About this Guide

Welcome to the BOMA BEST Sustainable Buildings 3.0 Application Guide.
This guide is specifically written for buildings wishing to achieve a BOMA BEST Sustainable Buildings certification.
It contains instructions for buildings in either the Single Building Stream or the Portfolio Stream.

Please send your feedback and/or questions to info@bomabest.org
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1.1. Process overview

The BOMA BEST process is very user friendly.

- Username registration (online)
- Login (online)
- Building registration (online)
- Payment (offline)
- Complete assessment (online)
- Request verification (online)
- On-site third-party verification and documentation review (offline)
- Annual certification (Portfolio Stream) or 3-year certification period (Single Stream)
- Ongoing access to online portal
1.2. From Registration to Certification

Step 1: Create a username

Note: Your V2 username and password will not work in the 3.0 Online Portal.

a. Visit: https://boma.credit360.com
b. Click on “Are you a new user?” to create your username

c. Complete the information requested regarding your company and contact information.

NOTE: For your company name, enter “Company Name-Your Name” (e.g. Management Company A-Jane Smith)

d. You will receive an email with a link. Click on this link to finalize the registration process. The link is valid for 60 minutes. Your username is your email address.
e. You can now log in.

NOTE: If you are planning on registering buildings in many different countries, you must create a new username specific to each country. If you do not, the correct questionnaires will not be issued by the Portal. Register buildings in Canada with a username registered to Canada; register buildings in the US with a username registered to the US, etc.
Step 2: Create a building

From the dashboard, click on the Services tab; select whether you would like to register a “Single” building or a “Portfolio” of buildings.

**Single Building Stream:** Designed for those who prefer to pay a one-time fee for a three-year certification. Upon expiry of the building, applicants must pay a new fee for recertification and be verified again. Multiple buildings can be registered (one at a time) via this method.

**Portfolio Stream:** Designed for applicants who prefer to pay an annual fee for ongoing certification. Certification never expires provided verification is successful and the annual fee is received. A different sample of the portfolio is verified every year.

Depending on your selection, follow the instructions directed to your stream in the remainder of this document.

1. **Single Building Stream:**
   a. From the Services tab, click on “Register single”.
   b. You will be redirected to the “Create new property” page.
   c. Complete all required fields in the Summary section

   **NOTE:** See the Tip box on the following page for details on how to complete your information.
   a. Click “Save”. Multiple buildings can be created this way, one at a time.

   **NOTE:** Fees for certification do not appear automatically in this step nor is it possible to create an invoice using the Online Portal. Your Local Association will be in touch with your invoice. Fees are based on the building size and asset type. Please visit the Fee section of the website for exact fees.

2. **Portfolio Stream:**
   a. From the Services tab, click on “Register multiple”
   b. You will be brought to the “Documents” folder where instructions are provided. You will be asked to provide BOMA Canada with a list of your buildings in the specified template.
Tips on creating a new building

- **Property Type:** Refers to the Energy Star Property Type of your building. Pick the descriptor that most closely resembles your building.

- **Questionnaire Type:** Refers to the BOMA BEST questionnaire you will be using to certify. Select the one that most closely fits your building’s description. Building descriptions are available in section 2 of this *BOMA BEST Application Guide 3.0*. Select Universal if your building does not match any other asset class.

- **“As of”:** This question allows you to track when you make changes to your new building entry. Select “Today” the first time through.

- **Local BOMA Association where the building is located:** Select the Local BOMA Association that is responsible for the region where your building is located. They will be responsible for payment and administration of your certification.

- **BOMA Membership Status where building is located:** If you are a BOMA member in another region, you may not qualify as a member where your building is located. Contact the Local BOMA Association where the building is located to confirm your membership status. This will have an impact on the registration fees.

- **Invoice Details:** Provide the contact information of the person who should receive the registration payment invoice.

- **Energy Star Section:** Return to this section later once you have reviewed the instructions in the BOMA BEST questionnaire pertaining to entering energy and water consumption.

- **People section:** Cannot be modified. If you wish to grant permissions to others to see your building, see section 1.3 of this Guide for instructions on how to proceed.

• Click on “Fill in more details” to enter more information about the building.

• **Location section:** Enter your building’s address here.
Step 3: Completing information for an imported building

Some buildings have been imported to the Online Portal. Please proceed to Step 4 if this is not the case.

If your building already exists in the system you do not need to register it again, simply provide some of the missing information:

a. Log in at [https://boma.credit360.com](https://boma.credit360.com)
b. Click on the “Property”
c. Find the property in question (you can use the Search function)

d. Click the property’s name
e. You are now on the “Property Characteristics” page for this building. This is the building’s homepage.
f. Click on “Change”

g. Complete the information that appears in this section. Ensure you have selected the correct questionnaire type. See the Tip box on the previous page for details on how to complete your information.
h. Click “Save”

**NOTE:** Fees for certification do not appear automatically in this step nor is it possible to create an invoice using the Online Portal. Your Local Association will be in touch with your invoice. Fees are based on the building size and asset type. Please visit the Fee section of the website for exact fees.
Step 4: Payment

NOTE: Payment always occurs offline via your Local Association or BOMA Canada. The “Payment” tab is for administrative purposes only (only BOMA Canada and the Local Association may add/remove entries).

Single Building Stream:
  a. On the building’s Property Characteristics page, click on “Register building”.

![Property characteristics](image)

b. Your Local BOMA Association will now receive a notification that you are registering your building for certification. They will be in touch regarding payment. You may be contacted to confirm your building’s details. You will be granted access to the BOMA BEST questionnaire for 60 days while payment is still pending. If payment has not been received after this period, access to your BOMA BEST questionnaire will be removed.

c. Submit payment to the Local BOMA Association.

d. Fees are available [here](link) and are invoiced every three years (per certification cycle).

Portfolio Stream:
  a. Once you have submitted the list of buildings to BOMA Canada, you will be contacted directly with information regarding fees for each building as well next steps.

b. **Do not** click on “Register building” (if you are able to see it).

c. Invoices will be sent based on your preferences (individual building invoicing or group invoicing). Portfolios are invoiced annually.
Step 5: Accessing and completing the BOMA BEST Questionnaire

a. From the building’s Property Characteristics page, click on the “Questionnaire” tab.

b. Click on the questionnaire for your building. A new tab will open.

c. Once inside the questionnaire, move through each tab, answering each question.

d. The “Welcome” tab contains some helpful tips for navigating through the questionnaire.

e. The “BEST Practices” tab contains mandatory questions.

f. Even if you are not going to answer questions in each tab, click through each tab by clicking “Next”. This will allow the system to register all scores so that you are correctly scored.

g. You may leave the questionnaire at any time and return to it by clicking “Save”.

h. To see your answers, click on the “Submit” button that appears once you are on the last tab. You may do this as often as you like. Don’t worry, this does not mean you are ready for verification!
Step 6: Completing the performance metrics portion of the questionnaire

In BOMA BEST 3.0 points are available for certain performance metrics (Energy Use Intensity, ENERGY STAR Score (if applicable) and Water Use Intensity).

These metrics are calculated via ENERGY STAR Portfolio Manager. There are two ways to enter energy and water consumption data to obtain these metrics.

1. Directly in the BOMA BEST Online Portal. For instructions, [click here](#).
2. Linking your ENERGY STAR Portfolio Manager account with your BOMA BEST account. For instructions, [click here](#).

In either case, once these steps have been completed correctly, performance values will be generated automatically in the Summary grey box on your Property Characteristics page. Only the values that appear in this summary box can be used in the BOMA BEST questionnaire. Be prepared to show the verifier this online Summary box during the verification.

Transcribe these values into the appropriate fields in your BOMA BEST questionnaire.

For more details on exactly what data must be provided to obtain performance values, consult the ENERGY STAR FAQ. In short, the following must be provided:

- **24 consecutive months** of energy consumption data, at a minimum. Consumption must be entered for each month (cannot be a bulk amount representing the complete 24-month timeframe).
- **12 consecutive months** of water consumption data. Can be entered as a single bulk value representing the 12 months.
Step 7: Requesting and preparing for Verification

Single Building Stream:

a. Check that you are ready for verification:
   1. All BEST Practices have been answered with “Yes” or “BOMA-Accepted Equivalent”
   2. Documentation demonstrating the BEST Practices has been uploaded for each BEST Practice.
   3. Performance metrics are visible in the Summary grey box on your Property Characteristics page (only occurs if you have correctly synchronized your account with ENERGY STAR – required for points).
   4. You have clicked through each section of the questionnaire.
   5. Your overall score has been calculated by clicking the “Submit” button (only appears when you've arrived at the last section of the questionnaire).

b. From the Property Characteristics page click “Request Verification”.

c. If you clicked this by mistake, you may click “Cancel Verification”.

d. Until the Local BOMA Association has accepted your request you will not have access to your BOMA BEST Questionnaire.

e. Once the Local BOMA Association has accepted your request you will be able to return to the BOMA BEST Questionnaire and make modifications to your questionnaire. These will not affect the copy that has been made for Verification.

f. You will be contacted by the Local BOMA Association to schedule the Verification.

g. A thorough description of the Verification process is available in section 6 of this BOMA BEST Sustainable Buildings Application Guide 3.0.

Portfolio Stream:

a. Check that you are ready for verification:
   1. All BEST Practices have been answered with “Yes” or “BOMA-Accepted Equivalent”
   2. Documentation demonstrating the BEST Practices has been uploaded for each BEST Practice.
3. Performance metrics are visible in the Summary grey box on your **Property Characteristics** page (only occurs if you have correctly synchronized your account with ENERGY STAR – required for points).

4. You have clicked through each section of the questionnaire.

5. Your overall score has been calculated by clicking the “Submit” button (only appears when you’ve arrived at the last section of the questionnaire).
   a. The “**Request Verification**” button does not appear for users in the Portfolio Stream. Instead contact BOMA Canada to alert them that you are ready for verification.
   b. BOMA Canada will work with you to organize a verification schedule for the buildings eligible for verification.
   c. A thorough description of the Verification process is available in section 6 of this *Guide*.

**Step 8: Certified Buildings**

a. Once your building has been successfully verified, the Local Association (or BOMA Canada for Portfolio buildings) will update your certification records. A new entry will be entered in the “**Certifications**” tab by an Administrator. Here you will see the certification date, expiry date, level of certification achieved as well as your score.

b. Your certification record will also appear in the My Properties List.

![My Certifications](image-url)
Step 9: Recertification

Single Building Stream:
  a. Certifications are valid for three 3 years. During this time, you will have ongoing access to the building’s data and BOMA BEST questionnaire. These can continue to be modified during this three-year period.
  b. You will receive two alerts – 12 months and 4 months from expiry – reminding you of your building’s upcoming expiry. You can recertify at any time by clicking on “Renew certification”. The process will begin anew starting at Step 4.

Portfolio Stream:
  a. Certification is ongoing, unless a building cannot meet the verification requirements or if fees are outstanding.
  b. There is no need to indicate that you want to renew your certification. BOMA Canada will be in touch regarding Verification at regular intervals.
1.3. **Additional functionalities**

1.3.1. **Adding users to a building**

The person who created a building is automatically granted permission to see and modify that building, all its data and applicable BOMA BEST questionnaire.

Any number of users can be added to a particular building. These users will be granted full permission to the building (i.e. can modify the questionnaire, the data entry forms, etc.). Users can be located across the country; they do not need to be in the same region as the building.

If you wish to add another user to a building, email info@bomabest.org with the following information:

- The username (these must already exist in the 3.0 Online Portal)
- The name of the building

Depending on the number of buildings and usernames, please allow 2-3 weeks for this to be completed. Let us know in the email if any are more urgent then others.

1.3.2. **Creating an overview of all buildings in your account:**

It is possible to see all buildings, their status (Certified, Expired, New, etc.), Asset type, location, etc. in one place.

a. Click on “Property”

b. Click on “My Properties”

c. From here, you will see a Table of all buildings in your account, or all buildings for which you have permission (if you have been manually added to other buildings).

d. You can sort your buildings by clicking on “Add filter criteria”

e. You can export all the results to a PDF by clicking on “Export to Excel”
1.3.3. Understanding your “BOMA BEST” dashboard

When you first log in, click on “BOMA BEST” to see your dashboard.

This dashboard provides you with an overview of your buildings. It has been created as a template for all users. Some of its features include:

- “Notes”: A place on which to write yourself reminders.
- “My Messages”: Shows all the messages and alerts sent to you via the system, for example regarding payment or verification.
- “Interactive Map”: Shows all the geographic location of all buildings in your account – provided the location has been specified for each building.
- “Building Types”: This chart provides a summary of all the different buildings types that have been entered in your account.
- “Property Status”: This chart provides a summary of the different status for each building in your account. Through this table you can track which ones are overdue for payment, which ones are in the process of being verified, which ones are certified, etc.
- “My Surveys”: Provides a direct link to all the surveys being completed by your buildings.
1.3.4. Understanding your building’s status

Your building’s status is visible in many places, on your dashboard. It is also a filter category in the “My Properties” list.

Below is a description of what each status means:

- **New**: Your building has just been created. You must now click on “Register Building” to finalize your registration for a BOMA BEST Sustainable Buildings Certification.
- **Pending**: Single Building stream only. The Local BOMA Association has acknowledged your building’s registration and is reviewing the details.
- **Payment due**: Single Building stream only. The Local BOMA Association has sent you an invoice for your building’s registration. You have 60 days to submit payment. If payment is not received in this time, you will no longer be able to make changes to your online questionnaire.
- **Payment overdue**: Single Building stream only. The Local BOMA Association has not yet received your payment. You can no longer make changes to the online questionnaire.
- **Full access**: Single Building stream only. Payment has been accepted. Your building has full access to the questionnaire. It is now possible to request verification.
- **Ongoing**: Portfolio Building stream only. Your building has full access to the questionnaire.
- **Verification requested**: Single Building stream only. You have clicked on “Request Verification”. The Local BOMA Association has been automatically notified.
- **Awaiting verification**: Both streams. Your verification is being scheduled.
- **Certified**: Both streams. Your building’s verification was successful. The building is now certified for three (3) years. You will continue to have access to the online questionnaire during this time.
- **Not certified**: Both streams. Your building’s verification was unsuccessful. You will have to “Register Building” to restart the process. You will not lose the answers saved in your questionnaire.
- **Certified (+24 mos)**: Single Building stream only. Your building has been certified for over two years and is 12 months away from expiry. You will receive an automatic notification to this effect. You can begin the recertification process at any time; simply click on “Renew certification”.
• **Certified (+32 mos):** Single Building stream only. Your building has been certified for nearly three years and is 4 months away from expiry. You will receive an automatic notification to this effect. You can begin the recertification process at any time; simply click on “Renew certification”.

• **Expired:** Both streams. Your building’s certification is expired. You will no longer be able to make any changes to your online questionnaire. If you wish to recertify your building, simply click on “Renew certification”.
2. Defining a single building in BOMA BEST

The BOMA BEST Sustainable Buildings program is dedicated to assisting facility managers and operators improve their building’s environmental performance. To do this, buildings must be assessed individually. Each building must complete its own assessment questionnaire and will receive its own score and certificate.

A building is usually free-standing. A free-standing building is one that is not connected to other buildings except only superficially (e.g. a walkway). It may or may not be part of a larger campus of buildings and may share a common mechanical system with other buildings. Each free-standing building must complete its own BOMA BEST Sustainable Buildings questionnaire and will receive its own certification.

A building can also include multiple structures. In certain cases, multiple buildings can be considered a single building and complete a single BOMA BEST Sustainable Buildings assessment for these structures.

2.1. When can multiple buildings be considered a single building?

For multiple buildings (or structures) to be considered a single building and complete only one BOMA BEST Sustainable Buildings questionnaire, the following three requirements must be met:

1. The buildings must share an actual, physical connection that is complete and indivisible (i.e. a shared functional space that cannot be divided such as underground parking, an atrium, or conference space). Hallways or interior walking paths between buildings are not considered functional, shared space, even if they are lighted and/or heated. This requirement is consistent with the Energy Star Portfolio Manager (ESPM) definition of a “single structure”.

2. Buildings must have the same primary use type (75% or more of each building is dedicated to the same use, such as “office”).

3. Buildings must be managed by the same management company and share policies.

Aspects that are not taken into consideration in the definition of a single building:

- Age of construction of each structure in the building.
- Whether utilities are shared.
- Whether consumption is sub-metered.
- Whether HVAC equipment or other technologies are shared.

Buildings composed of multiple structures that meet the requirement for a single building may be assessed using a single BOMA BEST Sustainable Buildings questionnaire or may submit multiple BOMA BEST Sustainable Buildings questionnaires to capture the specificities of each structure (e.g. building tower). This decision is left to the applicant. Contact BOMA Canada if you are unsure about how to proceed.

In the case where multiple structures fit the definition of a single building in BOMA BEST Sustainable Buildings and the applicant wishes to continue using a single questionnaire, the applicant must assess all areas in that building to obtain a certification. For example, in the case where four towers sit atop a shared podium, the applicant must include all four towers as part of the single assessment/questionnaire. The applicant cannot choose to only include part of the structure (e.g. two out of the four towers). If the
applicant only wants to assess a part of the building (e.g. two out of the four towers), he/she must use separate questionnaires for each tower.

2.2. Benchmarking energy and water in BOMA BEST buildings

Depending on how HVAC or utilities are organized, different approaches must be followed to determine the Energy Star Score (ESS), Energy Use Intensity (EUI) or Water Use Intensity (WUI) associated with a given BOMA BEST assessment.

In free-standing buildings

Separate meters: If the building has its own utilities and can account for consumption specific to it, connect the building with an ESPM account and report the ESS, EUI and WUI calculated by ESPM in the survey.

Shared meters: If the free-standing building shares utilities with another building (but together they do not meet the definition for a single building in BOMA BEST), connect one of the building with an ESPM account that represents the shared consumption. Do not enter estimates. Report the common ESS, EUI and WUI associated with the shared consumption in the questionnaires for each building (same values in each questionnaire). Since an ESPM account cannot be associated to more than one BOMA BEST account, simply link 1 building with ESPM and show that building’s Property Characteristics page to the verifier for the other buildings.

• E.g. Building A and Building B share utilities and are not sub-metered. They do not meet the criteria for a single building. Both must complete their own BOMA BEST questionnaire. Link the account for Building A with the ESPM account that represents the shared consumption for Building A and B. Enter the ESS, EUI and WUI value that is generated in BOMA BEST in the appropriate fields in questionnaires for both buildings (A and B). During the verification, explain to the verifier that the values generated for Building A also represent the consumption for Building B.

Shared HVAC: If the free-standing building shares HVAC equipment and systems with another building (but together they do not meet the definition for a single building in BOMA BEST), questions about this equipment should be answered as though they were in the building itself. This means that many buildings might report on the same equipment – this is acceptable and necessary to understand the efficiency of the equipment serving an individual building.

In buildings composed of multiple-structures using only one BOMA BEST questionnaire

There is no sub-metering of the structures: If there is no sub-metering of the structures within the building, follow these steps:

1. Create an account in ESPM for the totality of the space, entering the total area and associated consumption for all structures in the building.
2. Connect this account with the BOMA BEST assessment.
3. Enter the values for ESS, EUI and WUI in the appropriate place in the BOMA BEST survey.

Each structure is sub-metered: Even if each (or some) structure is sub-metered, only one value for EUI, WUI and ESS can be entered in the single BOMA BEST questionnaire. This value cannot be estimated. It
must be generated by the ESPM system. Follow the steps listed above, as though there was no sub-metering in the building.

If individual accounts exist for each structure in ESPM already, and if the EUI, WUI or ESS specific to each building is known, you will be invited to enter this extra detail in the BOMA BEST questionnaire. No additional points are awarded.

**Shared HVAC:** If the structures within the building share HVAC equipment, report these in the BOMA BEST survey as required.

**Separate HVAC or efficient technologies:** If the technologies and/or HVAC are not identical in each structure of the building, report the average in the questionnaire.

- E.g., calculate how many LEDs are present, on average, in the common areas of all structures. This will be the number reported in the survey and must represent the entire building (all structures).

**A note regarding consistency with ESPM:**

As much as possible, BOMA BEST strives to replicate the requirements from ESPM to avoid confusion. One area where policies do not match is regarding using a common ESS, EUI or WUI for multiple buildings that do not sub-meter yet are not considered a single structure. BOMA BEST allows users to calculate the ESS, EUI and WUI based on the shared data and apply this value to both buildings. ESPM does not allow this.
3. Gross Floor Area to assess BOMA BEST Fees

3.1. Spaces to include and exclude

BOMA BEST collects two types of floor area information: (1) one to calculate fees, the other (2) to calculate energy and water performance.

This section specifically addresses the areas that must be included or excluded for the purposes of calculating BOMA BEST Application Fees. It is consistent BOMA BEST Sustainable Buildings Program Policy 1 – Application Fees (available on the website).

For information on the Gross Floor Area required to calculate energy and water performance, see Section 7 of this Guide.

There are many different terms used to represent the floor area that encompasses the entire building: gross floor area, gross measured area, internal gross area, etc. For the sake of simplicity, BOMA BEST will always use the term Gross Floor Area (GFA) when referring to the spaces that must be included in the BOMA BEST assessment.

The GFA used to calculate fees must be entered on the building registration page (“Create New” page) here:
The GFA used for calculating fees **must** include the following spaces (consistent with BOMA BEST Program Policy 1 – Application Fees):

- Lobbies
- Tenant Areas
- Common Areas
- Meeting Rooms
- Break Rooms
- Atriums (ground floor only)
- Restrooms
- Elevator Shafts
- Stairwells
- Mechanical Equipment Areas
- Basements
- Storage Rooms
- Parking Area – Underground or closed indoor parking serviced by mechanical ventilation must be included in the gross floor area of the building.

Areas that that **must not** be included in the floor area:

- 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 Area – Outdoor or open-air parkades must be excluded from the gross floor area of the building.

### 3.2. Compatible measurement standards

Review the following compatibility notes regarding BOMA Measurement Standards. This ensures all buildings are using the same standard and can be appropriately compared.

The following BOMA Measurement Standards are acceptable for **Office** and **Universal** buildings:

- BOMA 1996 Office Standard (“Gross Measured Area”) – This measurement includes major vertical penetrations (i.e. "virtual floors"). These must be excluded from the values entered in BOMA BEST.
- BOMA 2010 Office Standard (“Interior Gross Area”) – This measurement includes the indoor parking areas.
- BOMA 2009 Gross Area Standard (“Exterior Gross Area”) – This measurement includes the indoor parking areas.
The following BOMA Measurement Standards are acceptable for Enclosed Shopping Centres and Open Air Retail buildings:

- BOMA 2010 Retail Standard ("Exterior Gross Area") – This measurement includes the indoor parking areas.
- BOMA 2009 Gross Area Standard ("Exterior Gross Area") – This measurement includes the indoor parking areas.

The following BOMA Measurement Standards are acceptable for Light Industrial buildings:

- BOMA 2004, 2009 or 2012 Industrial Standard (Method A) ("Exterior Gross Area") – This measurement includes the indoor parking areas.
- BOMA 2009 Gross Area Standard ("Exterior Gross Area") – This measurement includes the indoor parking areas.

The following BOMA Measurement Standards are acceptable for Multi-Unit Residential Buildings:

- BOMA 2010 Multi-Unit Residential Standard (Method B) ("Exterior Gross Area") – This measurement includes the indoor parking areas.
- BOMA 2009 Gross Area Standard ("Exterior Gross Area") – This measurement includes the indoor parking areas.

The following BOMA Measurement Standards are acceptable for Health Care buildings:

- BOMA 1996 Office Standard ("Gross Measured Area")
- BOMA 2010 Office Standard ("Interior Gross Area") – This measurement includes the indoor parking areas.
- BOMA 2009 Gross Area Standard ("Exterior Gross Area") – This measurement includes the indoor parking areas.
4. BEST Practices

4.1. Introduction

BEST Practices represent minimum threshold requirements for certification. All buildings must achieve the BEST Practices appropriate to their asset class to achieve any level of certification.

All applicants using the new online portal are required to upload documentation to support the BEST Practices prior to requesting verification.

Consult section 5.2 for BEST Practices for Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal buildings.

Consult section 5.3 for BEST Practices for Multi-Unit Residential Buildings and Health Care buildings.
4.2. BEST Practices for Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, Universal

BEST Practice 1: Preventative Maintenance Program
Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

<table>
<thead>
<tr>
<th>Is a Preventative Maintenance Program in place at the building?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explanation &amp; Evaluation</td>
</tr>
<tr>
<td><strong>Description:</strong> 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.</td>
</tr>
<tr>
<td><strong>Requirements:</strong> 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.</td>
</tr>
<tr>
<td><strong>Additional Information:</strong> 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.</td>
</tr>
</tbody>
</table>

**REQUIREMENT DETAILS: Preventative Maintenance Program**

This question is a BEST Practice and is required for all levels of certification, for all building types.

It is necessary to undertake preventative maintenance to maintain optimal performance of the building’s mechanical, electrical, and ventilation systems and their components. The building systems require periodic maintenance throughout their life cycle in addition to the need for overhauling, modernization, or replacement, at certain age or intervals, or due to specific issues or causes. These must be outlined specifically in a Preventative Maintenance Program.

The Preventive Maintenance Program must include the methodology and record for all actions that are necessary to maintain the optimal functioning of the building’s systems and their components. The required maintenance procedures will be unique to each property and the systems within these facilities.

The Preventative Maintenance Program must contain the following:

1. An inventory of which system or component must be reviewed and the type of action that is required (e.g., by room or by equipment type);
2. Guidelines on how frequently these actions must be taken (e.g., monthly, quarterly, yearly, etc.). These guidelines should be based on standards such as manufacturer specifications, code requirements and industry best practices;
3. Documentation that these actions have been taken (e.g., via signature and date);
4. Confirmation that follow-up action has been taken when warranted; and
5. Record updates as new equipment is added or removed.

In addition to manual recording of this information many buildings may have online tracking software that outlines and tracks the Maintenance Program. These are acceptable if the software can monitor and track items 1-5 listed above.

The program can be common to a portfolio or campus of buildings however implementation must be building-specific.

The following is an example of a Preventative Maintenance Program. The items listed below constitute a sample only.

<table>
<thead>
<tr>
<th>System</th>
<th>Component</th>
<th>Action Taken</th>
<th>Date Completed</th>
<th>Signature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annually</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Outdoor Air Intakes</td>
<td>Clear obstructions, bird droppings, standing water, proximity to cooling towers, trash compactors, exhausts and other pollutant sources.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Ventilation</td>
<td>Minimum outdoor air damper setting.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>VAV Box</td>
<td>Minimum VAV box settings.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Ventilation</td>
<td>Duct and terminal coil cleanliness.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Duct insulation liner</td>
<td>Check for cleanliness, adhesion, and coating.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Cooling towers</td>
<td>Water treatment functioning as intended.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIRE</td>
<td>Fire Systems</td>
<td>Open fire dampers.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Measurement Devices and Sensors</td>
<td>Calibration of sensors (temperature, humidity, pressure, occupancy, photocell etc.).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC.</td>
<td>Controls (digital, pneumatic)</td>
<td>Ensure the proper functioning of all controls systems.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Semi-annually</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Building Equipment</td>
<td>Floor and equipment drain traps – properly sealed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>HVAC</td>
<td>Air quality measurements in</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System</td>
<td>Component</td>
<td>Action Taken</td>
<td>Date Completed</td>
<td>Signature</td>
<td>Comments</td>
</tr>
<tr>
<td>--------</td>
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</tr>
<tr>
<td></td>
<td>select occupied areas of the building.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quarterly</td>
<td>Controls (digital, pneumatic)</td>
<td>Operation of outdoor damper actuators.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC</td>
<td>Lighting</td>
<td>Ensure all emergency lighting is functioning properly.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monthly</td>
<td>HVAC Ventilation</td>
<td>Air filter loading.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC. Lighting</td>
<td>Change lamps as required.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC. Generator</td>
<td>Generator testing.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional references: ASHRAE 62.1-2010 *The Standards for Ventilation and Indoor Air Quality*. 
BEST Practice 2: Energy Assessment
Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

<table>
<thead>
<tr>
<th>Has an ASHRAE Level 1 Energy Assessment been conducted in the last five (5) years?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation &amp; Evaluation</strong></td>
</tr>
</tbody>
</table>
| **Description:** An ASHRAE Level 1 assessment refers to a simple audit of the building’s configuration and energy systems. If focuses on the identification of the potential for energy efficiency improvements.  
**Requirements:** An ASHRAE Level 1 Energy Assessment must have been conducted on the building in the last five (5) years.  
The Energy Assessment report must contain the following elements:  
• 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.  
• List major energy-consuming equipment.  
• Prioritized list of proposed low-cost and no cost energy conserving measures (ECMs) to enable greater energy efficiency.  
• 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.  
Data used for this assessment must represent complete building data for all building spaces and uses.  
**Additional Information:** 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. |

**REQUIREMENT DETAILS: ENERGY ASSESSMENT**

This question is a BEST Practice and is required for all levels of certification, for all building types.

In order to meet this BEST Practice, the Energy Assessment must include the following information:

1. Owner/manager information;  
2. Building name and address;  
3. Building description;  
4. Energy use analysis must include:  
• Utility billing analysis including cost and consumption history compiled from utility bills.  
• Energy intensity benchmarking observations including a calculation of annual energy use divided by building area (to obtain building performance indices such as MJ/m²/yr or
kWh/ft²/yr for each energy source). Specify which floor area is being used (e.g. gross floor area, net floor area, gross leasable area, etc.) to improve the validity of comparison.

- The utility bills must cover a minimum of 12 months of continuous data.

5. Summary of major equipment and type of lighting systems in the building;

6. Recommended Energy Conservation Measures:
   - List of identified retrofit and operation and maintenance energy conservation measures.
   - Explore sub-meter opportunities for large energy-using tenants.

7. Basic estimates of financial savings the building owner will realize because of investing in ECMs; and

8. Date of the assessment and signature of the person responsible for conducting the work:
   - The Energy Assessment must have been conducted within the last five (5) years from the date of verification.

Important Notes

i. The Energy Assessment may be completed by “in-house” technical staff or by a third party consultant (e.g. professional engineer or other knowledgeable energy consultant).

II. No major renovations to be performed after the date of the energy assessment. 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.

BOMA-Accepted Equivalent A: Energy Study Report

Buildings that have been occupied for less than two (2) years may utilize an energy study report that was prepared during the design of the building in lieu of a post-construction energy audit report. This report must have shown simulated energy consumption for different design scenarios, and identify which options were chosen for the actual construction. Applicants must be able to demonstrate that these energy-reduction features were incorporated into the building.

BOMA-Accepted Equivalent B: Energy Communications Plan

Where 75% or more of the building’s energy is purchased directly by tenants (e.g. most industrial and retail buildings) applicants may prepare an Energy Communication Plan in lieu of an Energy Assessment. Evidence of implementation is required to meet this BEST Practice.

This communication plan must document means of encouraging energy conservation initiatives by occupants. For example, the communication plan may include the following offerings by the landlord/management company:

- Encouragements to share energy consumption information with landlord.
- Providing walk through energy audit or assessment services.
- Delivery of “energy conservation tips” brochures to occupants.
- Energy conservation seminars for tenants / occupants.
- Other communication tools: posters, “turn it off stickers”, etc.
Evidence of implementation may include the following:

- Agendas and notes from tenant-building management meetings.
- Copies of marketing materials used to promote energy conservation within the building.
- Copies of communication to tenants/occupants regarding energy conservation.
- Copies of energy assessments or audits performed in tenant spaces.
**BEST Practice 3: Energy Management Plan**

Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

<table>
<thead>
<tr>
<th>Is an Energy Management Plan in place at the building?</th>
</tr>
</thead>
</table>
| **Explanation & Evaluation** | This question is a BEST Practice and is required for all levels of certification. **Description:** Energy management is the continuous process of managing behavioral, organizational and technical change to improve the building’s energy performance. **Requirements:** The Energy Management Plan must have been reviewed and updated in the last three (3) years. 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:
- Whether a particular ECM will be pursued or not;
- The person responsible for the implementation of the ECM;
- The budget associated with the ECM; and
- A timeline for completion.
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. **Additional Information:** 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. The BOMA-Accepted Equivalent is available for buildings that have been occupied for fewer than two (2) years. |

**REQUIREMENT DETAILS: Energy Management Plan**

This question is a BEST Practice and is required for all levels of certification, for all building types.

Energy management is the continuous process of managing behavioural, organizational and technical change to improve your organization’s energy performance.

The Energy Management Plan must identify and document building-specific measures to improve energy efficiency and reduce demand. These measures should be based on a clearly identified performance target (using quantifiable performance indicators), identified through the energy audit or the operational staff.

The Energy Management Plan must have been reviewed and updated in the past three (3) years.

All actions must be evaluated for their technical feasibility and expected results (estimated energy savings and pre-feasibility study) as well as financial feasibility (through an economic cost/benefit analysis such as simple payback or ROI). These actions must be integrated into a timeline.
A documented plan for implementing energy conservation strategies is illustrated in the table below as an example of minimum requirements. A more detailed table is strongly encouraged, especially one which allows for continuous energy tracking.

**Energy Management Plan – Sample Form**

<table>
<thead>
<tr>
<th>No.</th>
<th>Proposed Measure</th>
<th>Budget</th>
<th>When</th>
<th>Expected Return</th>
<th>Responsible Person(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Day time cleaning</td>
<td>$ --.00</td>
<td>2017</td>
<td>4 years</td>
<td>Jean Paul Kim</td>
</tr>
<tr>
<td>2</td>
<td>Re-commissioning feasibility study</td>
<td>$ --.00</td>
<td>2018</td>
<td>18 months</td>
<td>Alexa Moreno</td>
</tr>
</tbody>
</table>


These practices are clearly stated as minimal best practices according to the *2011 ASHRAE Handbook HVAC applications* (chapter 36; chapter 41). If the energy reduction plan is done through an ESCO project, energy savings should be measured according to EVO Standards (Efficiency Valuation Organization) and *ASHRAE guideline 14-2002 Measurement of energy and demand savings*.

**BOMA-Accepted Equivalent: Energy Commissioning Plan**

Buildings that have been occupied for fewer than two (2) years can meet this BEST Practice by demonstrating that an Energy Commissioning Plan has been put into place. The intent of this BOMA-accepted equivalent is to ensure that the building’s major systems and equipment are being optimized/fine-tuned for specific seasonal requirements, occupancy variability, etc.

The Energy Commissioning Plan must clearly demonstrate that the following actions have been considered and implemented in the previous 12 months – as per *2011 ASHRAE Handbook HVAC applications* (chapter 36; chapter 41):

1. An energy measurement or assessment plan for major operating systems and equipment AND an energy bill evaluation and follow up plan;
2. If a deficiency report has been generated (from the construction process) regarding building systems, plans to address these deficiencies must be included in the Energy Commissioning Report;
3. A person identified as responsible for the building energy performance;
4. Training for operations staff on performing the above.

**Important Notes:**

i. The Energy Commissioning Plan may be created and implemented by an “in-house” operational staff or by a third-party consultant (e.g. professional engineer or other knowledgeable energy consultant).
ii. The energy measurement or assessment plan for major systems and equipment must include all operating systems and equipment that represent the greatest proportionate use of energy in the building (e.g. heating system; cooling system, etc.).

iii. It is not always possible to assess the operations of major operating systems and equipment through the ongoing review of energy bills. Other methods of assessment include: tenant satisfaction surveys, control sequence reviews, etc.

iv. The Energy Commissioning Plan must specifically identify the individuals responsible for the energy measurement of major operating systems and equipment, as well as those individuals responsible for reviewing energy billings.

v. One person must be identified as being responsible for the overall energy commissioning plan.

vi. Although demonstration of implementation is preferable, it is not necessary.

vii. The plan can be common to a portfolio or campus of buildings however building specific information is required.
BEST Practice 4: Energy Reduction Target
Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

| Explanation & Evaluation | Description: 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. |

Requirements: An energy reduction target must be identified along with a timeframe for completion.
Targets must be put into writing, signed by senior management and reviewed annually, as well as be integrated into the Energy Management Plan.

Additional Information: 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.
In the case of Recertification, building managers are expected to demonstrate what targets have been reached since certification.
The BOMA-Accepted Equivalent is available for buildings where 75% or more of the building’s energy is purchased directly by tenants.

REQUIREMENT DETAILS: Energy Reduction Target

This question is a BEST Practice and is required for all levels of certification, for all building types.

Applicants will not be evaluated on whether or not they have reached the stated targets; rather the intent of this BEST Practice is to encourage building owners and managers to review available historical consumption data while also taking into consideration planned upgrades or improvements in order to set realistic targets.

Targets must be written and signed by senior management. Targets must be reviewed annually and be inserted into the Energy Management Plan.

Recertified buildings are expected to review previously set targets, demonstrate which ones were met, as well as provide a brief explanation regarding targets that were not met.

BOMA-Accepted Equivalent: Energy Reduction Target Gap Analysis

Where 75% or more of the building’s energy is purchased directly by tenants (e.g. multi-tenant office, industrial or retail buildings) applicants may prepare an Energy Reduction Target Gap Analysis.

An Energy Reduction Target Gap Analysis allows the building owner or manager to understand where gaps exist in the available data. Once these gaps are filled, the building owner and manager will benefit from a better understanding of exactly how much energy is consumed in the building, thereby allowing for targets to be set.

This analysis must include information on the following:

1. Owner/manager information;
2. Building name and address;
3. Building description;
4. Base building annual energy usage summary; and
5. Tenant space analysis:
   - Summary of all tenant spaces.
   - Information on annual energy usage for all tenant spaces, where available.
   - Summary of tenant spaces where energy usage information is not available.
   - Documentation showing whether the missing energy data is being, or has been, sought after (i.e. Green Button Share my Data request sent etc.).
BEST Practice 5: Water Assessment
Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

Has a Water Assessment been conducted in the last five (5) years?

<table>
<thead>
<tr>
<th>Explanation &amp; Evaluation</th>
<th>Description: 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.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirements: A water assessment must have been conducted on the building in the last five (5) years.</td>
</tr>
<tr>
<td></td>
<td>The water assessment report must contain the following elements:</td>
</tr>
<tr>
<td></td>
<td>• 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.</td>
</tr>
<tr>
<td></td>
<td>• Assessment and list of current performance of water-consuming equipment.</td>
</tr>
<tr>
<td></td>
<td>• Prioritized list of proposed water conserving measures (WCM’s) to enable greater water efficiency.</td>
</tr>
<tr>
<td></td>
<td>• Provision of estimates of financial savings the building owner will realize as a result of investing in WCMs and the simple payback period.</td>
</tr>
<tr>
<td></td>
<td>Additional Information: The BOMA-Accepted Equivalent is available for buildings where 75% or more of the building’s water is purchased directly by tenants or if the building has been occupied for fewer than two (2) years.</td>
</tr>
</tbody>
</table>

REQUIREMENT DETAILS: Water Assessment

This question is a BEST Practice and is required for all levels of certification, for all building types.

To meet this BEST Practice, the Water Assessment must include the following information:

1. Building Information
2. Owner/manager information
3. Building name and address
4. Building description
5. Date of water assessment
6. Water use analysis must include:
   • Water billing analysis including cost and consumption history compiled from utility bills.
   • Water intensity benchmarking observations including a calculation of annual water use divided by building area (to obtain a building performance index such as m³/m²/yr).
     Specify which floor area is being used (e.g. gross floor area, net floor area, gross leasable area, etc.) to improve the validity of comparison.
   • The utility bills must cover a minimum of 12 months of continuous data.
7. Water-using equipment inventory, such as:
   • Domestic water fixtures (faucets, toilets, urinals).
• Water using appliances (dishwasher, washing machine etc.).
• Cooling equipment including cooling towers, equipment “once-through” cooling and customized tenant cooling equipment.
• Landscape irrigation equipment.
• Water use for humidification equipment.
• Water use from heating equipment (boiler blowdown, steam production and condensate management).
• Any specialized equipment (including production use and process loads).

8. Recommended Water Conservation Measures (WCMs):
• List of identified retrofit and operation and maintenance water conservation measures.
• Explore sub-meter opportunities for large water-using tenants.

9. Basic estimates of financial savings the building owner will realize because of investing in WCMs.

10. Date and signature of the person responsible for conducting the work:
• The Water Assessment must have been conducted within the last five (5) years from the date of verification.

Important Notes:

i. The Water Assessment may be completed by “in-house” technical staff or by a third party consultant (e.g. a professional engineer or other knowledgeable water consultant).

ii. The Water Assessment report may be combined with the Energy Assessment report.

BOMA-Accepted Equivalent A: Water-using equipment inventory

Buildings that have been occupied for less than two (2) years OR have buildings with no water meter may submit a Water-using Equipment Report which can be created with information contained in the building’s Operation and Maintenance Manual, As Built Drawings and Commissioning Report.

The Water-using Equipment Report must include the following information:

1. Building Information;
2. Owner/manager information;
3. Building name and address;
4. Building description;
5. Water-using Equipment Information: An inventory/survey of all water consuming equipment on facility premises and their locations throughout the building, such as:
   • Domestic water fixtures (faucets, toilets, urinals).
   • Water using appliances (dishwasher, washing machine etc.).
   • Cooling equipment including cooling towers, equipment “once-thru” cooling and customized tenant cooling equipment.
   • Landscape irrigation equipment.
   • Water use for humidification equipment.
   • Water use from heating equipment (boiler blowdown, steam production and condensate management).
Any specialized equipment (including production use).

6. Baseline consumption of this equipment based on data from the building automation system and water sub-meters OR based on equipment performance estimates informed by manufacturer specifications PLUS an estimated calculation of the equipment’s annual consumption, such as:
   - Sinks and faucets: aerator output multiplied by estimation of annual use.
   - Toilets and urinals: flush output multiplied by estimation of annual use.
   - Showerhead: output of the showerhead multiplied by estimation of annual use.
   - Cooling towers: estimate make-up water required to compensate for losses due to evaporation, drift and splash-out, leaks and overflow, and bleed or blowdown.
   - Evaporation: Directly related to heat transfer and operational management. Assume approximately 1.8 GPH (centrifugal) or 3.7 GPH (absorption) per ton of cooling multiplied by the load percentage.
   - Bleed/blowdown: Losses represent a non-linear function of the concentration cycles (purity of make-up water over the purity of the recirculating water). Higher cycles mean fewer blowdowns are needed.
   - Drift and splash-out: Losses are not significant for well-maintained towers under normal conditions. Assume approximately 0.014 GPH per ton of cooling or about 0.008% of recirculating water.
   - Leaks and overflows: These are difficult to measure or estimate and losses are not significant in well-maintained towers. Visual inspection for leaks should be performed.
   - Irrigation system: output of the sprinklers multiplied by operating hours.

7. Recommended Water Conservation Measures:
   - List of identified retrofit and operation and maintenance water conservation measures.
   - Estimated costs, savings and payback period of measures.
   - Establish water reduction targets.
   - Explore feasibility of installing a base building meter if not present.
   - Explore sub-meter opportunities for the cooling tower make-up line and other major water consuming equipment.

8. Date and signature of the person responsible for conducting the work.
   - The Water-using equipment inventory must have been conducted within the last five (5) years from the date of verification.

BOMA-Accepted Equivalent B: Water Communications Plan

Where 75% or more of the building’s water is purchased directly by tenants (e.g. most Light Industrial and Open Air Retail buildings), applicants may prepare a Water Communication Plan in lieu of a Water Assessment report. Evidence of implementation is required to meet this BEST Practice.
This communication plan must document means of encouraging water conservation initiatives by occupants. For example, the communication plan may include the following offerings by the landlord/management company:

- Providing walk through water audit or assessment services of tenant spaces.
- Delivery of “water conservation tips” brochures to occupants.
- Water conservation seminars for tenants/occupants.
- Other communication tools: posters, “shut-it-off stickers”, etc.

Evidence of implementation may include the following:

- Agendas and notes from tenant-management team meetings.
- Copies of marketing materials used to promote water conservation measures.
- Copies of communication to tenants/occupants regarding water conservation tips/opportunities.
- Copies of water use assessments or audits done in tenant spaces.
BEST Practice 6: Water Management Plan
Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

<table>
<thead>
<tr>
<th>Is a Water Management Plan in place at the building?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explanation &amp; Evaluation</td>
</tr>
<tr>
<td></td>
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<tr>
<td></td>
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</tbody>
</table>

REQUIREMENT DETAILS: Water Management Plan

This question is a BEST Practice and is required for all levels of certification, for all building types.

The Water Management Plan should identify and document building-specific measures to improve water efficiency and reduce demand. These measures should be based on a clearly identified performance target (using quantifiable performance indicators), identified through the water assessment or the operational staff.

The Water Management Plan must have been reviewed and updated in the past three (3) years.

All actions must be evaluated for their technical feasibility and expected results (estimated water savings and pre-feasibility study) as well as financial feasibility (through an economic cost/benefit analysis such as simple payback or ROI). These actions must be integrated into a timeline.

A documented plan for implementing water conservation strategies is illustrated in the table below as an example of minimum requirements. A more detailed table is strongly encouraged, especially one which allows for continuous water tracking.
Water Management Plan – Sample Form

<table>
<thead>
<tr>
<th>No.</th>
<th>Proposed Measure</th>
<th>Budget</th>
<th>When</th>
<th>Expected Return</th>
<th>Responsible Person(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Low-flow fixtures</td>
<td>$ --.00</td>
<td>2017</td>
<td>4 years</td>
<td>Jean Paul Kim</td>
</tr>
<tr>
<td>2</td>
<td>Non-potable irrigation</td>
<td>$ --.00</td>
<td>2018</td>
<td>18 months</td>
<td>Alexa Moreno</td>
</tr>
</tbody>
</table>

**BOMA-Accepted Equivalent: Water Commissioning Plan**

Buildings that have been occupied for less than two (2) years can meet this BEST Practice by demonstrating that a Water Commissioning Plan has been put into place. The intent of this BOMA-accepted equivalent is to ensure that the building’s major systems and equipment are being optimized/fine-tuned for specific seasonal requirements, occupancy variability, etc.

The Water Commissioning Plan must clearly demonstrate that the following actions have been considered and implemented in the previous 12 months:

1. A water measurement or assessment plan for major operating systems and equipment as well as a water bill evaluation and follow up plan;
2. If a deficiency report has been generated (from the construction process) regarding building systems, plans to address these deficiencies must be included in the Water Commissioning Report;
3. A person identified as responsible for the building water performance;
4. Training for operations staff on performing the above.

**Important Notes:**

i. The Water Commissioning Plan may be created and implemented by an “in-house” operational staff or by a third-party consultant (e.g. professional engineer or another appropriate consultant).

ii. The water measurement or assessment plan for major systems and equipment must include all operating systems and equipment that represent the greatest proportion of water consumption in the building (e.g. district hot water, cooling towers, etc.)

iii. It is not always possible to assess the operations of major operating systems and equipment through the ongoing review of water bills. Other methods of assessment include: tenant satisfaction surveys, control sequence review, etc.

iv. The Water Commissioning Plan must specifically identify the individuals responsible for the water measurement of major operating systems and equipment, as well as those individuals responsible for water bill review.

v. One person must be identified as being responsible for the overall water commissioning plan.

vi. Although demonstration of implementation is preferable, it is not necessary.

vii. The plan can be common to a portfolio or campus of buildings however building specific information is required.
### BEST Practice 7: Indoor Air Quality Monitoring Plan

Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

<table>
<thead>
<tr>
<th>Is an Indoor Air Quality Monitoring Plan in place at the building?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation &amp; Evaluation</strong></td>
</tr>
<tr>
<td><strong>Description</strong>: 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.</td>
</tr>
<tr>
<td><strong>Requirements</strong>: The Air Quality Monitoring Plan must contain the following elements:</td>
</tr>
<tr>
<td>• 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.</td>
</tr>
<tr>
<td>• Set a schedule for HVAC inspection and maintenance tasks to ensure good hygiene (cleanliness, no standing water, etc.).</td>
</tr>
<tr>
<td>• Identify HVAC systems that will impact the IAQ goals listed above.</td>
</tr>
<tr>
<td>• 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.</td>
</tr>
<tr>
<td>• 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).</td>
</tr>
<tr>
<td>• Identify training requirements for property management and building maintenance staff relating to IAQ.</td>
</tr>
<tr>
<td>• Review the plan annually and update as necessary.</td>
</tr>
</tbody>
</table>

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.

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.

**Additional Information**: 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.

Refer to the USEPA I-BEAM for more information on developing an IAQ Monitoring Plan.
REQUIREMENT DETAILS: Air Quality Monitoring Plan

This question is a BEST Practice and is required for all levels of certification, for all building types.

The Air Quality Monitoring Plan is a guidance document that will inform future action. Implementation is not required as a part of this BEST Practice. Rather, this BEST Practice is focused on intent.

Below are suggestions to inform the components of the IAQ Monitoring Plan.

Suggested performance goals for IAQ include the following for frequently occupied indoor spaces:

- Carbon dioxide not exceeding 700 ppm above ambient (ASHRAE 62.1);
- Carbon monoxide not exceeding 9 ppm (ASHRAE 62.1);
- Total volatile organic compound concentrations do not exceed 1000 µg/m$^3$ (440 ppb) (Health Canada);
- PM$_{10}$ does not exceed 50 µg/m$^3$ (ASHRAE 62.1);
- Temperature in the range of 21 – 27 °C, taking into account seasonal variances, relative humidity (ASHRAE 55);
- Relative humidity in the range of 30-60% (USEPA I-BEAM) or more than 20% (CSA);
- HVAC system interiors are in good general condition, clean, free of standing water and debris, and have no visible suspect mould growth.

If other local regulations exist for the above performance criteria, the most stringent will apply.

Regarding the preventative maintenance schedule for HVAC systems and equipment that will impact IAQ, include language regarding how environmental quality performance will be verified. At a minimum, testing should be conducted over a typical work day, taking into account fluctuations in contaminant levels that may occur. Testing should be conducted, at a minimum, in the morning and afternoon.

The US EPA provides a free sample Indoor Air Quality audit checklist.

BOMA-Accepted Equivalent: Indoor Air Quality Monitoring Plan for Tenants

In the case where all ventilation systems and equipment are owned and operated exclusively by the tenants, the building owner or manager must provide tenants with suggested guidelines on how to prepare an Indoor Air Quality Monitoring Plan based on the requirements listed above. Although ensuring adherence by the tenants to this plan is highly encouraged, it is not required to meet this BEST Practice.

Important Notes:

i. The person developing the Indoor Air Quality Monitoring Plan must be competent based on the following criteria (aligned with the definition of various provincial Occupational Health and Safety Acts):
   - Adequate qualifications – the person has a good working knowledge and understanding of the legislation surrounding indoor environmental quality (i.e. training certificates or educational background in hygiene, occupational health and safety, environmental engineering, building science or similar);
• Suitable training – the person must have training that is appropriate to implementing an indoor environmental quality monitoring program and which comply with provincial minimum safety training requirements; and

• Sufficient experience – the person must have enough experience to safely perform the work without supervision or with only a minimal degree of supervision.

ii. Although demonstration of implementation is preferable, it is not necessary.

iii. The plan can be common to a portfolio or campus of buildings however building specific information is required.
**BEST Practice 8: Occupant Service Request Program**
Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

<table>
<thead>
<tr>
<th>Is an Occupant Service Request Program in place?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation &amp; Evaluation</strong></td>
</tr>
<tr>
<td><strong>Description:</strong> 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.</td>
</tr>
<tr>
<td><strong>Requirements:</strong> Establish an Occupant Service Request Program for the building. The Program must include the following components:</td>
</tr>
<tr>
<td>• 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).</td>
</tr>
<tr>
<td>• Information on the origins of the service request;</td>
</tr>
<tr>
<td>• Information on the status of the service request (e.g. in progress, resolved, etc.); and</td>
</tr>
<tr>
<td>• Information on the corrective action taken.</td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td><strong>Additional Information:</strong> Service requests can be made by all building occupants, including tenants, visitors and staff.</td>
</tr>
</tbody>
</table>

**REQUIREMENT DETAILS: Occupant Service Request Program**

This question is a BEST Practice and is required for all levels of certification, for all building types.

Building management must have in place a documented means for addressing occupant (tenant and building staff) concerns regarding maintenance service requests. Visitors to the building may also log service requests. Such service request logs can provide evidence of occupant dissatisfaction and its causes. Trends in complaint rates over time may indicate occupant reactions to changes in building operation.

The Occupant Service Request Program must have a mechanism in place for recording the following information:

- Incident log number;
- Occupant name, company and department, location in building.
- Date complaint was received;
- Description of complaint;
- Suggested cause;
- Summary of problem;
- Actions completed;
• Date of occupant interview (if applicable);
• Remedial action report;
• Date of when occupant was advised about actions taken;
• Additional details (as required).

Service requests must be reviewed and acted upon within 1-2 weeks, unless otherwise specified (e.g., critical area or critical equipment).

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.
### BEST Practice 9: Hazardous Building Materials Management Program

Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

<table>
<thead>
<tr>
<th>Explanation &amp; Evaluation</th>
<th>Description: The presence and condition of hazardous building materials must be identified and managed for the safety of building occupants.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Requirements:</strong> The Hazardous Building Materials Management Program must include:</td>
</tr>
<tr>
<td></td>
<td>• Inventory of all building materials known or presumed to contain asbestos, lead, PCBs, silica and mercury (at a minimum);</td>
</tr>
<tr>
<td></td>
<td>• Inspection of known/presumed asbestos-containing materials within the past 12 months, where present;</td>
</tr>
<tr>
<td></td>
<td>• 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;</td>
</tr>
<tr>
<td></td>
<td>• Corrective actions identified during the inspections completed;</td>
</tr>
<tr>
<td></td>
<td>• Management protocols for unexpected disturbance of asbestos;</td>
</tr>
<tr>
<td></td>
<td>• Pre-construction assessment of materials and equipment impacted by renovation activities for the presence of hazardous building materials;</td>
</tr>
<tr>
<td></td>
<td>• A proactive plan for the abatement of accessible asbestos-containing materials (including in the areas above acoustic tiles) and PCB-containing equipment and ballasts;</td>
</tr>
<tr>
<td></td>
<td>• Awareness training for building maintenance staff on asbestos safety; and</td>
</tr>
<tr>
<td></td>
<td>• Review and updating as changes occur to the location of hazardous materials in the building, at a minimum every three (3) years.</td>
</tr>
</tbody>
</table>

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. Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.

### REQUIREMENT DETAILS: Hazardous Building Materials Management Program

This question is a BEST Practice and is required for all levels of certification, for all building types.

To mitigate the risk of exposure to hazardous materials associated with building materials, equipment and finishes, the building owner/manager must develop a plan to periodically inspect the condition of these materials, conduct safe repair, assess disturbance or complete removal of these materials, and to adequately train personnel in contact with hazardous materials.

The Hazardous Building Materials Management Program must include:

1. Inventory of all building materials known or presumed to contain asbestos, lead, PCBs, silica and mercury (at a minimum).
The survey for hazardous building materials are performed typically room by room, or by area. Samples may be required to confirm presence of hazardous building materials. All building owners or tenants must verify sampling requirements with the province specific regulation governing sampling methodology for hazardous building materials.

All building materials should be presumed to contain asbestos and all paint should be presumed to contain lead until analysis is performed at an accredited laboratory (see Notes for the list of acceptable accreditations). The presence of these substances must be identified prior to any renovation or demolition.

Building materials containing asbestos must be identified. Local regulations prescribe the type of materials to be sampled, the number of samples of each material to be analyzed and the minimum quantity of asbestos fibres by dry weight for the material to be considered asbestos-containing. A comprehensive survey must have the following information at a minimum for BOMA BEST verification purposes:

- Type of hazardous materials present in the building;
- Location of the hazardous materials;
- The extent of the hazardous material within the building;
- The approximate quantity of hazardous material in each area.

ASTM E2356-14 “Standard Practice for Comprehensive Building Asbestos Surveys” provides guidelines on completing an asbestos survey.

2. Inspection of known/presumed asbestos-containing materials within the past 12 months, where present.

The condition or state of the asbestos-containing materials (e.g. poor, fair, good) must be reviewed.

3. 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.

4. Corrective actions identified during the inspections completed.

The program must include a list of recommended actions to meet province specific regulatory requirements with respect to maintenance, inspection, training and abatement.

5. Management protocols for unexpected disturbance of asbestos.

6. Pre-construction assessment for the presence of hazardous building materials and equipment that may be directly impacted by renovation activities.

7. A proactive plan for the abatement of accessible asbestos-containing materials (including in the areas above acoustic tiles) and PCB-containing equipment and ballasts.

8. Awareness training for building maintenance staff on asbestos safety.

9. Reviewing and updating as changes occur to the location of hazardous materials in the building every three (3) years

**Important Notes:**

i. If the hazardous materials inventory was done at the time of acquisition and, if no other hazardous building materials were brought into the building, or found, and, if no changes in building materials have been implemented since the original survey, then a formal statement to this effect will be sufficient for verification purposes. The statement must clearly reference the
previous hazardous materials survey and the policies that have been put in place to ensure that no additional hazardous materials have been brought into the building and that existing building materials have not been replaced.

ii. Buildings with multiple tenants must have a Hazardous Building Materials Survey that includes all tenant spaces. Building owners are responsible for ensuring that the building in its entirety is represented in the Hazardous Building Materials Survey.

iii. The laboratory performing the sample testing should be accredited by one of the following organizations: the Canadian Association for Laboratory Accreditation (CALA), the National Voluntary Laboratory Accreditation Program (NVLAP), the American Industrial Hygiene Association (AIHA), or the Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST).

iv. The person completing the hazardous building materials inventory and inspection must be competent based on the following criteria (aligned with the definition of various provincial Occupational Health and Safety Acts):

- Adequate qualifications – the person has good working knowledge and understanding of the legislation surrounding hazardous materials (i.e. training certificates or educational background in hygiene, occupational health and safety, environmental engineering, building science or similar);
- Suitable training – the person must have training that is appropriate to conducting hazardous building materials inventories and which comply with provincial minimum safety training requirements; and
- Sufficient experience – the person must have enough experience to safely perform the work without supervision or with only a minimal degree of supervision.

v. Demonstration of implementation is required.

vi. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.
**BEST Practice 10(A): Hazardous Chemical Products Management Program**

Applicable **ONLY** to Office, Enclosed Shopping Centre and Universal

| Is a Hazardous Chemical Products Management Program in place at the building? |
| --- | --- |
| **Explanation & Evaluation** | **Description:** 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.

**Requirements:** The Hazardous Chemical Products Management Program must include:

- Periodic inventory of in-use, base-building hazardous chemical products (at least annually, or as procurement is revised);
- Storage of chemical products in accordance with product Safety Data Sheets;
- Safety Data Sheets available for all hazardous chemical products dated within the past three (3) years;
- Chemical products labeled in accordance with WHMIS/GHS/HAZCOM
- 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);
- Review and updating of the Plan as products are changed and at least annually.

Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.

**REQUIREMENT DETAILS: Hazardous Chemical Products Management Program**

This question is a BEST Practice and is required for all levels of certification, for Office, Enclosed Shopping Centres and Universal buildings. This is **not** a BEST Practice requirement for Light Industrial or Open Air Retail buildings.

Internationally, a globally harmonized system for safety related to the use of hazardous chemical products has been developed by the United Nations. Similar systems such as the Workplace Hazardous Materials Information System (WHMIS) in Canada and HAZCOM in the US are regulated approaches to the management of hazardous chemical or use-related products.

A use-related product is defined as anything that is brought into the building and can include a hazardous chemical. A hazardous chemical is defined as a dangerous good which could be a solid, liquid, or gas that can harm people, other living organisms, property, or the environment.

The Hazardous Chemical Products Management Program must contain the following components:

1. Periodic inventory of in-use, base-building hazardous chemical products.

Every building that uses hazardous chemicals or use-related products shall keep and maintain a record of the chemicals or use-related products in the work place that are used, handled, or stored in the building.
Any Hazardous Chemicals or Use-Related Products brought into or used in the building should be included in this Inventory:

- A list of chemicals or use-related products brought into the building for use, handling and storage.
- The location where the chemical(s) or use-related products are used, handled and stored.
- Safety Data Sheets for each chemical or use-related product used, handled and stored.
- The approximate quantities of each chemical or use-related product stored on site.
- A live index of the chemicals or use-related products including the chemical name and page reference for easy access to Safety Data Sheets and other relevant information related to each chemical.

2. Storage of chemical products in accordance with product Safety Data Sheets.

Hazardous products should be stored in rooms with proper ventilation, controlled temperatures, drain protection and adequate shelf space. Containers should be capped to avoid potential spills and fumes, properly labelled and kept in securely locked areas.

3. Safety Data Sheets available for all hazardous chemical products dated within the last three (3) years.

A Safety Data Sheet, as required by this BEST Practice, is a document that contains information on the potential hazards (health, fire, reactivity and environmental) and how to work safely with the chemical product. It is an essential starting point for the development of a complete health and safety program. It also contains information on the use, storage, handling and emergency procedures related to the hazards of the material.

4. Chemical products labeled in accordance with WHMIS/GHS/HAZCOM.

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).

Relevant building maintenance staff must be trained on safe handling and use of chemicals pertaining to their work, symbol recognition, safety data sheets, first aid and spill response, storage and disposal.

6. Review and updating of the Program as products are changed and at least annually.

The Hazardous Chemicals Management Program should be modified as chemical products are changed/added, and must be reviewed annually to make sure the safety data sheets are dated within the last three (3) years, individuals working with the products have received the appropriate training, and products are appropriately labelled, etc.

Important Notes:

i. Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.

ii. Tenants, as well as building owners, are required to have an up-to-date Hazardous Chemical or Use-Related Product Inventory. It is an industry best management practice for building owners to keep an up-to-date record of all tenant Hazardous Chemical or Use-Related Product Inventories.
iii. There are no specific competency requirements for compiling a Hazardous Chemical or Use-Related Product Inventory, however the individual conducting the inventory must have good working knowledge and understanding of the applicable regulatory requirements, including at a minimum, WHMIS.
BEST Practice 10(B): Tenant Hazardous Chemical Products Management Program
Applicable ONLY to Light Industrial and Open Air Retail

<table>
<thead>
<tr>
<th>Explanation &amp; Evaluation</th>
<th>Description: Tenants, as well as building owners, are required to have an up-to-date Hazardous Chemical or Use-Related Product Inventory. Building owners must keep an up-to-date record of all tenant Hazardous Chemical or Use-Related Product Inventories.</th>
</tr>
</thead>
</table>

**Requirements:** At a minimum, the Tenant Hazardous Chemicals Monitoring Program must address the following:

- Periodic (at least annual) tenant inventory including location and approximate quantities of hazardous chemicals in tenant areas. This inventory can be conducted by the tenant or the property owner. In all cases, the results of the inventory must be provided to the building owner/manager.
- Provision of Safety Data Sheets on all hazardous chemicals in tenant areas.
- Periodic checks on the safe storage and use of the chemicals or use-related products (at least annual).

**REQUIREMENT DETAILS: Tenant Hazardous Chemicals Monitoring Program**

This question is a BEST Practice and is required for all levels of certification, for Light Industrial or Open Air Retail buildings only. This is **not** a BEST Practice requirement for Office, Enclosed Shopping Centres and Universal buildings.

Tenants, as well as building owners, are required to have an up-to-date Hazardous Chemical or Use-Related Product Inventory. It is an industry best management practice for building owners to keep an up-to-date record of all tenant Hazardous Chemical or Use-Related Product Inventories.

A use-related product is defined as anything that is brought into the building and can include a hazardous chemical. A hazardous chemical is defined as a dangerous good which could be a solid, liquid, or gas that can harm people, other living organisms, property, or the environment.

At a minimum, the Tenant Hazardous Chemicals Monitoring Program must address the following:

1. Periodic (at least annual) tenant inventory including location and approximate quantities.

There are no specific competency requirements for compiling a Hazardous Chemical or Use-Related Product Inventory however, the individual conducting the inventory must have good working knowledge and understanding of the applicable regulatory requirements, including at a minimum, the Hazardous Materials Information System (WHMIS).

2. Provision of Safety Data Sheets.

A Safety Data Sheet (SDS), as required by this BEST Practice, is a document that contains information on the potential hazards (health, fire, reactivity and environmental) and how to work safely with the chemical product. It is an essential starting point for the development of a complete health and safety...
program. It also contains information on the use, storage, handling and emergency procedures related to the hazards of the material.

3. Periodic checks on the safe storage and use of the chemicals or use-related products.

Hazardous products should be stored in rooms with proper ventilation, controlled temperatures, drain protection and adequate shelf space. Containers should be capped to avoid possible spills and fumes, properly labelled and kept in securely locked areas.
BEST Practice 11: Green Cleaning Program
Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

| Explanation & Evaluation | Description: A Green Cleaning Program emphasizes the use of environmentally preferred products, maintenance of cleaning equipment and effective cleaning practices.

Requirements: Develop a Green Cleaning Program for the facility. It must include the following components:

- Standard operating procedures (SOP) for cleaning activities.
- Cleaning products certified by a third party.
- Cleaning logs (describing the activities carried out, the times they were carried out and by whom).
- Training for building cleaning staff.
- Annual review and updating.

Cleaning product must be certified by a third-party (EcoLogo or Green Seal) to reduce both occupant and building cleaning staff exposure.

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.

Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.

Additional Information: 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.

REQUIREMENT DETAILS: Green Cleaning Program
This question is a BEST Practice and is required for all levels of certification, and for all buildings types.

BOMA-Accepted Equivalent: Green Cleaning Program for Tenants
In the case where cleaning is performed exclusively by individual tenants, the building owner or manager must provide tenants with suggested guidelines with a guidance document regarding developing a Green Cleaning Program for the building that meets the requirements listed above. Although ensuring adherence by the tenants to this program is highly encouraged, it is not required to meet this BEST Practice.
# BEST Practice 12(A): Source Separation Program

**Applicable ONLY to Office, Enclosed Shopping Centre and Universal**

| Explanation & Evaluation | **Description:** A Source Separation Program facilitates the separation of waste at the point of generation for recycling and waste destined for disposal.  
**Requirements:** 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.  
The source separation program must consist of the following components:  
* 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.  
* 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.  
* 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).  
* Reasonable efforts are made to ensure that the separated waste is reused or recycled.  
Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.  
**Additional Information:** The contamination of recyclable material does not disqualify this requirement, though continued contamination should be addressed in the Waste Reduction Work Plan. 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.  
Buildings that have achieved a certification through the 3RCertified program can answer “Yes” and show their certification to the Verifier. 3RCertified is a certification program for buildings in the Industrial, Commercial and Institutional (IC&I) sectors that reviews how organizations manage solid waste reduction and diversion operations. It is available across Canada. |
REQUIREMENT DETAILS: Source Separation Program

This question is a BEST Practice and is required for all levels of certification, for Office, Enclosed Shopping Centres and Universal buildings. This is not a BEST Practice requirement for Light Industrial or Open Air Retail buildings.

BOMA-Accepted Equivalent: Alternative Source Separation Program

Alternative source separation programs are permitted in so far as the following have been met:

1. At a minimum, there must be two streams to minimize contamination;
2. The waste hauler must provide the building manager with evidence that they are compliant with the province or territory’s legislation concerning waste collection and processing practices;
3. The waste hauler must provide the building manager with a letter confirming that their collection and processing practices result in capture rates of at least 80% over the year.
## BEST Practice 12(B): Waste Reduction and Diversion Policy

**Applicable ONLY to Light Industrial and Open Air Retail**

<table>
<thead>
<tr>
<th>Explanation &amp; Evaluation</th>
<th>Description:</th>
<th>The Waste Reduction and Diversion Policy represents a commitment from the organization or building management to continuously improve performance regarding the reduction and diversion of solid waste.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirements:</td>
<td>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:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Day to day activities from all waste producing areas, including food service and retail; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Periodic events such as conferences, catered meetings and functions, training, tenant relocation activities, construction, renovation and demolition projects, fit-ups, etc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The Policy (and any subsequent updates) must be dated and signed by Senior Management (an individual with decision-making abilities on budget expenditures). Demonstration of implementation is not required, nor is building-specific information. The policy can be common to a portfolio or campus of buildings.</td>
</tr>
<tr>
<td></td>
<td>Additional Information:</td>
<td>Buildings that have achieved a certification through the 3RCertified program can answer “Yes” and show their certification to the Verifier. 3RCertified 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.</td>
</tr>
</tbody>
</table>

This question is a BEST Practice and is required for all levels of certification, for Light Industrial or Open Air Retail buildings. This is not a BEST Practice requirement for Office, Enclosed Shopping Centres and Universal buildings.
BEST Practice 13: Waste Audit
Applicable ONLY to Office, Enclosed Shopping Centre and Universal

<table>
<thead>
<tr>
<th>Has a Waste Audit been completed for the building in the past three (3) years?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation &amp; Evaluation</strong></td>
</tr>
<tr>
<td><strong>Requirements:</strong> Following the <a href="#">BOMA BEST Waste Auditing Requirements</a>, the Waste Audit must address:</td>
</tr>
<tr>
<td>• The time period and duration of the waste sampling.</td>
</tr>
<tr>
<td>• The sample size (representing at least 10% of the total building’s waste and recycling materials).</td>
</tr>
<tr>
<td>• Details specific to each collected waste stream.</td>
</tr>
<tr>
<td>• 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).</td>
</tr>
</tbody>
</table>

The resulting Waste Audit Report must include:

| • Summary of the sampling protocol and methodology used. |
| • Annualization of daily waste as well as other waste stream such as construction, renovation and demolition (CRD) waste and hazardous materials. |
| • Total of each waste stream and overall total. |
| • Diversion rate. |
| • Capture rate. |
| • Summary of recommendations for improving waste diversion. |

The audit must be performed by a person with adequate qualifications as well as suitable training and experience.

**Additional Information:** 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 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. The Waste Audit must be performed at the building and must not be based on generalized waste facility averages.

Buildings that have achieved a certification through the 3RCertified program can answer “Yes” and show their certification to the Verifier. [3RCertified](#) is a certification program for buildings in the Industrial, Commercial and Institutional (IC&I) sectors that reviews how organizations manage solid waste reduction and diversion operations. It is available across Canada.
REQUIREMENT DETAILS: Waste Audit

This question is a BEST Practice and is required for all levels of certification, for Office, Enclosed Shopping Centres and Universal buildings. This is not a BEST Practice requirement for Light Industrial or Open Air Retail buildings.

A description of the requirements for completing an audit compliant with the BEST Practice is available in the BOMA BEST Waste Auditing Requirements.

For a more comprehensive description of the details on the process, and for additional suggestions (not required) on performing a valuable waste audit, download the Waste Auditing Guiding Principles.

Important Notes:

The person performing the Waste Audit must be competent based on the following criteria:

i. Adequate qualifications – the person has a good working knowledge and understanding of the legislation surrounding waste;

ii. Suitable training – the person must have training that is appropriate to performing a waste audit and which complies with provincial minimum safety training requirements; and

iii. Sufficient experience – the person must have enough experience to safely perform the work without supervision or with only a minimal degree of supervision.
### BEST Practice 14: Waste Reduction Work Plan

**Applicable ONLY to Office, Enclosed Shopping Centre and Universal**

<table>
<thead>
<tr>
<th>Explanation &amp; Evaluation</th>
<th>Description: A waste reduction plan is an action plan prepared in to reflect the updated waste audit.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Requirements:</strong></td>
<td>The Waste Reduction Work Plan must consist of the following components:</td>
</tr>
<tr>
<td></td>
<td>• 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.</td>
</tr>
<tr>
<td></td>
<td>• 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.</td>
</tr>
<tr>
<td></td>
<td>• 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.</td>
</tr>
<tr>
<td></td>
<td>• 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).</td>
</tr>
</tbody>
</table>

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.

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.

**Additional Information:** The Waste Reduction Work Plan targets the collection programs for which the building manager or owner is responsible.

Buildings that have achieved a certification through the 3RCertified program can answer “Yes” and show their certification to the Verifier. 3RCertified is a certification program for buildings in the Industrial, Commercial and Institutional (IC&I) sectors that reviews how organizations manage solid waste reduction and diversion operations. It is available across Canada.

This question is a BEST Practice and is required for all levels of certification, for Office, Enclosed Shopping Centres and Universal buildings. This is **not** a BEST Practice requirement for Light Industrial or Open Air Retail buildings.
BEST Practice 15: Environmental Policy
Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

<table>
<thead>
<tr>
<th>Explanation &amp; Evaluation</th>
<th>Description: An Environmental Policy or vision establishes the direction building management wishes to take on 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.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Requirements: Create an overarching Environmental Policy (or vision) which contains the following components:</td>
</tr>
<tr>
<td></td>
<td>• 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 on 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.).</td>
</tr>
<tr>
<td></td>
<td>• Enter the vision statement for each assessment category in the space provided in the online portal.</td>
</tr>
<tr>
<td></td>
<td>Additional Information: 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. Demonstration of implementation is not required, nor is building-specific information. The policy can be common to a portfolio or campus of buildings.</td>
</tr>
</tbody>
</table>

This question is a BEST Practice and is required for all levels of certification, for all building types.
**BEST Practice 16: Occupant Environmental Communication Program**

Applicable to Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

<table>
<thead>
<tr>
<th>Is an Occupant Environmental Communication Program in place at the building?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explanation &amp; Evaluation</strong></td>
</tr>
<tr>
<td><strong>Description:</strong> 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.</td>
</tr>
<tr>
<td><strong>Requirements:</strong> The Occupant Environmental Communication Program must address the following components:</td>
</tr>
<tr>
<td>• Selecting the communication strategies that will be used;</td>
</tr>
<tr>
<td>• Selecting the activities that will be encouraged;</td>
</tr>
<tr>
<td>• Identifying responsible individuals among management for moving each aspect of the plan forward; and</td>
</tr>
<tr>
<td>• Creating a timeline for implementation.</td>
</tr>
<tr>
<td>• Demonstrate that at least two (2) communication strategies have been implemented in the past 12 months.</td>
</tr>
<tr>
<td>Demonstration of implementation is required. The program can be common to a portfolio or campus of buildings however implementation must be building-specific.</td>
</tr>
<tr>
<td><strong>Additional Information:</strong> Occupants 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.</td>
</tr>
</tbody>
</table>

**REQUIREMENT DETAILS: Occupant Environmental Communication Program**

This question is a BEST Practice and is required for all levels of certification, for all building types.

Building management must have in place an Occupant Environmental Communication Program for communicating with tenants and building staff on environmental issues specific to the building. Components of this Program must have been implemented within the past 12 months.

*Occupants* 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.

The key aspects of effective communication are: **frequency, accuracy, comprehensiveness and inclusiveness**. To ensure that building occupants work together with building management to achieve environmental goals, regular communication must be executed. As such, the Program must clearly outline communication strategies, activities, responsibilities and timelines for implementation. The following communication framework must be evident:

- Communication strategies: clearly describe the communication strategies that will be used with tenants/occupants.
Activities: clearly describe the activities/events that will be communicated to occupants (e.g., Earth Day event or energy awareness campaigns with “turn off your monitor” stickers).

Responsibilities: clearly describe who will be responsible for each aspect of the Occupant Sustainability Communications Program.

Timeline for implementation: clearly describe the timeline for implementation of all activities, events, and strategies put in place in the context of the Occupant Sustainability Communications Program.

The communication program must also include specific initiatives to effectively engage tenants and building staff around environmental/sustainability issues, and encourage them to work with building management to drive performance improvements in the building. At least two (2) initiatives must have been implemented in the last 12 months. The table below provides suggestions on possible communication objectives and how they may be implemented (for guidance purposes only):

<table>
<thead>
<tr>
<th>Objective</th>
<th>Possible Communication and Implementation Ideas</th>
</tr>
</thead>
</table>
| To increase engagement:                               | • Create a Management/Tenant task force or Green Team with all major stakeholders represented (e.g. tenant representatives, cleaners/janitors, and building management) to develop, promote, and implement environmental/sustainability initiatives.  
  • Designate one or more of the Management Team to be the property’s Environmental Ambassador to lead the program.  
  • Hold tenant meetings to educate them about the new environmental program.  
  • Develop a calendar that highlights the year’s planned engagement opportunities with tenants or building occupants. Send an announcement letter to each tenant. |
| If you want to launch an event:                        | • Host environmental/sustainability related events or competitions for occupants and tenants:  
  o Sustainable commuting challenges; battery/lightbulb/electronic recycling drives.  
  o BBQs (waste free if possible) or other functions to celebrate global events such as Earth Week in April, Energy Conservation Week in May, Waste Reduction Week in October. |
| If you want to incentivize new behaviour:              | • Establish incentive programs to promote participation in environmentally preferable/sustainable practices and performance improvements:  
  o Rewards and recognition for individuals and/or tenant organizations who are implementing sustainable best practices,  
  o Discounts or financial incentives for tenants and building staff to encourage more sustainable choices/behaviours (such as discounted transit passes, discounts to local businesses that provide environmentally preferable products or services, or financial incentives for building staff who bike to work). |
If you want to relay management’s activities and results:

| • Post and/or distribute and/or e-mail notices of audit results, new environmental programs and policies, performance summaries (for building energy or water consumption). |
| • Create a building website highlighting the environmental performance of the building. |
| • Regularly communicate environmental/sustainability goals (related to the building’s sustainability policy/statement), achievements, and performance improvement tips to tenants and building occupants through a variety of relevant communications channels: |
|   - Newsletters, eNewsletters, Memos. |
|   - Lobby/Common Area Posters, Screens or central Communications Board. |
|   - Elevator Messaging (e.g. ENN). |
|   - Website and Social Media (e.g. Twitter, Facebook). |
|   - Tenant-Landlord Collaboration Opportunities (e.g. Natural Resource Canada Sustainability Initiatives-metering reporting). |

**Important Note:**

In the case where the applicant has developed an Energy, Water or Waste Communication Program to comply with previous BEST Practices, these plans cannot be reused here. Additional communication efforts will be required to meet these BEST Practices. The topic may be the same, but the scope or objective must be broadened in order to qualify.
### 4.3. BEST Practices for MURB and Health Care Facilities

#### Energy

**Applicable ONLY to MURB and Health Care Facilities**

<table>
<thead>
<tr>
<th>1.3.2.1</th>
<th>Has the building conducted an energy assessment within the past five (5) years?</th>
</tr>
</thead>
</table>
| Tip:    | This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded. A minimum of an ASHRAE Level 1 Walk-through audit or equivalency is required that includes:  
- Utility billing analysis with benchmarking observations  
- Summary of major equipment and type of lighting systems in the buildings  
- List of potential energy conservation opportunities, estimated savings, and simple payback, based on walk-through audit of the facility  
The assessment report must identify low-cost improvements and potential capital improvements as well as issues for a future more-detailed audit. 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. |

<table>
<thead>
<tr>
<th>1.3.3.1</th>
<th>Is there a building-specific Energy Management (reduction) Plan to address issues raised in the energy assessment?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip:</td>
<td>This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded. The Energy Management Plan must document building-specific measures to improve building energy efficiency and reduce demand based on the most recent energy assessment and targets. These measures should be based on a clearly identified energy performance target, identified through the energy assessment or by the operational staff. The Plan must show allocated resources, estimated payback, and implementation timelines for specific energy efficiency improvements. The BOMA-Accepted Equivalent is available for buildings that have been occupied for fewer than two (2) years.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.3.8.14</th>
<th>Is there a preventive maintenance program for the HVAC (heating, ventilating, and air-conditioning)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip:</td>
<td>This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded. Preventive 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 Preventive Maintenance Program</td>
</tr>
</tbody>
</table>
is a systematic approach that outlines what equipment must be reviewed, the corrective action that must be taken and how frequently this must occur.

### 1.3.2.1 Energy Assessment

An energy assessment report must be presented for on-site verification. Requirements are outlined in the tip language and must include the following information:

1. Owner/manager information;
2. Building name and address;
3. Building description;
4. Energy assessment (walk-through, analysis);
5. Utility billing analysis with benchmarking observations (e.g. a comparison of building performance indices such as MJ/m²/yr or kWh/ft²/yr for each energy source);
6. Summary of major equipment and type of lighting systems in the building; and
7. List of potential energy conservation opportunities, estimated savings, and simple payback based on walk-through audit of the facility.

**IMPORTANT NOTES:**

I. The Energy Assessment may be completed by in-house technical staff or by a third party consultant (e.g. professional engineer or other appropriate energy consultant).

II. Assessments are evaluated based on meeting the requirements outlined in the question tip language. Energy assessments MUST BE DATED and SIGNED by the person responsible for conducting the work.

- BOMA BEST verifiers will look for signature and date. An Energy Assessment must have been conducted within the last five (5) years of the date the BOMA BEST verification assessment was conducted.

**BOMA-Accepted Equivalents**

1. **Energy Study Report**

Buildings that have been occupied for fewer than two (2) years may utilize an energy study report that was prepared during the design of the building in lieu of a post-construction energy audit report. This report must have shown simulated energy consumption for different design scenarios, and identify which options were chosen for the actual construction. Applicants must be able to demonstrate that these energy-reduction features were incorporated in the building.

2. **Energy Communications Plan**

Where 75% or more of the building’s energy is purchased directly by tenants, applicants may prepare an Energy Communication Plan in lieu of an Energy Study Report.

This communication plan must document means of encouraging energy conservation initiatives by occupants. For example, the communication plan may include the following offerings by the landlord/management company:

- Providing walk through energy audit or assessment services.
• Delivery of “energy conservation tips” brochures to occupants.
• Energy conservation seminars for tenants / occupants.
• Other communication tools: posters, “turn it off stickers”, etc.

Evidence of implementation may include the following:
• Agendas and notes from tenant-building management meetings.
• Copies of marketing materials used to promote energy conservation within the building.
• Copies of communication to tenants/occupants regarding energy conservation.
• Copies of energy assessments or audits performed in tenant spaces.

IMPORTANT NOTES:

1. Applicants must make available the communication plan and evidence of its implementation to the verifier, as part of the on-site tour.

1.3.3.1 Energy Management Plan

The Energy Management Plan should identify and document building-specific measures to improve energy efficiency and reduce demand. These measures should be based on a clearly identified performance target (using quantifiable performance indicators), identified through the energy audit or the operational staff.

All actions must be evaluated for their technical feasibility and expected results (estimated energy savings and pre-feasibility study) as well as financial feasibility (through an economic cost/benefit analysis such as simple payback or ROI). These actions must be integrated into a timeline.

A documented plan for implementing energy conservation strategies is illustrated in the table below as an example of minimum requirements. A more detailed table is strongly encouraged, especially one which allows for continuous energy tracking.

Energy Management Plan – Sample Form

<table>
<thead>
<tr>
<th>No.</th>
<th>Proposed Measure</th>
<th>Budget</th>
<th>When</th>
<th>Expected Return</th>
<th>Responsible Person(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Day time cleaning</td>
<td>$ --.00</td>
<td>2017</td>
<td>4 years</td>
<td>Jean Paul Kim</td>
</tr>
<tr>
<td>2</td>
<td>Re-commissioning feasibility study</td>
<td>$ --.00</td>
<td>2018</td>
<td>18 months</td>
<td>Alexa Moreno</td>
</tr>
</tbody>
</table>


These practices are clearly stated as minimal best practices according to the 2011 ASHRAE Handbook HVAC applications (chapter 36; chapter 41). If the energy reduction plan is done through an ESCO project, energy savings should be measured according to EVO Standards (Efficiency Valuation Organization) and ASHRAE guideline 14-2002 Measurement of energy and demand savings.
BOMA-Accepted Equivalent

Buildings that have been occupied for fewer than two (2) years can meet this BEST Practice by demonstrating that an Energy Commissioning Plan has been put into place. The intent of this BOMA-accepted equivalent is to ensure that the building’s major systems and equipment are being optimized/fine-tuned for specific seasonal requirements, occupancy variability, etc.

The Energy Commissioning Plan must clearly demonstrate that the following actions have been considered and implemented in the previous twelve (12) months – as per 2011 ASHRAE Handbook HVAC applications (chapter 36; chapter 41):

1. An energy measurement or assessment plan for major operating systems and equipment AND an energy bill evaluation and follow up plan;
2. If a deficiency report has been generated (from the construction process) regarding building systems, plans to addresses these deficiencies must be included in the Energy Commissioning Report.
3. A person identified as responsible for the building energy performance;
4. Training for operations staff on performing the above.

IMPORTANT NOTES:

- The Energy Commissioning Plan may be created and implemented by an “in-house” operational staff or by a third-party consultant (e.g. professional engineer or other appropriate energy consultant).
- The energy measurement or assessment plan for major systems and equipment shall include all operating systems and equipment that represent the greatest proportion of energy consumption in the building (e.g. heating system; cooling system, etc.).
- It is not always possible to assess the operations of major operating systems and equipment through the ongoing review of energy bills. Other methods of assessment include: tenant satisfaction surveys, control sequence review, etc.
- The Energy Commissioning Plan must specifically identify the individuals responsible for the energy measurement of major operating systems and equipment, as well as those individuals responsible for energy bill review.
- One person must be identified as being responsible for the overall energy commissioning plan.
1.3.8.14 Preventative Maintenance Program

It is necessary to undertake preventative maintenance to maintain optimal performance of the building’s mechanical, electrical, and ventilation systems and their components. The building systems require periodic maintenance throughout their life cycle in addition to the need for overhauling, or replacement, at a certain age or interval, or due to specific issues or causes. These must be outlined specifically in a Preventative Maintenance Program.

The Preventive Maintenance Program must include the methodology and record for all actions that are necessary to maintain the optimal functioning of the building’s systems and their components. The required maintenance procedures will be unique to each property and the systems within these facilities. The Preventative Maintenance Program must contain the following:

1. An inventory of which system or component must be reviewed and the type of action that is required (e.g. by room or by equipment type);

2. Guidelines on how frequently these actions must be taken (e.g. monthly, quarterly, yearly, etc.). These guidelines should be based on standards such as manufacturer specifications, code requirements and industry best practices;

3. Documentation that these actions have been taken (e.g. via signature and date);

4. Confirmation that follow-up action has been taken when warranted; and

5. Record updates as new equipment is added or removed.

In addition to manual recording of this information many buildings may have online tracking software that outlines and tracks the Maintenance Program. These are acceptable if the software can monitor and track items 1-5, listed above.

The following is an example of a Preventative Maintenance Program. The items listed below constituted a sample only.

<table>
<thead>
<tr>
<th>System</th>
<th>Component</th>
<th>Action Taken</th>
<th>Date Completed</th>
<th>Signature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annually</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Outdoor Air Intakes</td>
<td>Clear obstructions, bird droppings, standing water, proximity to cooling towers, trash compactors, exhausts and other pollutant sources.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Ventilation</td>
<td>Minimum outdoor air damper setting.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>VAV Box</td>
<td>Minimum VAV box settings.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Ventilation</td>
<td>Duct and terminal coil cleanliness.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>Duct insulation</td>
<td>Check for cleanliness, adhesion, and coating.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System</td>
<td>Component</td>
<td>Action Taken</td>
<td>Date Completed</td>
<td>Signature</td>
<td>Comments</td>
</tr>
<tr>
<td>--------</td>
<td>-----------</td>
<td>--------------</td>
<td>----------------</td>
<td>-----------</td>
<td>----------</td>
</tr>
<tr>
<td>HVAC</td>
<td>Cooling towers</td>
<td>Water treatment functioning as intended.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIRE</td>
<td>Fire Systems</td>
<td>Open fire dampers.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC/ELEC</td>
<td>Measurement Devices and Sensors</td>
<td>Calibration of sensors (temperature, humidity, pressure, occupancy, photocell etc.).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC.</td>
<td>Controls (digital, pneumatic)</td>
<td>Ensure the proper functioning of all controls systems.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Semi-annually**

<table>
<thead>
<tr>
<th>System</th>
<th>Component</th>
<th>Action Taken</th>
<th>Date Completed</th>
<th>Signature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC</td>
<td>Building Equipment</td>
<td>Floor and equipment drain traps – properly sealed.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HVAC</td>
<td>HVAC</td>
<td>Air quality measurements in select occupied areas of the building.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Quarterly**

<table>
<thead>
<tr>
<th>System</th>
<th>Component</th>
<th>Action Taken</th>
<th>Date Completed</th>
<th>Signature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELEC</td>
<td>Controls (digital, pneumatic)</td>
<td>Operation of outdoor damper actuators.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC</td>
<td>Lighting</td>
<td>Ensure all emergency lighting is functioning properly.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Monthly**

<table>
<thead>
<tr>
<th>System</th>
<th>Component</th>
<th>Action Taken</th>
<th>Date Completed</th>
<th>Signature</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC</td>
<td>Ventilation</td>
<td>Air filter loading.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC.</td>
<td>Lighting</td>
<td>Change lamps as required.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ELEC.</td>
<td>Generator</td>
<td>Generator testing.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional references: ASHRAE 62.1-2010 “The Standards for Ventilation and Indoor Air Quality”.
Water

Applicable ONLY to MURB and Health Care Facilities

<table>
<thead>
<tr>
<th>2.3.1</th>
<th>Is there a written policy intended to minimize water use, and encourage water conservation?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip:</td>
<td>This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded.</td>
</tr>
<tr>
<td></td>
<td>A water conservation policy must express a commitment to reduce demand for water and to establish goals and strategies to reduce water consumption.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.3.4</th>
<th>Has the building conducted a water assessment within the past five (5) years?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip:</td>
<td>This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded.</td>
</tr>
<tr>
<td></td>
<td>The water assessment report must include:</td>
</tr>
<tr>
<td></td>
<td>• Water billing analysis including cost and consumption history;</td>
</tr>
<tr>
<td></td>
<td>• Water intensity benchmarks;</td>
</tr>
<tr>
<td></td>
<td>• Water-using equipment inventory and end-use analysis;</td>
</tr>
<tr>
<td></td>
<td>• List of potential water conservation measures including maintenance procedures and retrofit measures;</td>
</tr>
<tr>
<td></td>
<td>• Estimated costs, savings and payback times for recommended measures.</td>
</tr>
<tr>
<td></td>
<td>The water assessment report may be incorporated into the energy assessment report.</td>
</tr>
<tr>
<td></td>
<td>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.</td>
</tr>
</tbody>
</table>

### 2.3.1 Water conservation Policy

A water conservation policy should express a commitment to reduce demand for water and to establish goals and strategies to reduce water consumption.

The water conservation policy may be a national, corporate policy for all buildings managed by a single company. However, to meet this BEST Practice, building management must demonstrate its awareness of the policy, and is implementing specific measures in accordance with its strategic guidance.

**IMPORTANT NOTES:**

I. For on-site verification applicants must make available:
   - A copy of the required policy;
   - Examples of how the policy is being implemented on-site by property management; and
   - Documents demonstrating the policy’s implementation must be dated.

II. Policy should be an official document on a company’s website (internal and/or external); and/or printed on company’s letterhead with appropriate management signature.
2.3.4 Water Assessment

A Water Assessment report must be reviewed by the verifier. Requirements are outlined in the tip language (noted in the BEST Practice questions table) and must include the following information:

Building Information

- Owner/manager information;
- Building name and address;
- Building description;
- Date of water assessment

Water Use Analysis

- Water billing analysis including cost and consumption history compiled from utility bills;
- Water intensity benchmarking which includes a calculation of annual water use divided by building area;
- Water-using equipment inventory and end-use analysis compared with consumption, such as:
  - Domestic water fixtures (faucets, toilets, urinals);
  - Water using appliances (dishwasher, washing machine etc.);
  - Cooling equipment including cooling towers, equipment “once-through” cooling and customized tenant cooling equipment;
  - Landscape irrigation equipment;
  - Water use for humidification equipment;
  - Water use from heating equipment (boiler blowdown, steam production and condensate management);
  - Any specialized equipment (including production use).

- Recommended Measures:
  - List of identified retrofit and operation and maintenance water conservation measures;
  - Estimated costs, savings and payback period of measures;
  - Explore sub-meter opportunities for large water-using tenants.

IMPORTANT NOTES:

I. The Water Assessment may be completed by in-house technical staff or by a third party consultant (e.g. professional engineer or other appropriate water consultant).

II. Assessments are evaluated based on meeting the requirements outlined in the tip language and by date. Water assessments MUST BE DATED and SIGNED by the person responsible for conducting the work.
   - BOMA BEST verifiers will look for signature and date. A Water Assessment must have been conducted within the last five (5) years of the date the assessment was conducted.

III. The Water Assessment report may be combined with the Energy Assessment report.
BOMA-Accepted Equivalents

1. Water-using equipment inventory

Buildings that have been occupied for fewer than two (2) years OR have buildings with no water meter may submit a Water-using Equipment Report which can be created with information contained in the building’s Operation and Maintenance Manual, As Built Drawings and Commissioning Report.

The Water-using Equipment Report must include the following information:

Building Information

- Owner/manager information;
- Building name and address;
- Building description;
- Date of equipment inventory.

Water-using Equipment Information

- Inventory/survey of all water consuming equipment on facility premises and their locations throughout the building, such as:
  - Domestic water fixtures (faucets, toilets, urinals);
  - Water using appliances (dishwasher, washing machine etc.);
  - Cooling equipment including cooling towers, equipment “once-thru” cooling and customized tenant cooling equipment;
  - Landscape irrigation equipment;
  - Water use for humidification equipment;
  - Water use from heating equipment (boiler blowdown, steam production and condensate management);
  - Any specialized equipment (including production use).

- Baseline consumption of this equipment based on data from the building automation system and water sub-meters OR based on equipment performance estimates informed by manufacturer specifications PLUS an estimated calculation of the equipment’s annual consumption, such as:
  - Sinks and faucets: aerator output multiplied by estimation of annual use;
  - Toilets and urinals: flush output multiplied by estimation of annual use;
  - Showerhead: output of the showerhead multiplied by estimation of annual use;
  - Cooling towers: estimate make-up water required to compensate for losses due to evaporation, drift and splash-out, leaks and overflow, and bleed or blowdown.
    - Evaporation: Directly related to heat transfer and operational management. Assume approximately 1.8 GPH (centrifugal) or 3.7 GPH (absorption) per ton of cooling multiplied by the load percentage.
    - Bleed/blowdown: Losses represent a non-linear function of the concentration cycles (purity of make-up water over the purity of the recirculating water). Higher cycles mean fewer blowdowns are needed.
- Drift and splash-out: Losses are not significant for well-maintained towers under normal conditions. Assume approximately 0.014 GPH per ton of cooling or about 0.008% of recirculating water.
- Leaks and overflows: These are difficult to measure or estimate and losses are not significant in well-maintained towers. Visual inspection for leaks should be performed.
  - Irrigation system: output of the sprinklers multiplied by operating hours.

- Recommended Measures:
  - List of identified retrofit and operation and maintenance water conservation measures;
  - Estimated costs, savings and payback period of measures;
  - Establish water reduction target.
  - Explore feasibility of installing base building meter if not present
  - Explore sub-meter opportunities for the cooling tower make-up line.

2. Water Communications Plan

Where 75% or more of the building’s water is purchased directly by tenants, applicants may prepare a Water Communication Plan in lieu of a Water Assessment report.

This communication plan must document means of encouraging water conservation initiatives by occupants. For example, the communication plan may include the following offerings by the landlord/management company:

- Providing walk through water audit or assessment services of tenant spaces.
- Delivery of “water conservation tips” brochures to occupants.
- Water conservation seminars for tenants/occupants.
- Other communication tools: posters, “shut-it-off stickers”, etc.

Evidence of implementation may include the following:

- Agendas and notes from tenant-management team meetings.
- Copies of marketing materials used to promote water conservation measures.
- Copies of communication to tenants/occupants regarding water conservation tips/opportunities.
- Copies of water use assessments or audits done in tenant spaces.

IMPORTANT NOTES:

I. Applicants must make available the communication plan and evidence of its implementation for review to the verifier, as part of the on-site tour.
**Waste Reduction**

**Applicable ONLY to MURB and Health Care Facilities**

<table>
<thead>
<tr>
<th>3.1.1.1</th>
<th>Is there a waste diversion program that incorporates the recycling of materials such as: paper and cardboard; bottles and cans; food waste; and plastics for occupants, visitors and operations at the site, to the extent that local infrastructure is available to accommodate these materials?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip:</td>
<td>This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded. The property must have an active recycling program. A BOMA-accepted equivalent may suffice in particular situations.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.1.2.13</th>
<th>Is there a written policy intended to minimize construction waste being sent to landfill?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip:</td>
<td>This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded. Construction and demolition waste - which accounts for about 30% of Canada's landfill - can be reduced by implementing a source separation and recycling program on-site. The program must meet the minimal requirements of the jurisdiction (e.g. 3R Code of Practice). The waste specifications should address recycling of corrugated cardboard, metals, concrete blocks, clean dimensional wood, plastic, glass, gypsum board and carpet.</td>
</tr>
</tbody>
</table>

**3.1.1.1 Waste Diversion Program**

To meet this BEST Practice, applicants must implement a waste diversion program that aims to reduce total volume of waste generated, and divert as much volume of materials from landfill as possible. Waste minimization and diversion is done through a reuse and recycling program available on-site to all building occupants.

Waste diversion programs should strive to achieve high diversion rates of standard fibre and container streams, as well as hazardous materials such as toner cartridges, fluorescent lamps and electronic equipment. Composting of organic material, either on site or through an off-site contractor, should also be included in this program, where possible.

**BOMA-Accepted Equivalents**

1. **Tenant Coordinated Waste Diversion**

Where tenants are directly managing their own waste removal, the building applicant must confirm tenant(s)’s waste diversion efforts.

In the absence of tenant material recycling/reuse, the applicant must demonstrate it has made an effort to provide recycling facilities.

- For example, in retail plazas, each individual tenant (retail unit) may produce a small volume of recyclables; the property manager may provide a common recycling area for tenants as a value-added service (and to make recycling more cost-effective).
2. Lack of Recycling Facilities

Where recycling facilities may not be available, the applicant must provide a confirmation letter from the local municipality, provincial government, or other appropriate body as evidence. Where recycling facilities are available, but the local municipality does not collect recyclables, the applicant must demonstrate that reasonable efforts to contract a commercial hauler were made.

3.1.2.13 Construction Waste Policy

The construction waste policy must clearly identify the applicant’s commitment to reducing construction and demolition waste from being sent to landfill. The Policy should meet the minimal requirements of the jurisdiction (e.g. 3R Code of Practice) by implementing a source separation and recycling program on-site. The waste specifications should address recycling of corrugated cardboard, metals, concrete blocks, clean dimensional wood, plastic, glass, gypsum board and carpet.

The Construction Waste Policy may be a national, corporate policy for all buildings managed by a single company. However, to meet this BEST Practice, building management must demonstrate awareness of the policy and show that it is implementing specific measures in accordance with its strategic guidance.

IMPORTANT NOTES:

I. For on-site verification, applicants must make available:
   - A copy of the required policy;
   - Sample specification must be made available for review and specification may include:
     - Documentation of a recent renovation contract that specifies materials for reuse, resale and diversion.
     - Tenant design guidelines that specify materials for reuse, resale and diversion.
     - Corporate or on-site program specifications for the diversion of demolition, construction and renovation materials.
   - Examples of how the Policy is being implemented on-site by property management; and
   - Documents demonstrating the Policy’s implementation must be dated.

II. The Policy should be an official document on a company’s website (internal and/or external); and/or printed on company’s letterhead with appropriate management.
Emissions and Effluents

Applicable ONLY to MURB and Health Care Facilities

<table>
<thead>
<tr>
<th>4.2.2</th>
<th>Is there a documented management plan for Ozone Depleting Substances (ODS) that includes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tip:</td>
<td>This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded. Maintenance of the refrigeration system can reduce operating costs by improving the chiller performance, avoiding costly repairs, and reducing the need for refrigerant replacement. If there are no ODS, mark &quot;not applicable&quot;.</td>
</tr>
<tr>
<td>i)</td>
<td>Inventory of refrigerants and records?</td>
</tr>
<tr>
<td>Tip:</td>
<td>Inventory should show the present ODS and records should show the historical quantities of ODS.</td>
</tr>
<tr>
<td>ii)</td>
<td>Maintenance reports, loss reports, and leak test results?</td>
</tr>
<tr>
<td>iii)</td>
<td>Operational staff training?</td>
</tr>
<tr>
<td>Tip:</td>
<td>Environmental awareness courses should include course content on “Refrigerant Control” or “CFC Handling” that has been developed by the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI) and Environment Canada. These courses are typically one day in length. When the maintenance of the equipment is outsourced, the contractor should provide evidence of meeting the staff training requirements.</td>
</tr>
<tr>
<td>iv)</td>
<td>Periodic leak testing?</td>
</tr>
</tbody>
</table>

| 4.2.2.5 | Is there a phase-out plan for ozone-depleting refrigerants? |
| Tip:    | This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded. Effective January 1, 2015, operating or allowing the operation of a chiller containing CFC will be prohibited. If there are no ODSs, mark "Not Applicable". |

| 4.4.1.1 | Has a hazardous building materials survey and a use-related chemical inventory been completed within the last three years? |
| Tip:    | This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded. A Hazardous Materials Survey should include only building-related hazardous materials and must indicate, at a minimum, whether the following four hazardous building materials are present in the building: Asbestos-containing materials (e.g., insulation coverings, putties and caulking, older equipment); Polychlorinated biphenyls (PCBs) (e.g., old fluorescent lighting ballasts, transformers); Lead (e.g., lead in paint); and Mercury (e.g., thermostats, lighting). The
survey must indicate the type of hazardous materials present in the building, its location, the quantity, its condition, and a list of recommended actions to meet province-specific regulatory requirements with respect to maintenance, inspection, training and abatement.

In addition, a **Hazardous Chemicals or Use-Related Products Inventory** must also be conducted and include pesticides, at a minimum. This Inventory must include a list of chemicals or use-related products brought into the building for use, handling and storage; location, Safety Data Sheets for each chemical or use-related product; approximate quantities; and a live index of the chemicals or use-related products including the chemical name and page reference for easy access to Safety Data Sheets (SDS) and other relevant information related to each chemical.

### 4.5.2.2 Is there a Hazardous Products (hazardous chemicals) Management Plan?

**Tip:** This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded.

A hazardous products management plan should indicate how controlled products are received at the facility, how they are to be used and safe disposal procedures. It should also include the provision of WHMIS sheets for all products identified in the inventory. Chemicals used in buildings that are classified as hazardous include oils, biocides, solvents, insecticides, pesticides and herbicides. Biomedical waste (including cytotoxic waste) and pharmaceutical waste must also be included. They should be stored in rooms with proper ventilation, controlled temperatures, drain protection and adequate shelf space. Containers should be capped to avoid possible spills and fumes, properly labelled and kept in securely locked areas.

### 4.2.2 Management Plan for Ozone Depleting Substances

Ozone Depleting Substances (ODS) may be found in buildings and include CFCs, HCFCs, halons and other substances used in refrigerants, fire extinguishing systems and chemicals (sterilizing agents and solvents).

Applicants must present a management plan for ODS that includes the following:

1. Inventory of refrigerants and records;
2. Maintenance reports, loss reports, and leak test results;
3. Operational staff training; and
4. Periodic leak testing.

Applicants may opt to implement the elements of their ODS management plan using either in-house staff or using third-party contractors. Personnel (in-house or third-party) performing any ODS related work must be appropriately trained to manage associated risks.

### 4.2.2.5 Phase-Out of Ozone Depleting Refrigerants

Applicants must be able to provide an implementation plan that demonstrates a phase-out of ozone depleting refrigerants in accordance with *Canada’s Strategy to Accelerate the Phase-Out of CFC and Halon Uses and to Dispose of the Surplus Stocks* (Phase-Out Strategy).

Federal regulations under the Canadian Environmental Protection Act (CEPA) – *Ozone-depleting Substances Regulations, 1998 (SOR/99-7)* – specify a complete phase-out of CFCs in all refrigeration and
chillers by 2020. Canada's Phase-Out Strategy is part of the on-going process to fulfill Canada's commitment to protect the earth's ozone layer.

To learn more about the Phase-Out Strategy: download the official document at the following link: http://www.ccme.ca/files/Resources/air/ods/phase_out_cfc_1316_e.pdf

IMPORTANT NOTES:

I. Applicants must refer to the Canadian federal regulation with regards to phasing out of all ODS by 2020. For more information see Environment Canada’s Ozone Depleting Substances webpage: http://www.ec.gc.ca/ozone/default.asp?lang=En&n=D57A0006-1.

II. A plan to use HCFCs such as refrigerant R-123 is acceptable as an interim solution, until a viable substitute with zero ozone depletion potential becomes available.

4.4.1.1 Hazardous Building Materials Survey and Hazardous Chemicals or Use-Related Products Inventory

1. Hazardous Materials Survey

A survey of hazardous building materials present at the facility should include only building-related hazardous materials. As a minimum requirement for meeting this BEST Practice, the hazardous materials survey must indicate whether the following are present:

- Asbestos-containing materials (e.g., insulation coverings, putties and caulking, older equipment);
- Polychlorinated biphenyls (PCBs) (e.g., old fluorescent lighting ballasts, transformers);
- Lead (e.g., lead in paint); or
- Mercury (e.g., thermostats, lighting).

Hazardous Materials Survey Requirement:

The survey for hazardous building materials are performed typically room by room, or by area. Samples may be required to confirm presence of hazardous building materials. All building owners or tenants must verify sampling requirements with the province specific regulation governing sampling methodology for hazardous building materials. A comprehensive survey should have the following information at a minimum for BOMA BEST verification purposes:

- Type of hazardous materials present in the building;
- Location of the hazardous materials;
- The extent of the hazardous material within the building;
- The approximate quantity of hazardous material in each area;
- The condition or state of the hazardous material (i.e. poor, fair, good); and
- A list of recommended actions to meet province specific regulatory requirements with respect to maintenance, inspection, training and abatement.

The survey should be reviewed at least annually and updated as necessary.

IMPORTANTE NOTES:

I. If the hazardous materials survey was done at the time of acquisition and, if no other hazardous building materials were brought into the building, or found, and, if no changes in building
materials have been implemented since the original survey, then a formal statement to this effect will be sufficient for verification purposes. The statement must clearly reference the previous hazardous materials survey and the policies that have been put in place to ensure that no additional hazardous materials have been brought into the building and that existing building materials have not been replaced.

II. Buildings with multiple tenants must have a Hazardous Building Materials Survey that includes all tenant spaces. Building owners are responsible for ensuring that the building in its entirety is represented in the Hazardous Building Materials Survey.

III. The following criteria applies to establish competency with respect to the person(s) or organization (internal or external to the building), that has completed the Hazardous Building Materials Survey:

- Has a good working knowledge and understanding of the legislation surrounding hazardous materials (i.e. training certificates or educational background in hygiene, occupational health and safety, environmental engineering, building science or similar);
- Has at least one year of work experience conducting hazardous building materials surveys; and
- Has led the completion of at least five Hazardous Building Materials Surveys.

2. Hazardous Chemicals or Use-Related Products Inventory

Every building that uses hazardous chemicals or use-related products shall keep and maintain a record of the chemicals or use-related products in the work place that are used, handled, or stored in the building.

A use-related product is defined as anything that is brought into the building and can include a hazardous chemical. A hazardous chemical is defined as a dangerous good which could be a solid, liquid, or gas that can harm people, other living organisms, property, or the environment.

As a minimum requirement for meeting this BEST Practice, the Hazardous Chemicals or Use-Related Products Inventory must indicate whether the following is present:

- Pesticides

Hazardous Chemicals or Use-Related Products Inventory Requirement:

Although not required in this BEST Practice, best management practices dictate that all other Hazardous Chemicals or Use-Related Products brought into or used in the building should also be included in this Inventory.

The hazardous chemical or use-related product inventory must include at a minimum the following information for BOMA BEST verification purposes:

- A list of chemicals or use-related products brought into the building for use, handling and storage;
- The location where the chemical(s) or use-related products are used, handled and stored;
- Material Safety Data Sheets for each chemical or use-related product used, handled and stored;
- The approximate quantities of each chemical or use-related product stored on site; and
• A live index of the chemicals or use-related products including the chemical name and page reference for easy access to Material Safety Data Sheets (MSDS) and other relevant information related to each chemical.

The inventory should be reviewed at least annually and updated as necessary.

IMPORTANTE NOTES:

I. A Safety Data Sheet (SDS), as required by this BEST Practice, is a document that contains information on the potential hazards (health, fire, reactivity and environmental) and how to work safely with the chemical product. It is an essential starting point for the development of a complete health and safety program. It also contains information on the use, storage, handling and emergency procedures related to the hazards of the material.

II. Tenants, as well as building owners, are required to have an up-to-date Hazardous Chemical or Use-Related Product Inventory. It is the responsibility of every tenant to provide the Building Owner with an up-to-date Use-Related Product Inventory records for Pesticides only (for the purposes of this BEST Practice). It is the responsibility of every Building Owner to provide the most up-to-date building operations Use-Related Product Inventory records for Pesticides only to BOMA BEST verifiers. It is an industry best management practice for building owners to keep an up-to-date record of all tenant Hazardous Chemical or Use-Related Product Inventories; however, it is not necessary to meet this requirement.

III. There are no specific competency requirements for compiling a Hazardous Chemical or Use-Related Product Inventory however, the individual conducting the inventory must have good working knowledge and understanding of the applicable regulatory requirements, including at a minimum, WHMIS.

4.5.2.2 Hazardous Products Management Plan

A Hazardous Products Management Plan should indicate how controlled products are received at the facility, how they are to be used and safe disposal procedures. It should also include the provision of Workplace Hazardous Materials Information System (WHMIS) sheets for all products identified in the inventory. Chemicals used in buildings that are classified as hazardous include oils, biocides, solvents, insecticides, pesticides and herbicides.

Hazardous products should be stored in rooms with proper ventilation, controlled temperatures, drain protection and adequate shelf space. Containers should be capped to avoid possible spills and fumes, properly labelled and kept in securely locked areas.

Additional Information and Resources:

BOMA BEST is a leader in building management and has identified this technical requirement as a best management practice. Its completion does not preclude users from understanding and meeting their legal responsibilities regarding compliance with federal, provincial or municipal legislation.

The rights and responsibilities of workers, responsibilities of employers and supervisors are similar in all jurisdictions across Canada. However, the details of the OH&S legislation and how the laws are enforced vary from one jurisdiction to another. In addition, provisions in the regulations may be "mandatory",...
"discretionary" or "as directed by the Minister." More information on where to find province specific regulatory requirements and guidance documents can be found on province specific Occupational Health and Safety websites or through the various Ministries of Labour. BOMA BEST encourages building managers and owners to understand and apply province specific OH&S regulatory requirements as they apply to hazardous materials and hazardous chemicals management.
### Indoor Environment

**Applicable ONLY to MURB and Health Care Facilities**

<table>
<thead>
<tr>
<th>5.1.8.1</th>
<th>Does building management have in place a documented means for addressing tenant/occupant concerns regarding indoor air quality (such as a complaint form and incident log)?</th>
</tr>
</thead>
</table>

**Tip:** This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded.

Building management must have in place a documented means for addressing patient and staff concerns regarding indoor air quality. Complaint logs can provide evidence of occupant dissatisfaction and its causes. Trends in complaint rates over time may indicate occupant reactions to changes in building operation.

The incident log must provide fields to capture the following information:

- Incident log number; Form completed by __; Date
- Occupant Name; Company & Department; Location in Building
- Date complaint was received; Description of Complaint; Suggested cause; Summary of problem
- Actions completed; date of occupant interview
- CO2 measurements; ventilation rate assessment (if required); ventilation system inspection; airborne contaminant sampling (if required)
- Remedial action report completed
- Occupant advised of actions taken

#### 5.1.8.1 Indoor Air Quality

1. To meet this BEST Practice, follow the specific tip instructions specifying what an incident log for tenant/occupant indoor air quality concerns must capture.
2. Refer to occupational health and safety regulations that may be in effect in your jurisdiction.
3. It is suggested that the building manager develop standards and specifications for controlling indoor air quality during construction activities. Remedial procedures for water damage are also suggested to reduce the risk of molds.
4. It is recommended that an integrated approach to indoor air quality be implemented by involving service technicians, building operators, consulting professionals and tenants.
# Environmental Management Systems

**Applicable ONLY to MURB and Health Care Facilities**

<table>
<thead>
<tr>
<th>6.2.5</th>
<th>Does building management have a written policy for the selection of building materials that attempts to reduce any potential negative impact on the environment?</th>
</tr>
</thead>
</table>
| **Tip:** | This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded.  

The policy committing the organization to using low environmental impact building materials and equipment in its facilities should be part of the tenant construction guidelines or in an appendix to a lease where tenant improvement restrictions are mentioned. Examples of low impact building materials include materials with high recycled content or low off-gassing carpeting and furnishings. See section 5.6 Indoor Air Quality - Control of Pollutants at Source in the questionnaire referring to the checklist of items to be discussed with architects etc. Consider the following criteria:  

- Avoiding materials that will result in excessive scrap material because of sizing needs;  
- Salvaging reusable materials during demolition;  
- Selecting materials that have recycled content;  
- Selecting renewable materials; and  
- Selecting materials with low embodied energy and low maintenance requirements.  

Management should be able to demonstrate that the policy is actually implemented and put into practice in projects. |

<table>
<thead>
<tr>
<th>6.4.1.1</th>
<th>Has a documented Communications Work Plan been developed and/or updated for tenants/occupants regarding environmental initiatives and practices in the building within the past 12 months?</th>
</tr>
</thead>
</table>
| **Tip:** | This question is a BEST Practice and is required for all levels of certification. Documentation demonstrating this BEST Practice must be uploaded.  

Building management must have in place a building-specific Communications Work Plan, which must include evidence of communication strategies, activities, responsibilities and timelines for implementation. Tenants should be provided with information, and should have a forum or hotline to discuss their environmental concerns and to coordinate their activities. The key aspects of effective communication are frequency, accuracy, comprehensiveness and inclusiveness. To ensure that building occupants work together with building owners to achieve environmental goals, there must be frequent communication. Please see the Application Guide (BEST Practices section) for details on the core components of a Communications Work Plan required by this BEST Practice. |
6.2.5 Policy on Selection of Building Materials

The policy committing the organization to using low environmental impact building materials and equipment in its facilities should be part of the tenant construction guidelines or in an appendix to a lease where tenant improvement restrictions are mentioned.

Examples of low environmental impact building materials include materials with high recycled content and/or low off-gassing carpeting and furnishings.

Consider the following criteria:

- Avoiding materials that will result in excessive scrap material because of sizing needs.
- Salvaging reusable materials during demolition.
- Selecting materials that have recycled content.
- Selecting renewable materials.
- Selecting materials with low embodied energy and low maintenance requirements.

Management should be able to demonstrate that the policy is being implemented and put into practice in various projects.

IMPORTANT NOTES:

I. For on-site verification applicants must make available:
   - A copy of the required policy;
   - Examples of how the policy is being implemented on-site by property management; and
   - Documents demonstrating policy’s implementation must be dated.

II. Policy should be an official document on a company’s website (internal and/or external); and/or printed on company’s letterhead with appropriate management.

6.4.1.1 Tenant Communications

Building management must have in place a Communications Work Plan for communicating with tenants/occupants on environmental issues specific to the building to comply with this BEST Practice.

The core components of this work plan include communication strategies, activities, responsibilities and timelines for implementation. Evidence of each of these components must be clear in the Communications Work Plan. The components of the Communications Work Plan must have been put into place in the last 12 months and evidence of this implementation must be available.

The core components include the following:

1. Communication strategies: clearly describe the communication strategies that will be used with tenants/occupants.
2. Activities: clearly describe the activities/events that will be communicated to tenants/occupants (ex: Earth Day event or energy awareness campaigns with “turn off your monitor” stickers).
3. Responsibilities: clearly describe who will be responsible for each aspect of the Communications Work Plan.
4. Timeline for implementation: clearly describe the timeline for implementation of all activities, events, and strategies put in place in the context of the Communications Work Plan.
The key aspects of effective communication are: **frequency, accuracy, comprehensiveness and inclusiveness**. To ensure that building occupants work together with building management to achieve environmental goals, regular communication must be executed.

Applicants must be able to provide copies of the environmental Communications Work Plan and samples of the material provided to tenants/occupants as part of the plan. If materials are provided by corporate head-office and are generic to be used nationally, the on-site building management is expected to demonstrate how the environmental communications plan and generic materials, if any, are specifically targeted to building tenants/occupants and integrated to address building-specific environmental issues.

A well-understood system for communicating with tenants/occupants on environmental issues specific to the building can include a combination of the following techniques (the table below should be used for guidance purposes only):

<table>
<thead>
<tr>
<th>Possible Communications Techniques</th>
<th>Possible Implementation Ideas</th>
</tr>
</thead>
</table>
| **Initial Environmental Program Development** | • Create a Management-Tenant task force or Green Team.  
• Designate one or more of the Management Team to be the property’s Environmental Ambassador to lead the program.  
• Develop a calendar that highlights the year’s planned engagement opportunities with tenants or building occupants. |
| **Initial Program Launch** | • Send an announcement letter to each tenant.  
• Hold tenant meetings to educate them about the new environmental program.  
• Establish an awareness program explaining the benefits of green operation for the occupants and the environment.  
• Create new events or coincide events with existing environmental celebrations. Examples include:  
  o Sweater Day in February  
  o Earth Hour in March  
  o Earth Day and Earth Week in April  
  o Energy Conservation Week in May  
  o Waste Reduction Week in October |
| **Relaying Management's Activities and Results** | • Post and/or distribute and/or e-mail notices of audit results, new environmental programs and policies, performance summaries (for building energy or water consumption).  
• Create a building website highlighting the environmental performance of the building.  
• Consider active and passive communications, as available, and discern their frequency. Examples include:  
  o Newsletters, eNewsletters, Memos  
  o Green Team Meetings  
  o Lobby/Common Area Posters, Screens or central Communications |
<table>
<thead>
<tr>
<th>Board</th>
</tr>
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<tbody>
<tr>
<td>o Elevator Messaging (e.g. ENN)</td>
</tr>
<tr>
<td>o Website and Social Media (e.g. Twitter, Facebook)</td>
</tr>
<tr>
<td>o Tenant-Landlord Collaboration Opportunities (e.g. Natural Resource</td>
</tr>
<tr>
<td>Canada Sustainability Initiatives-metering reporting)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>New Tenants/Occupants</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Modify lease agreements to include green lease considerations.</td>
</tr>
<tr>
<td>• Provide continuing education in environmental awareness.</td>
</tr>
<tr>
<td>• Create a tenant handbook/manual which highlights environmental</td>
</tr>
<tr>
<td>awareness.</td>
</tr>
<tr>
<td>• Modify Tenant Fit Up Manual/Design Criteria to include green</td>
</tr>
<tr>
<td>building considerations (e.g., low VOC paint, ENERGY STAR</td>
</tr>
<tr>
<td>appliances, etc.)</td>
</tr>
</tbody>
</table>
5. BOMA BEST Verification Process

5.1. Overview of the Verification process

Download the handy checklist to ensure you are ready for the verification process.

Buildings in Single Stream

Applicants must upload documentation demonstrating each BEST Practice to the questionnaire. Once this has been done, and when the questionnaire is complete, notify the Local Association that you are ready for verification by clicking “Request Verification”.

Any changes made to your questionnaire from this moment forward will NOT be part of the verified version of your questionnaire.

The Local BOMA Association will be automatically notified. The Local BOMA Association program administrator, or its appointed third-party verifier, will contact the Applicant to set up an on-site visit of the building.

BOMA BEST buildings are verified by a third-party assessor, retained by Local BOMA Associations for verification in their region. The purpose of on-site verification is to confirm not only the information submitted via the online survey, but also to ensure the assessment is an accurate reflection of the building’s environmental management practices and performance.

The on-site visit includes a building tour and a documentation review.

The duration of this on-site visit is approximately two to four (2-4) hours, though this can vary by building size and/or number of buildings (e.g. in the case of Complexes and/or Parks).

Buildings in Portfolio Stream

Buildings in the portfolio Stream do not have a “Request Verification” button. Contact your company’s building portfolio manager to let them know that your building is ready for a verification. They will then notify BOMA Canada. Based on the verification schedule established by BOMA Canada, the applicant will be notified which buildings in the portfolio will be undergoing a verification.

BOMA BEST buildings are verified by a third-party assessor, retained by BOMA Canada. The purpose of on-site verification is to confirm not only the information submitted via the online survey, but also to ensure the assessment is an accurate reflection of the building’s environmental management practices and performance.

The on-site visit includes a building tour and a documentation review.

Prior to the on-site visit, the Applicant must upload documentation demonstrating compliance with all BEST Practices.

More information about the Verification process for buildings in the Portfolio Stream is available in the Portfolio Program Guide.
5.2. About the Verifier

A Verifier is a third-party, contracted by the Local BOMA Association, expected to perform an on-site verification to confirm that the BOMA BEST Sustainable Buildings requirements have been met and assess the level of BOMA BEST Sustainable Buildings certification achieved. Verifiers are not hired to act as consultants to the building manager, nor are they to provide their expert advice. Rather a Verifier’s job is to confirm the validity of information submitted.

5.3. Scheduling the On-Site Visit

Applicants will be contacted by either the BOMA Canada (Portfolio Program buildings), the Local BOMA Association (Single Buildings) or the Verifier to schedule the on-site visit. The site visit will typically be scheduled within 30 days of an assessment being locked.

Scheduling must involve a property contact person who is authorized to access the BOMA BEST Sustainable Buildings assessment for that property.

If buildings are part of a complex, and are located close to one another, it is expected that the Verifier will schedule the verification for all buildings on the same day. In these situations, applicants should expect a lengthier verification visit.

For verification of buildings in locations outside the metropolitan area of the Local BOMA Association office, the applicant will be notified of estimated additional travel costs (as directed in BOMA BEST Sustainable Buildings Program Policy 6 – On-Site Verification: Additional Verification Costs).

5.4. Security Clearance

If some manner of security clearance is required for the Verifier to perform the site visit, the applicant must inform BOMA Canada, the Local BOMA Association or the Verifier (whoever is the primary contact for the verification) as early into the assessment process as possible so that appropriate steps can be taken to gain clearance. The Verification cannot proceed if the Verifier is not able to access critical areas of the building (namely, the mechanical room, storage tanks, a typical tenant space, waste disposal facilities, etc.).

5.5. Required Supporting Documentation Prior to On-Site Visit

Documentation supporting and demonstrating compliance with the BEST Practices must be uploaded for each BEST Practice prior to notifying the Local Association that you are ready for verification. If documentation demonstrating compliance with the BEST Practices is considered inadequate, Applicants will be informed of this oversight to ensure that the missing pieces are provided prior to the on-site visit. Until the documentation is provided, the visit cannot proceed.

Documentation demonstrating compliance with every question marked “Yes” or “N/A” must be available (either in hard copy or digitally) during the on-site visit. Only the BEST Practices documentation must be uploaded.

A thorough description of the documentation required to meet all BEST Practices is described in section 5 of this guide.
### Office, Enclosed Shopping Centre and Universal

<table>
<thead>
<tr>
<th>BEST Practice Documentation Required Prior to Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Office, Enclosed Shopping Centre and Universal</strong></td>
</tr>
<tr>
<td><strong>Energy</strong></td>
</tr>
<tr>
<td>BEST Practice 1</td>
</tr>
<tr>
<td>BEST Practice 2</td>
</tr>
<tr>
<td>BEST Practice 3</td>
</tr>
<tr>
<td>BEST Practice 4</td>
</tr>
<tr>
<td><strong>Water</strong></td>
</tr>
<tr>
<td>BEST Practice 5</td>
</tr>
<tr>
<td>BEST Practice 6</td>
</tr>
<tr>
<td><strong>Air</strong></td>
</tr>
<tr>
<td>BEST Practice 7</td>
</tr>
<tr>
<td><strong>Comfort</strong></td>
</tr>
<tr>
<td>BEST Practice 8</td>
</tr>
<tr>
<td><strong>Health and Wellness</strong></td>
</tr>
<tr>
<td>BEST Practice 9</td>
</tr>
<tr>
<td>BEST Practice 10 (A)</td>
</tr>
<tr>
<td><strong>Custodial</strong></td>
</tr>
<tr>
<td>BEST Practice 11</td>
</tr>
<tr>
<td><strong>Waste</strong></td>
</tr>
<tr>
<td>BEST Practice 12 (A)</td>
</tr>
<tr>
<td>BEST Practice 13</td>
</tr>
<tr>
<td>BEST Practice 14</td>
</tr>
<tr>
<td><strong>Stakeholder Engagement</strong></td>
</tr>
<tr>
<td>BEST Practice 15</td>
</tr>
<tr>
<td>BEST Practice 16</td>
</tr>
</tbody>
</table>
### Light Industrial and Open Air Retail

<table>
<thead>
<tr>
<th>BEST Practice</th>
<th>Documentation Required Prior to Verification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Light Industrial and Open Air Retail</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Energy</strong></td>
<td></td>
</tr>
<tr>
<td>BEST Practice 1</td>
<td>Preventative Maintenance Program</td>
</tr>
<tr>
<td>BEST Practice 2</td>
<td>Energy Assessment</td>
</tr>
<tr>
<td>BEST Practice 3</td>
<td>Energy Management Plan</td>
</tr>
<tr>
<td>BEST Practice 4</td>
<td>Energy Reduction Targets</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td></td>
</tr>
<tr>
<td>BEST Practice 5</td>
<td>Water Assessment</td>
</tr>
<tr>
<td>BEST Practice 6</td>
<td>Water Management Plan</td>
</tr>
<tr>
<td><strong>Air</strong></td>
<td></td>
</tr>
<tr>
<td>BEST Practice 7</td>
<td>IAQ Monitoring Plan</td>
</tr>
<tr>
<td><strong>Comfort</strong></td>
<td></td>
</tr>
<tr>
<td>BEST Practice 8</td>
<td>Occupant Service Request Program</td>
</tr>
<tr>
<td><strong>Health and Wellness</strong></td>
<td></td>
</tr>
<tr>
<td>BEST Practice 9</td>
<td>Hazardous Building Materials Management Program</td>
</tr>
<tr>
<td>BEST Practice 10 (B)</td>
<td>Tenant Hazardous Chemicals Monitoring Program</td>
</tr>
<tr>
<td><strong>Custodial</strong></td>
<td></td>
</tr>
<tr>
<td>BEST Practice 11</td>
<td>Green Cleaning Program</td>
</tr>
<tr>
<td><strong>Waste</strong></td>
<td></td>
</tr>
<tr>
<td>BEST Practice 12 (B)</td>
<td>Waste Reduction and Diversion Policy</td>
</tr>
<tr>
<td><strong>Stakeholder Engagement</strong></td>
<td></td>
</tr>
<tr>
<td>BEST Practice 15</td>
<td>Environmental Policy</td>
</tr>
<tr>
<td>BEST Practice 16</td>
<td>Occupant Sustainability Communication Program</td>
</tr>
</tbody>
</table>
### BEST Practice Documentation Required Prior to Verification

#### MURB and Health Care

<table>
<thead>
<tr>
<th>Category</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Management – Energy Assessment</td>
<td>1.3.2.1 Energy Assessment (no older than 3 years at verification)</td>
</tr>
<tr>
<td>Energy Management – Monitoring and Targeting</td>
<td>1.3.3.1 Energy Management Reduction Plan</td>
</tr>
<tr>
<td></td>
<td>1.3.8.14 Preventive Maintenance Program</td>
</tr>
<tr>
<td>Water</td>
<td>2.3.1 Water Conservation Policy</td>
</tr>
<tr>
<td></td>
<td>2.3.4 Water Assessment (no older than 3 years at verification)</td>
</tr>
<tr>
<td>Waste Reduction and Site</td>
<td>3.1.1.1 Waste Diversion Program</td>
</tr>
<tr>
<td></td>
<td>3.1.2.13 Renovation/Construction Waste Reduction Policy</td>
</tr>
<tr>
<td>Emissions and Effluents</td>
<td>4.2.2 Ozone Depleting Substances Management Plan</td>
</tr>
<tr>
<td></td>
<td>4.2.2.5 Phase-out plan for Ozone-Depleting Refrigerants</td>
</tr>
<tr>
<td></td>
<td>4.4.1.1 Hazardous Building Materials Survey and Use-Related Chemical Inventory (may be 1 or 2 documents)</td>
</tr>
<tr>
<td></td>
<td>4.5.2.2 Hazardous Products Management Plan</td>
</tr>
<tr>
<td>Indoor Environment</td>
<td>5.1.8.1 Documented Complaints Policy for Indoor Air Quality</td>
</tr>
<tr>
<td>Environmental Management Systems</td>
<td>6.2.5 Environmental Selection Policy for Building Materials</td>
</tr>
<tr>
<td></td>
<td>6.4.1.1 Communications Work Plan</td>
</tr>
</tbody>
</table>
5.6. **On-Site Verification Attendees (Required)**

To assist with the verification, the following team members must be present (or available) during the visit:

- An individual familiar with the BOMA BEST Sustainable Buildings questionnaire; AND
- An individual responsible for the building’s on-site management practices; AND
- An individual responsible for the building’s operations.

The verification will typically begin with a walking tour of the building, followed by a return to the meeting room to review the supporting documentation.

5.7. **Building tour**

Below are some examples of specific areas which the Verifier will be expected to review during the on-site visit. The following areas/features must be accessible (if applicable) during the site visit.

- Typical tenant space
- Heating plant
- Cooling plant
- Generator rooms
- Building envelope, elevator shafts, windows, awnings etc.
- Lighting fixtures
- Plumbing fixtures
- Irrigation
- Facility for storage and handling waste
- Composting facility for organic waste
- Floor and roof drains
- Storage tanks
- Hazardous materials storage site
- Air inlets and cooling towers
- Filtration systems
- Housekeeping (MSDS sheets)
- Building Automation System (BAS)
- Emergency response equipment site (e.g. spill control kits etc.)
- Environmentally significant areas
5.8. Reviewing energy and water data

In the case where points have been awarded in the Energy Assessment or Water Assessment section of the questionnaire, the Applicant must show the Verifier the building’s online Property Characteristics page so that the Verifier may review the performance values as well as energy and water data. As such, a computer with internet connection should be available during the meeting.

There are two ways to enter energy (and water) consumption data to obtain points

1. Click here for instructions if entering data directly into the BOMA BEST Online Portal.
2. Click here for instructions if using an existing ENERGY STAR Portfolio Manager account.

5.9. Documentation review

Documentation is required on-site to support all questions marked “Yes” or “N/A”.

Documentation must be organized in a comprehensive and cohesive manner, which mimics the organization and layout of the questionnaire. For example, if done electronically, the files can be arranged in sub-sections, with each section representing the key areas of assessment (energy, water, etc.), and with subsequent documentation arranged in order of the questions.

The information provided to the Verifier must be representative of the practices and operations of the entire building (not just leasable space, or partial tenant information). BOMA BEST Sustainable Buildings requires complete building information to assess the building’s performance.
5.10. Meeting Technical Clarification Requests requirements

Once or twice a year, the questionnaire will be updated in response to completed Technical Clarification Requests (TCRs). These are announced via the BOMA BEST Sustainable Buildings Newsletter or through the Local BOMA Association. They can also be found under the “Completed TCRs” section of the website. Once the TCRs are in effect, all buildings verified after that time are expected to comply with the modifications including those in the process of completing an assessment.

5.11. Missing documentation

Should additional documentation be required before the assessment can be considered complete, Applicants can submit the missing documentation as per BOMA BEST Sustainable Buildings 3.0 Program Policy 5 – On-Site Verification: Missing Documentation.

a) An Applicant shall have up to thirty (30) days to provide the requested documentation and/or information and resubmit to the designated Local BOMA Association and/or the BOMA BEST Verifier as agreed upon; and
b) The Verifier may help the applicant understand what is missing and whether newly provided documentation meets the requirement. However, to be respectful of the Verifier’s time, there can be no more than two interactions focused on clarifying a question’s intent following the on-site verification. Applicants are instructed to carefully review all BOMA BEST Sustainable Buildings explanation language and the information found in the Application Guide to understand what is required. Additional document review beyond the two interactions will incur an additional verification cost.
c) Should the Verifier require a second on-site visit, the applicant will be required to pay all applicable Verifier costs.

Notwithstanding the above clause 1; the relevant Local BOMA Association, upon consultation with the Verifier, may, at its sole discretion, grant an Applicant an extension of thirty (30) days to provide missing documentation and/or information.

5.12. Additional Verification Costs

The Applicant is expected to have diligently completed the questionnaire and supporting documentation prior to the verification.

It is possible (and indeed expected) that the Verifier will uncover some questions that were incorrectly answered in the questionnaire in light of the walk through or documentation review. It is the Verifier’s responsibility to take note of these errors and correct them in the online questionnaire following the Verification. The Verifier will notify the Applicant that these changes are being made.

A Verifier may amend up to twelve (12) answers within the questionnaire. If more questions require modifications this will incur an additional verification cost. For more information on these and other possible additional costs, please see BOMA BEST Sustainable Buildings 3.0 Program Policy 6 – On-Site Verification: Additional Verification Costs.
5.13. **Communicating the Certification Status**

Following the on-site visit, the Applicant’s online assessment will be amended by the Verifier, BOMA Canada or the Local BOMA Association as needed to reflect the changes discussed during the verification visit. Scoring may be adjusted higher or lower depending on the verification tour and whether the appropriate back-up information is provided.

Following this amendment, the Verifier will upload a Final Report to the building’s account on the BOMA BEST Online Portal summarizing the changes that have been made to the online assessment, the final overall score and certification Level achieved by the Applicant. BOMA Canada or the Local BOMA Association will notify the Applicant of the building’s certification status and Level achieved within a reasonable delay.

5.14. **Confidentiality**

All information viewed received by the Verifier is confidential to the building. The Verifier shall retain only his or her notes from the building site visit and shall destroy any records or information belonging to the building.

Download the [handy checklist](#) to ensure you are ready for the verification process.
6. Benchmarking methodology for energy and water

Any new building assessed using the new online portal will be assessed for energy and water consumption using the ENERGY STAR Portfolio Manager (ESPM) benchmarking methodology. There are three performance metrics in the BOMA BEST Sustainable Buildings 3.0 assessment. None is required to obtain a certification although additional points may be earned for participating.

Applicants must link up existing ESPM accounts with the online portal – this eliminates the need to re-enter data and ensures that data is verifiable. Instructions are provided [here](#).

Applicants that do not have an ESPM account can use the online portal to capture their consumption data. Instructions are provided [here](#).

An ESPM FAQ has been prepared to assist applicants who have additional questions regarding energy and water benchmarking.

6.1. Office, Enclosed Shopping Centre, Light Industrial, Open Air Retail, and Universal

6.1.1. Gross Floor Area

BOMA BEST performance metrics are dependent on an accurate gross floor area (GFA). For the purposes of benchmarking performances, BOMA BEST is aligned with the ENERGY STAR Portfolio Manager definition of the Gross Floor Area. This definition is different from the area required to calculate the BOMA BEST application fees (see Section 4 of this Guide for more details on this).

a) For Office and Universal (ENERGY STAR Score eligible) buildings

The GFA that used for the purposes of calculating the energy and water performance must be entered here on the building registration page (“Create New” page - under “Fill in more details”):

![Building characteristics screenshot](image)

The GFA used for calculating energy or water performance **must** include the following spaces:

- Lobbies
- Tenant Areas
- Common Areas
- Meeting Rooms
- Break Rooms
• Atriums (ground floor only)
• Restrooms
• Elevator Shafts
• Stairwells
• Mechanical Equipment Areas
• Basements
• Storage Rooms
• Indoor/underground parking (depends on whether it is sub-metered – see notes below for more details)

Areas that that must not be included in the floor area:

• 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
• Exterior parking/Parkades

Indoor and Underground Parking: The above list is identical to the areas required to calculate BOMA BEST Fees except for parking areas. Indoor and underground parking areas must be included in the GFA to calculate fees. However, the decision to include this area in the GFA used to benchmark performance depends on whether the space is sub-metered.

• If energy for the parking area is sub-metered, the floor area should not be included in the GFA. In such cases, energy consumption from the indoor parking area must also be excluded from the energy consumption data entered.
• If the parking area is not sub-metered, the floor area must be included in the GFA for benchmarking purposes. It follows that the energy consumption associated with this area will already be included in the total energy consumption data entered for the building.

b) Enclosed Shopping Centres, Open Air Retail, Light Industrial, Universal (non-ENERGY STAR Score eligible) buildings

As much as possible, respect the rules listed above for Office etc. However, if the surface areas of all the spaces listed above are not known, include whatever is known in the ENERGY STAR GFA field.

Please note that in the future, these buildings will be required to provide a GFA based on the rules outlined in 7.1.1 a).
6.1.2. **ENERGY STAR Score**

Energy performance for Office buildings and eligible Universal buildings is assessed using the ENERGY STAR Score – a score from 1 to 100.

Buildings that earn a score between 1 and 100 are compared to other buildings nationwide that have the same primary use. In addition to this, the ENERGY STAR Score also normalizes for building characteristics such as weather, occupancy hours, and number of full-time workers.

**ENERGY STAR Score Benchmarking Scale for Office and eligible Universal buildings**

<table>
<thead>
<tr>
<th>ENERGY STAR Score</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown</td>
<td>0</td>
</tr>
<tr>
<td>0-49</td>
<td>0</td>
</tr>
<tr>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>51-100</td>
<td>2 points are earned for every ENERGY STAR Score above 50, up to 90 points. E.g. ENERGY STAR Score of 73 = 56 points</td>
</tr>
</tbody>
</table>

6.1.3. **Energy Use Intensity (EUI)**

In all asset classes, applicants are requested to provide their Energy Use Intensity. This metric is not scored specifically though points may be earned (depending on the asset class) for being able to calculate a valid EUI. The intent is to encourage participants to benchmark energy consumption over time.

To obtain a weather-normalized site EUI, applicants must provide energy consumption data representing all required spaces in the building for a period of 24 consecutive months. See sub-section 7.1.1 for instructions on how to proceed if there is indoor parking.

6.1.4. **Water Use Intensity (WUI)**

In all asset classes, applicants are requested to provide their Water Use Intensity. For Office buildings, depending on the performance, applicants will obtain points. In the remaining asset classes, simply providing a valid WUI (regardless of the value) may be sufficient for obtaining points. The intent is to encourage participants to benchmark energy consumption over time.

This metric is not scored specifically though points may be earned (depending on the asset class) for being able to calculate a valid WUI.

To obtain a WUI, applicants must provide water consumption data representing all spaces in the building (exceptions can be made depending on the asset class) for a period of 12 consecutive months.

Water used for irrigation must be included.
### Water Use Intensity Benchmarking Scale (Office Only)

<table>
<thead>
<tr>
<th>Water Use Intensity</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown / Unable to obtain</td>
<td>0</td>
</tr>
<tr>
<td>1.0 m³/m²/year and above</td>
<td>0</td>
</tr>
<tr>
<td>Between 0.8 and 0.99 m³/m²/year</td>
<td>4</td>
</tr>
<tr>
<td>Between 0.65 and 0.79 m³/m²/year</td>
<td>6</td>
</tr>
<tr>
<td>Between 0.50 and 0.64 m³/m²/year</td>
<td>8</td>
</tr>
<tr>
<td>Between 0.33 and 0.49 m³/m²/year</td>
<td>10</td>
</tr>
<tr>
<td>Between 0.2 and 0.32 m³/m²/year</td>
<td>12</td>
</tr>
<tr>
<td>Less than 0.2 m³/m²/year</td>
<td>15</td>
</tr>
</tbody>
</table>
6.2. MURB and Health Care Facilities

Similarly to the other asset classes, when applicants assess their buildings using the MURB or Health Care questionnaires on the new portal they will be accessing the ENERGY STAR Methodology. However, performance is rewarded slightly differently.

6.2.1. Gross Floor Area

BOMA BEST performance metrics are dependent on an accurate gross floor area (GFA). For the purposes of benchmarking performances, BOMA BEST is aligned with the ENERGY STAR Portfolio Manager definition of the Gross Floor Area. This definition is different from the area required to calculate the BOMA BEST application fees (see Section 4 of this Guide for more details on this).

The GFA that used for the purposes of calculating the energy and water performance must be entered here on the building registration page (“Create New” page - under “Fill in more details”):

![Building characteristics](image)

The GFA used for calculating energy or water performance must include the following spaces:

- Lobbies
- Tenant Areas
- Common Areas
- Meeting Rooms
- Break Rooms
- Atriums (ground floor only)
- Restrooms
- Elevator Shafts
- Stairwells
- Mechanical Equipment Areas
- Basements
- Storage Rooms
- Indoor/underground parking (depends on whether it is sub-metered – see notes below for more details)

Areas that that must not be included in the floor area:

- 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
• Exterior parking/Parkades

Indoor and Underground Parking: The above list is identical to the areas required to calculate BOMA BEST Fees except for parking areas. Indoor and underground parking areas must be included in the GFA to calculate fees. However, the decision to include this area in the GFA used to benchmark performance depends on whether the space is sub-metered.

• If energy for the parking area is sub-metered, the floor area should not be included in the GFA. In such cases, energy consumption from the indoor parking area must also be excluded from the energy consumption data entered.
• If the parking area is not sub-metered, the floor area must be included in the GFA for benchmarking purposes. It follows that the energy consumption associated with this area will already be included in the total energy consumption data entered for the building.

6.2.2. Energy for MURB

To obtain a weather-normalized site Energy Use Intensity (EUI), applicants must provide energy consumption data representing all required spaces in the building for a period of 24 consecutive months. See sub-section 7.2.1 for instructions on how to proceed if there is indoor parking.

Based on the EUI generated on the new online portal, applicants will receive points based on the following benchmarking scale:

<table>
<thead>
<tr>
<th>Energy Benchmarking Matrix – Multi-Unit Residential Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Use Intensity</td>
</tr>
<tr>
<td>Unknown / Unable to obtain</td>
</tr>
<tr>
<td>0.890 GJ/m²/yr and above</td>
</tr>
<tr>
<td>Between 0.850 and 0.889 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.810 and 0.849 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.770 and 0.809 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.740 and 0.769 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.700 and 0.739 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.660 and 0.699 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.620 and 0.659 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.580 and 0.619 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.540 and 0.579 GJ/m²/yr</td>
</tr>
<tr>
<td>Less than 0.540 GJ/m²/yr</td>
</tr>
</tbody>
</table>
6.2.3. Water for MURB

To obtain a Water Use Intensity (WUI), applicants must provide water consumption data representing all required spaces in the building for a period of 12 consecutive months. Water used for irrigation must be included.

Based on WUI generated on the new online portal, applicants will receive points based on the following benchmarking scale:

<table>
<thead>
<tr>
<th>Water Benchmarking Matrix – Multi-Unit Residential Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Use Intensity</td>
</tr>
<tr>
<td>Unknown / Unable to obtain</td>
</tr>
<tr>
<td>8.03 m³/m²/yr and more</td>
</tr>
<tr>
<td>Between 6.205 and 8.029 m³/m²/yr</td>
</tr>
<tr>
<td>Between 5.475 and 6.204 m³/m²/yr</td>
</tr>
<tr>
<td>Less than 5.475 m³/m²/yr</td>
</tr>
</tbody>
</table>

6.2.4. Energy for Health Care

To obtain a weather-normalized site Energy Use Intensity (EUI), applicants must provide energy consumption data representing all required spaces in the building for a period of 24 consecutive months. See sub-section 7.2.1 for instructions on how to proceed if there is indoor parking.

Based on the EUI generated on the new online portal, applicants will receive points based on the following benchmarking scale:

<table>
<thead>
<tr>
<th>Energy Benchmarking Matrix – Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Use Intensity</td>
</tr>
<tr>
<td>Unknown / Unable to obtain</td>
</tr>
<tr>
<td>3.100 GJ/m²/yr and above</td>
</tr>
<tr>
<td>Between 2.940 and 3.099 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 2.790 and 2.939 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 2.630 and 2.789 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 2.480 and 2.629 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 2.320 and 2.479 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 2.170 and 2.319 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 2.010 and 2.169 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 1.860 and 2.009 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 1.700 and 1.859 GJ/m²/yr</td>
</tr>
<tr>
<td>Less than 1.700 GJ/m²/yr</td>
</tr>
<tr>
<td>Energy Use Intensity</td>
</tr>
<tr>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>Unknown / Unable to obtain</td>
</tr>
<tr>
<td>1.320 GJ/m²/yr and above</td>
</tr>
<tr>
<td>Between 1.240 and 1.319 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 1.160 and 1.239 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 1.050 and 1.159 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.930 and 1.049 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.810 and 0.929 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.700 and 0.809 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.580 and 1.699 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.460 and 0.579 GJ/m²/yr</td>
</tr>
<tr>
<td>Between 0.350 and 0.459 GJ/m²/yr</td>
</tr>
<tr>
<td>Less than 0.350 GJ/m²/yr</td>
</tr>
</tbody>
</table>

| Energy Benchmarking Matrix – Long Term Care |
|--------------------------------------------|--------|
| Energy Use Intensity                        | Points |
| Unknown / Unable to obtain                 | 0      |
| 2.290 GJ/m²/yr and above                  | 0      |
| Between 2.090 and 2.289 GJ/m²/yr         | 7      |
| Between 1.980 and 2.089 GJ/m²/yr         | 14     |
| Between 1.860 and 1.979 GJ/m²/yr         | 21     |
| Between 1.740 and 1.859 GJ/m²/yr         | 28     |
| Between 1.630 and 1.739 GJ/m²/yr         | 35     |
| Between 1.510 and 1.629 GJ/m²/yr         | 42     |
| Between 1.390 and 1.509 GJ/m²/yr         | 49     |
| Between 1.280 and 1.389 GJ/m²/yr         | 56     |
| Between 1.160 and 1.279 GJ/m²/yr         | 63     |
| Less than 1.160 GJ/m²/yr                 | 70     |
6.2.5. Water for Health Care

To obtain a Water Use Intensity (WUI), applicants must provide water consumption data representing all required spaces in the building for a period of 12 consecutive months. Water used for irrigation must be included.

Based on WUI generated on the new online portal, applicants will receive points based on the following benchmarking scale:

<table>
<thead>
<tr>
<th>Water Use Intensity – Health Care</th>
<th>Hospitals</th>
<th>Medical Offices</th>
<th>Long Term Care</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unknown / Unable to obtain</td>
<td>Unknown / Unable to obtain</td>
<td>Unknown / Unable to obtain</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>3.0 m³/m²/yr and above</td>
<td>1.60 m³/m²/yr and above</td>
<td>1.90 m³/m²/yr and above</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Between 2.60 and 2.99 m³/m²/yr</td>
<td>Between 1.40 and 1.59 m³/m²/yr</td>
<td>Between 1.70 and 1.89 m³/m²/yr</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Between 2.20 and 2.59 m³/m²/yr</td>
<td>Between 1.20 and 1.39 m³/m²/yr</td>
<td>Between 1.30 and 1.69 m³/m²/yr</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Between 1.70 and 2.19 m³/m²/yr</td>
<td>Between 1.0 and 1.19 m³/m²/yr</td>
<td>Between 1.10 and 1.29 m³/m²/yr</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>Between 1.30 and 1.69 m³/m²/yr</td>
<td>Between 0.80 and 0.99 m³/m²/yr</td>
<td>Between 0.90 and 1.09 m³/m²/yr</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Between 0.90 and 1.29 m³/m²/yr</td>
<td>Between 0.50 and 0.79 m³/m²/yr</td>
<td>Between 0.60 and 0.89 m³/m²/yr</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Less than 0.9 m³/m²/yr</td>
<td>Less than 0.5 m³/m²/yr</td>
<td>Less than 0.6 m³/m²/yr</td>
<td>30</td>
<td></td>
</tr>
</tbody>
</table>
7. Scoring methodology

7.1. Program Objectives

The vision for BOMA BEST 3.0 was to set a standard for building management and performance – to facilitate sound building management and guide building performance improvement. The goals for the program are:

➢ Be accessible, inclusive and aspirational;
➢ Be educational and provide actionable outcomes;
➢ Lead to improved environmental performance.

BOMA BEST 3.0 assesses performance through questions that were developed with these goals in mind. They cover a wide range of building management and performance aspects and in totality they encompass the BOMA BEST definition of a sustainable building. The questions are grouped into 10 different categories: Energy, Water, Air, Comfort, Health & Wellness, Purchasing, Custodial, Waste, Site, and Stakeholders.

7.2. Scoring Approach

Each question describes an environmental measure that impacts building management or performance, some being more important than others. Points are attributed to each question, except for BEST Practices which are minimum requirements. The number of points available per question is calculated as a factor of the impact and importance of the measure/initiative:

• The perceived sustainability impact of each measure was scored on a scale of 1 to 5 (with 5 representing the most benefit and 1 the least). The value was attributed according to each measure’s respective economic, social and environmental benefit.
• The Energy category represents the most important measures and therefore capture about 30% of the total points available. The remaining 70% of points were deemed of equal importance and spread evenly across the other 9 categories.

The outcome is a points system that awards more points for taking action where it matters, actions that lead to better understanding of building systems and improved operational performance. It mandates the implementation of industry best practices as first steps and leads the way to a path of improvement over time, rewarding actions that carry greater import and impact with more points.

7.3. Total Points for Different Asset Classes

The scoring approach described above calculates the relative weight of each question in the Office asset class in relation to each other question, adding up to the 1,000 total. Similarly, point totals were then determined for the remaining asset classes (Universal, Enclosed Shopping Centres and Light Industrial/Open Air Retail) by awarding the same number of points across the respective questions (as was awarded in the Office questionnaire) whilst also referencing their pre-determined weight to ensure a question’s relative weighting is maintained.
Points are distributed across each asset class in the following way:

**Office**

![Office Asset Class Distribution Pie Chart]

**Enclosed Shopping Centre**

![Enclosed Shopping Centre Asset Class Distribution Pie Chart]
Light Industrial & Open Air Retail

Universal
7.4. Performance Thresholds

BOMA BEST 3.0 also considers the minimum performance expected by a property to achieve a specific certification threshold. Aside from completing BEST Practices to achieve a Certified level, BOMA BEST 3.0 does not restrict what properties can do to achieve a particular certification level (Bronze and up). In deciding the performance thresholds, measures that might be considered entry-level tasks were grouped together to determine the most likely certification level that could be expected for entry-level effort. This informed the 20% scoring threshold introduced to achieve Bronze. The intent of this strategy is to encourage more buildings to enter the program, achieve Certified level which can set them on a course to pursue higher levels of certification over time.

Performance thresholds in BOMA BEST 3.0 are as follows:

- **Certified**: BEST Practices and a score under 19%
- **Bronze**: BEST Practices and a score between 20 – 49%
- **Silver**: BEST Practices and a score between 50 – 79%
- **Gold**: BEST Practices and a score between 80 – 89%
- **Platinum**: BEST Practices and a score between 90 – 100%

7.5. “Not Applicable” answer options

Total points may vary within each asset class because of “Not Applicable” (or N/A) answer options. These are provided throughout the questionnaire to accommodate situations where the question is not applicable to buildings in certain scenarios. When a N/A option is selected, the question’s total point value is removed from both the final score’s numerator and denominator (the question’s score becomes 0/0). The result is neutral on the final score; it is as though the question (and its score) were never part of the questionnaire.

In all cases where the N/A option appears, specific instructions are provided to help the applicant understand whether that answer option is appropriate for them.

7.6. Innovation questions

The tables provided in section 8.3 do not include the points awarded to innovation questions. Innovation questions are present in many questions. These questions represent initiatives that are above and beyond typical best industry practices. It is possible to gain points via the innovation questions however it is impossible to lose points (since the answer options are either “Yes” or “N/A”). Answering innovation questions may increase applicants’ score to the degree that they may gain one (1) certification level (e.g. from Silver to Gold). To reiterate, applicants’ score will not be hurt if they are unable to answer “Yes”.

**Note**: The above statement pertaining to Innovation questions does not apply to the MURB and Health Care questionnaires. In these questionnaires, when answering “No” to these questions, the applicant will lose the points.
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