air conditioning. This negates the need for individual building systems to provide these services, and enables improved energy efficiency, decreased life-cycle costs, greater flexibility, and decreased capital expenditures.</p> <p>During cogeneration, waste heat that is typically lost during the production of electricity is captured and used as thermal energy to support district or local heating and cooling.</p> <p><b>Requirements:</b> Demonstrate that energy has been purchased from a district or community energy system or that there is an on-site co-generation system in operation.</p> <p>Energy purchased or generated on-site must be sufficient to meet all major energy needs in the last 12 months.</p> <p><b>Additional Information:</b> For all innovation questions, if you are unable to answer "Yes", select "Not Applicable" instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	9/9
	N/A	0/0

(Describe)





01.05.13	Is an innovative technology or process in place at the building that goes beyond the requirements outlined in this section?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Many technologies exist that go beyond the standards and requirements set out in the BOMA BEST Assessment. If building managers/owners have invested in innovative technologies or processes that go beyond these standards, innovation points can be earned under this question.</p> <p><b>Requirements:</b> Provide a comprehensive report about the benefits of the technology and/or process to BOMA Canada. The BOMA BEST Technical Committee will assess each proposal to determine whether or not it qualifies. Expect a 10-12 week delay before receiving a final decision. Contact BOMA Canada to obtain the submission guidelines. For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	15/15
	N/A	0/0

(Document Upload)



## 2.0 WATER



## 2.1 DEMONSTRATION OF INTENT

02.01.01	Is a Water Damage Monitoring and Management Program in place in the building?	
<p><b>Explanation &amp; Evaluation</b></p>	<p><b>Description:</b> Water-impacted building materials can begin to exhibit mould growth in as little as 48 hours. A water damage monitoring and management program will assist in rapidly addressing bulk water damage, including detailed procedures for drying, cleaning and remediating where necessary.</p> <p><b>Requirements:</b> The Water Damage Monitoring and Management Program must include the following:</p> <ul style="list-style-type: none"> <li>• Inspection of building materials for signs of water damage or mould growth at least annually.</li> <li>• Inspection of HVAC system components (such as chambers, pans, ductwork) for standing water, signs of water damage or mould growth at least annually.</li> <li>• Inspection of readily accessible plumbing components for signs of leaks at least annually.</li> <li>• All recommended corrective actions identified during the above inspections during the past 12 months completed.</li> <li>• Response plans for the remediation of building materials exhibiting signs of water damage and mould growth (including consideration for the presence of hazardous materials based on the Hazardous Building Materials Management Plan).</li> <li>• Response plans for bulk water damage from clean and contaminated sources.</li> <li>• Training for building maintenance staff and custodial staff on water damage (including health hazards, how to identify suspect mould growth, response plans for identified mould growth or bulk water damage, safety precautions for remediating mould-impacted materials)</li> <li>• Reviewing and updating of the management program at least annually.</li> </ul> <p>Demonstrate implementation by providing</p> <ul style="list-style-type: none"> <li>• Evidence of visual inspections in building interiors and HVAC systems for mould growth and water damage within the last 12 months (such as work orders, IAQ Audit findings, maintenance records).</li> <li>• Evidence that any recommended corrective actions identified by the visual inspections have been acted upon (such as work orders, follow-up inspections).</li> <li>• Documented response plans for remediation of water damaged and/or mould impacted materials. The response plan must identify key personnel and their responsibilities, contact information for qualified building maintenance staff or contractors for remediation, tenant response plans and communication protocols.</li> <li>• Attendance records and syllabus for training sessions.</li> <li>• Evidence of program review.</li> </ul> <p>The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> The Water Damage Monitoring and Management Program must incorporate all tenant spaces.</p>	
<p><b>Scoring</b></p>	Yes	5/5
	No	0/5

(Document Upload)



02.01.02	Is a maintenance program in place for interior features requiring water?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Although natural features such as plants and fountains are linked to improved mood, they are also frequently linked to air quality contaminants such as mould and bacteria. A maintenance program specific to these features will ensure air quality remains good.</p> <p><b>Requirements:</b> Develop and implement a maintenance program for interior natural features that require water such as interior landscaping, aquariums and fountains.</p> <p>The program must include reference to regular cleaning and maintenance, periodic water testing (where necessary), training of appropriate staff and an annual review. Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> Select Not Applicable if there are no natural features requiring water in the building or if these are owned, managed and maintained solely by tenants.</p>	
<b>Scoring</b>	Yes	2/2
	No	0/2
	N/A	0/0

(Document Upload)



## 2.2 ASSESSMENT

02.02.01	Do you benchmark water performance using either the BOMA BEST or ENERGY STAR Portfolio Manager portal?	
Explanation & Evaluation	<p><b>Description:</b> Benchmarking informs organizations about how they use water, where they use it, and what drives their water use. By comparing water use to historical data and to comparable buildings building management teams can better manage and optimize water use.</p> <p><b>Requirements:</b> Using either the BOMA BEST or ENERGY STAR Portfolio Manager portal, enter water consumption data representing 12-consecutive months, at a minimum. The entered data must not be any older than the past 18 months nor should it represent consumption during periods of major renovations.</p> <p><b>Additional Information:</b> The data entered does not need to be representative of the entire building however should represent as much as possible. Ensure you have indicated the areas to which this data can be attributed in Question 02.02.02.</p> <p>ENERGY STAR Portfolio Manager is a secure online tool that is used to review and record water and energy consumption and greenhouse gas emissions. It allows users to benchmark their building(s) water performance to others in their category based on location, age, size, and function.</p> <p>To enter data using the BOMA BEST portal, follow <a href="#">these instructions</a>.</p> <p>If you are an existing user of the ENERGY STAR Portfolio Manager portal, you do not need to re-enter your information. Please follow <a href="#">these instructions</a> to link your accounts.</p> <p>Select Not Applicable if all water meters are managed solely by tenants.</p>	
Scoring	BOMA BEST	5/5
	ENERGY STAR	5/5
	No	0/5
	N/A	0/0



<b>02.02.02</b>	<b>Indicate the areas for which you have water consumption data available.</b>
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> In order to properly benchmark water consumption, it is first necessary to understand which areas are represented in the data.</p> <p><b>Requirements:</b> Indicate for which areas water consumption data will be provided.</p>
<b>Scoring</b>	For informational purposes

	Area
Total Building	
All tenants (excluding anchor)	
Some tenants (excluding anchor)	
Anchor tenants	
Pad/Ground tenants	
Interior common area	
Exterior common area and landscaping (e.g., irrigation)	
Total Building	

<b>02.02.03</b>	<b>For what percentage of occupied gross leasable area is water consumption data available?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Obtaining whole building consumption information (including tenant-managed water data) provides building managers a better understanding of the building's performance and the opportunities that exist for improvement.</p> <p><b>Requirements:</b> Indicate for what percentage of occupied gross leasable area you have water consumption data (either through sub-metering or by other means). The data must represent consumption from the most recent 12-month period and must not be any older than the past 18 months.</p>	
<b>Scoring</b>	Less than 24%	0/20
	25-39%	4/20
	40-64%	8/20
	65-79%	12/20
	80-94%	16/20
	95-100%	20/20
	N/A	0/20



02.02.04		Can you provide a Water Use Intensity (WUI) for the building?	
Explanation & Evaluation	<p><b>Description:</b> Using the BOMA BEST or the ENERGY STAR Portfolio Manager portals, generate a WUI for the building</p> <p><b>Requirements:</b> The data used to generate the WUI must represent 12 consecutive months of consumption, at a minimum. The data must not be any older than the past 18 months nor should it represent consumption during periods of major renovations.</p> <p><b>Additional Information:</b> Only WUIs generated by the BOMA BEST or the ENERGY STAR Portfolio Manager portals can be accepted.</p> <p>Provide the WUI in your preferred unit. Include up to two decimals.</p> <p>Leave blank if no WUI could be calculated.</p>		
	Scoring	Yes	3/3
	No	0/3	

02.02.05		Have you compared the building's current water consumption with consumption from past years?	
Explanation & Evaluation	<p><b>Description:</b> Analyzing water consumption data and detecting anomalies can assist facilities staff and building owners with better building management by harnessing the power of data extrapolated over time.</p> <p><b>Requirements:</b> All water use under the responsibility of the building owner/manager must be included in the analysis. At a minimum, compare consumption from the same seasons over two (2) years in order to detect anomalies. Conclusions drawn from the analysis must be presented.</p> <p><b>Additional Information:</b> Ensure you are comparing the same areas (if you originally looked only at common area consumption, continue looking at this area) as well as applying the same rules in regards to whether or not to use normalized data. If renovations have occurred during this time, special consideration should be applied in the analysis.</p>		
	Scoring	Yes	3/3
	No	0/3	



## 2.3 OPERATIONS AND MAINTENANCE

There are no questions in this section.





## 2.4 BUILDING SYSTEMS

<b>02.04.01</b>	<b>Do you maintain a list of every water meter installed within the building that you own and manage?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Having a list of the meters operating within the building can assist building managers in their water tracking and monitoring efforts as well as help answer any questions related to consumption anomalies. A list allows for a methodic approach to water analysis.</p> <p><b>Requirements:</b> The list must indicate meter location and tag number (if available).</p> <p><b>Additional Information:</b> Select Not Applicable if all meters are owned and managed solely by the tenants.</p>	
<b>Scoring</b>	Yes	3/3
	No	0/3
	N/A	0/0

<b>02.04.02</b>	<b>Which type of water efficient controls are used for irrigation?</b>			
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Water-efficient irrigation controls reduce water consumption.</p> <p><b>Requirements:</b> Indicate which type of irrigation control is in place at the building and used to irrigate 80% or more of the landscape.</p> <p><b>Additional Information:</b> Select all that apply. Other efficient technologies include WaterSense-approved technologies or equivalent. Select Not Applicable if there is no irrigation at the building.</p> <p>Reference: <a href="http://www.epa.gov/watersense/product_search.html?Category=5">WaterSense-approved irrigation controls</a> &lt;<a href="http://www.epa.gov/watersense/product_search.html?Category=5">http://www.epa.gov/watersense/product_search.html?Category=5</a>&gt;</p>			
<b>Scoring</b>		Yes	No	N/A
	Drip irrigation	2/6	0/6	0/0
	Root-fed irrigation	2/6	0/6	0/0
	Moisture sensors	2/6	0/6	0/0



02.04.03	What percentage of the building's water consumption is sub-metered?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Sub-meters measure the water consumption of specific areas or equipment, providing property owners and managers with the ability to understand where and how the building water is used.</p> <p><b>Requirements:</b> Provide outputs from sub-meters along with information on each sub-meter such as make, model, and serial number.</p> <p><b>Additional Information:</b> Metering major water consuming mechanical equipment such as cooling towers will reveal how often it runs and how much water it consumes during operation, as well as identify when equipment drifts away from set point (should it occur). Metering tenant areas could allow for reclaiming costs associated with water consumption and raise water efficiency awareness with the tenants.</p> <p>Systems such as irrigation, and common areas should be sub-metered separately to allow for early identification of consumption changes which could indicate a problem.</p>	
<b>Scoring</b>	30% or more	8/8
	20-29%	6/8
	10-19%	4/8
	Less than 10%	0/8



<b>02.04.04</b>	<b>What percentage of water fixtures are efficient, based on inventory amount?</b>
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> A high-efficiency fixture uses less water while still performing its function.</p> <p><b>Requirements:</b> For each fixture type, identify what percentage of fixtures is efficient based on the standards listed.</p> <p><b>Additional Information:</b>            Select Not Applicable if a certain type of fixture is not present in the building or if the fixtures are owned, managed and maintained solely by tenants.            Reference: WaterSense-approved fixtures (<a href="http://www.epa.gov/watersense/products/">http://www.epa.gov/watersense/products/</a>)</p>

<b>02.04.05</b>	<b>Toilet: 4.8 L/flush or less (1.28 G/flush)</b>	
<b>Explanation &amp; Evaluation</b>		
<b>Scoring</b>	75 – 100%	8/8
	50 – 74%	4/8
	25 – 49%	2/8
	Less than 25%	0/8
	N/A	0/0

<b>02.04.06</b>	<b>Urinals: 1.9 L/flush or less (0.5 G/flush)</b>	
<b>Explanation &amp; Evaluation</b>		
<b>Scoring</b>	75 – 100%	8/8
	50 – 74%	4/8
	25 – 49%	2/8
	Less than 25%	0/8
	N/A	0/0



02.04.07		Lavatory and kitchen faucets: 5.7 L/min or less (1.5 G/min)	
<b>Explanation &amp; Evaluation</b>			
<b>Scoring</b>	75 – 100%	5/5	
	50 – 74%	3/5	
	25 – 49%	2/5	
	Less than 25%	0/5	
	N/A	0/0	

02.04.08		Shower heads: 7.6 L/min or less (2 G/min)	
<b>Explanation &amp; Evaluation</b>			
<b>Scoring</b>	75 – 100%	4/4	
	50 – 74%	2/4	
	25 – 49%	1/4	
	Less than 25%	0/4	
	N/A	0/0	



## 2.5 INNOVATION

02.05.01	Is a potable water testing program in place at the building?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> A potable water quality testing program will confirm that the quality of the water supplied to building occupants for potable use.</p> <p><b>Requirements:</b> A potable water testing program must be in place at the building which includes annual testing at representative points of use so as to identify (and ultimately address) vulnerabilities. Consideration of the following is recommended:</p> <ul style="list-style-type: none"> <li>• Consideration of the following is recommended:</li> <li>• Microbiological, including <i>Legionella</i></li> <li>• Chemicals</li> <li>• Physical aesthetic properties (turbidity)</li> <li>• Organics (including pesticides, herbicides)</li> <li>• Metals (including lead)</li> <li>• Radionuclides</li> </ul> <p>At a minimum, annual testing must include microbiological parameters, physical aesthetic properties and metals.</p> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> Even municipally supplied water at buildings can become contaminated as it travels through the building water system to point of use. Old piping, microbiological contamination, and piping with long periods of low usage (or dead-legs) can lead to an increased risk of poor water quality. Potable water testing will assist in identifying water quality issues which can be addressed with treatment or filtration.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	9/9
	N/A	0/0

(Document Upload)



02.05.02		Have three (3) years of water consumption been analyzed in order to establish trends?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Analyzing water consumption data and establishing a trend can assist facilities staff and building owners better manage their buildings by detecting anomalies in water use and by harnessing the power of data extrapolated over time.</p> <p><b>Requirements:</b> Analysis of the building’s water consumption must include data from at a minimum, three (3) continuous years. Establish a baseline and assess consumption patterns over time. The analysis must clearly show trends and anomalies in relation to established water savings goals. Trends need not be positive.</p> <p><b>Additional Information:</b> Ensure you are comparing the same areas and that no major renovations have occurred over the time of this trending assessment.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>		
	<b>Scoring</b>	Yes	9/9
	N/A	0/0	

(Describe)

02.05.03		Are non-potable water sources used at the building?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> The use of non-potable water in certain practices will reduce how much potable water is used in the building – allowing for potable water to be conserved for more critical needs, such as for drinking.</p> <p><b>Requirements:</b> Use of alternatively sourced water must make up at least 5% of the building’s total water consumption.</p> <p><b>Additional Information:</b> Examples of non-potable water uses include grey water collected from condensate used as flushing water in urinals and toilets or collecting rain water to use for irrigation purposes.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>		
	<b>Scoring</b>	Yes	9/9
	N/A	0/0	

(Describe)



02.05.04	Is an innovative technology or process in place at the building that goes beyond the requirements outlined in this section?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Many technologies exist that go beyond the standards and requirements set out in the BOMA BEST Assessment. If building managers/owners have invested in innovative technologies or processes that go beyond these standards, innovation points can be earned under this question.</p> <p><b>Requirements:</b> Provide a comprehensive report about the benefits of the technology and/or process to BOMA Canada. The BOMA BEST Technical Committee will assess each proposal to determine whether or not it qualifies. Expect a 10-12 week delay before receiving a final decision. Contact BOMA Canada to obtain the submission guidelines.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	15/15
	N/A	0/0

(Document Upload)



3.0 AIR





### 3.1 DEMONSTRATION OF INTENT

03.01.01	Is a training program on indoor air quality (IAQ) in place for Property Managers and Building Maintenance staff?	
Explanation & Evaluation	<p><b>Description:</b> In order for building maintenance staff to effectively maintain HVAC systems for optimal indoor air quality, training should be provided which addresses the relationship between HVAC maintenance and IAQ. The intent of the training is to equip the property manager and/or building maintenance staff with knowledge of their HVAC systems, preventative maintenance programs, common IAQ issues and remedies.</p> <p><b>Requirements:</b> The formal training program must include in person or web-based seminars on the following topics, at a minimum:</p> <ul style="list-style-type: none"> <li>• A review of maintenance practices such as filter changes, coil cleaning, drain pans, humidifiers, fan operation, cooling tower maintenance, etc.</li> <li>• A review of applicable IAQ standards and guidelines as well as building performance goals.</li> <li>• Typical causes of IAQ complaints and suggested remedies.</li> <li>• Training must be refreshed as HVAC systems are changed, and at least every three (3) years.</li> <li>• A record of attendance, syllabus and competency assessment (quiz) should be kept.</li> <li>• Where HVAC services are contracted to a third party, the property manager and/or building maintenance staff must still be provided with basic training on IAQ, to assist in directing the HVAC service provider.</li> </ul> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> A detailed description of suggested maintenance practices and frequencies is available in ASHRAE 180 "Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems". Additional rationale for preventative HVAC maintenance practices for the benefit of indoor air quality is provided in the ASHRAE Indoor Air Quality Guide &lt; <a href="https://www.ashrae.org/resources--publications/bookstore/indoor-air-quality-guide">https://www.ashrae.org/resources--publications/bookstore/indoor-air-quality-guide</a>&gt;.</p>	
Scoring	Yes	14/14
	No	0/14

(Document Upload)



03.01.02	Is smoking restricted on the property?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> To reduce the potential for exposure, there must be restrictions placed on areas where occupants, staff or visitors are allowed to smoke (including e-cigarettes).</p> <p><b>Requirements:</b> The property must provide clear signage indicating designated exterior smoking areas at, or exceeding, a minimum distance of nine (9) meters from building entrances and intakes.</p> <p><b>Additional Information:</b> Such restrictions reduce the potential for harmful smoking products and odours from entering the building HVAC systems, and increases occupant comfort in the building exterior space. Consideration should be given to the implementation of a property-wide smoking and e-cigarette ban.</p>	
<b>Scoring</b>	Yes	10/10
	No	0/10



03.01.03	Is a plan in place to control construction-generated contaminants prior to base-building or tenant renovations?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Specific guidelines must be in place for base-building or tenant renovations to ensure that contaminants are not released into the surrounding interior environment.</p> <p><b>Requirements:</b> Guidelines must specify consideration of each of the following, where relevant:</p> <ul style="list-style-type: none"> <li>• Hazardous materials (reference to the Hazardous Building Materials Management Program);</li> <li>• De-pressurization of construction zones (e.g., in medical offices, hospitals and long term care facilities);</li> <li>• Noise control;</li> <li>• Vibration control monitoring, as applicable;</li> <li>• Dust control;</li> <li>• Volatile organic compound (VOC) emission/absorption management;</li> <li>• Odours;</li> <li>• Isolation of HVAC zones and/or enhanced ventilation;</li> <li>• HVAC filter replacement;</li> <li>• Awareness training of relevant staff.</li> </ul> <p><b>Additional Information:</b> During renovation or construction activities, elevated airborne particulate can be generated through the disturbance of various building materials (e.g., concrete, plaster, drywall, ductwork, flooring, and insulation), dusts originating from products used in the construction and by equipment that may emit combustion products. Additionally, building furnishings and finishes typically emit volatile organic compounds. Strategies to mitigate the impact of construction-generated contaminants in adjacent spaces should be developed and implemented.</p> <p>These procedures can be included in a building construction manual. Any renovation project that has the potential to generate the above noted contaminants should have a control plan. Although demonstration of implementation is preferable, it is not necessary. The plan can be common to a portfolio or campus of buildings however building specific information is necessary in most cases.</p>	
<b>Scoring</b>	Yes	3/3
	No	0/3

(Document Upload)



### 3.2 ASSESSMENT

03.02.01	Does the air quality meet the goals set out in the IAQ Monitoring Plan?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> The building owner/manager must confirm at least annually that IAQ goals set out in the IAQ Monitoring Plan are being met.</p> <p><b>Requirements:</b> An IAQ audit must be conducted annually by a competent individual to confirm that the parameters set out in the IAQ Monitoring Plan are being met. This audit must include at a minimum:</p> <ul style="list-style-type: none"> <li>• Measurement of key IAQ parameters (temperature, relative humidity, particulate, total volatile organic compounds, carbon dioxide and carbon monoxide) at representative locations throughout the building. This must include both base building and tenant spaces.</li> <li>• Visual inspection of all main and representative supplementary HVAC systems to confirm good hygiene.</li> <li>• Measurements and visual inspections must match performance goals for the building set out in the IAQ Monitoring Plan.</li> </ul>	
<b>Scoring</b>	Yes	6/6
	No	0/6
	Unknown	0/6

(Document Upload)



### 3.3 OPERATIONS & MAINTENANCE

03.03.01		Are the results of the most recent IAQ audit available to building occupants?	
Scoring	Yes	4/4	
	No	0/4	
	N/A	0/0	

(Document Upload)

03.03.02		Has the building manager acted on recommended corrective actions identified in the IAQ audit?	
Scoring	Yes	6/6	
	No	0/6	
	N/A	0/0	



<b>03.03.03</b>	<b>Is there a process in place for investigating and correcting when manual overrides of the HVAC system occur?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Manual overrides of the mechanical systems can occur due to building occupant complaints. A process should be developed and implemented to investigate override occurrences and to reset the system. Overrides due to system typically indicate there are other systemic issues that should be investigated.</p> <p><b>Requirements:</b> Establish a process for investigating and correcting when manual overrides of the HVAC system occur. Root causes of HVAC system failure or inadequate function must be determined and changes implemented to prevent the need for future overrides.</p> <p>The process must include documentation of the override, investigation methodology, corrective actions including a schedule for completion, and follow up assessment.</p> <p><b>Additional Information:</b> Select Not Applicable if all HVAC equipment is owned, managed and maintained solely by tenants.</p>	
<b>Scoring</b>	Yes	12/12
	No	0/12
	N/A	0/0

(Describe)

<b>03.03.04</b>	<b>Is nighttime outdoor air purging performed at the building?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Where climate and the quality of outdoor air permits, the use of night time air purging strategies can be employed to both pre-cool and purge air in a building for the next day. This practice goes above and beyond the use of economizers that may operate in order to use free-cooling during daytime hours.</p> <p><b>Requirements:</b> A minimum of two (2) full air changes of the building must be provided when temperatures are suitable. Purging must use a high percentage of outdoor air (at least 75%). Demonstrate that purging is performed regularly as part of standard operations (whenever possible).</p> <p><b>Additional Information:</b> Purging operating times are dictated by outdoor and building temperatures and should be performed after occupied periods, typically Monday to Friday. Select Not Applicable if all HVAC equipment is owned, managed and maintained solely by tenants.</p>	
<b>Scoring</b>	Yes	8/8
	No	0/8
	N/A	0/0



03.03.05	Are there minimum open set points on all variable air volume dampers?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> If dampers on variable air volume (VAV) VAV boxes are allowed to close completely the supply air to these zones may be completely cut off for extended periods of time. This will usually occur when the temperature requirements are satisfied in the area where the thermostat control for the VAV is located. When this happens all internally generated pollutants will build up and building occupants will likely complain of stale air.</p> <p><b>Requirements:</b> Establish and set minimum open set points for the VAV dampers so that they are never allowed to close completely. Minimum set points must be established in accordance with manufacturer specifications.</p> <p><b>Additional Information:</b> Select Not Applicable if all HVAC equipment is owned, managed and maintained solely by tenants.</p>	
<b>Scoring</b>	Yes	10/10
	No	0/10
	N/A	0/0



### 3.4 BUILDING SYSTEMS

03.04.01	What MERV filters are in use for all outdoor air and return air (i.e. circulating air) systems?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Use of MERV 8 or greater filtration systems significantly reduces levels of indoor contaminants and prevents build-up of particulate and debris on HVAC components. Filtration of return-air (from systems such as compartment units, fan-coil units, heat pumps) prevents recirculation of occupant-generated contaminants.</p> <p><b>Requirements:</b> All filters must be rated as per ASHRAE 52.2 (latest edition). Filters must be installed and replaced in accordance with manufacturer’s specifications and ASHRAE Standard 180 (Maintenance Standard). Maintenance of these filtration systems should be included in the building’s Preventative Maintenance Program. ASHRAE recommends the use of MERV 8 filtration at a minimum for commercial environments. Additional points are awarded if the filters maintain their MERV rating when tested in accordance with ASHRAE 52.2 Addendum B, Appendix J.</p> <p><b>Additional Information:</b> Installation of filtration systems that meet ASHRAE Minimum Efficiency Reporting Value (MERV) 8 will prevent larger outdoor air contaminants such as mould spores, pollen, some dusts and aerosols from entering the HVAC system. Installation of filtration systems that meet ASHRAE Minimum Efficiency Reporting Value (MERV) 13 to 16 prevent up to 90% of fine outdoor air contaminants such as mould spores, pollen, dusts and aerosols from entering the HVAC system. If a combination of filters is used, select the highest MERV rating representative of at least 50% of all filters. Select Not Applicable if all HVAC systems are owned, managed and maintained solely by tenants.</p>	
<b>Scoring</b>	MERV 7 or below	0/10
	MERV 8-12	4/10
	MERV 8-12 (ASHRAE 52.2, Addendum B, Appendix J)	6/10
	MERV 13-16	8/10
	MERV 13-16 (ASHRAE 52.2, Addendum B, Appendix J)	10/10
	N/A	0/0





03.04.02	Do all high traffic entryways have track-off systems such as grills, grates or matting in place throughout the year?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Many indoor air contaminants such as bacteria, soils, and mould can be transported into a building by the occupants. An entryway system to capture contaminants tracked in on footwear should be employed.</p> <p><b>Requirements:</b> Grills, grates or matting must be in place throughout the year in order to reduce particulate and other contaminant transfer. Track-off systems need not be permanent fixtures but must be cleaned and replaced as necessary. The matting system should be 12 -15 feet long, where permissible.</p> <p>Describe how these systems are used, cleaned and maintained.</p> <p><b>Additional Information:</b> An ideal set up for a main entrance consists of an outside scraper mat, foyer mat and an inside carpet mat.</p> <p>The ASHRAE IAQ Guide section 3.5 describes the factors to be considered in determining the appropriate track-off system including traffic load, aesthetics, dominant contributors and local environmental conditions.</p>	
<b>Scoring</b>	Yes	8/8
	No	0/8

(Describe)

03.04.03	Are measures in place to alert building operators that HVAC filtration systems need replacement?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Measures to alert building operators when filtration systems require replacement outside of regular preventative maintenance schedules. Overloaded, improperly fit filters degrade the performance of the HVAC unit and increase the potential for outdoor contaminants to enter the indoor air.</p> <p><b>Requirements:</b> Implement measures, such as sensors (pressure, air flow, etc.) to ensure that filtration systems are performing correctly. Sensors must be installed and maintained in accordance with manufacturer specifications.</p> <p><b>Additional Information:</b> Although regular preventative maintenance programs are effective in maintaining filtration systems, the condition of outdoor air is not static. Increased levels of outdoor contaminants due to local construction, weather conditions, etc., may shorten the useful life of a filter. Measures such as sensors are employed to assist the building operator in identifying filtration systems that have reached capacity such that maintenance can be performed before the system's efficiency is compromised.</p> <p>Select Not Applicable if all HVAC systems are owned, managed and maintained solely by tenants.</p>	
<b>Scoring</b>	Yes	4/4
	No	0/4
	N/A	0/0

(Describe)



<b>03.04.04</b>		<b>Do measured outdoor air ventilation rates meet the minimum requirements of Table 6.2.2.1 of the current ASHRAE 62.1 Standard.</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> When HVAC systems are capable of providing ventilation rates in accordance with ASHRAE 62.1, it must be confirmed that they are operated in such a manner that these rates are continually achieved in occupied spaces.</p> <p><b>Requirements:</b> Determine the average ventilation rate for frequently occupied indoor spaces. This must be achieved through on-site measurement.</p> <p>The assessment must have been completed within the last five (5) years, or as major renovations of the HVAC systems occur.</p> <p><b>Additional Information:</b> Rates can be measured through the use of in-line sensors/monitors, or preferably through measurements of actual outdoor and supply air through the use of a certified air balancing contractor or similar.</p> <p>Reference: ASHRAE 62.1 Standard &lt; <a href="https://www.ashrae.org/resources--publications/bookstore/standards-62-1--62-2">https://www.ashrae.org/resources--publications/bookstore/standards-62-1--62-2</a>&gt;</p>		
	<b>Scoring</b>	Yes	8/8
	No	0/8	

<b>03.04.05</b>		<b>Is there an enclosed parking garage, loading dock or fuel/gas-fired equipment room within or connected to the building?</b>	
<b>Explanation &amp; Evaluation</b>			
<b>Scoring</b>	Yes	For informational purposes	
	No	For informational purposes	

<b>03.04.06</b>		<b>Is the enclosed parking garage and/or gas/fuel-fired equipment room ventilated?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> In office and commercial buildings, important sources of combustion products include garages, and loading docks that are attached or have a pathway to working spaces. Air intakes located at ground level or adjacent to vehicles or other combustion sources can transport contaminants to areas served by the air handling system.</p> <p><b>Requirements:</b> Enclosed parking garages and/or fuel fired equipment rooms must be ventilated – either continuously or on demand. Where on-demand ventilation is employed, sensors must be appropriate to the combustion source or triggered by the startup of the fuel fired equipment.</p> <p>Combustion products may include carbon monoxide, oxides of nitrogen, sulphur oxides, carbon dioxide, and particulates. At a minimum, concentration of carbon monoxide must be monitored to confirm they are within accepted limits (either continuously or during representative periods).</p>		
	<b>Scoring</b>	Yes	7/7
	No	0/7	

Nest



### 3.5 INNOVATION

03.05.01		Do the following space types have a dedicated exhaust system?		
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Air from spaces containing local contaminant and odour sources such as high volume printer rooms, kitchens, custodial rooms, and chemical storage areas, should not be entrained with the return air and re-distributed to other parts of the building.</p> <p><b>Requirements:</b> To prevent the spread of contaminants, a dedicated exhaust system must be in place in these space types. Select all space use types for which more than 50% of the space use type is outfitted with a dedicated exhaust system. Tenant areas must be included in this calculation (e.g., tenant kitchens, enclosed printing rooms, etc.)</p> <p><b>Additional Information:</b> Select all that apply. Though not required, additional measures such as self-closing doors, separation from adjacent spaces with deck-to-deck partitions or a continuous hard ceiling should be employed to further reduce contamination.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>			
	<b>Scoring</b>		Yes	N/A
		Enclosed Printing/Copying Rooms	8/24	0/0
		Tenant and Staff Kitchens	8/24	0/0
	Custodial/Chemical Storage Rooms	8/24	0/0	

03.05.02		Are concentrations of carbon monoxide below 25 ppm in the enclosed parking garage and/or gas/fuel-fired equipment room?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Carbon monoxide can build up to harmful levels in enclosed parking garages or fuel fired equipment rooms.</p> <p><b>Requirements:</b> Concentrations of carbon monoxide must be monitored either continuously or by representative sampling to confirm that levels are below 25 ppm. Representative sampling must be conducted at least annually, and must capture high traffic periods.</p> <p>Where continuous monitoring is conducted via sensors, these sensors must be installed and calibrated in accordance with manufacturer’s specifications.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>		
	<b>Scoring</b>	Yes	14/14
	N/A	0/0	

(NESTED question: Does not appear if have indicated that there is no parking garage or gas/fuel-fired equipment room in a previous question).



<b>03.05.03</b>	<b>Are air sanitation measures in place in main HVAC systems or in 50% or more of return-air systems?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Outdoor air conditions, as well as interior contaminant recirculation, may warrant investment in greater air purification measures. Standalone or integrated air sanitation devices such as ultraviolet germicidal irradiation, or photocatalytic oxidation filtration systems can be employed to reduce the presence of VOCs, mould, ozone, bacteria and viruses. These measures would supplement (not necessarily replace) MERV rated filtration.</p> <p><b>Requirements:</b> One or more of the following air sanitation measures must be in place in main HVAC systems or in a majority of return-air systems:</p> <ul style="list-style-type: none"> <li>• Ultraviolet germicidal irradiation for air filtration</li> <li>• Photocatalytic oxidation filtration</li> <li>• Activated carbon filtration</li> </ul> <p>Units must be maintained as per manufacturer specifications, including recommendations on carbon testing (annually at a minimum) and replacement schedule (carbon units should be replaced annually if no testing can be done).</p> <p><b>Additional Information:</b> For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	14/14
	N/A	0/0

<b>03.05.04</b>	<b>Is an innovative technology or process in place at the building that goes beyond the requirements outlined in this section?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Many technologies exist that go beyond the standards and requirements set out in the BOMA BEST Assessment. If building managers/owners have invested in innovative technologies or processes that go beyond these standards, innovation points can be earned under this question.</p> <p><b>Requirements:</b> Provide a comprehensive report about the benefits of the technology and/or process to BOMA Canada. The BOMA BEST Technical Committee will assess each proposal to determine whether or not it qualifies. If pursuing this path, expect a 10-12 week delay before receiving a final decision. Contact BOMA Canada to obtain the submission guidelines.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	10/10
	N/A	0/0

(Document Upload)



## 4.0 COMFORT



## 4.1 DEMONSTRATION OF INTENT

There are no questions in this section.



## 4.2 ASSESSMENT

04.02.01	Is the building designed such that potential accessibility barriers are addressed?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> The design of the site features and the base building must ensure that areas generally accessed by the public are accessible and meet current barrier-free or accessibility standards or guidelines governing the facility.</p> <p>Where the construction of the facility predates the guidelines, owners are encouraged to renovate and to provide barrier-free paths of travel to and in the facility. The design or renovation must accommodate all people, irrespective of their level of ability.</p> <p><b>Requirements:</b> The building must comply with current building codes, standards and regulations through consultation with the local jurisdiction, such as the building code, AODA, Integrated Accessibility Standards Regulation or Americans with Disabilities Act (ADA). Where multiple local regulations, standards and building codes exist, the strictest shall apply.</p> <p><b>Additional Information:</b> Select Not Applicable if these criteria cannot be met due to heritage conservation requirements. Provide evidence of the relevant heritage elements that cannot be modified.</p>	
<b>Scoring</b>	Yes	14/14
	No	0/14
	N/A	0/0



## 4.3 OPERATIONS & MAINTENANCE

There are no questions in this section.





## 4.4 BUILDING SYSTEMS

There are no questions in this section.



## 4.5 INNOVATION

04.05.01	Do frequently occupied spaces have radiant building surfaces?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Radiant surfaces provide occupants with enhanced thermal comfort.</p> <p><b>Requirements:</b> Provide radiant building surfaces (such as radiant panels, thermally active slab/ceiling, and chilled beams) to frequently occupied spaces. These surfaces may provide main or supplemental heating for the occupied space.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	8/8
	N/A	0/0



## 5.0 HEALTH & WELLNESS



## 5.1 DEMONSTRATION OF INTENT

05.01.01	Is a <i>Legionella</i> Bacteria Control Management Program in place at the building?
<p><b>Explanation &amp; Evaluation</b></p>	<p><b>Requirements:</b> Develop and implement for <i>Legionella</i> susceptible water systems a Legionella Bacteria Control Management Program that is compliant with ASHRAE 188 “Legionellosis: Risk Management for Building Water Systems” and Public Works and Government Services Canada’s “Control of <i>Legionella</i> in Mechanical Systems”.</p> <p>The following systems must be considered for Legionella susceptibility, at a minimum:</p> <ul style="list-style-type: none"> <li>• Cooling towers and evaporative condensers;</li> <li>• Aerosol-generating misters, atomizers, humidifiers;</li> <li>• Hot and cold water systems;</li> <li>• Domestic hot water storage tanks;</li> <li>• Open air systems (such as decorative fountains); and</li> <li>• Whirlpool Spas.</li> </ul> <p>For compliance, the <i>Legionella</i> Bacteria Control Management Program must include consideration of the following components: :</p> <ul style="list-style-type: none"> <li>• Program team (identification of the persons responsible for developing and implementing the program, and the tasks for which they are responsible);</li> <li>• Water system flow diagrams;</li> <li>• Analysis of building water systems;</li> <li>• Water sampling protocol (includes monthly testing of hot water storage tanks, cooling tower and hot and cold water distribution systems);</li> <li>• Control measures;</li> <li>• Monitoring and corrective actions;</li> <li>• Confirmation;</li> <li>• Documentation;</li> <li>• Training;</li> <li>• Annual review and update.</li> </ul> <p>Risk analysis, and monitoring of control measures must be documented and kept current. At a minimum, the program must be reviewed every 12 months to ensure risks associated with legionella susceptible systems are mitigated.</p> <p>The program must be developed and executed by a person competent in Legionella mitigation measures.</p> <p>Where <i>Legionella</i> susceptible systems are owned and maintained by the tenants, the building owner/manager must provide information on how to implement a Legionella bacteria control management program. Tenants must be encouraged to disclose <i>Legionella</i> susceptible systems on-site and participate in the <i>Legionella</i> bacteria control management program.</p> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> The program team should include the building owner or designee, employees, consultants and contractors.</p> <p>The building water systems should be described in the form of a flow diagram, to assist in analyzing the areas of risk and determining sampling locations. Where necessary, control measures such as preventative maintenance, inspections and water treatment should be implemented. These control measures must be monitored to ensure they are effective (for example, through routine sampling activities and checking temperatures of hot water once a month).</p>



	Select Not Applicable if there are no <i>Legionella</i> susceptible systems in the building.	
<b>Scoring</b>	Yes	16/16
	No	0/16
	N/A	0/0

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05.01.02	Is a Refrigerant Safety Program in place at the building?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Some refrigerants present both a health and environmental hazard. Safety measures should be employed to reduce the potential for releases.</p> <p><b>Requirements:</b> Develop and implement a Refrigerant Safety Program compliant with CSA Mechanical Refrigeration Code B52-13 and ASHRAE Standard 15-2013 “Safety Standard for Refrigeration Systems” for large base building systems where leaks will have significant impacts on indoor air quality or climate.</p> <p>The following systems must be considered, at a minimum:</p> <ul style="list-style-type: none"> <li>• HVAC;</li> <li>• Industrial refrigeration or water systems;</li> <li>• Domestic fridges/freezers and stand-alone water coolers are excluded from consideration.</li> </ul> <p>For compliance, the Safety Program must include consideration of the following components:</p> <ul style="list-style-type: none"> <li>• Identification of refrigerant systems and inventory;</li> <li>• Proper operation, testing and maintenance;</li> <li>• Presence of safeguards, such as sensors;</li> <li>• Signage;</li> <li>• Proper storage;</li> <li>• Emergency shutdown procedures;</li> <li>• Training for building staff working on equipment containing refrigerants;</li> <li>• Use of licensed personnel, where required.</li> </ul> <p>The Refrigerant Safety Program may be a campus-wide or corporate document, but should include building specific inventory and safety considerations. Tenants must be encouraged to disclose refrigerants on-site and participate in the Safety Plan (may be part of the lease agreement).</p> <p>Where refrigerant equipment is owned and maintained by the tenant, the building owner/manager must provide information on how to implement a Refrigerant Safety Program. Tenants must be encouraged to disclose any halocarbon fire suppressant systems within their space.</p> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> Select Not Applicable if there are no refrigerants in the building.</p>	
<b>Scoring</b>	Yes	12/12
	No	0/12
	N/A	0/0

(Document Upload)



05.01.03	Is a safety program in place for halocarbon fire suppression systems?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Halon is an ozone depleting substance as well as an indoor atmospheric hazard (oxygen displacing). Use of halon in fire-suppression systems has been banned in many jurisdictions.</p> <p><b>Requirements:</b> Develop and implement safety program for halocarbon fire suppression systems in the building.</p> <p>For compliance, the safety program must include consideration of the following components:</p> <ul style="list-style-type: none"> <li>• Inventory of halocarbon fire suppressants greater than 10 kg;</li> <li>• Procedures for leaks;</li> <li>• Procedures for disposal;</li> <li>• Training; and</li> <li>• Annual review and update.</li> </ul> <p>The safety and global warming potential of non-halon fire suppression systems must also be assessed and where necessary, controls should be put in place to prevent exposures and releases.</p> <p>Where refrigerant equipment is owned and maintained by the tenant, the building owner/manager must provide information on how to implement a safety program for halocarbon fire suppression systems. Tenants must be encouraged to disclose any halocarbon fire suppression systems within their space.</p> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> Select Not Applicable if there are no halocarbon fire suppression systems in the building.</p>	
<b>Scoring</b>	Yes	14/14
	No	0/14
	N/A	0/0

(Document Upload)



05.01.04	<b>Is a management program in place at the building for above or below ground fuel storage tanks (AST/UST)?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> A management program for AST/UST will prevent ground water and soil contamination.</p> <p><b>Requirements:</b> Develop and implement a management program compliant with the “Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products” &lt;<a href="https://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&amp;n=61B26EE8-1">https://www.ec.gc.ca/lcpe-cepa/default.asp?lang=En&amp;n=61B26EE8-1</a>&gt;, developed by Environment Canada.</p> <p>For compliance, the management program must include consideration of the following components:</p> <ul style="list-style-type: none"> <li>• Inventory;</li> <li>• Registration with local authorities, where applicable;</li> <li>• Tank upgrading/replacement;</li> <li>• Testing;</li> <li>• Spill protection;</li> <li>• Emergency preparedness;</li> <li>• Record keeping; and</li> <li>• Training.</li> </ul> <p>Where fuel storage tanks are owned and maintained by the tenant, the building owner/manager must provide information on how to implement a fuel storage tank management program. Tenants must be encouraged to disclose the installation of any above or below ground fuel storage tanks.</p> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> Select Not Applicable if there are no above or below ground fuel storage tanks.</p>	
<b>Scoring</b>	Yes	6/6
	No	0/6
	N/A	0/0

(Document Upload)





## 5.2 ASSESSMENT

05.02.01	Has a radon risk assessment been completed for the building?	
<p><b>Explanation &amp; Evaluation</b></p>	<p><b>Description:</b> Radon is a colourless, odourless, naturally occurring radioactive gas present in soil, rock and water. In indoor environments, radon gas can penetrate the building envelope and accumulate in hazardous concentration levels. Radon is a risk in all parts of the country (Health Canada, C-NRPP).</p> <p><b>Requirements:</b> Radon testing must occur in all occupied areas where the floors or walls are in direct contact with the ground or a crawl space. Health Canada defines an occupied area as one that is, or may be, occupied by an individual for four (4) hours per day. If none of the ground contact floors are occupied, test all occupied rooms on the first occupied floor level above. Long term measurement of these areas is required (minimum of 90 days).</p> <p>Measurement devices approved by the Canadian National Radon Proficiency Program (C-NRPP) must be used. The radon risk assessment must be conducted by an individual certified by the Canadian National Radon Proficiency Program (<a href="http://www.C-NRPP.ca">www.C-NRPP.ca</a>) or local equivalent. Final analysis must be completed by a laboratory certified by C-NRPP or local equivalent. Note, not all measurement protocols require laboratory analyses (e.g., E-PERM Electrets) so long as the analyst is accredited to conduct that analysis through C-NRPP.</p> <p><b>Additional Information:</b> Health Canada recommends an action level of 200 becquerels per cubic meter (Bq/m<sup>3</sup>) to minimize health hazards due to indoor radon exposure. The radon risk assessment should be started and completed during the heating season between October and April when radon levels are typically higher in buildings.</p> <p>More information on radon testing is available in the Health Canada document "<a href="http://www.hc-sc.gc.ca/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/radiation/radon_building-edifices/27-15-1468-RadonMeasurements_PublicBuildings-EN13.pdf">Guide for Radon Measurements in Public Buildings</a>" &lt;<a href="http://www.hc-sc.gc.ca/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/radiation/radon_building-edifices/27-15-1468-RadonMeasurements_PublicBuildings-EN13.pdf">http://www.hc-sc.gc.ca/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/radiation/radon_building-edifices/27-15-1468-RadonMeasurements_PublicBuildings-EN13.pdf</a>&gt;.</p>	
<p><b>Scoring</b></p>	Yes	14/14
	No	0/14

(Document Upload)



### 5.3 OPERATIONS & MAINTENANCE

05.03.01	Are mitigation strategies in place to bring radon concentrations to within acceptable limits?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Serious health hazards are present where radon concentrations exceed 200 Bq/m<sup>3</sup>, If levels are detected below 200 Bq/m<sup>3</sup> no further testing is required unless major renovations are performed that could significantly impact airflow in the building. Other exceptions include change of use in the lowest-occupied levels.</p> <p><b>Requirements:</b> Where radon concentrations have been detected between 200 and 600 Bq/m<sup>3</sup>, remedial action must be taken within 2 years of detection.</p> <p>Where radon concentrations have been detected above 600 Bq/m<sup>3</sup>, remedial action must be taken within 1 year.</p> <p>Mitigation strategies/systems (such as active soil depressurization and mechanical ventilation) must be designed and implemented by a Certified Radon Mitigation Professional (certified with the Canadian National Radon Proficiency Program (C-NRPP).</p> <p>In the event of high radon test results, conduct additional diagnostic testing on the upper floors as per Health Canada’s document, “<a href="http://www.hc-sc.gc.ca/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/radiation/radon_building-edifices/27-15-1468-RadonMeasurements_PublicBuildings-EN13.pdf">Guide for Radon Measurements in Public Buildings</a>” (http://www.hc-sc.gc.ca/ewh-semt/alt_formats/hecs-sesc/pdf/pubs/radiation/radon_building-edifices/27-15-1468-RadonMeasurements_PublicBuildings-EN13.pdf). High radon levels can potentially exist on upper floors due to the upward movement of air from stack effect or if radon is suspected to be emanating from building materials. This diagnostic testing can be conducted using a continuous radon monitor (CRM).</p> <p><b>Additional Information:</b> Select Not Applicable if radon concentrations are below 200 Bq/m<sup>3</sup>.</p>	
<b>Scoring</b>	Yes	8/8
	No	0/8
	Unknown	0/8
	N/A	0/0

(Describe)



## 5.4 BUILDING SYSTEMS

05.04.01	<b>Are secondary containment measures in place in base-building areas where chemicals are stored and/or used?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Secondary containment measures such as spill berms should be employed in areas where chemicals are used and stored (such as in mechanical rooms) to prevent chemicals from entering drains and/or sewers.</p> <p><b>Requirements:</b> Secondary containment is required for all areas of chemical storage such as janitorial storage, water treatment chemical tanks, etc. At a minimum, the uniform fire code mandates that secondary containment exist where individual containers hold 55 gallons or more, or where the aggregate capacity of multiple containers is 100 gallons or more.</p> <p>OSHA specifies that secondary containment should be sufficient to carry 10% of the aggregate capacity of multiple containers, or 100% of the largest container, whichever is greater.</p> <p>Tenants must be encouraged to disclose the storage/use of chemicals on-site (may be required in their lease agreement) and where present, the building owner/manager must provide information on how to implement secondary containment measures.</p> <p><b>Additional Information:</b> Select Not Applicable if no chemical products are stored on the property.</p>	
<b>Scoring</b>	Yes	10/10
	No	0/10
	N/A	0/0



## 5.5 INNOVATION

05.05.01	<b>Are features that attempt to simulate the natural environment installed in commonly occupied base-building areas?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> The biophilia hypothesis suggests there is an instinctive connection between human beings and other living systems. Regular connection with nature can improve experience, mood and happiness. In the built environment, this translates to the incorporation of natural features such as wood and plant life in the building. To be effective, these natural features must be visible to as many occupants as possible such as in entryways, lobbies, cafeterias, food courts, and in the atrium.</p> <p><b>Requirements:</b> Acceptable features must be large in scale, such as green walls (not individual potted plants), large plants (such as trees), decorative water fountains and aquariums.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	6/6
	N/A	0/0

(Describe)



## 6.0 PURCHASING



## 6.1 DEMONSTRATION OF INTENT

06.01.01	Is an environmental procurement program in place at the building that includes the following components?
Explanation & Evaluation	<p><b>Description:</b> An environmental procurement program is a tangible way of expressing commitment to environmental conservation and human health.</p> <p><b>Requirements:</b> Develop an environmental procurement program that identifies environmentally preferable alternatives for many or all of the types of products used in buildings.</p> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> Preferred products are those that decrease the environmental impact of one aspect (for example, reduction in chemicals in cleaning) while not worsening the impact in another (for example, water). Such products are typically identified thanks to a third-party certification label attesting to their improved environmental performance. These certifications are applied to products and services that have been independently certified to meet strict environmental standards that reflect the entire life cycle – from manufacturing to disposal. The program scope can be building-specific or can apply at the corporate or campus-wide level.</p>

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06.01.02	Cleaning devices, products and supplies	
Explanation & Evaluation	<p><b>Description:</b> Environmentally friendly cleaning devices, products and supplies (such as paper towels) are those that have been certified by a third-party.</p> <p><b>Requirements:</b> At least 50% of cleaning devices, products and supplies must carry a third-party certification from EcoLogo, Green Seal, US EPA Safer Choice, Forest Stewardship Council (FSC), Sustainable Forestry Initiative (SFI), or the Canadian Standards Association’s Sustainable Forest Management Standard (CSA’s SFMI). Provide copies of purchase orders for environmentally preferable products from the past 12 months or provide a letter from the contracted janitorial service provider confirming that cleaning devices, products and supplies comply with the requirements listed here.</p> <p><b>Additional Information:</b> Cleaning devices, products and supplies include: devices that use ionized or electrolyzed water, sanitary paper products, hard surface cleaners, hard floor care products, urinal blocks, hand cleaners, cleaning and degreasing compounds, disinfectants and disinfectant cleaners, carpet and upholstery cleaners, odor control additives.</p>	
Scoring	Yes	2/2
	No	0/2



06.01.03		Office supplies.	
Explanation & Evaluation	<p><b>Description:</b> Office supplies carry a significant impact on our environment given their frequency of use and scale of use.</p> <p><b>Requirements:</b> At least 50% of office supplies must either carry a third-party certification from Forest Stewardship Council (FSC)-certified or meet one of the following requirements (based on the type of material: contain at least 10% post-consumer ; contain at least 20% pre-consumer material; contain at least 50% rapidly renewable materials; or use only rechargeable batteries.</p> <p><b>Additional Information:</b> Office supplies include paper, toner cartridges, binders, batteries and desk accessories. Portable dry-cell batteries, including single use and rechargeable batteries used in radios, phones, cameras, computers, and other devices or equipment should be recycled or disposed responsibly.</p>		
	Scoring	Yes	1/1
	No	0/1	

06.01.04		Products used for building operations and maintenance.	
Explanation & Evaluation	<p><b>Description:</b> Environmentally friendly building products (for operations and maintenance) are those that have been certified by a third-party.</p> <p><b>Requirements:</b> A least three (3) products used for building operations and maintenance must carry a third-party certification from EcoLogo, Green Seal or GreenGuard. Provide copies of purchase orders for environmentally preferable products from the past 12 months or provide a letter from the contracted provider confirming that products comply with the requirements listed here.</p> <p><b>Additional Information:</b> Products used in operations and maintenance include adhesives, sealants, solvents, HVAC filters, and degreasers.</p>		
	Scoring	Yes	1/1
	No	0/1	

06.01.05		Cleaning Equipment.	
Explanation & Evaluation	<p><b>Description:</b> Environmentally friendly cleaning equipment is certified by a third-party.</p> <p><b>Requirements:</b> Cleaning equipment must carry a third-party certification from the Carpet and Rug Institute or meet California Air Resources Board (CARB) or the ISSA Cleaning Industry Management Standard (CIMS) for sound levels of less than 70bBA. Provide copies of purchase orders for environmentally preferable products from the past 12 months or provide a letter from the contracted provider confirming that products comply with the requirements listed here.</p> <p><b>Additional Information:</b> Cleaning equipment includes carpet care equipment, floor machines, and vacuum cleaners.</p>		
	Scoring	Yes	1/1
	No	0/1	



06.01.06		Building materials used for renovations.	
Explanation & Evaluation	<p><b>Description:</b> Environmentally friendly building materials (for renovations) are those that have been certified by a third-party.</p> <p><b>Requirements:</b> Building materials must carry a third-party certification. Provide copies of purchase orders for environmentally preferable products from the past 12 months or provide a letter from the contracted provider confirming that products comply with the requirements listed here.</p> <p><b>Additional Information:</b> Accepted third-party certifications include: Green Seal, GreenGuard, EcoLogo, Cradle to Cradle, ENERGY STAR, WaterSense, Forest Stewardship Council (FSC), Sustainable Forestry Initiative (SFI), or the Canadian Standards Association’s Sustainable Forest Management Standard (CSA’s SFMI).</p>		
	Scoring	Yes	1/1
	No	0/1	

06.01.07		Energy efficient equipment?	
Explanation & Evaluation	<p><b>Description:</b> Energy efficient equipment use fuel more effectively and heat or cool the fluid (air, water) to the same set point with less energy consumed relative to their lower efficiency counterparts.</p> <p><b>Requirements:</b> Specify in the procurement plan that when it comes time to replace equipment, they will be replaced with an energy efficient model compliant with ASHRAE 90.1 or ENERGY STAR.</p>		
	Scoring	Yes	2/2
	No	0/2	

06.01.08		Water efficient equipment?	
Explanation & Evaluation	<p><b>Description:</b> Water efficient equipment use water in a more effective way relative to their less efficient counterparts.</p> <p><b>Requirements:</b> Specify in the procurement plan that when it comes time to replace equipment, they will be replaced with a water efficient model compliant with WaterSense or ENERGY STAR.</p>		
	Scoring	Yes	2/2
	No	0/2	





06.01.09	Are private or independent retailers engaged in an environmental procurement program?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Engaging the private or independent retailers operating in the building in a facility-wide environmental procurement program will provide them with the opportunity to align their actions with the facility's environmental objectives. This may take the form of implementing a reusable mug incentive program, participating in the facility's composting program, putting in place environmental purchasing objectives, etc.</p> <p><b>Requirements:</b> An effective environmental procurement program must include clear performance indicators for retailers (listing specific initiatives and implementation timelines) and be regularly reviewed (at least every 12 months) to assess the success of any given initiative with modifications made as needed. Provide documentation demonstrating how private or independent retailers have been engaged in the building's environmental procurement program.</p> <p><b>Additional Information:</b> Retailers can be food-based retailers or other. Select Not Applicable if there are no private or independent retailers in the building.</p>	
<b>Scoring</b>	Yes	7/7
	No	0/7
	N/A	0/0

(Describe)



## 6.2 ASSESSMENT

There are no questions in this section.



## 6.3 OPERATIONS & MAINTENANCE

06.03.01	Is the environmental procurement program reviewed and updated annually?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> More frequent reviews of the procurement program are encouraged. Reviewing the program at least annually is important because new products regularly come to market, third-party certifiers alter their standards, and new building systems may be installed for which a new procurement plan must be specified.</p> <p><b>Requirements:</b> The program must be reviewed every 12 months, at a minimum. The review must be systematic, looking at each area in turn and reassessing each selected product to confirm that after 12 months of use it is not having a negative impact on another environmental area. Should any such issue be discovered, the product can be refused and discontinued.</p> <p>The updated version of the environmental procurement program must be properly communicated and distributed to all relevant parties.</p> <p><b>Additional Information:</b> Select Not Applicable if there is no environmental procurement program.</p>	
<b>Scoring</b>	Yes	5/5
	No	0/5
	N/A	0/0



## 6.4 BUILDING SYSTEMS

There are no questions in this section.



## 6.5 INNOVATION

There are no questions in this section.



## 7.0 CUSTODIAL



## 7.1 DEMONSTRATION OF INTENT

07.01.01	Are details about the green cleaning initiative shared with building occupants?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Tenants and building staff are stakeholders in the effective cleaning of the building. Sharing details about the green cleaning initiatives in place at the building will encourage feedback and generate enthusiasm for such initiatives.</p> <p><b>Requirements:</b> Provide occupants with details about the green cleaning initiative, such as green cleaning protocols, custodial goals, cleaning logs and Standard Operating Procedures (SOPs) where custodial services are contracted (as provided by the contractor).</p> <p><b>Additional Information:</b> These may be communicated in a tenant booklet, website, memorandum or posters. Cleaning logs should be made available for review upon request. Cleaning logs must include the date maintenance tasks were performed and by whom.</p>	
<b>Scoring</b>	Yes	7/7
	No	0/7



## 7.2 ASSESSMENT

07.02.01	Is a green cleaning audit conducted annually at the building?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Cleaning audits ensure cleanliness goals for each space are being met and that green products are being used appropriately.</p> <p><b>Requirements:</b> Conduct an audit every 12 months. The audit must be conducted by someone who is not affiliated with the custodial staff (such as a non-custodial staff member). The audit must include a confirmation that green products are being used appropriately and that cleanliness goals for each space are being met.</p> <p>The audit must be conducted in general accordance with the APPA Custodial Effectiveness Audit (<a href="http://www.appa.org/">http://www.appa.org/</a>) and include the following components:</p> <ul style="list-style-type: none"> <li>• Identify Appearance Level</li> <li>• Identify Standard Spaces</li> <li>• Create Staffing Level Summary</li> <li>• Create Inventory of each space</li> </ul> <p>The audit must identify areas in need of improvement and will provide the building with an APPA score, assessing the appearance level of the site.</p>	
<b>Scoring</b>	Cleanliness goals are being met	5/10
	Green products are being used appropriately	5/10
	No	0/10

(Document Upload)





### 7.3 OPERATIONS & MAINTENANCE

<b>07.03.01</b>	<b>Does building management maintain an inventory and sanitation schedule for frequently touched surfaces?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Frequently touched surfaces such as door handles and elevator buttons can harbor bacteria and viruses for extended periods. Such surfaces should be easily cleanable, and should be sanitized with a disinfectant on a daily basis.</p> <p><b>Requirements:</b> A sanitation schedule must be developed which identifies frequently touched surfaces. Provide evidence of the scheduled cleaning process and cleaning frequency (at least daily) for disinfection and that the inventory includes disinfection products registered with Health Canada (DIN) and/or products certified by Ecologo.</p>	
<b>Scoring</b>	Yes	5/5
	No	0/5

<b>07.03.02</b>	<b>Are pest reduction strategies in place at the building?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Unhygienic conditions can result in the presence and proliferation of organisms that produce harmful or irritating byproducts.</p> <p><b>Requirements:</b> To minimize the potential for such organisms to thrive, the following three (3) pest reduction strategies must be in place:</p> <ul style="list-style-type: none"> <li>• Food storage in sealed containers with daily disposal;</li> <li>• Proactive inspection for evidence of pests at least monthly; and</li> <li>• The use of environmentally preferable pesticides, if necessary.</li> </ul> <p>The pest reduction strategies must be reviewed every 12 months and updated as necessary.</p> <p>The building owner/manager must provide information on how to implement pest reduction strategies and tenants must be encouraged to participate.</p>	
<b>Scoring</b>	Yes	8/8
	No	0/8

(Describe)



## 7.4 BUILDING SYSTEMS

07.04.01	Is high efficiency cleaning equipment used in the building?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Well-maintained, high performing cleaning equipment reduces the required frequency of cleaning as well as reducing the spread of indoor air contaminants.</p> <p><b>Requirements:</b> At least one (1) device or piece of cleaning equipment must be high efficiency, such as HEPA Vacuums or Mobile UV cleaning devices. If custodial services are contracted, the contracted company must confirm in writing that they are using such equipment.</p>	
<b>Scoring</b>	Yes	12/12
	No	0/12



## 7.5 INNOVATION

There are no questions in this section.



## 8.0 WASTE



## 8.1 DEMONSTRATION OF INTENT

08.01.01	Is a Waste Reduction and Diversion Policy in place at the building?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> The Waste Reduction and Diversion Policy represents a commitment from the organization or building management to continuously improve performance in regards to the reduction and diversion of solid waste.</p> <p><b>Requirements:</b> The Policy must include a statement committing the organization or building to continuous improvement in the reduction and diversion of waste. Address the prevention, diversion, and management of solid waste generated as a result of the following:</p> <ul style="list-style-type: none"> <li>• Day to day activities from all waste producing areas, including food service and retail; and</li> <li>• Periodic events such as conferences, catered meetings and functions, training, tenant relocation activities, construction, renovation and demolition projects, fit-ups, etc.</li> </ul> <p>The Policy (and any subsequent updates) must be dated and signed by Senior Management (an individual with decision-making abilities in regards to budget expenditures).</p> <p><b>Additional Information:</b> Demonstration of implementation is not required, nor is building-specific information. The policy can be common to a portfolio or campus of buildings.</p> <p>Buildings that have achieved a certification through the 3RCertified program can answer “Yes” and show their certification to the verifier. 3RCertified &lt; <a href="http://3rcertified.ca/home">http://3rcertified.ca/home</a>&gt; is a certification program for buildings in the Industrial, Commercial and Institutional (IC&amp;I) sectors that reviews how organizations manage solid waste reduction and diversion operations. It is available across Canada.</p>	
<b>Scoring</b>	Yes	10/10
	No	0/10

(Document Upload)



08.01.02	Is a program in place at the building to minimize construction, renovation and/or demolition waste being sent to landfill?	
Explanation & Evaluation	<p><b>Description:</b> Construction and demolition waste – which accounts for about 30% of Canada's disposal – can be reduced by implementing a source separation and recycling program on-site.</p> <p><b>Requirements:</b> The program must clearly describe the procedure for achieving waste diversion goals during future renovation. Each renovation project within the site boundary (including tenant spaces) must establish waste diversion goals, target five materials for diversion and identify waste diversion strategies to be used.</p> <p>The program must include the following components:</p> <ul style="list-style-type: none"> <li>• A Material Source Separation Plan (MSSP) so that discarded materials are sorted into corresponding bins for separation and reuse/recycling and hauled offsite by a verified hauler;</li> <li>• Roles and Responsibilities for implementing the MSSP;</li> <li>• Material Handling;</li> <li>• Waste Tracking;</li> <li>• Waste Reporting;</li> <li>• Communications to relevant parties; and</li> <li>• Review and update as required.</li> </ul> <p><b>Additional Information:</b> The program must meet the minimal requirements of the jurisdiction (e.g., 3R Code of Practice). The specifications should address the recycling of the following construction waste materials, including but not limited to:</p> <ul style="list-style-type: none"> <li>• Corrugated Cardboard;</li> <li>• Wood (treated and untreated, composite and lumber);</li> <li>• Concrete, brick and masonry;</li> <li>• Asphalt;</li> <li>• Steel and other metals;</li> <li>• Gypsum wallboard/ceiling tiles;</li> <li>• Insulation (fiberglass, mineral, expanded polystyrene (EPS), etc);</li> <li>• Architectural glass;</li> <li>• Flooring (carpet, ceramic tile, linoleum, vinyl, etc);</li> <li>• Plastics;</li> <li>• Asphaltic and composite roofing products; and,</li> <li>• General worker-generated waste.</li> </ul> <p>The following materials should be excluded from the program (and waste diversion calculations):</p> <ul style="list-style-type: none"> <li>• Hazardous materials (i.e.: lead, asbestos);</li> <li>• Excavated materials (includes soil); and,</li> <li>• Materials that are used as landfill cover or in a land reclamation project.</li> </ul>	
Scoring	Yes	8/8
	No	0/8

(Document Upload)



08.01.03	Are communication strategies in place to promote a greater understanding of the Waste Reduction Work Plan?	
Scoring	<p><b>Description:</b> Given that all building occupants contribute to the generation of waste, developing and implementing ongoing, strategic communication initiatives directed to relevant parties will help ensure that the waste diversion program is successful.</p> <p><b>Requirements:</b> Demonstrate that at least one (1) communication strategy identified below has been implemented. The following two communication strategies must also already be in place (in addition to any extras):</p> <ul style="list-style-type: none"> <li>• Proper and instructive signage on all waste collection containers/bins (ongoing);</li> <li>• Up-to-date written instructions and guidance on the expectations of the collection and storage of the divertible and disposed materials to the on-site custodial staff (ongoing).</li> </ul> <p>Communications tools and programs can include but are not limited to (minimum frequency provided in brackets):</p> <ul style="list-style-type: none"> <li>• Posters, emails, newsletters, web or intranet site, social media, floor maps, Earth Week and/or Waste Reduction Week events, tenant engagement events, awards programs, targeted at all users (varies, posters ongoing, bi-monthly for emails, newsletters, and sites, events bi-monthly) ;</li> <li>• In person meetings with tenant groups - Green Teams (bi-monthly at a minimum);</li> <li>• Lobby displays during events of acceptable materials in the recycling program (bi-monthly at a minimum);</li> <li>• Materials Recycling Facility tours for tenants, and building staff (offered monthly at a minimum);</li> <li>• Feedback on the results of the annual waste audit and initiatives in the Waste Reduction Work Plan, etc. (bi-monthly at a minimum).</li> </ul> <p><b>Additional Information:</b></p> <p>Relevant parties include any stakeholders that generate, manage, and/or dispose of solid waste on the premises, such as:</p> <ul style="list-style-type: none"> <li>• Internal stakeholders: employees, tenants of all types, custodial staff and security; and</li> <li>• External stakeholders: customers/visitors, suppliers, temporary and contract labour and other contractors, and waste and recycling service providers.</li> </ul> <p>Buildings that have achieved a certification through the 3RCertified program can answer “Yes” and show their certification to the verifier. 3RCertified &lt; <a href="http://3rcertified.ca/home">http://3rcertified.ca/home</a>&gt; is a certification program for buildings in the Industrial, Commercial and Institutional (IC&amp;I) sectors that reviews how organizations manage solid waste reduction and diversion operations. It is available across Canada.</p>	
Scoring	Yes	7/7
	No	0/7

(Document Upload)



## 8.2 ASSESSMENT

08.02.01	What is the building's Reduce, Reuse, Recycle (3Rs) diversion rate?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Diversion rate is defined as the total amount of waste diverted from landfill expressed as a percentage of the total amount of waste generated and/or used as Energy from Waste (EFW). It can be determined through various methods and combinations such as hauler records, waste audit, etc.</p> <p><b>Requirements:</b> Determine the building's waste diversion rate based on the following calculation:  <math display="block">\frac{[\text{Annual weight of all materials currently diverted (excluding contamination or residuals)}]}{[\text{Annual weight of all materials diverted (including contamination) + annual weight of disposed material + EFW}] * 100}</math> </p> <p>The diversion rate must be based on 12 months of data. Data cannot be older than the past three (3) years.</p> <p><b>Additional Information:</b> Only include materials for which there is an established market in the calculation.</p> <p><i>Annual weight of all materials diverted</i> includes daily generated waste, but also all other materials diverted from building activities such as e-waste, batteries, lamps, scrap metal, wood debris, etc., that may not be captured by the waste audit. Annual weight can include Construction, Renovation and Demolition project waste if it was also included in the waste audit). Materials that are treated with thermal applications (incineration or EFW) are not considered diverted.</p>	
<b>Scoring</b>	90%-100%	15/15
	80%- 89.9%	12/15
	70-79.9%	9/15
	60-69.9%	6/15
	50-59.9%	3/15
	Under 50%	0/15
	Unknown	0/15





08.02.02	What is the building's capture rate?															
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Calculated during the Waste Audit, the Capture Rate refers to the proportion of divertible waste, expressed as a percentage, which is successfully diverted from landfill and/or Energy from Waste (EFW) technologies. Capture rate calculations are based on all existing opportunities to divert waste materials available in your region, not just the capture rates for the materials currently collected in the building.</p> <p><b>Requirements:</b> Determine the building's capture rate based on the following calculation:  <math display="block">\frac{\text{(Annual weight of all materials currently diverted)}}{\text{(Annual weight of all materials currently diverted + all materials with future potential diversion opportunities found in the waste stream during audit)}} * 100</math></p> <p>The capture rate must be based on 12 months of data. Data cannot be older than the past three (3) years.</p> <p><b>Additional Information:</b></p> <p>Use the table below as an example:</p> <table border="1" data-bbox="394 804 1382 1003"> <thead> <tr> <th>Material</th> <th>Annual weight of all materials currently diverted (kg)</th> <th>Annual weight of all materials that could be diverted (kg)</th> <th>Total Combined Weight (kg)</th> <th>Capture Rate (%)</th> </tr> </thead> <tbody> <tr> <td>All diverted materials</td> <td>5,000</td> <td>5,000</td> <td>10,000</td> <td>50%</td> </tr> </tbody> </table>		Material	Annual weight of all materials currently diverted (kg)	Annual weight of all materials that could be diverted (kg)	Total Combined Weight (kg)	Capture Rate (%)	All diverted materials	5,000	5,000	10,000	50%				
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All diverted materials	5,000	5,000	10,000	50%												
<b>Scoring</b>	<table border="1"> <tbody> <tr><td>90-100%</td></tr> <tr><td>80%- 89.9%</td></tr> <tr><td>70-79.9%</td></tr> <tr><td>60-69.9%</td></tr> <tr><td>50-59.9%</td></tr> <tr><td>Under 50%</td></tr> <tr><td>Unknown</td></tr> </tbody> </table>	90-100%	80%- 89.9%	70-79.9%	60-69.9%	50-59.9%	Under 50%	Unknown	<table border="1"> <tbody> <tr><td>10/10</td></tr> <tr><td>8/10</td></tr> <tr><td>6/10</td></tr> <tr><td>4/10</td></tr> <tr><td>2/10</td></tr> <tr><td>0/10</td></tr> <tr><td>0/10</td></tr> </tbody> </table>	10/10	8/10	6/10	4/10	2/10	0/10	0/10
90-100%																
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Unknown																
10/10																
8/10																
6/10																
4/10																
2/10																
0/10																
0/10																



08.02.03	Is there evidence of a reduction in the overall generation of waste relative to your baseline year?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> In order to understand whether an initiative is producing results, it is important to compare waste data from the most recent audit year to baseline data.</p> <p><b>Requirements:</b> Review the total waste generated from the most recent previous waste audit (the baseline) and compare these numbers to the most current waste audit conducted no later than three (3) years prior to the application date.</p> <p><b>Additional Information:</b> In some cases, reduction levels cannot be easily demonstrated due to an increase in the number of tenants or occupants in the building. In such cases, use per capita generation rates (also called waste intensity) to determine overall reduction. Per capita generation is calculated by taking the total annual waste generated (waste destined for disposal, reuse or recycling) and dividing this by the number of building occupants. Daily per capita generation rates are determined by dividing by the number of working days per year. An improvement in waste diversion rates is not sufficient unless it is also accompanied by a reduction in the total overall generation of waste.</p>	
<b>Scoring</b>	Yes	6/6
	No	0/6

(Describe)



### 8.3 OPERATIONS & MAINTENANCE

08.03.01	Are any of the following waste diversion initiatives in place at the building?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Reduction initiatives encourage staff/tenant participation in waste diversion activities.</p> <p><b>Requirements:</b> Demonstrate that waste diversion initiatives have been implemented in the building.</p> <p><b>Additional Information:</b> Select all that apply.</p> <p>Reduction initiatives can include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Purchasing policies and initiatives that result in reduced waste thanks to a reduction of packaging at source or by investing in products that have a longer life (e.g., filters for HVAC).</li> <li>• Electronic communication initiatives that result in a reduction of paper use.</li> <li>• Bulk dispensing in building staff/tenant kitchenettes or in cafeterias and other food service areas that minimize the use of single use disposable items.</li> <li>• Food waste reduction or diversion programs with on-site cafeterias, restaurants or coffee shops.</li> <li>• Use of china and reusable utensils as an option for patrons in the building cafeteria, food court and office kitchenettes.</li> <li>• Implementing a paper use accountability system.</li> <li>• Clauses in supplier contracts that require “take back” programs where the supplier can guarantee that at least 70% of the returned products will be diverted from landfill.</li> <li>• The installation of carpet tiles that eliminate the need to replace entire carpets.</li> </ul> <p>Reduction programs can be initiated by either building management or the tenants.</p>	
<b>Scoring</b>	Packaging reduction	4/24
	Electronic communication	4/24
	Bulk dispensers	4/24
	Food waste diversion	4/24
	Reusable china and utensils	4/24
	Paper accountability system	4/24
	Take back programs	4/24
	Removable carpet tiles	4/24
	Other (Describe)	4/24
	None	0/24



08.03.02	Has the recycling program been expanded to include any of the following waste materials?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> In addition to the typical list of designated materials for source separation that most regions accept for recycling (paper, containers, cardboard) or composting (food waste) many organizations expand their collection programs to include other reusable/recyclable materials (where a demonstrated end-market exists).</p> <p><b>Requirements:</b> Demonstrate that the recycling program for additional materials has been implemented.</p> <p><b>Additional Information:</b> Tenant-led collection initiatives may also qualify as long as building management is taking steps to publicize the initiative building-wide.</p>	
<b>Scoring</b>	Batteries	2/16
	Electronics	2/16
	Ballasts, fluorescent tubes, CFL and lamps containing mercury	2/16
	Coffee cups	2/16
	Coffee pods	2/16
	Organic food material for composting (if not already offered by the municipality)	2/16
	Low grade paper	2/16
	Grease/cooking oil	2/16
	Toner cartridges	2/16
	Wood	2/16
	Scrap metal	2/16
	Furniture	2/16
	Merchandise bulk packaging (shrink wrap, Styrofoam)	2/16
	Other waste material (Describe)	2/16
	None	0/16



08.03.03	Are reuse initiatives in place at the building that have the potential to result in less waste disposed?	
Explanation & Evaluation	<p><b>Description:</b> To reuse is to use an item for the second (or third) time either for the same function or in another application.</p> <p><b>Requirements:</b> Demonstrate that at least one (1) reuse initiative has been implemented.</p> <p><b>Additional Information:</b> Some examples of reuse include but are not limited to:</p> <ul style="list-style-type: none"> <li>• The establishment of a Reuse Centre to put usable office supplies back into circulation, such as file folders, binders, etc.</li> <li>• Community reuse partnerships with charities and other organizations for the reuse of obsolete items, such as furniture and fixtures.</li> <li>• Waste exchanges internal to the organization, such as reusing furniture, computers or other obsolete items within the portfolio of buildings.</li> <li>• The use of reusable shipping containers to send or receive goods and supplies.</li> </ul> <p>Reuse programs can be initiated by either the building management or the tenants.</p>	
Scoring	Yes	8/8
	No	0/8

(Describe)



## 8.4 BUILDING SYSTEMS

There are no questions in this section.



## 8.5 INNOVATION

08.05.01	<b>Are recycling bins provided to staff, tenants and visitors for point of generation collection throughout the building?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Provide waste and recycling bins at points of generation throughout the building.</p> <p><b>Requirements:</b> Central bins must capture the following materials separately:</p> <ul style="list-style-type: none"> <li>• Paper/newspaper/magazines;</li> <li>• Cans/glass/plastics (#1, 2, 5, 6, other);</li> <li>• Waste destined for disposal.</li> </ul> <p>These bins must be accessible throughout the building at frequent enough intervals to accommodate the number of visitors and staff.</p> <p>In office areas, provide two deskside bins at a minimum, one for paper and one for cans/glass/plastic. Copy and print rooms must capture paper separately from waste destined for disposal.</p> <p>Food courts and cafeterias must capture the following materials separately:</p> <ul style="list-style-type: none"> <li>• Cans/glass/plastics (#1, 2, 5, 6, other);</li> <li>• Compost (if such a program is in place at the building);</li> <li>• Waste destined for disposal.</li> </ul> <p>All bins, in all space types, must have clear signage/labelling showing what specific items can be placed in the bin (must match what can actually be diverted in that area).</p> <p>Provide training to tenants (e.g. as part of initial welcome package) and update the training as required. Provide training to custodial staff at inception of recycling program, upon staff turnover. Update training as required.</p> <p><b>Additional Information:</b> Bins can be emptied in two ways: either the occupant is responsible for emptying deskside bins into central bins or the custodial staff empties the deskside bins. In case of the latter, the custodial staff must be equipped with appropriate bags to ensure source-separated materials remain separated upon collection.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	12/12
	N/A	0/0



08.05.02	Are other measures in place in the building to improve waste diversion?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Innovation in waste management requires going beyond standard 3Rs initiatives.</p> <p><b>Requirements:</b> Demonstrate that at least one (1) initiative has been put in place.</p> <p><b>Additional:</b></p> <p>Some examples include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Specification clauses in waste and recycling hauler contracts requiring weight reporting on the materials removed from the site for reuse, recycling, composting or disposal;</li> <li>• Unique waste collection or processes to minimize waste disposal to landfill. Examples include an on-site dehydrator for food waste or water bottle ban with a water filtration station supplied in common area or kitchenettes, or scullery in a cafeteria or food court.</li> <li>• Specification clauses in tenant leases outlining the expectations for tenants to fully participate in any and all building waste diversion efforts.</li> <li>• Documented expectations for tenants to provide building management with annual weights for materials diverted from landfill that are tenant managed, example: off-site shredding and recycling of confidential documents;</li> <li>• Waste diversion protocol for the provision of additional containers/bins and signage to capture recyclables during moves and other relocation activities;</li> <li>• Use of reusable eat-in food containers/cutlery or compostable take-out containers/cutlery in the building cafeteria. In the case of compostable containers/cutlery demonstrate that there is a composting program (private or municipal) in place that is able to accept these materials specifically.</li> <li>• Use of radio-frequency identification (RFID) technology to reliably identify individual receptacles, providing assurance that they have been collected.</li> </ul> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	15/15
	N/A	0/0

(Describe)





08.05.03	Has the final disposition/destination been identified of at least three (3) materials removed from the site for reuse, recycling, composting or disposal?	
Explanation & Evaluation	<p><b>Description:</b> Waste is only reduced from landfill when materials are actually successfully diverted. Transparency from supplier operations can help ensure this is the case.</p> <p><b>Requirements:</b> Provide documentation on the following points:</p> <ul style="list-style-type: none"> <li>• Name of the waste management company with whom there is a contract or agreement to collect source separated materials from the building. The Waste Management service provider must have provincial regulatory approval to process the collected materials from the building site. Provide a copy of the contract/agreement for each company and if applicable, their Environmental Compliance Approval-ECA or Environmental Activity and Sector Registry registration number.</li> <li>• Location where the recyclable materials are being sent. Provide a letter including the name, location and ECA, if applicable, of each receiving facility.</li> <li>• Details on where recyclables and waste are going beyond the Materials Recycling Facility – for example, the name, location and ECA, if applicable, of any other processing/remanufacturing facilities.</li> <li>• Reject and recycling percentage of recycling facilities.</li> </ul> <p>Documentation on points listed here must be available for each waste management company retained to remove source separated material from the building site.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
Scoring	Yes	9/9
	N/A	0/0

(Document Upload)



## 9.0 SITE



## 9.1 DEMONSTRATION OF INTENT

09.01.01	Is a landscape management program in place for the building that includes the following considerations?
Explanation & Evaluation	<p><b>Description:</b> How a building manages its landscaped areas through mowing and fertilization practices can have an impact on the surrounding environment (e.g., the persistence of invasive species; the release of harmful chemicals and toxins into the environment such as pesticides, fertilizers and herbicides; and on resource use like water).</p> <p><b>Requirements:</b> The management of turf and garden areas must follow a plan that understands and works with the agronomic needs of the plants. Other key components of the program include proper use of irrigation, using site appropriate landscape plants and the use of herbicides and pesticides only when appropriate based on growth cycles of the pests or weeds. This program must be communicated to and followed by all relevant building staff and contractors/service providers.</p> <p>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> Select Not Applicable if 5% or less of the property is permeable. Provide evidence of the lack of landscaping (e.g., site map).</p>

(Document Upload)

09.01.02	Use of native species.	
Explanation & Evaluation	<p><b>Description:</b> Maximize the use of native and drought resistant plant species.</p> <p><b>Requirements:</b> Demonstrate that native species are selected above other plant species for use in landscaping.</p> <p><b>Additional Information:</b> Using native and drought resistant plant species for landscaping is beneficial because they support the needs of local wildlife populations (some wildlife populations are entirely dependent upon specific native plants to survive, such as many species of butterfly). Native species may require less care than non-native plant species as they are better adapted to local environmental conditions, and they act as a source of seeds to keep local natural areas populated with native plants. Obtain Planting Plan/Landscape Plan from Architect highlighting plant types and locations on building site or refer to local conservation authority for plan directory and characteristics.</p>	
Scoring	Yes	2/2
	No	0/2
	N/A	0/0



09.01.03		Protect and/or restore habitat.	
Explanation & Evaluation	<p><b>Description:</b> Landscaping – even in urban areas – can help to protect or restore important habitat for local wildlife species. Buildings have an opportunity to provide connectivity between larger natural landscapes or contribute to habitat patches that can aid in habitat migrations and provide important refuges for wildlife.</p> <p><b>Requirements:</b> Demonstrate that efforts are being made to protect or restore habitat for specific species.</p> <p><b>Additional Information:</b> Selecting plants that are specifically attractive for pollinators (such as bees) can help ensure species proliferation and ecosystem health. Obtain Planting Plan/Landscape Plan from Architect highlighting plant types and locations on building site or refer to local conservation authority for plan directory and characteristics.</p>		
	Yes	2/2	
	No	0/2	
Scoring	N/A	0/0	

09.01.04		Control or removal of invasive/non-native species.	
Explanation & Evaluation	<p><b>Description:</b> Invasive species are all non-indigenous or non-native flora and fauna that have been deliberately or accidentally introduced to an area where they are not naturally found. Invasive species have an adverse effect on the habitats they invade. These species compete for space, nutrients and water, ultimately outcompeting local or native species, and reducing biodiversity.</p> <p><b>Requirements:</b> Demonstrate that strategies are in place to control or remove invasive and non-native species.</p> <p><b>Additional Information:</b> Building managers can do their part to control or manage the spread of invasive species by only using indigenous species in landscaping, and removing any non-native species that enter landscaped areas.</p>		
	Yes	2/2	
	No	0/2	
Scoring	N/A	0/0	



09.01.05	<b>Use of environmentally preferable pesticides, fertilizers, and herbicides and/or minimize their use.</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Incorrect fertilization and mowing have significant impacts on the health of the landscape and the runoff of harmful chemicals into the environment and should be part of the overall landscape management plan.</p> <p><b>Requirements:</b> Demonstrate that environmentally preferable fertilizers and/or herbicides are used, such as properly balanced organic and/or high-quality slow release fertilizers (e.g., Methylene Urea). These must be used appropriately based on sound horticultural practices. An operational program must be put in place to control the application of these products so that they are not over-applied or used inappropriately.</p> <p><b>Additional Information:</b> Building managers can reduce non-point source pollution by reducing the use of pesticides, fertilizers, and herbicides or by using products that are less toxic and less persistent. Runoff controls should also be put in place to mitigate ground and surface water contamination. Landscaping plans should favour the use of plant species that naturally require fewer fertilizers and pesticides, and/or can contain specifications for fertilizers, herbicides and pesticides with lower toxicity, persistence and bioavailability.-</p>	
<b>Scoring</b>	Yes	2/2
	No	0/2
	N/A	0/0

09.01.06	<b>Is there a hardscape management program in place for the building that includes the following considerations?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Building managers must have a clear plan in place to address the regular cleaning and maintenance of the building's facade and hardscape areas. Proper hardscape management can have a tremendous impact on the surrounding environment (e.g., release of chemicals and toxins into the environment), safety (e.g., slips due to ice build-up), and the building's overall aesthetic/street appeal.</p> <p><b>Requirements:</b> Create a Hardscape Management Program. The program must reviewed every 12 months and be available to all relevant building staff, contractors or service providers. Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</p> <p><b>Additional Information:</b> Select Not Applicable if there is no hardscape for which the property owner is responsible. Provide evidence of the lack of hardscape (e.g., site map).</p>	



<b>09.01.07</b>	<b>Regular cleaning of hardscape areas such as sidewalks, pavement, parking garages, parking lots.</b>	
<b>Explanation &amp; Evaluation</b>	<b>Requirements:</b> Demonstrate that regular cleaning of the building's hardscape is occurring. Provide rationale for how cleaning frequency was determined. .	
<b>Scoring</b>	Yes	2/2
	No	0/2
	N/A	0/0

<b>09.01.08</b>	<b>Regular cleaning of the building's exterior facade.</b>	
<b>Explanation &amp; Evaluation</b>	<b>Requirements:</b> Demonstrate that regular cleaning of the building's exterior facade is occurring. Provide rationale for how cleaning frequency was determined.	
<b>Scoring</b>	Yes	2/2
	No	0/2

<b>09.01.09</b>	<b>Use of environmentally preferable cleaning chemicals.</b>	
<b>Explanation &amp; Evaluation</b>	<b>Requirements:</b> Where possible, the use of cleaning chemicals should be minimized. When cleaning chemicals are required, these must have obtained a third party certification from EcoLogo or Green Seal.	
<b>Scoring</b>	Yes	2/2
	No	0/2
	N/A	0/0



09.01.10		Use of environmentally preferable maintenance equipment.						
Explanation & Evaluation	<p><b>Requirements:</b> Specify the use of manual cleaning strategies wherever possible. If equipment is necessary, these must be energy and water efficient. If powered equipment is necessary, it must operate with a sound level of less than 70dBA and be compliant with ENERGY STAR (where possible). Propane-powered equipment must have high-efficiency, low emission engines. Battery-powered equipment must be equipped with environmentally-preferable gel batteries. Powered equipment must be ergonomically designed to minimize vibration, noise and user fatigue. Equipment dependent on water must use water efficiently or use non-potable water where possible. Carefully monitor the landscape to avoid excessive water runoff.</p> <p><b>Additional Information:</b> ENERGY STAR qualified products include: sweepers, mowers, outdoor vacuums and other equipment used to clean and maintain hardscapes, landscaping, or the building exterior.</p>							
	Scoring	<table border="1"> <tr> <td>Yes</td> <td>2/2</td> </tr> <tr> <td>No</td> <td>0/2</td> </tr> <tr> <td>N/A</td> <td>0/0</td> </tr> </table>	Yes	2/2	No	0/2	N/A	0/0
	Yes	2/2						
No	0/2							
N/A	0/0							

09.01.11		Use of environmentally preferred snow and ice melting products.						
Explanation & Evaluation	<p><b>Description:</b> Selecting environmentally preferable de-icing products reduces the adverse impacts on neighbouring soils, vegetation and waterways of such applications.</p> <p><b>Requirements:</b> Specify the use of environmentally preferable de-icing agents for hardscape (parking, walkways, etc.). De-icing agents must have a working temperature of -7°C or below and contain no added chloride (such as magnesium chloride or calcium chloride). Organic products (e.g., beet juice, Organic Melt or equivalent) are recommended. Materials may be brines or solid de-icers that are pre-treated or pre-wetted.</p> <p><b>Additional Information:</b> Select Not Applicable if 1) Snow and ice removal is not applicable due to climate conditions (and provide evidence of the climate in which the building is located to demonstrate that there would be no snow and ice requiring removal , e.g., regional weather maps/reports); OR 2) If the property owner is not responsible for any hardscape. Provide evidence of the lack of hardscape (e.g., site map).</p>							
	Scoring	<table border="1"> <tr> <td>Yes</td> <td>2/2</td> </tr> <tr> <td>No</td> <td>0/2</td> </tr> <tr> <td>N/A</td> <td>0/0</td> </tr> </table>	Yes	2/2	No	0/2	N/A	0/0
	Yes	2/2						
No	0/2							
N/A	0/0							



09.01.12	Are de-icing agents appropriately applied?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> In an effort to increase accessibility and also reduce the risk of slips, falls and other ice-related accidents, the application of salt in excess of what is needed drives up the price of winter maintenance contracts, accelerates corrosion of building infrastructure and adversely impacts neighbouring soils, vegetation and waterways.</p> <p><b>Requirements:</b> The de-icing agent must be applied by staff or contractors trained to operate calibrated closed-loop ground speed controllers that automatically adjust salt application based on ground speed and spreader discharge. Using properly calibrated salt spreading equipment can help ensure that when salt is applied that it is done in appropriate quantities while still providing a safe surface for building visitors, tenants and staff. Target average application rates of 4.8 Kg/100m<sup>2</sup>, taking into account the auger drop rate, spinner spread span, and the speed of the truck.</p> <p>Demonstrate effective calibration by providing records showing that calibration is performed based on auger drop rate, spinner spread span, and the speed of the truck. Calibration must be reviewed annually when the equipment is being readied for a new season. Evidence of properly calibrated equipment can be provided by performing a drop test.</p> <p>If de-icing agents must be applied manually, because the area is small and ground speed controllers cannot be used, measurement markings must be applied to the de-icing containers to ensure that overuse is not occurring.</p> <p><b>Additional Information:</b> Ground speed controllers can be adjusted to increase or decrease the amount of salt being discharged to suit weather conditions and level of service demands for any given site.</p> <p>Select Not Applicable if 1) Snow and ice removal is not applicable due to climate conditions (and provide evidence of the climate in which the building is located to demonstrate that there would be no snow and ice that would require to be removed—e.g., regional weather maps/reports); OR 2) If the property owner is not responsible for any hardscape. Provide evidence of the lack of hardscape (e.g., site map).</p> <p>Salt Application Verified Equipment Program &lt;<a href="http://www.savesalt.ca">www.savesalt.ca</a>&gt;            Snow and Ice Management Association &lt;<a href="http://www.sima.org/">http://www.sima.org/</a>&gt;            Smart about Salt &lt;<a href="http://www.smartaboutsalt.com/">http://www.smartaboutsalt.com/</a>&gt;</p>	
<b>Scoring</b>	Yes	2/2
	No	0/2
	N/A	0/0





09.01.13	Has a resilience or business continuity plan been prepared for the building that includes the following components?
Explanation & Evaluation	<p><b>Description:</b> A <i>Business Continuity Plan</i> or <i>Resilience Plan</i> is a plan that outlines how a building or campus will continue to run in spite of adverse events. A good continuity plan will address both short-term risks (e.g., floods, fires), and long-term changes that could impact the operating environment (e.g., long-term temperature and precipitation changes brought on by climate change).</p> <p><b>Requirements:</b> Develop a Resilience or Business Continuity Plan for the building. Although demonstration of implementation is preferable, it is not necessary. The plan can be common to a portfolio or campus of buildings however some building-specific information is required.</p> <p><b>Additional Information:</b> Buildings/campuses/organizations with robust resilience or business continuity plans are far more prepared to deal with emergency situation, and are therefore more likely to continue operating successfully over the short- and long-terms.</p> <p>More information on business continuity planning is available from Public Safety Canada: A Guide to Business Continuity Planning  <a href="http://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/bsnss-cntnt-plnng/index-eng.aspx">http://www.publicsafety.gc.ca/cnt/rsrscs/pblctns/bsnss-cntnt-plnng/index-eng.aspx</a></p>

(Document Upload)

09.01.14	A long-term climate change risk assessment.	
Explanation & Evaluation	<p><b>Description:</b> Climate change is anticipated to have lasting impacts on all aspects of the natural and built environments. It is important for building management to be aware of the potential impacts of climate change on the building or campus.</p> <p><b>Requirements:</b> Include a long-term climate change risk assessment into the Resilience or Business Continuity Plan. List all potential long-term risks to the building in the face of climate change as well as management's assessment of how they might apply to the building/campus/organization as a whole.</p> <p><b>Additional Information:</b> Long-term climate change impacts include: changes in long-term weather patterns (e.g., precipitation and temperature); changes in the frequency of extreme weather events and natural hazards; rising sea levels; and increased desertification. All of these anticipated impacts can alter a building's ability to function and perform as it was originally designed to do. Failure of assets to perform in altered conditions can cause serious consequences for the tenants and communities that rely on them, and can negatively impact the building owner and manager.</p>	
Scoring	Yes	5/5
	No	0/5



09.01.15		An adaptation plan based on assessed long-term climate risks.	
Explanation & Evaluation	<p><b>Description:</b> Once a long-term climate impact assessment has been completed and the long-term potential risks have been identified for the building or campus, it is important to develop plans to adapt to these expected future risks, this will build <i>adaptive capacity</i>.</p> <p><b>Requirements:</b> Incorporate an adaptation plan to long-term risks into the Resilience or Business Continuity Plan. Identify adaptation measures that will be taken and design features implemented to address potential consequences of long term climate change (i.e. extreme weather events, water scarcity, increase in ambient temperature, etc.)</p> <p><b>Additional Information:</b> Adaptive capacity should be incorporated into the building envelope, building systems and services so that they can cope in an altered future state brought on by climate change. <i>Adaptive capacity</i> means the system has the ability to respond to changing conditions over time to better withstand them. Flexibility is a key part of adaptive capacity. Redundancy (from backup systems or decentralized distributed networks) helps systems maintain functionality even if one component fails.</p> <p>Adaptation strategies may include any or all of the following: structural changes to the building (e.g., enhance the durability of the building, improve the insulation of the envelope), systems changes (e.g., mixed mode ventilation, advanced BAS systems to expand the range of conditions in which the building can function properly), implementation of environmentally preferable systems such as green or cool roofs, or decentralizing vital systems.</p> <p>Adaptation planning is not the same as emergency preparedness which focuses more on short-term risks rather than long-term changes, though the two can be developed in tandem as there is likely to be overlap.</p>		
	Scoring	Yes	5/5
	No	0/5	

09.01.16		A short-term hazard assessment.	
Explanation & Evaluation	<p><b>Description:</b> In addition to looking at long-term climate change risks, buildings are also subject to a range of potential short-term risks that may include any or all of the following: wildfires, floods, tornadoes, hurricanes, earthquakes, tsunamis and man-made hazards (e.g., pandemics).</p> <p><b>Requirements:</b> Incorporate short term hazard assessment in the Resilience or Business Continuity Plan. The short-term hazard assessment must include a thorough list of all likely natural and human induced hazards in the building area and their direct and indirect impacts.</p> <p><b>Additional Information:</b> Building management should consider which types of natural and man-made hazards are potential threats in the area, and should conduct research to ascertain the potential frequency and severity of each. Direct effects include: flooding, wildfires, high wind speeds and lightning. Indirect effects include: loss of power supply caused by the disaster or disruptions in availability of key resources of these disasters.</p>		
	Scoring	Yes	5/5
	No	0/5	



<b>09.01.17</b>	<b>Plans to safeguard against potential short-term hazards.</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Once a short-term hazards assessment has been undertaken for the building or campus, it is important for management to develop plans to safeguard against these potential hazards.</p> <p><b>Requirements:</b> Incorporate adaptation plans to protect against short-term hazards in the Resilience or Business Continuity Plan. Identify adaptation measures that will be taken and design features implemented to address potential consequences of short-term hazards.</p> <p><b>Additional Information:</b> Plans should include emergency response, disaster recovery, crisis management and communication, training, testing, maintenance, awareness.</p>	
<b>Scoring</b>	Yes	5/5
	No	0/5

<b>09.01.18</b>	<b>Has the Resilience or Business Continuity Plan been reviewed, signed, and dated by senior management within the last three (3) years?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Regular review of the building or campus' resilience or business continuity plan is an important quality assurance technique. A review of the plan should assess the plan's accuracy and effectiveness, as well as its ongoing relevance. Even if the plan doesn't change, a regular review should be undertaken.</p> <p><b>Requirements:</b> Review and update the plan and its components at a minimum every three (3) years. It should also be reviewed after any substantial changes to the building or management takes place, when new threats or risks to the building emerge, or after a training exercise occurs to incorporate findings/lessons learned.</p> <p>The business continuity plan must be signed and dated to signal that the current one is in place.</p> <p><b>Additional Information:</b> Senior management is someone with decision-making abilities on the topics raised in the plan.</p> <p>Select Not Applicable if there is no resilience or business continuity plan in place at the building.</p>	
<b>Scoring</b>	Yes	3/3
	No	0/3
	N/A	0/0



## 9.2 ASSESSMENT

09.01.01	Has a property condition assessment (PCA) report been completed for this building within the past five (5) years?	
Explanation & Evaluation	<p><b>Description:</b> A PCA Report incorporates the expected life of the building and all of its components and systems under specific conditions. This includes the envelope, roofing, windows, interior and exterior mechanical systems and other major building equipment.</p> <p><b>Requirements:</b> Conduct a Property Condition Assessment for all building systems. The report must contain a list of Tactical and Strategic items. This report must be completed by a qualified third-party who has had training in building assessment and is able to do the work relative to ASTM E2018-08 and CSA Z320 standards.</p> <p>A Property Condition Assessment update is valid if performed within the last 12 months or as major system changes have occurred. The update must include an inspection of all building systems identified in the initial assessment, and provide an update on their condition.</p> <p><b>Additional Information:</b> This report is used to gather a better understanding of how the building is operating in its present state and how funds need to be saved and/or allocated to repair or replace various items. Tactical items are those that will require attention within the first five (5) years of the report's completion, whereas Strategic items are those that are looked at after five (5) years and are typically reviewed in the ten (10) year capital asset management plan.</p> <p>Select Not Applicable if the building was constructed within the past five (5) years.</p>	
Scoring	Yes	10/10
	No	0/10
	N/A	0/0

(Document Upload)



<b>09.02.02</b>	<b>Has an environmental site assessment been completed for the property within the last three (3) years?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Where hazardous conditions exist, controls must be in place to prevent and control migration of contaminants into the building or surrounding environment.</p> <p><b>Requirements:</b> Identify the presence of contaminants sub-grade to the building through the completion of a Phase I or Phase II environmental site assessment in accordance with CSA Standards Z768 and Z769 or ASTM Standards 1527 or 1903.</p> <p>The environmental site assessment must have been completed within the last three (3) years.</p>	
<b>Scoring</b>	Yes	10/10
	No	0/10

(Document Upload)

<b>09.02.03</b>	<b>Are measures in place to calculate building occupancy?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Information on what time and how many, people enter the building can be used to optimize HVAC system operations or be used in heat load calculations. Counters can be used to monitor where the majority of traffic is located; information which can further optimize system operations.</p> <p><b>Requirements:</b> Building management must have in place a means to understand how many occupants and visitors (if applicable) are in the building during a given week.</p> <p><b>Additional Information:</b> Various methods exist such as traffic counters, visitor registrations, etc.</p>	
<b>Scoring</b>	Yes	2/2
	No	0/2



### 9.3 OPERATIONS & MAINTENANCE

<b>09.03.01</b>	<b>Have steps been taken to address the issues identified in the Property Condition Assessment Report?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Requirements:</b> Demonstrate that action has been taken regarding items identified in the Property Condition Assessment (PCA) Report or that issues have been integrated into the Capital Plan, to be addressed in the future. The Capital Plan must include a dedicated budget line and timeline for completion for a given PCA item.</p> <p><b>Additional Information:</b> Select Not Applicable if no PCA was performed.</p>	
<b>Scoring</b>	Yes	10/10
	No	0/10
	N/A	0/0

(Describe)

<b>09.03.02</b>	<b>Are controls in place to address migration of known soil/groundwater contaminants into the building?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Where hazardous conditions exist, controls must be in place to prevent and control migration of contaminants into the building.</p> <p><b>Requirements:</b> Demonstrate that control measures are in place and monitored to mitigate the migration of contaminants into the building. Control measures include the use of building pressures, or sub-slab pressure control (to control hydrocarbon vapour migration).</p> <p><b>Additional Information:</b> Select Not Applicable if there are no known soil/groundwater contaminants based on the Phase I or II environmental site assessment.</p>	
<b>Scoring</b>	Yes	8/8
	No	0/8
	N/A	0/0

<b>09.03.03</b>	<b>Are high albedo surfaces cleaned regularly to maintain effective solar reflectance?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> High albedo surfaces (i.e. white) have a higher solar reflectance index (SRI) than dark surfaces. They must be cleaned regularly in order to maintain reflectance.</p> <p><b>Requirements:</b> Demonstrate that these surfaces are cleaned at a minimum every two (2) years.</p> <p><b>Additional Information:</b> Select Not Applicable if there are no high albedo surfaces.</p>	
<b>Scoring</b>	Yes	5/5
	No	0/5
	N/A	0/0



## 9.4 BUILDING SYSTEMS

09.04.01	Are measures in place to reduce light pollution?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Light pollution from a site’s lighting system can affect nocturnal ecosystems and can use energy unnecessarily.</p> <p><b>Requirements:</b> Demonstrate that at least two (2) measures have been put in place to minimize nighttime light pollution.</p> <p>Accepted measures include (but are not limited to): conducting a lighting assessment of the facility to determine requirements and eliminating light fixtures that are not needed/unnecessary; installing motion sensors and timers to reduce the amount of time lights are on; shielding outdoor lights so that only required areas are illuminated; and encouraging occupants to keep blinds down at night to keep the light glow indoors.</p> <p>Store fronts and other buildings with exterior lighting must use luminaire shielding strategies to control up lighting and prevent lighting pollution to the maximum extent reasonably possible.</p>	
<b>Scoring</b>	Yes	6/6
	No	0/6

Describe

09.04.02	Are automatic occupancy indicators installed in all parking spots of the parking areas?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Implementation of automatic parking space occupancy indicators allows drivers to find and park their vehicle with relative ease. By identifying which spots have been taken and which are available this option reduces the amount of time spent searching for a spot which in turn reduces the amount of carbon emissions exhausted from the tailpipe of the car.</p> <p><b>Requirements:</b> Install occupancy indicators in all parking spots to alert occupants to available areas.</p> <p><b>Additional Information:</b> Select Not Applicable if there is no parking at the building, installation of sensors is not economically feasible (due to lack of frequent public visitation, non-enclosed lots under 100 spaces in size, etc.) or if the parking facility is owned and managed by a third-party.</p>	
<b>Scoring</b>	Yes	8/8
	No	0/8
	N/A	0/0



## 9.5 INNOVATION

09.05.01	Does the facility site include features to minimize and manage stormwater runoff?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Impervious surfaces, such as parking lots, roofs and sidewalks can lead to increased surface runoff. Too much runoff can lead to erosion, flooding, and increased pollutants and sediments reaching municipal storm sewer systems and nearby waterbodies. Therefore, measures should be implemented to minimize stormwater runoff.</p> <p><b>Requirements:</b> Demonstrate that sufficient stormwater management/minimization measures are in place at the building to reduce the percentage of stormwater that becomes runoff. During peak storm flow, the typical percentage of stormwater runoff varies by location of site:</p> <ul style="list-style-type: none"> <li>• Downtown/urban areas: 70-95% of stormwater becomes runoff</li> <li>• Suburban areas: 25-40% of stormwater becomes runoff</li> <li>• Light industrial areas: 50-60% of stormwater becomes runoff</li> <li>• Heavy industrial areas: 60-90% of stormwater becomes runoff</li> </ul> <p>Demonstrate that the runoff is at least 10% less than the lowest threshold using the threshold (above) that is closest to the type of site relevant to the building (e.g., downtown/urban vs. suburban area, etc.)</p> <p><b>Additional Information:</b> There are a number of measures that can be put in place to effectively manage stormwater to reduce runoff, including: stormwater or retention ponds, gardens/rain gardens, green roofs, use of porous pavement/pavers, and capturing stormwater in cisterns for later re-use. Rain gardens are landscape features designed that consist of sunken garden spaces where runoff can pond and infiltrate into deep constructed soils and then into the native soils below to divert stormwater runoff from hard surface areas</p> <p>In downtown core areas, planting trees and vegetation can decrease runoff by detaining and absorbing rainfall. Other strategies include: reducing the size of each parking space, minimizing parking lot areas, using pervious pavement to reduce runoff and planting urban rain gardens.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	6/6
	N/A	0/0

(Describe)





09.05.02	Does 75% or more of the available impermeable surface area have a high Solar Reflectance Index (SRI) value?	
Explanation & Evaluation	<p><b>Description:</b> The Solar Reflectance Index (SRI) is a measure of a surface's ability to reject solar heat. An SRI of 0 is usually attributed to black surfaces that absorb high amounts of solar heat, whereas an SRI of 100 is usually attributed to white surfaces that reject solar heat.</p> <p><b>Requirements:</b> Implement measures (such as white reflective roofs ) to ensure impermeable surfaces have a SRI value of 29 or higher for non-roof or steep-slope areas and a SRI value of 78 or higher for low-slope areas.</p> <p><b>Additional Information:</b> Examples of compliant surfaces include walkways with typical new white concrete (SRI 86), and white coating on metal roof (SRI 82). Check product specification sheets to confirm SRI values.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
Scoring	Yes	10/10
	N/A	0/0



## 10.0 STAKEHOLDER ENGAGEMENT



## 10.1 DEMONSTRATION OF INTENT

10.01.01	Has the Environmental Policy been clearly communicated to building occupants?
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Increasing awareness of environmental goals can help management and tenants work together to achieve more sustainable outcomes for the building. This ensures stakeholders are on the same page with respect to sustainability at the facility.</p> <p><b>Requirements:</b> Communicate the overarching Environmental Policy (BEST Practice) to occupants. It must be available for review on an on-going basis.</p> <p><b>Additional Information:</b> <i>Occupants</i> are the permanent/regular occupants of the building, such as tenants and staff. If the building is owner-occupied, surveys should be directed to staff. Visitors to the building are not considered occupants. If the building is owner-occupied, surveys should be directed to staff. Communication examples include: adding the Environmental Policy to new employee "welcome packages", new tenant packages and newsletters; making it available on the company website or on an intranet site accessible by tenants and building staff; and introducing it at "green team" meetings or other in-person forums.</p>
<b>Scoring</b>	Yes    3/3
	No    0/3

10.01.02	Are members of the building management team specifically responsible for implementing environmental initiatives?
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Leadership in environment begins at the top. It is important to specify who is ultimately accountable for setting environmental (or sustainability) goals or targets for the building and who is ultimately responsible for achieving them.</p> <p><b>Requirements:</b> Management must clarify roles and responsibilities of those leading the environmental initiative. Authority must be given to these individuals so that they may implement environmental initiatives to improve building performance.</p> <p><b>Additional Information:</b> Provide outline of the building management team structure describing roles and responsibilities of environmental group/leaders along with their roles and responsibilities.</p> <p>Individuals may be responsible for initiatives applicable to an entire portfolio/campus or for an individual building.</p>
<b>Scoring</b>	Yes    12/12
	No    0/12



10.01.03	Is the building's environmental performance tied to one or more key performance indicators (KPIs) for building staff?	
Explanation & Evaluation	<p><b>Description:</b> Key Performance Indicators (KPIs) are metrics used to evaluate factors that are deemed critical to the success of an organization. In terms of building operations, developing KPIs that include environmental or sustainability metrics is important to ensuring success in this area.</p> <p><b>Requirements:</b> KPIs must be – at a minimum – tied to the performance of senior management personnel, though KPIs should ideally also be in place for building staff at all levels. A minimum of two (2) KPIs (or 1 if this is the maximum permitted) must be in place and tied directly to the performance of senior level staff in the building. KPIs must be related to at least two (2) of the following: energy efficiency, water efficiency, and waste diversion.</p> <p><b>Additional Information:</b> KPIs can be related to any number of environmental or sustainability goals, including energy efficiency, water efficiency, waste diversion, and tenant satisfaction rates.</p>	
Scoring	Yes	8/8
	No	0/8

(Describe)



10.01.04	Are tenants required to comply with specific environmental criteria?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Tenants have a big role to play if the environmental objectives for a building are going to be met. Providing tenants with specific sustainability or environmental criteria will improve transparency around key environmental issues pertinent to the building and foster greater cooperation between tenants and building staff in regards to achieving environmental goals.</p> <p>Criteria can be provided in a green lease, a green design criteria handbook, or through other methods.</p> <p><b>Requirements:</b> Demonstrate that tenants have been required to meet at least one (1) provision per criteria:</p> <ul style="list-style-type: none"> <li>• Energy efficiency. Provisions include (but are not limited to): tenants commit to installing only energy-efficient equipment or agree to leave pre-installed ENERGY STAR rated equipment; tenants commit to sending the landlord utility information if separately metered at least annually; tenants commit to managing plug loads; etc.</li> <li>• Water efficiency. Provisions include (but are not limited to): tenants commit to installing only water-efficient equipment or agree to leave pre-installed water-efficient equipment; tenants commit to sending the landlord water usage data if separately metered at least once annually; tenants commit to minimizing the use of water by turning off taps and other water-using equipment when not in use, etc.</li> <li>• Environmental fit-up plan. Provisions include (but are not limited to): tenants commit to selecting furniture, paints, equipment and other products for tenant fit-ups that are certified by credible third-party certifiers such as CSA, EcoLogo, UL, GreenSeal, FSC, and SFI; tenants commit to reducing the amount of waste generated through renovation and construction; etc.</li> <li>• Waste reduction and recycling. Provisions include (but are not limited to): tenants commit to educating employees about correctly using recycling facilities at the building; tenants commit to selecting office supply vendors with recycling or take-back programs, or programs that reduce the use of packaging materials for shipments; tenants commit to tracking and monitoring waste reduction efforts and submitting information to the landlord at least once annually; tenants commit to recycling batteries and e-waste, etc.</li> <li>• Provide evidence that tenants are complying with these criteria.</li> </ul> <p><b>Additional Information:</b> Select all that apply.</p>	
<b>Scoring</b>	Energy efficiency	1/3
	Water efficiency	1/3
	Environmental fit-up plan	1/3
	Waste reduction and recycling	1/3
	None	0/3
	The building has no tenants	3/3

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## 10.2 ASSESSMENT

<b>10.02.01</b>	<b>Does building management regularly conduct an occupant satisfaction survey that includes the following components?</b>
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Conducting regular occupant satisfaction surveys can help management better understand the issues/priorities that matter most to occupants. Surveys can also help improve management-tenant relationships, and inform management priorities.</p> <p><b>Requirements:</b> Conduct an occupant satisfaction survey. The survey must be provided to at least 50% of building occupants.</p> <p>Assess occupant satisfaction survey every two (2) years, at a minimum.</p> <p><b>Additional Information:</b> Although there is no minimum rate of response required, a rate of 30% is encouraged for results to be considered informative.</p> <p><i>Occupants</i> are the permanent/regular occupants of the building, such as tenants and staff. If the building is owner-occupied, surveys should be directed to staff. Visitors to the building are not considered occupants.</p>

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<b>10.02.02</b>	<b>Quality and effectiveness of building management and services.</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Feedback can help management understand what it is doing well from the perspective of occupants and identify areas for improvement.</p> <p><b>Requirements:</b> Include a question (or set of questions) pertaining to the quality and effectiveness of building management and services.</p> <p><b>Additional Information:</b> Samples of topics include (but are not limited to): building management responsiveness, custodial staff, repairs and fit-ups.</p>	
<b>Scoring</b>	Yes	3/3
	No	0/3

<b>10.02.03</b>	<b>Air quality.</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Air quality can be a major contributor to occupant satisfaction (or dissatisfaction).</p> <p><b>Requirements:</b> Include a question (or set of questions) pertaining to the air quality of the building so that management can understand what it might do to improve this aspect of the occupant experience (if the results of the survey indicated deficiencies in this area).</p> <p><b>Additional Information:</b> A sample question may be: "Do you notice any unpleasant odors in the building?"</p>	
<b>Scoring</b>	Yes	3/3
	No	0/3



10.02.04		Thermal comfort.	
Explanation & Evaluation	<p><b>Description:</b> Monitoring, managing, and maintaining thermal comfort conditions in a building allows for optimal performance while also improving user comfort and overall satisfaction.</p> <p><b>Requirements:</b> Include a question (or set of questions) pertaining to the thermal comfort of the building so that management can understand what it might do to improve this aspect of the occupant experience (if the results of the survey indicated deficiencies in this area).</p> <p><b>Additional Information:</b> Samples of topics include (but are not limited to): indoor temperature, air speed, humidity, etc.</p>		
	Scoring	Yes	3/3
	No	0/3	

10.02.05		Lighting.	
Explanation & Evaluation	<p><b>Description:</b> The quality and amount of lighting used in the building can have an effect on occupant satisfaction (or dissatisfaction).</p> <p><b>Requirements:</b> Include a question (or set of questions) pertaining to the quality and amount of lighting in the building so that management can understand what it might do to improve this aspect of the occupant experience (if the results of the survey indicated deficiencies in this area).</p>		
	Scoring	Yes	3/3
	No	0/3	

10.02.06		Acoustics.	
Explanation & Evaluation	<p><b>Description:</b> The acoustics of the building can have an effect on occupant satisfaction (or dissatisfaction).</p> <p><b>Requirements:</b> Include a question (or set of questions) pertaining to the acoustics of the building so that management can understand how it might improve this aspect of the occupant experience (if the results of the survey indicated deficiencies in this area).</p>		
	Scoring	Yes	3/3
	No	0/3	



<b>10.02.07</b>	<b>Frequency and timeliness of communication and response times.</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> The frequency of communications and response times from building management can be a major contributor to occupant satisfaction (or dissatisfaction).</p> <p><b>Requirements:</b> Include a question (or set of questions) pertaining to the frequency and timeliness of communication and response times from building management.</p>	
<b>Scoring</b>	Yes	3/3
	No	0/3

<b>10.02.08</b>	<b>Environmental/sustainability priorities.</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Understanding occupant priorities in regards to environmental/sustainability objectives will help building management focus its communications, initiatives, and efforts to align with occupant priorities. It is also a good way for building management to assess any gaps in tenant awareness or understanding of pertinent environmental/sustainability issues.</p> <p><b>Requirements:</b> Include a question (or set of questions) pertaining to occupant environmental/sustainability priorities.</p>	
<b>Scoring</b>	Yes	3/3
	No	0/3





10.02.09	Is a transportation survey conducted in the building?		
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Understanding how occupants and visitors move to and from the building each day provides management with information useful for identifying more sustainable modes of transportation that could be encouraged or implemented at the building. This information can be used to measure changes to the data over time and could be a useful indicator of whether programs are successfully encouraging more sustainable modes of transportation to and from the building.</p> <p><b>Requirements:</b> Provide occupants and visitors with a question (or set of questions) about their chosen mode of transportation to and from the building. The transportation survey must be conducted every five (5) years.</p> <p><b>Additional Information:</b> Consider gathering more detail on fuel use patterns such as: days commuted using selected mode, distance commuted and number of passengers (for cars/carpools). Such information can help identify whether more car pool priority parking spots are needed or if more bicycle parking is required, among other things. <i>Occupants</i> are the permanent/regular occupants of the building, such as tenants and staff. <i>Visitors</i> are temporary visitors to the building. If the building is owner-occupied, surveys should be directed to staff.</p>		
<b>Scoring</b>		Yes	No
	Facility tenants/building staff	10/15	0/15
	Visitors	5/15	0/15

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### 10.3 OPERATIONS & MAINTENANCE

10.03.01	Does building management act on responses obtained from occupant satisfaction surveys?			
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> An occupant satisfaction survey can provide building management with important information to improve management-occupant relations, improve the occupant experience, and prioritize action plans to improve the sustainable/environmental performance of the facility. However, a survey only provides information. Unless building management acts upon the information, its value is diminished.</p> <p><b>Requirements:</b> Establish mechanisms to act on responses received from occupant satisfaction surveys:</p> <ul style="list-style-type: none"> <li>• Aggregate results from surveys must be reported within 60 days to building management.</li> <li>• Describe steps taken to address occupant survey feedback in each area.</li> </ul> <p><b>Additional Information:</b> Select all that apply. Select Not Applicable if a particular topic was not included in the survey.</p>			
<b>Scoring</b>		Yes	No	N/A
	Quality and effectiveness of building management and service	1/8	0/8	0/0
	Air quality	1/8	0/8	0/0
	Thermal comfort	1/8	0/8	0/0
	Lighting	1/8	0/8	0/0
	Acoustics	1/8	0/8	0/0
	Frequency and timeliness of communication and response times	1/8	0/8	0/0
	Environmental/sustainability priorities	1/8	0/8	0/0
	Transportation survey	1/8	0/8	0/0

(Describe)



10.03.02	Are opportunities created and promoted for occupants to contribute to the community?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> There are many ways to give back to the community in which the building is located. One of those ways is by developing and promoting volunteer opportunities for tenants and building staff. Investing in the community through volunteering is a great way to enhance tenant loyalty, contribute to overall company success and brand recognition, and is a tangible statement of the organization's commitment to sustainability. Volunteering opportunities do not necessarily need to be environmentally oriented; opportunities should be focused on the needs of the community – whether they are environmental (e.g., community clean-up events, tree planting, etc.) or social (e.g., Habitat for Humanity builds, serving food at local shelters, providing educational opportunities to school groups, etc.) or economic (e.g. fundraising activities to support local non-profits/charities such as through food or clothing drives, raising money for local shelters or community organizations, toy drives, raising funds for local environmental protection organizations, etc.).</p> <p><b>Requirements:</b> Develop opportunities for tenants and building staff to contribute to the community demonstrate that participation was promoted to occupants. Provide evidence that volunteering/fundraising opportunities were successfully implemented within the past 12 months.</p> <p><b>Additional Information:</b> Evidence of implementation could be in the form of articles and photos summarizing volunteering activities and/or results of fundraising initiatives, or a letter from the receiving organization/community group thanking building tenants and staff for their volunteering or financial contributions.</p>	
<b>Scoring</b>	Yes	5/5
	No	0/5

(Describe)



## 10.4 BUILDING SYSTEMS

10.04.01	Are the following measures in place at the building to promote sustainable modes of travel?
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Encouraging use of more sustainable modes of transportation reduces the carbon footprint associated with occupants of the building and promotes health and wellness. Providing occupants with a narrative explaining why certain modes of transportation are more sustainable than others will increase occupant awareness of this issue.</p> <p><b>Requirements:</b> Demonstrate that you have been encouraging the use of more sustainable modes of transportation to and from the property within the past 12 months (e.g., supply sample communications to tenants). While not all modes of sustainable transportation may be reasonable for all buildings to promote, ascertain which options are relevant and take all reasonable steps to promote its/their use.</p> <p><b>Additional Information:</b> Sustainable modes of transportation include active modes (e.g., walking, cycling, rollerblading, and running); carpooling and use of car-share programs; use of public-transportation; and the use of hybrid/electric or other more efficient vehicles.</p> <p><i>Occupants</i> are the permanent/regular occupants of the building, such as tenants and staff. Visitors are temporary visitors to the building. If the building is owner-occupied, surveys should be directed to staff.</p>

10.04.02	Promoting the use of public transportation.	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Building management has an opportunity to help reduce greenhouse gas emissions and traffic congestion associated with the use of single occupant vehicles by encouraging the use of public transportation facilities to and from the property.</p> <p><b>Requirements:</b> Encourage the use of public transportation facilities to and from the property.</p> <p><b>Additional Information:</b> There are many ways to promote the use of public transportation, including but not limited to: providing clear signage directing users to public transportation facilities; communicating the benefits of public transportation through different channels such as newsletters, online forums, e-blasts and/or posters; creating challenges to motivate building staff and tenants to use public transportation, etc.</p> <p>Select Not Applicable If there are no public transportation options nearby (if there are no rail stations within 800m or if there is no bus stops within 400m).</p>	
<b>Scoring</b>	Yes	4/4
	No	0/4
	N/A	0/0



10.04.03		Encouraging carpooling and/or car sharing programs.	
Explanation & Evaluation	<p><b>Description:</b> Carpooling/car sharing programs reduce the number of vehicles on the road and therefore minimize traffic congestion and air pollutants. Carpooling also saves money spent on fuel and allows co-workers/commuters to socialize.</p> <p><b>Requirements:</b> Encourage carpooling by providing designated parking spaces for carpoolers and/or ride sharing programs (e.g., AutoShare, ZipCar, SmartCommute) or by providing space for park and ride initiatives (e.g., shuttles to special events).</p> <p><b>Additional Information:</b> At least 3% of parking spaces must be reserved near the building's entrance(s) for carpooling/car sharing programs. These parking spaces can also be used by visitors.</p> <p>Select Not Applicable if there is no parking at the building or if the parking facility is owned and managed by a third-party.</p>		
	Scoring	Yes	4/4
		No	0/4
		N/A	0/0

10.04.04		Providing a charging station for electric/hybrid vehicles.	
Explanation & Evaluation	<p><b>Description:</b> Electric/hybrid vehicles are considered a better because they are more efficient and emit less carbon dioxide than conventional cars. Management should work to encourage use of these vehicles and make employees/tenants aware of their benefits.</p> <p><b>Requirements:</b> Provide a minimum of one (1) Level 2 (240-volt or 208-volt plug) or Level 3 (480-volt plug) electric vehicle charging station with clear signage indicating its location and designation.</p> <p>Alternatively, if no electric vehicle charging stations are in place, points can be earned if one of the two paths have been met:</p> <ul style="list-style-type: none"> <li>• Demonstrate that a program has been implemented to engage occupants to partner on infrastructure costs for installing electric vehicle charging stations. Demonstrate that realistic cost estimates have been calculated, potential providers researched as well as specifics surrounding implementation (optimal location, etc.).</li> <li>• Demonstrate that other alternative fuel vehicles are being encouraged (e.g. in provinces where low greenhouse gas -mitting electricity options are not available).</li> </ul> <p>If there is a separate dedicated parking for tenants and staff, a minimum of one (1) electric vehicle charging station must be provided in each separate parking area.</p> <p><b>Additional Information:</b></p> <p>Select Not Applicable if there is no parking at the building or if the facility is owned and managed by a third-party.</p>		
	Scoring	Yes	4/4
		No	0/4
		N/A	0/0



10.04.05		Providing safe and secure bicycle racks?			
Explanation & Evaluation	<p><b>Description:</b> Providing safe, secure, and covered bicycle racks at the building encourages cycling to and from the facility. Cycling promotes a healthy lifestyle, helps to reduce traffic congestion, and reduces the building's associated environmental footprint.</p> <p><b>Requirements:</b> Provide a sufficient number of bicycle racks for building occupants and visitors. Use the following formulas to calculate sufficient space:</p> <ul style="list-style-type: none"> <li>• <i>Sufficient number of bicycle racks for building occupants = (staff and tenant headcount) x 3%</i></li> <li>• <i>Sufficient number of bicycle racks for visitors = (10 bike racks, minimum) + (0.25 racks for each 100 square meters of interior floor area used for retail space)</i></li> </ul> <p>Bicycle racks must be located no more than 10 meters from property entrance(s) in highly visible locations, where possible.</p> <p><b>Additional Information:</b> Bicycle racks should be secure (to reduce bicycle theft), covered (to protect cyclists and their bicycles from inclement weather) and should be located in a safe space (to encourage their use and ensure the safety of cyclists). Racks installed by the municipality are not eligible unless building management has/had an active role in promoting their installation.</p> <p>Select Not Applicable in cases where the building is not accessible via regional cycling infrastructure (i.e. bicycle lanes or paths) or if there are no visitors to the building.</p>				
	Scoring		Yes	No	N/A
		Sufficient racks for tenants and staff	2/4	0/4	0/0
		Sufficient racks for visitors	2/4	0/4	0/0

10.04.06		Providing showering and changing facilities for occupant use.	
Explanation & Evaluation	<p><b>Description:</b> Occupants will be more likely to use active modes of transportation (e.g., cycling, walking, running) to get to and from the building if showering and changing facilities are provided.</p> <p><b>Requirements:</b> Incorporate showering and changing facilities into the building's capital plan and/or encourage occupants to install shower and changing facilities as part of their fit-ups.</p> <p><b>Additional Information:</b> Select Not Applicable in cases where the building is not accessible via regional cycling infrastructure (i.e. bicycle lanes or paths) or sidewalks.</p>		
	Scoring	Yes	4/4
		No	0/4
		N/A	0/0



## 10.5 INNOVATION

<b>10.05.01</b>	<b>Is the building’s environmental performance documented in a publicly available sustainability report?</b>	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Many organizations commit to producing an annual sustainability or corporate social responsibility (CSR) report that discusses sustainable performance (e.g., energy efficiency, water efficiency, carbon footprint, tenant satisfaction rates, employee turnover, community investment, etc.). Reporting is important from a transparency perspective; it provides pertinent information to internal and external stakeholders about the organization, much like an annual (financial) report does.</p> <p>Making such reports publicly available shows strengthened commitment to sustainability/CSR and increases corporate accountability to pursuing continuous improvement.</p> <p><b>Requirements:</b> Produce a sustainability or CSR report and make it publicly available. The report must have been produced in the last two (2) years.</p> <p><b>Additional Information:</b> Since reports aren’t typically created for individual buildings, it is acceptable and encouraged to include the building’s data in a report that aggregates the performance of buildings in a given real estate portfolio.</p> <p>Information can be communicated in a variety of ways, such as through infographics or text. Sustainable performance examples include: energy efficiency, water efficiency, carbon footprint, tenant satisfaction rates, employee turnover, community investment, etc.</p> <p>For all innovation questions, if you are unable to answer “Yes”, select “Not Applicable” instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	6/6
	N/A	0/0

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10.05.02	Is the sustainability report verified or validated by an external third party?	
<b>Explanation &amp; Evaluation</b>	<p><b>Description:</b> Report verification ensures sustainability report compliance with best practices in sustainability/CSR reporting standards.</p> <p><b>Requirements:</b> Demonstrate that a third-party verifier was engaged to confirm all of the most recent sustainability or corporate social responsibility report.</p> <p><b>Additional Information:</b> Some organizations have their reports verified to determine compliance with best practices in sustainability/CSR reporting standards (e.g., the Global Reporting Initiative's reporting framework). Some organizations have portions of their reports verified (e.g., carbon emissions data) to ensure data has been collected and reported in accordance with leading carbon emissions protocols (e.g., The Climate Registry's General Reporting Protocol). Other organizations hire an external consultant to review and provide feedback on the quality and completeness of the report (e.g., Canadian Business for Social Responsibility, or Chartered Professional Accountants associations).</p> <p>For all innovation questions, if you are unable to answer "Yes", select "Not Applicable" instead. No points will be lost.</p>	
<b>Scoring</b>	Yes	6/6
	N/A	0/0

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