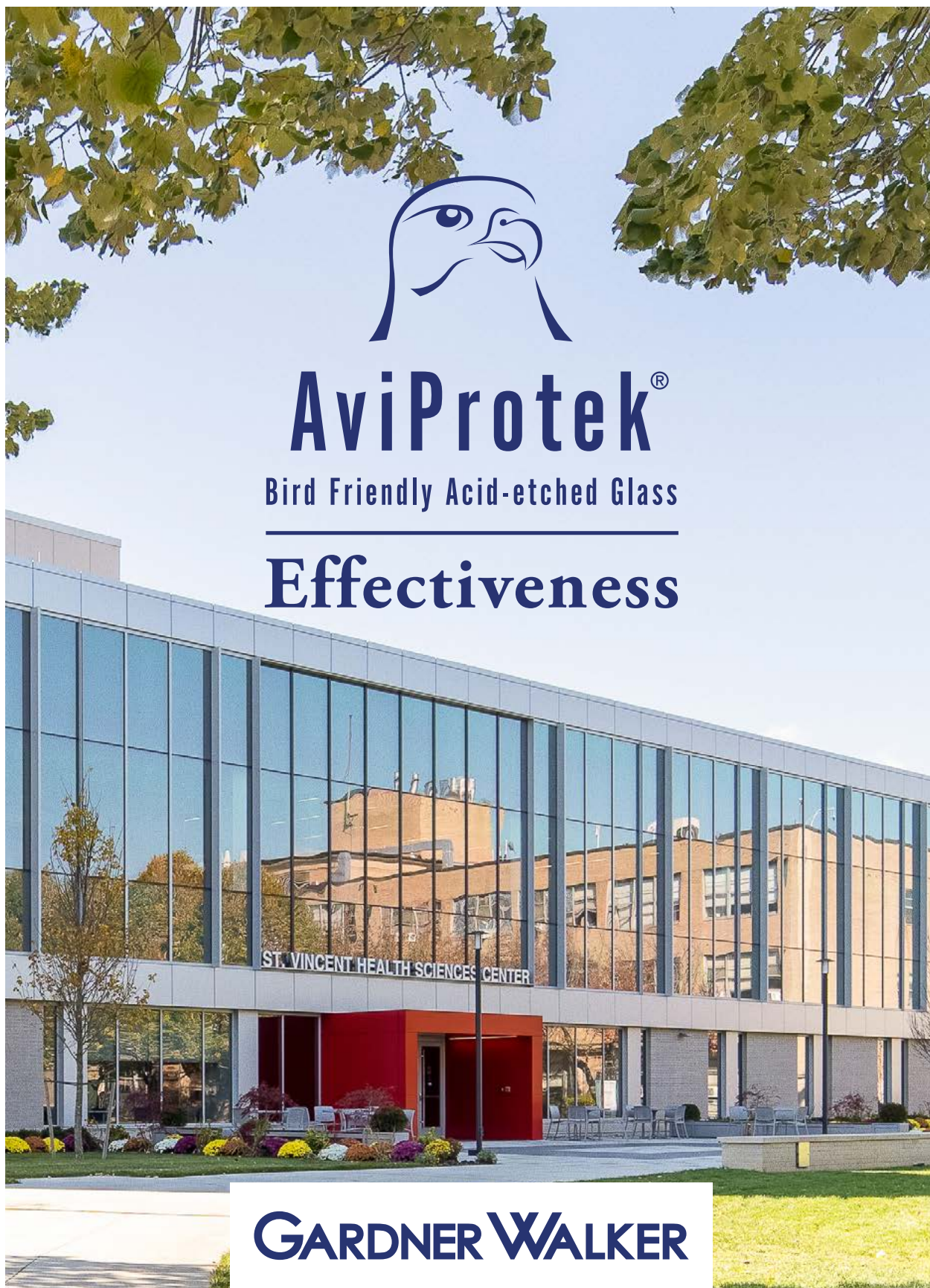




AviProtek®

Bird Friendly Acid-etched Glass

Effectiveness



GARDNER WALKER



AviProtek®

Bird Friendly Acid-etched Glass

The Effectiveness of AviProtek® Bird-Friendly Glass

Principles of Bird Deterrence

Bird collisions against building glass facades are a major cause of bird mortality, claiming the lives of up to a billion birds each year. The magnitude of the problem is such that an important trend has emerged across North America to make buildings safer for birds.

Municipalities, states and provinces are proactively adopting bird deterrence legislation. San Francisco's Standards for Bird-Safe Buildings and the California Coastal Commission lead the way in bird deterrence regulations on the West Coast. Further east, Toronto's Green Standard and New York City's Local Law 15 are influential voices in bird-friendly building legislation.

Thought leaders including The National Glass Association (NGA), the Canadian Standard Association, and ornithologists like Dr. Daniel Klem agree that visual markers on the first surface of a glazing unit provide the best protection against bird collisions. The CSA A460 standard requires first-surface treatment, while the NGA's updated Bird-Friendly Glazing Design Guide recommends first-surface markers as the most reliable method for all weather conditions.

Bird Deterrent Buildings

One of the most asked questions is: Does it really work? Yes, it does.

The following examples provide information on real projects with a variety of performance requirements. Read on to see how effective AviProtek® acid-etched bird deterrent patterns on surface 1 can be.



Gardner Walker

Montreal, QC North Wilkesboro, NC Huntsville, TX Indianapolis, IN

Email: info@gardnerwalker.com | Website: www.gardnerwalker.com



United States

Eastern USA

National Aviary, The Garden Room	4
Berks Nature, The Nature Place.	5
Swarthmore College, PPR Apartments	6
Swarthmore College, Whittier Hall	7
St. John's University, St. Vincent Health Sciences Center	8
National Aquarium, Upland Tropical Rain Forest Exhibit	9
National Aviary, Tropical Rainforest	10
W.W. Knight Nature Preserve, Nature Center	11

Central USA

Pikes Peak Summit Visitor Center	12
Cedar Hill Library	13
Marquette University, David A. Straz, Jr., Hall	14

Western USA

Shashi Hotel.	15
Oregon Zoo, Education Center	16
City of Seattle's Cedar River Municipal Watershed.	17
Aquarium of the Pacific, Pacific Visions Expansion	18

Canada

Eastern Canada

Markdale Hospital	19
Villeroy Rest Area	20
Cap Tourmente National Wildlife Area	21
OSSTF Headquarters	22
115 Echo Drive	23

Central Canada

University of Saskatchewan, Collaborative Science Research Building	24
Calgary Zoo, Land of Lemurs Exhibit	25

Bird-Friendly Products Options	26
AviProtek® Turbo	27
Architectural Managers	28
eGuide of Designing Exteriors	29
AviProtek® eBooks	30
AIA Accredited Courses	31





Eastern USA

National Aviary, The Garden Room

Location: Pittsburgh, PA

Date of construction: 2020

Collision(s) since installation: **0 collisions 2020 to 2022 - July 2024: 1 collision.**

The Garden Room of The National Aviary features stunning views of the historic Rose Garden and Lake Elizabeth through AviProtek® E bird-friendly glass. The Aviary achieved LEED® Gold certification for this project, aided significantly by the glazing's energy-efficient and bird-friendly qualities.



"[Having] tons and tons of glass, regularly monitoring that space and not having any bird strikes [from 2020 through 2022] ... I think it is a testament to the treatment of the glass, and to the intentionality with which that space was built."

Sam Moore, Director of Guest Operations, National Aviary

Glass Specs

AviProtek® bird-friendly glass

- 6mm Acuity® glass
- Custom pattern (horizontal stripes) on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 30

Energy / Performance

- Vitro Solarban® 72 on surface 3
- SHGC: 0.36
- VLT: 67%



Custom linear pattern



Eastern USA

Berks Nature, The Nature Place

Location: Reading, PA

Date of construction: 2017

Collision(s) since installation: **0 (as of August 2024)**

Berks Nature is an organization that cares about land preservation, water protection, trail management, community gardens, and the state of the environment. The Nature Place is equipped with AviProtek® bird-safe glass with visual markers on the exterior surface to minimize the risk of collisions.



Kim Murphy, President of Berks Nature, describes the site's bird-friendly glass as an educational talking point that staff make sure to highlight during tours. It's so subtle that visitors often miss the bird-safe pattern at first. Murphy explains, **"It's almost like they didn't even see it until we pointed it out."**

Kim Murphy,
President of Berks Nature

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

- 6mm Starphire Ultra-Clear® glass
- Custom pattern (horizontal stripes) on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 30

Energy / Performance

- Vitro Solarban® 60 on surface 2
- SHGC: 0.41
- VLT: 74%





Eastern USA

Swarthmore College, PPR Apartments

Location: Swarthmore, PA

Date of construction: 2017

Collision(s) since installation: **0 (as of February 2022)**

Swarthmore College's PPR Apartments are linked by glass walkways, a notoriously dangerous feature for birds. To prevent strikes against these high-risk elements, the walkways are glazed with AviProtek® E bird-friendly glass. Along with the complex's other green components, like geothermal energy, this choice of bird-safe glazing reflects the college's commitment to ecological responsibility.



"The patterned Gardner Walker glass on the PPR Apartments and Whittier buildings at Swarthmore is **far more effective at preventing bird strikes than other glass patterns on campus**. Over several years, there has been fewer than one documented bird collision per year on the patterned glass."

Professor E. Carr Everbach,
Chair, Swarthmore College
Environmental Studies

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

- 6mm clear glass
- Custom pattern (horizontal stripes) on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 30

Energy / Performance

- Vitro Solarban® 67 on surface 2
- SHGC: 0.29
- VLT: 54%





Eastern USA

Swarthmore College, Whittier Hall

Location: Swarthmore, PA

Date of construction: 2018

Collision(s) since installation: **1 (as of February 2022)**

The Whittier Hall pavilion at Swarthmore College is one of the institution's first projects to be built under its new sustainability plan, equivalent to LEED® Platinum criteria. Green features include a photovoltaic array for solar energy, geothermal heating, and energy-efficient bird-friendly glazing.



"At Swarthmore, staff have been able to reduce bird strikes dramatically at the PPR Apartments and Whittier Hall by installing AviProtek® bird deterrent glass. Imagine what a difference it would make if all university and college campuses adopted this kind of approach!"

Dr. Daniel Klem Jr., Professor of Biology; Sarkis Acopian Professor of Ornithology & Conservation Biology, Muhlenberg College

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

- 6mm clear glass
- Custom pattern (horizontal stripes) on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 30

Energy / Performance

- Vitro Solarban® 60 on surface 2
- SHGC: 0.39
- VLT: 70%





Eastern USA

St. John's University, St. Vincent Health Sciences Center

Location: New York, NY

Date of construction: 2023

Collision(s) since installation: **0 (as of June 2025)**

The St. Vincent Health Sciences Center, a state-of-the-art building, supports and houses St. John's University's health sciences programs. This fenestration with bird-safe AviProtek® E glass, combine bird-deterrent markers on surface one with an energy-efficient coating on surface two to reduce heat loss.



"The opening of the St. Vincent Health Sciences Center represents our unwavering commitment to providing our students with the best possible resources and facilities,"

**Rev. Brian J. Shanley, O.P.,
President of St. John's
University**

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

- 6mm Acuity® glass
- Pattern 215 (5mm dots, 2" x 2") on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 25

Energy / Performance

- Vitro Solarban® 90 on surface 2
- SHGC: 0.23
- VLT: 53%





Eastern USA

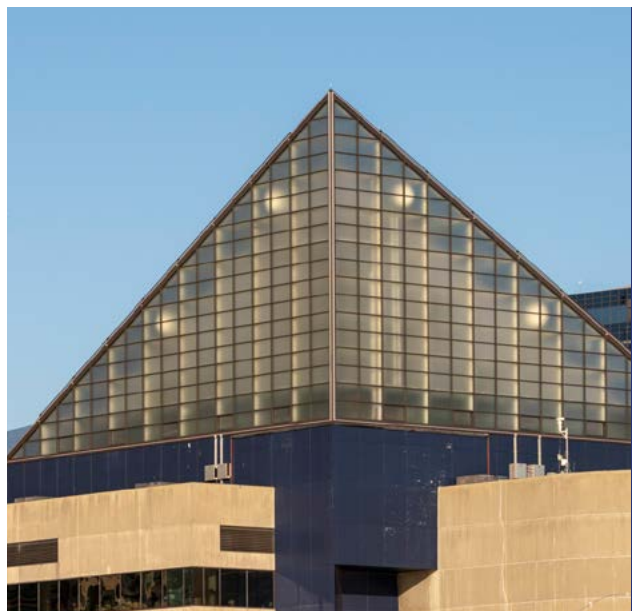
National Aquarium, Upland Tropical Rain Forest Exhibit

Location: Baltimore, MD

Date of renovation: 2022

Collision(s) since installation: **1 (as of February 2024)**

The National Aquarium is known as the most important tourist attraction in Maryland, and the immense glass pyramid of its Upland Tropical Rain Forest is a landmark of the Baltimore skyline. The pyramid was renovated in 2022 with Walker Textures® Opaque acid-etched glass on a Starphire Ultra-Clear® substrate. The new glazing's first-surface etch deters bird collisions, while a Solarban® 60 low-e coating on surface 2 improves temperature control and light transmittance.



"A year has now passed, and I am super happy with the glass panels provided for that project. It was an excellent choice for this application. I have paid close attention to any possible bird strikes occurring on this glass and that number appears to be zero ... In addition, the plants and animals living under the glass in the rainforest exhibit have responded very favourably to the glass provided."

Ken Howell, Curator of Australia and Rainforest, National Aquarium

Glass Specs

Walker Textures® full-surface acid-etched glass

- 6mm Starphire Ultra-Clear® glass
- Opaque finish on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 25

Energy / Performance

- Vitro Solarban® 60 on surface 2
- SHGC: 0.27
- VLT: 70%





Eastern USA

National Aviary, Tropical Rainforest

Location: Pittsburgh, PA

Date of renovation: 2018

Collision(s) since installation: **0 (as of July 2024)**

The National Aviary's Tropical Rainforest habitat uses Starphire Ultra-clear® glass with a Velour finish to prevent bird strikes and optimize natural daylighting. The result is a stunning, airy habitat. It's the perfect space for plants, visitors, and birds.



"Everything is really, really lush. It lends itself well to the birds that are in there, that sun themselves high up in the canopy. We got a tremendous amount of growth ... I'm frankly impressed and amazed at the amount of growth we have in there."

**Conor McGarvey, Director
of Buildings and Grounds,
National Aviary**

Glass Specs

Walker Textures® full-surface acid-etched glass

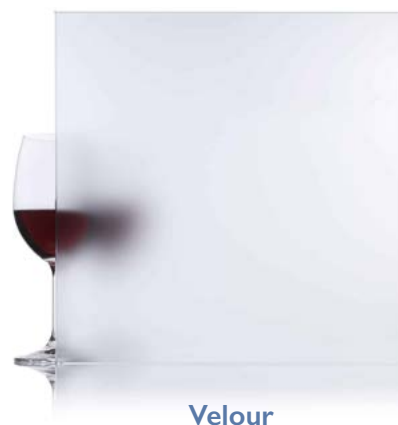
- 3mm Starphire Ultra-Clear® glass
- Velour finish on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 25

Energy / Performance

- VLT: 92%



Velour



Eastern USA

W.W. Knight Nature Preserve, Nature Center

Location: Perrysburg, OH

Date of renovation: 2018

Collision(s) since installation: **1 per year (average, as of August 2024)**

The W.W. Knight Nature Preserve in Perrysburg, OH includes 44 acres of trails, water activities, and bird watching. The preserve's Nature Center, surrounded by trees and wildlife, would be a risk for bird strikes if its windows weren't fitted with bird-friendly glass. A transparent UV-reflective pattern on surface one makes the windows safe for birds while being barely visible to visitors.



"The glass is the best product that we've found in terms of finding a balance between visitor enjoyment of viewing wildlife and preventing bird window strikes."

**Jim Witter, Program Manager,
Wood County Park District**

Glass Specs

AviProtek® T transparent bird-friendly glass

- 6mm clear glass
- UV-reflective pattern 701 (textured) on surface 1



Pattern 701



Central USA

Pikes Peak Summit Visitor Center

Location: Colorado Springs, CO

Date of construction: 2021

Collision(s) since installation: **0 (as of July 2023)**

Known as “America’s Mountain”, Pikes Peak has inspired visitors’ imaginations for centuries. Built at over 14,000’ elevation, it is one of the highest buildings in America and a beacon for sustainable development in challenging environments. Green strategies such as bird-friendly glazing, greywater reclamation, and energy-efficient windows helped the building meet the rigorous standards of the Living Building Challenge.



Awards include:

2021 CSI Environmental Stewardship Award, presented by the Construction Specifications Institute (CSI)

2022 PCI Design Awards, Special Award: Sustainable Design, presented by Precast/Prestressed Concrete Institute

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

- 6mm clear glass
- Custom pattern (horizontal stripe) on surface 1

Bird Deterrence

- ABC Threat Factor: 30

Energy / Performance

- Vitro Solarban® 70 on surface 2
- SHGC: 0.27
- VLT: 64%





Central USA

Cedar Hill Library

Location: Cedar Hill, TX

Date of construction: 2024

Collision(s) since installation: **0 (as of August 2026)**

PGAL describes this project as “a library within a park”, a nod to a nearby Texas State Park. Surrounded by trees, the design on the glass deliberately blurs the boundaries between indoor and outdoor spaces. It’s all about caring for birds and people at the same time. AviProtek® E bird-friendly glass with a low-e coating fulfills its role perfectly in this installation.



“Not only are the windows functioning beautifully, but they are a conversation piece and the community loves them!

We consider the Bird-Strike Glass that was installed as part of our new library’s construction as one of our greatest investments. Our building is largely made up of glass to bring nature and light in; so to say that we’ve had no bird collisions where this glass was installed is a huge win for the city and for the birds.”

**Correne Constantino, Library
Customer Experience
Manager, Cedar Hill Library**

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

- 6mm clear glass
- Pattern 211 (vertical stripes) on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 23

Energy / Performance

- Vitro Solarban® 70 on surface 2
- SHGC: 0.27
- VLT: 64%



Pattern 211



Central USA

Marquette University, David A. Straz, Jr., Hall

Location: Milwaukee, WI

Date of construction: 2024

Collision(s) since installation: **0 (as of June 2025)**

Marquette University's College of Nursing has a new home: the renovated David A. Straz, Jr., Hall. Following the university's commitment to protecting its local environment and ecosystems, the renovation included extensive use of AviProtek® T bird friendly glass with transparent UV-reflective markers on surface one. The glass deliver abundant natural light inside the complex.



"We do not have an official monitoring program in place, but I do usually hear about bird strikes on campus; I have not heard of any at the College of Nursing. So, good work!"

Kurt Young Binter,
Senior Project Manager,
Planning and Project
Delivery.

Glass Specs

AviProtek® T transparent bird-friendly glass

- 6mm clear glass
- Pattern 717 (5mm dots, 2" x 2") on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)

Energy / Performance

- Vitro Solarban® 70VT on surface 3
- SHGC: 0.33
- VLT: 60%



Pattern 717



Western USA

Shashi Hotel

Location: Mountain View, CA

Date of construction: 2021

Collision(s) since installation: **0 (as of July 2023)**

The Shashi Hotel is an upscale urban resort in the middle of Silicon Valley that caters to a fast-moving tech clientele. The hotel's blue-tinted glass and sleek profile fit perfectly among neighbouring buildings like the Google and Microsoft campuses and NASA's Ames Research Center. AviProtek® bird-friendly markers on surface one make the façade safer for birds, while a Solarban® 70 low-e coating on surface three reduces the building's cooling loads.



"I'm happy to report zero bird strikes. I think it's safe to say the bird-safe pattern works!"

Agustin Sanchez, Director of Engineering, Shashi Hotel

Glass Specs

AviProtek® bird-friendly glass

- 6mm Solarblue® glass, 6mm Optigray® glass
- Pattern 211 (vertical stripes) on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 23

Energy / Performance

- Vitro Solarban® 70 on surface 3
- SHGC: 0.26
- VLT: 41%



Pattern 211



Western USA

Oregon Zoo, Education Center

Location: Portland, OR

Date of construction: 2017

Collision(s) since installation: **0 (as of February 2022)**

The Oregon Zoo's Education Center punches above its weight in sustainability, performance and use of daylighting. Throughout the Center, Opsis Architecture used AviProtek® E bird-friendly glass in pattern 211. A low-e coating on the second surface of the glass minimizes energy waste and helped the project achieve LEED® Platinum status.



"There were some places where we didn't need the pattern at all, by percentages, so initially we left it out. The zoo came back and asked, 'Why wouldn't we put it everywhere? The staff in the admin offices feel like they've been left out because they don't have that in their area.'

"For them, this was a value that was so important, and they said, 'We want it everywhere.' "

Heather DeGrella, Sustainable Design Director, Opsis Architecture

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

- 6mm clear glass
- Pattern 211 (vertical stripes) on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 23

Energy / Performance

- Vitro Solarban® 70 on surface 2
- SHGC: 0.27
- VLT: 64%



Pattern 211



Western USA

City of Seattle's Cedar River Municipal Watershed

Location: North Bend, WA

Date of construction: 2018

Collision(s) since installation: **1 per year (average, as of July 2023)**

The City of Seattle's Cedar River Municipal Watershed Headquarters supports the work of Seattle Public Utilities to protect the ecological health of the region's water supply. AviProtek® bird-friendly glass with low-e coating on surface three contributed to this building's LEED® Gold certification.



This building is located in a densely wooded area heavily populated with wild birds, which increases the likelihood of bird-glass collisions.

The pattern used for the glazing is AviProtek® 221, a 2" x 4" dot pattern with 0.7% etch coverage. While this pattern reduces bird strikes significantly compared to regular glass, a 2" x 2" dot or linear pattern can be even more effective.

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

- 6mm clear glass
- Pattern 221 (5mm dots, 2" x 4") on surface 1

Bird Deterrence

- ABC Threat Factor: 25

Energy / Performance

- Vitro Solarban® 70 on surface 3
- SHGC: 0.36
- VLT: 64%





Western USA

Aquarium of the Pacific: Pacific Visions Expansion

Location: Long Beach, CA

Date of construction: 2019

Collision(s) since installation: **0 (as of May 2026)**

The expansion of the Pacific Visions Aquarium is a stunning space reminiscent of the ocean. On the exterior surface you can see the Velour finish in Starphire Ultra-Clear® glass laminated to other substrates, giving this building its signature sea-blue color.



"I am happy to report we have had no bird strikes with the triple layered glass system for the exterior of the Pacific Visions wing. Pacific Visions has proven to be entirely bird-friendly."

Fahria Qader,
Director of Architecture,
Aquarium of the Pacific

Glass Specs

Walker Textures® full-surface acid-etched glass

- 6mm Starphire Ultra-Clear® glass
- Velour finish on surface I

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 25



Velour



Eastern Canada

Markdale Hospital

Location: Markdale, ON

Date of construction: 2023

Collision(s) since installation: **0 (as of July 2024)**

The Markdale Hospital reflects a vision to develop a rural health center with a modern infrastructure providing care within the local community. The design responds to the challenges of a rural environment with the installation of AviProtek® bird friendly glass.



"I have been talking to the staff and we have had no known bird strikes.

The glass is doing a good job."

**Kevin Gilbert, Interim Manager,
Facilities Operations &
Maintenance**

Glass Specs

AviProtek® bird-friendly glass

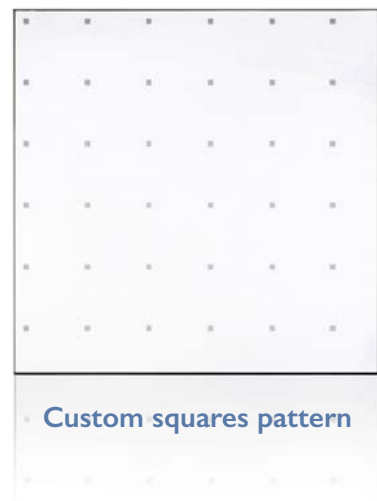
- 6mm Optigray® glass
- Custom pattern (5mm squares, 2" x 2") on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 30

Energy / Performance

- Vitro Solarban® 70 on surface 3
- SHGC: 0.27
- VLT: 46%





Eastern Canada

Villeroy Rest Area

Location: Villeroy, QC

Date of construction: 2020

Collision(s) since installation: **0 (as of July 2024)**

In July 2018, Quebec's Ministry of Transport announced a multi-year campaign to modernize the province's rest stops and service areas to provide greater comfort for travellers and more eco-friendly structures in four sites across the province. First-surface AviProtek® markers ensure maximum visibility for birds and helped the project achieve LEED® Silver certification.



The LEED® Innovation credit for bird deterrence is typically evaluated through calculations using Threat Factors assigned to various elements in the building's envelope. However, this credit was granted for the Villeroy rest area based on its compliance with the CSA A460:19 bird-friendly building design standard, which takes a prescriptive approach by specifying 2" x 2" spacing of visual markers.

Glass Specs

AviProtek® bird-friendly glass

- 6mm clear glass
- Custom pattern (horizontal stripe) on surface I

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 30





Eastern Canada

Cap Tourmente National Wildlife Area

Location: Saint-Joachim, QC

Date of retrofit: 2014

Collision(s) since installation: **3 in 10 years against AviProtek® windows (fewer than 0.4 per year)**

Before the retrofit, this building had 24 or more bird strikes per year.

The Cap Tourmente National Wildlife Area interpretation centre is an access point to over 180 species of Quebec wildlife, including more than 30 warbler species. Natural vegetation all around the building increased the potential for bird strikes, so it was essential that the glazing be bird-deterrent. AviProtek® patterns fit the bill perfectly.



Glass Specs

AviProtek® bird-friendly glass

- 6mm clear glass
- Patterns 211, 214 and custom stripes on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factors: 23-30



Pattern 211



Pattern 214



Custom linear pattern



Eastern Canada

OSSTF Headquarters

Location: Toronto, ON

Date of construction: 2023

Collision(s) since installation: **0 (as of June 2025)**

The OSSTF Headquarters is Moriyama Teshima's first completed mass-timber building. In fact, the whole project stands out as an exercise in sustainable and biophilic design. AviProtek® E windows contribute bird deterrence and energy efficiency to the design strategy.



Awards include:

Rethinking the Future

Awards: Office Building (Concept)
Category [Runner-Up] (2023)

LOOP Design Awards: Office Concept
Category (2023)

Architecture Press Release

**(APR), Global Future Design
Awards:** Office Building (Under
Construction) Category (2023)

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

- 6mm clear glass
- Pattern 215 (5mm dots, 2" x 2") on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 25

Energy / Performance

- Vitro Solarban® 90 on surface 2
- SHGC: 0.23
- VLT: 51%





Eastern Canada

115 Echo Drive

Location: Ottawa, ON

Date of construction: 2023

Collision(s) since installation: **0 (as of August 2024)**

This apartment building near the Rideau Canal features bird-friendly windows with AviProtek® pattern 226: scattered squares with 2" x 2" spacing. This is one of our newest AviProtek® patterns, and 115 Echo Drive is the first project to use it.



"I have confirmed with building management that there have been no bird strikes reported at 115 ECHO.

The acid-etched glass has been performing to date."

**Emily Meyers, Marketing Manager/
Planning Coordinator, Uniform
Urban Developments**

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

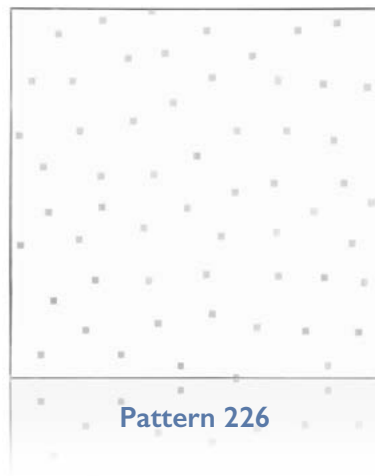
- 6mm clear glass
- Pattern 266 (5mm squares, scattered, 2" x 2") on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 25

Energy / Performance

- Vitro Solarban® 67 on surface 2
- SHGC: 0.29
- VLT: 54%





Central Canada

University of Saskatchewan, Collaborative Science Research Building

Location: Saskatoon, SK

Date of construction: 2018

Collision(s) since installation: **0 (as of February 2022)**

This research facility's curtain walls and walkways use bird-friendly AviProtek® glass with a Solarban® 70 coating. These high-performance glass products deter bird strikes and contribute toward this building's Two Green Globes certification for sustainable design and energy efficiency.



"As the building we were constructing was to focus primarily on research aimed toward life and natural sciences, we wanted to provide a facility that would not only support the work they do, but the principles that their research is dedicated to which involves the conservation, preservation and prevention of harm to the natural environment and those living in it."

Dr. Christy Morrissey, Associate Professor at U of Sask, with a specialty in health of wild bird populations.

Glass Specs

AviProtek® E energy-efficient bird-friendly glass

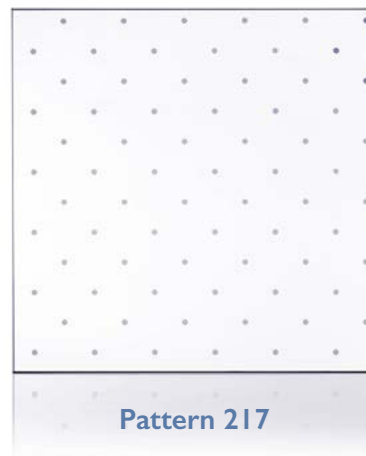
- 6mm clear glass
- Pattern 217 (5mm dots, 2" x 2") on surface 1

Bird Deterrence

- Meets CSA A460-19 standard (2x2 rule)
- ABC Threat Factor: 25

Energy / Performance

- Vitro Solarban® 70 on surface 2
- SHGC: 0.27
- VLT: 64%





Central Canada

Calgary Zoo, Land of Lemurs Exhibit

Location: Calgary, AB

Monitored since: 2017

Collision(s): **4 (as of August 2024). Fewer than 1 per year on average.**

The Calgary Zoo is on a journey “to become Canada’s leader in wildlife conservation”, and that goes beyond the species under its care. Buildings like the Land of Lemurs support this goal by deterring bird strikes and protecting local bird populations. UV-reflective markers mean that the building can be covered in glass, filled with natural daylight, and still be safe for birds.



“Land of Lemurs experiences fewer bird strikes than other habitats during the same period and our Animal Care, Health and Welfare team feels the glass is working well.”

Alison Archambault, Director of Brand & Engagement, Calgary Zoo

Glass Specs

AviProtek® T transparent bird-friendly glass

- 6mm clear glass
- UV-reflective pattern 714 (organic lines) on surface 1

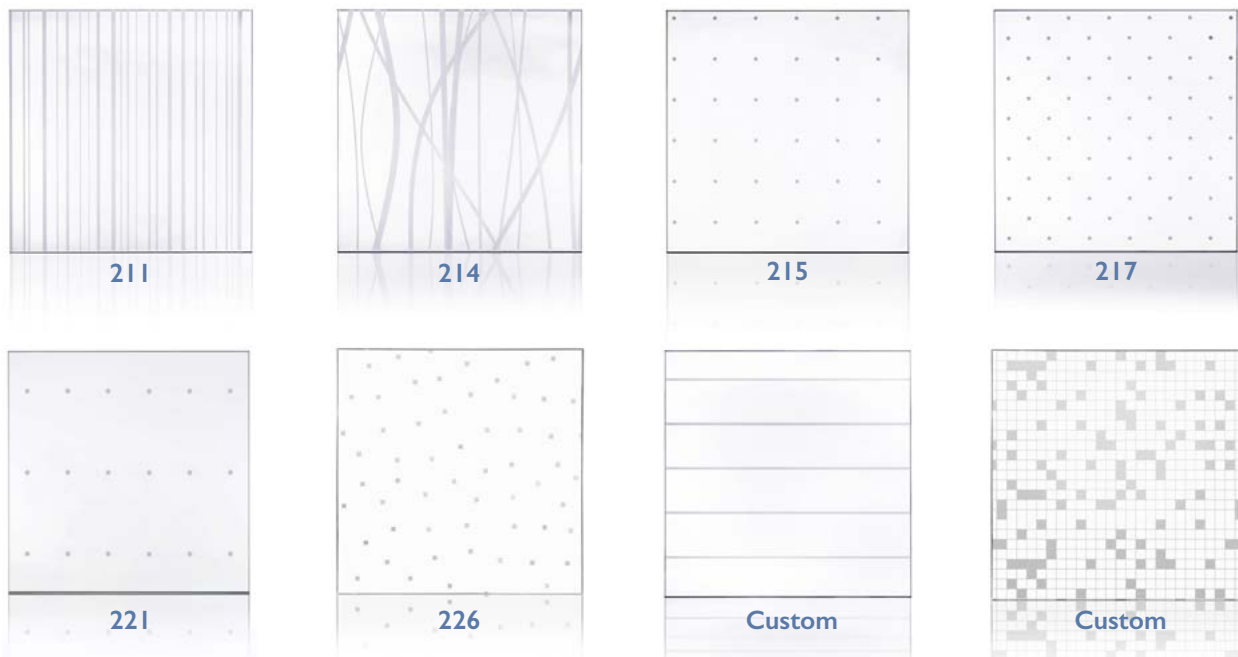




Bird-Friendly Product Options

There are many ways to build bird-safe windows into your design. This page shows the solutions used by projects within this document, but there are more options available with AviProtek® and Walker Textures® glass. You can see other bird-friendly solutions at gardnerwalker.com.

AviProtek® and AviProtek® E Patterns

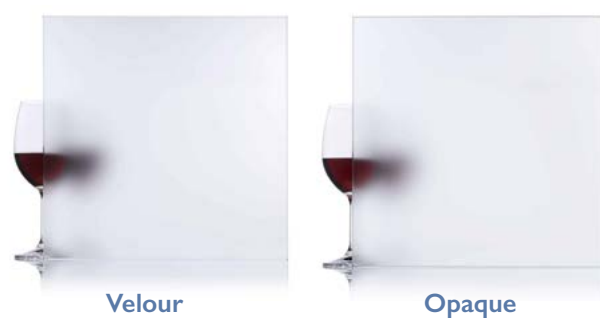


Custom patterns may be suitable for bird-friendly applications, provided they meet the criteria of the applicable bird-friendly standard or legislation.

AviProtek® T UV-Reflective Patterns



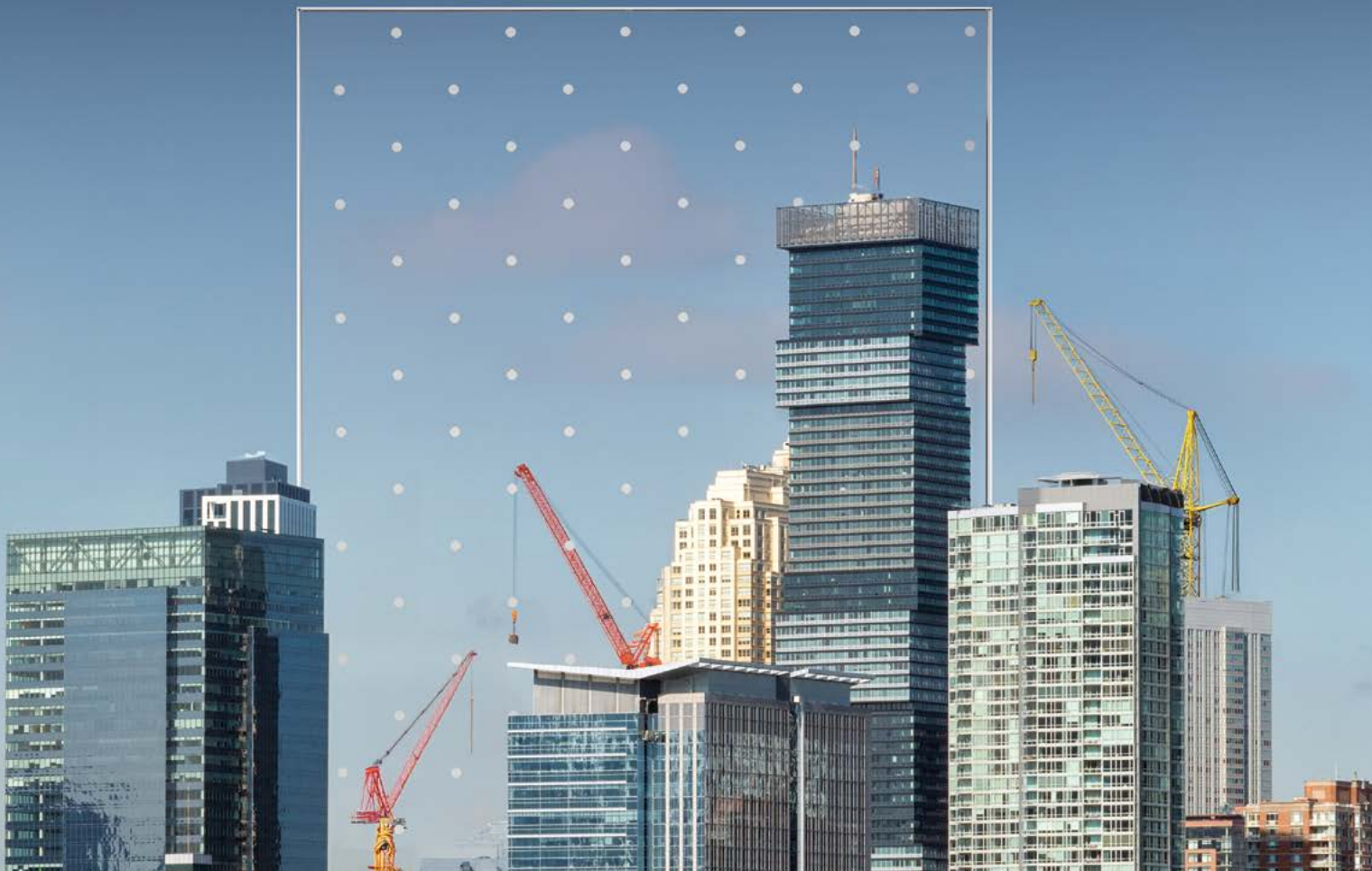
Walker Textures® Full-Surface Finishes





AviProtek®
TURBO

**Faster. Bigger. Better.
Bird-Friendly Glass**



AviProtek® Turbo is a bird-friendly glass that provides **shorter lead times, larger stock sheets** for bigger openings, and efficiency, backed by the trusted performance and quality of the industry-leading brand.



Our Architectural Managers

Gardner Walker's North American architectural managers are here to support you at every step of your design process. Please refer to the list below to find the architectural manager for your area.



Kent Yonker

KYonker@gardnerwalker.com
West Coast



John Myers

JMyers@gardnerwalker.com
US Southeast



Bobby Chestnut

BChestnut@gardnerwalker.com
Mid-Atlantic



Jacob Bowser

JBowser@gardnerwalker.com
Central Pennsylvania
and Upstate New York



Patrick Thornton

PThornton@gardnerwalker.com
Arizona, New Mexico, Oklahoma,
Texas and Louisiana



Gary Falco

GFalco@gardnerwalker.com
US Northeast,
including New York City



John E. Just

JJust@gardnerwalker.com
US North Central



Marc Deschamps

MDeschamps@gardnerwalker.com
Canada

Thank you for helping the glass industry work toward a safer, more sustainable built environment.

Don't miss a beat!

Subscribe to our monthly [newsletter](#).



The eGuide of Designing Exteriors with Acid-Etched Glass

Acid-etched glass is a durable, sustainable choice for exterior applications, offering excellent light transmittance and design flexibility. Our eGuide features AviProtek® products and highlights the many ways this material can enhance building exteriors.

You'll find key benefits, real-world case studies, and inspiring projects that show how acid-etched glass adds value and supports architectural goals across a variety of designs.





The AviProtek® eBooks of Bird-Friendly Glass

Bird-friendly building is a real and growing concern. Across North America, cities are implementing and strengthening their regulations for bird deterrent building. How to keep up with all of this? The AviProtek® eBooks of bird-friendly glass provide busy building professionals with guides to the latest bird deterrent legislation and sustainable building codes.



The eBooks are available in five regionally-adapted publications:

United States
New York City
Pacific Coast
Canada
Toronto

Ask your architectural manager for a link to download the document for your region.



Our AIA Accredited Courses

Our architectural directors are experts on acid-etched glass and mirror for use in interior, exterior and bird-friendly applications. Let us share our knowledge with you in our convenient “Lunch and Learn” context: on-site or online presentations from our team to yours.

Choose from our four specialized courses:

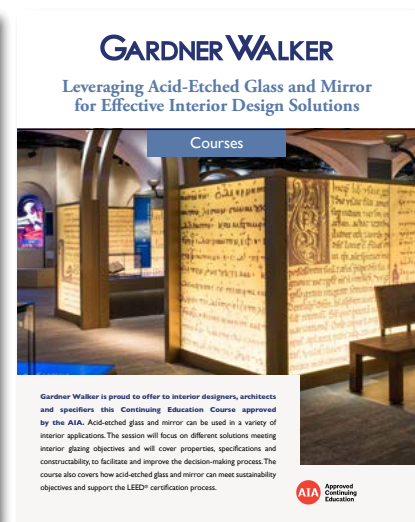
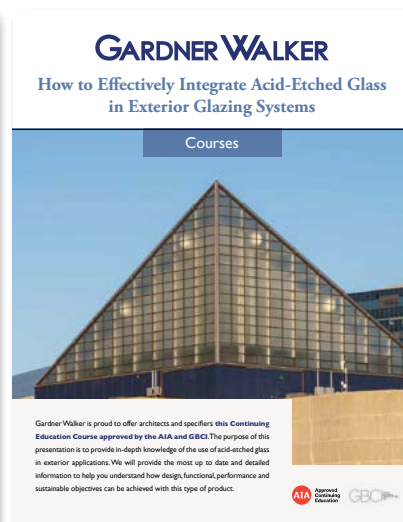
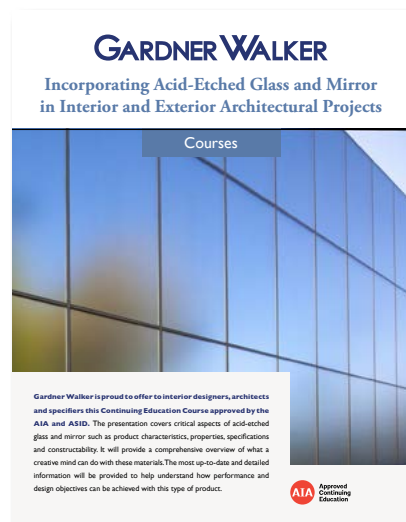
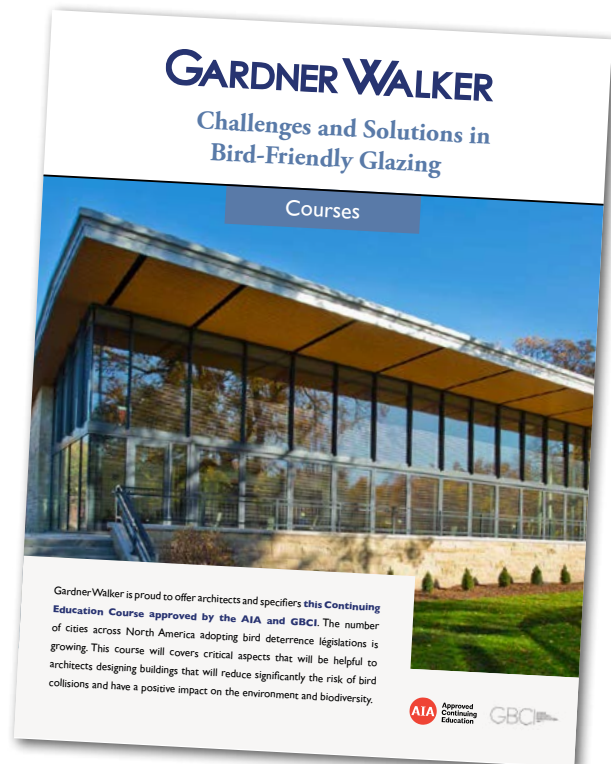
Bird-friendly glazing challenges and solutions

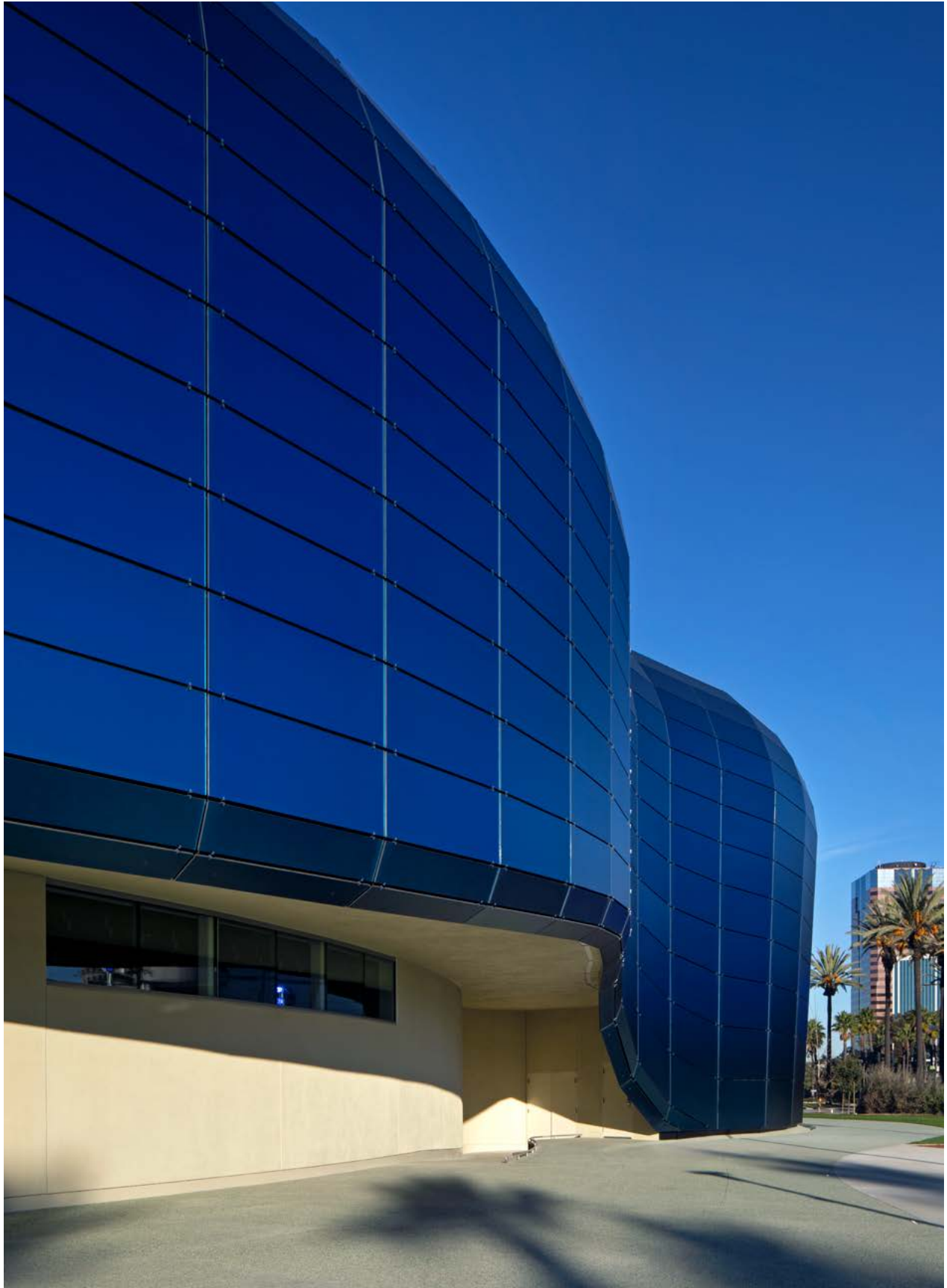
Using and specifying acid-etched glass or mirror in interior or exterior glass application

How to effectively integrate acid-etched glass in exterior glazing systems

How to use acid-etched glass and mirror to meet design intents in interior applications

To book a session, do not hesitate to contact one of our Architectural Managers or email us at info@gardnerwalker.com.





Montreal, QC North Wilkesboro, NC Huntsville, TX Indianapolis, IN

Email: info@gardnerwalker.com | Website: www.gardnerwalker.com

