

Bird-friendly Design Sustainability Requirements:

For new construction, additions, and renovated portions of building facades:

COMPLIANCE OPTION A

**see definitions and calculations for Material Threat Factor, Building Collision Threat Factor and Fly-Through conditions below*

HIGH RISK FEATURES

Materials used in the following applications are high risk features and shall have a Material Threat Factor (**MTF**) of 30 or less:

1. All exterior **fly-through conditions**
2. Railings
3. Awnings
4. Windbreak/ windscreen panels
5. Acoustic barriers
6. Ground level building links
7. Skywalks (elevated walkways)
8. Bus shelters
9. Guard shelters
10. Exterior decorative panels or signage

ZONE 1 (high hazard)

The following facade areas shall have a Building Collision Threat Rating (**BCTR**) of fifteen (15) or less, calculated according to the table provided.

1. Facade areas up to sixty (60) feet above grade;
2. Facade areas up to sixteen (16) feet above green roofs, roof gardens, or landscape/ amenity decks OR 3' above height of mature vegetation at roof gardens or landscape/ amenity decks (whichever is higher)

ZONE 2 (medium hazard)

The following areas shall have a Bird Collision Threat Rating (**BCTR**) of thirty (30) or less, calculated according to the table provided, and as defined by the most current American Bird Conservancy Bird Collision Deterrence ratings:

1. Facade areas higher than sixty (60) feet above grade
2. All facade building areas not included in Zone 1 or High Risk Features

Fly-through conditions: A building design feature where there is line of sight from one glazed portion of the exterior façade to another.

Material Threat Factor (MTF): An index developed by the American Bird Conservancy (ABC) to assign scores that provide a relative measure of birds' ability to see and avoid patterned glass

and other materials (see <https://abcbirds.org/glass-collisions/threat-factor-rating/> for more information about ABC's threat factors). A lower score indicates a material that is more visible to birds than a higher score. The lowest MTF (1) indicates a solid, non-transparent, non-reflective material such as masonry or stucco. The highest MTF (100) indicates the most hazardous materials that are highly reflective and/or highly transparent. ABC maintains a database of materials and their threat factors and is also developing a prescriptive standard for materials that have not yet been tested.

Building Collision Threat Rating (BCTR): A calculated threat rating of a facade zone based on the material threat factor (MTF) of each of its component materials proportional to the amount of area of each material in a given facade zone. A lower threat rating indicates a lower risk of collisions.

To calculate the BCTR, use the formulas below. Calculate the BCTR for zone 1 and zone 2 separately.

For each façade Zone, calculate the BCTR:

1. [(Material Type 1 MTF) x (Material Type 1 Area)]
+ [(Material Type 2 MTF) x (Material Type 2 Area)]
+ [repeat MTF x Area for each facade material in the zone]
= **Facade Factor**

2. Calculate **facade area**. The sum of the areas for each material calculated in 1 should = zone facade area

3. Divide: **Facade Factor/ facade area = BCTR**

COMPLIANCE OPTION B

In lieu of providing the calculated facade BCTR, protect all glass with any of the following:

1. Secondary facades, shutters, sunshades, or other permanent features greater than 2 inches in thickness (excluding any support framework, standoffs, mounting accessories, etc.) with openings such that a 9-inch diameter sphere cannot pass through any opening. Distance from the face of glass to the edge of the feature shall not exceed the thickness of the feature.

Example: If a 6-inch-deep vertical sunshade system is to be installed, the sunshade cannot be located more than 6 inches away from the face of the glass and cannot have any openings larger than a 9-inch diameter sphere.

OR

2. Meshes, netting, screens, or other permanent features less than 2-inch thickness with openings such that a 2-inch diameter sphere cannot pass through any opening

Lighting:

The following types of **exterior** lighting are prohibited: mercury vapor luminaires, searchlights, sky beams, upward-directed fixtures, and aerial lasers. All exterior lighting fixtures shall be full-cutoff.

Extinguish decorative lighting on the upper stories of buildings after 11 p.m. each evening and leave lights off until daylight from March 15 to June 15 for the spring migration, and again from August 15 to November 15 for the fall migration. Tenants on the upper floors are encouraged to turn out lights or draw blinds after 11 p.m. These guidelines apply to all buildings of 40 or more stories and to buildings of 20 or more stories that are isolated from other buildings.

Include lighting controls such that decorative lighting can be extinguished according to the guidelines above.

Exterior features:

Ventilation grates within twenty (20) feet of glass facades shall have openings such that a 3/4-inch diameter sphere cannot pass through any opening.

Exterior pools and fountains shall not be located closer than twenty (20) feet to glass façade areas.