



# GLASSWERKS – TECHNICAL BULLETIN

## BIRD-FRIENDLY GLAZING – INDUSTRY GUIDANCE AND DESIGN CONSIDERATIONS

### TECHNICAL DOCUMENT: GW-TB-009

This Technical Bulletin is provided by Glasswerks for general informational purposes to assist customers, design professionals, and project teams in understanding bird-friendly glazing concepts, commonly referenced industry guidance, and evolving code considerations. This document is not project-specific and does not constitute a performance guarantee, certification, or warranty.

Bird collisions with glass typically occur when glazing reflects surrounding landscapes or appears visually transparent, creating perceived flight paths. Under these conditions, birds may not recognize glass as a physical barrier. Industry research has demonstrated that incorporating visual markers or treatments into glazing can significantly reduce bird collisions by increasing visibility of the glass to birds during daylight conditions. As a result, bird-friendly glazing strategies have been increasingly incorporated into architectural design guidelines, green building programs, and government facility standards.

#### **INDUSTRY GUIDANCE:**

At present, there is no standalone AAMA performance specification dedicated solely to bird-friendly glazing. Instead, glazing and fenestration professionals rely on guidance published by recognized industry organizations and governing bodies, including:

- National Glass Association (NGA) – *Best Practices for Bird-Friendly Glazing Design*
- GSA P-100 Facilities Standards – Federal design requirements referencing NGA guidance
- ASHRAE 189.1 and the International Green Construction Code (IGCC) – Green code provisions addressing bird-friendly façade design
- American Bird Conservancy (ABC) – Widely referenced testing methodologies and threat-factor evaluations

These references collectively represent current best practices used by architects, specifiers, and authorities having jurisdiction (AHJs).

#### **COMMON DESIGN PRINCIPLES:**

While requirements vary by project location and governing authority, bird-friendly glazing design commonly includes the following considerations:

- Use of visual markers applied to or integrated into glazing surfaces
- Marker spacing generally consistent with the widely referenced "2 x 4 Rule":
  - Maximum 2 inches horizontal spacing, or
  - Maximum 4 inches vertical spacing
- Focus on glazing areas most susceptible to collisions, including:
  - Façades near grade
  - Adjacent landscaped areas
  - Courtyards, fly-through conditions, and glass corners
- Consideration of lighting conditions, reflectivity, and surrounding site features



# GLASSWERKS – TECHNICAL BULLETIN

## BIRD-FRIENDLY GLAZING – INDUSTRY GUIDANCE AND DESIGN CONSIDERATIONS

### TECHNICAL DOCUMENT: GW-TB-009

Bird-friendly strategies may be achieved using techniques such as ceramic frit patterns, etching, laser-applied markers, applied coatings, or supplemental façade elements including screens or shading devices.

#### **TESTING AND QUALIFICATION:**

When testing is specified, many project documents reference American Bird Conservancy (ABC) tunnel testing, which evaluates the relative effectiveness of bird-collision deterrent patterns and assigns a "Threat Factor" rating. Acceptance criteria and documentation requirements are determined by the project specification or AHJ.

#### **IMPORTANT LIMITATIONS:**

- Bird-friendly glazing cannot guarantee the elimination of bird collisions. Effectiveness may vary based on site conditions, building orientation, lighting, landscaping, and façade design.
- Final determination of compliance with applicable codes, standards, and project requirements rests with the design professional of record and the AHJ.
- Glasswerks supplies architectural glass products in accordance with approved project specifications but does not control building operation, installation methods, lighting conditions, or site-specific features.
- This bulletin does not modify or extend any Glasswerks warranty and is provided for informational purposes only.

Bird-friendly glazing represents an evolving area of architectural design supported by industry research and increasing code adoption. Glasswerks encourages early coordination between owners, architects, glazing contractors, and material suppliers to ensure that bird-friendly performance criteria are clearly defined and properly integrated into project documentation.

For project-specific requirements, always consult the approved construction documents and applicable governing standards.