



Strategies for Reducing Bird Collisions

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General Education: Problem/Solutions

Social Media
Letters to the Editor
Publications
Partnerships
Listserv
PR
Internet queries
Manufacturers



Birds Have Intrinsic and Cultural Value



Contribute Hundreds of Billions in Eco-services



Habitat Restoration



Pest Control

Bird Watching: 40 Billion Dollar Industry



Annual Mortality: North America

Collisions with	Date of reference	Mortality estimate
Buildings/glass	2014	300,000,000– 1 billion Probably closer to a billion
Cats	2013	1.5–3 billion

Homes and Low-rise Buildings



Collisions are not rare



Mostly songbirds:
migrating at night, colliding by day



Beacon effect
9/11 Memorial
in Lights

Houston Metropolitan Area
10,000 Square Miles:
Larger than State of New Jersey



Look Where You're Going?



People Can't See Glass



Birds Don't Learn the Concept 'Glass'



Glass or No Glass?

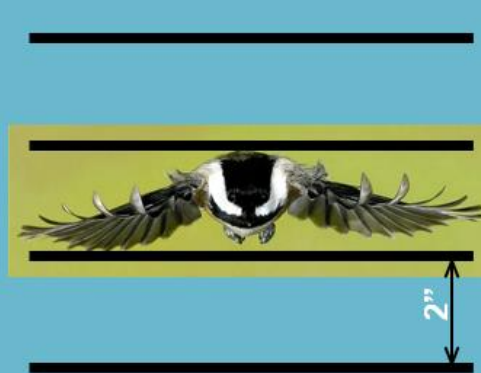


How to Stop Collisions

- 2 or 3D patterns
- Proper spacing
- Birds can see far enough
 - away to change course

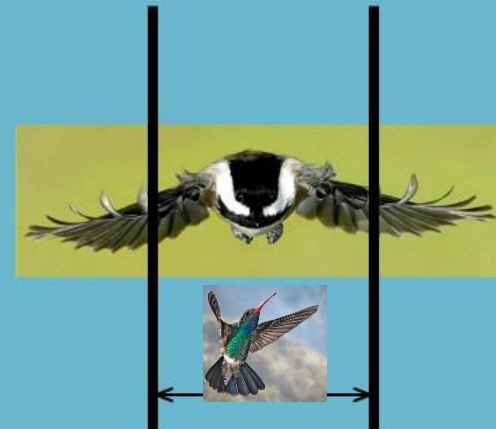
Birds have a very accurate sense of body shape and size

SOLUTIONS - 2" / 4" RULE



Horizontal lines with a maximum spacing of 2"

Pattern elements at least 1/8"



Vertical lines with a maximum spacing of 4"

Educating Architects



ABC tunnel testing set up at Powdermill



Intuit HQ



Above 20-40% Glass Buildings Are Less Energy Efficient



GSA: Regional Field Office, Houston, TX

Architect: Page Southerland Page



Vancouver University



SJ Quinney School of Law, Salt Lake City, UT SmithGroup



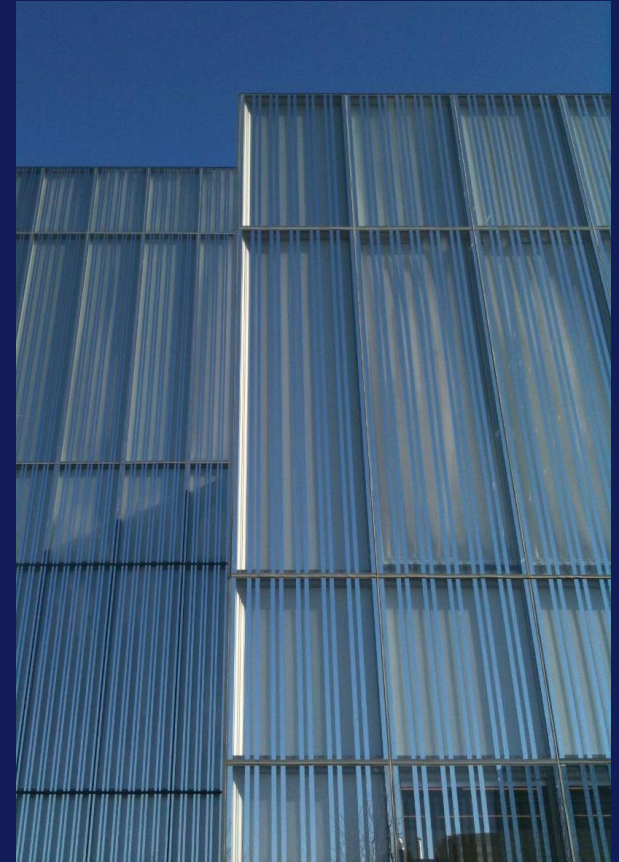
Jacob Javits Convention Center retrofit

FX Collaborative



Anchorage Museum

David Chipperfield



Retrofits




Legislation

Google's New Home at Block 185 is Downtown Austin's Next Signature Tower

[James Rambin](#) March 26, 2019 [Comment](#)



Image: [Pelli Clarke Pelli Architects](#) / [STG Design](#) / [Trammell Crow Company](#)

[Block 185](#) is an all-star tower. This 35-floor office building by national developer **Trammell Crow Company**, which broke ground last month in downtown Austin, is already leased in full by tech juggernaut **Google**, and features a striking sail-like design courtesy of “starchitecture” outfit **Pelli Clarke Pelli Architects**.  (Ctrl) -

Legislation, Ordinances and Guidelines

San Francisco, CA: Standards for Bird-safe Buildings
Oakland, CA: Bird Safety Measures
Alameda, CA
San Jose, CA
Menlo Park, CA
Sunnyvale, CA: Standards for Bird-safe Buildings
Palo Alto, CA
Richmond, CA
Minnesota: Buildings, Benchmarks and Beyond Maryland
Highland Park, IL new public buildings
Cook County, IL (unincorporated)
Barrington, IL
Toronto, Canada: Bird-friendly Development Standards
Ontario, Canada: Environmental Protection Act, Species at Risk Act
Markham, Ontario
Portland, OR
Calgary, Canada

IN PROGRESS

Bird-safe Buildings Act, Federal
State of California, CalGreen
Berkeley, CA
Santa Cruz, CA
Chicago, IL
Washington, DC DOEE Green Code
Arlington, VA
State of Maryland
Canada, standard code for
provinces
New York City and State

Questions?