

## Civic Design Review Sustainable Design Checklist

Sustainable design represents important city-wide concerns about environmental conservation and energy use. Development teams should try to integrate elements that meet many goals, including:

- Reuse of existing building stock
- Incorporation of existing on-site natural habitats and landscape elements
- Inclusion of high-performing stormwater control
- Site and building massing to maximize daylight and reduce shading on adjacent sites
- Reduction of energy use and the production of greenhouse gases
- Promotion of reasonable access to transportation alternatives

The Sustainable Design Checklist asks for responses to specific benchmarks. These metrics go above and beyond the minimum requirements in the Zoning and Building codes. All benchmarks are based on adaptations from Leadership in Energy and Environmental Design (LEED) v4 unless otherwise noted.

| Categories  | Benchmark  | Does project meet benchmark? If yes, please explain how. If no, please explain why not. |
|---|--|---|
| <b>Location and Transportation</b>  |  |   |
| (1) Access to Quality Transit   | Locate a functional entry of the project within a ¼-mile (400-meter) walking distance of existing or planned bus, streetcar, or rideshare stops, bus rapid transit stops, light or heavy rail stations.  |   |
| (2) Reduced Parking Footprint   | All new parking areas will be in the rear yard of the property or under the building, and unenclosed or uncovered parking areas are 40% or less of the site area.  |   |
| (3) Green Vehicles  | Designate 5% of all parking spaces used by the project as preferred parking for green vehicles or car share vehicles. Clearly identify and enforce for sole use by car share or green vehicles, which include plug-in electric vehicles and alternative fuel vehicles.   |   |
| (4) Railway Setbacks<br>(Excluding frontages facing trolleys/light rail or enclosed subsurface rail lines or subways) | To foster safety and maintain a quality of life protected from excessive noise and vibration, residential development with railway frontages should be setback from rail lines and the building’s exterior envelope, including windows, should reduce exterior sound transmission to 60dBA. <b>(If setback used, specify distance)<sup>i</sup></b> |   |
| (5) Bike Share Station  | Incorporate a bike share station in coordination with and conformance to the standards of Philadelphia Bike Share.   |   |

| Water Efficiency  |   |  |
|---|---|--|
| (6) Outdoor Water Use   | Maintain on-site vegetation without irrigation. OR, Reduce of watering requirements at least 50% from the calculated baseline for the site's peak watering month.   |  |
| Sustainable Sites   |   |  |
| (7) Pervious Site Surfaces  | Provides vegetated and/or pervious open space that is 30% or greater of the site's Open Area, as defined by the zoning code. Vegetated and/or green roofs can be included in this calculation.  |  |
| (8) Rainwater Management  | Conform to the stormwater requirements of the Philadelphia Water Department(PWD) and either: A) Develop a green street and donate it to PWD, designed and constructed in accordance with the PWD Green Streets Design Manual, OR B) Manage additional runoff from adjacent streets on the development site, designed and constructed in accordance with specifications of the PWD Stormwater Management Regulations           |  |
| (9) Heat Island Reduction (excluding roofs)   | Reduce the heat island effect through either of the following strategies for 50% or more of all on-site hardscapes: A) Hardscapes that have a high reflectance, an SRI>29. B) Shading by trees, structures, or solar panels.  |  |
| Energy and Atmosphere   |   |  |
| (10) Energy Commissioning and Energy Performance - Adherence to the New Building Code | PCPC notes that as of April 1, 2019 new energy conservation standards are required in the Philadelphia Building Code, based on recent updates of the International Energy Conservation Code (IECC) and the option to use ASHRAE 90.01-2016. PCPC staff asks the applicant to state which path they are taking for compliance, including their choice of code and any options being pursued under the 2018 IECC. <sup>ii</sup> |  |
| (11) Energy Commissioning and Energy Performance - Going beyond the code              | Will the project pursue energy performance measures beyond what is required in the Philadelphia code by meeting any of these benchmarks? <sup>iii</sup><br><ul style="list-style-type: none"> <li>•Reduce energy consumption by achieving 10% energy savings or more from an established baseline using</li> </ul>  |  |

|  |   |  |
|--|---|--|
|  | ASHRAE standard 90.1-2016 (LEED v4.1 metric).<br><ul style="list-style-type: none"> <li>●Achieve certification in Energy Star for Multifamily New Construction (MFNC).</li> <li>●Achieve Passive House Certification</li> </ul>                                     |  |
| (12) Indoor Air Quality and Transportation | Any sites within 1000 feet of an interstate highway, state highway, or freeway will provide air filters for all regularly occupied spaces that have a Minimum Efficiency Reporting Value (MERV) of 13. Filters shall be installed prior to occupancy. <sup>iv</sup> |  |
| (13) On-Site Renewable Energy              | Produce renewable energy on-site that will provide at least 3% of the project's anticipated energy usage.   |  |
| <b>Innovation</b>                          |   |  |
| (14) Innovation                            | Any other sustainable measures that could positively impact the public realm.   |  |

<sup>i</sup> Railway Association of Canada (RAC)'s “Guidelines for New Development in Proximity to Railway Operations. Exterior Sound transmission standard from LEED v4, BD+C, Acoustic Performance Credit.

<sup>ii</sup> Title 4 The Philadelphia Building Construction and Occupancy Code  
 See also, “The Commercial Energy Code Compliance” information sheet:  
<https://www.phila.gov/li/Documents/Commercial%20Energy%20Code%20Compliance%20Fact%20Sheet--Final.pdf>

and the “What Code Do I Use” information sheet:  
<https://www.phila.gov/li/Documents/What%20Code%20Do%20I%20Use.pdf>

<sup>iii</sup> LEED 4.1, Optimize Energy Performance in LEED v4.1

For Energy Star: [www.Energystar.gov](http://www.Energystar.gov)

For Passive House, see [www.phius.org](http://www.phius.org)

<sup>iv</sup> Section 99.04.504.6 "Filters" of the City of Los Angeles Municipal Code, from a 2016 Los Angeles Ordinance requiring enhanced air filters in homes near freeways