architectural
glass
"Only SunGlass® gave me the look we wanted with the performance we needed."

— Wayne Dunkelberger, AIA, Baker Barrios

Oldcastle BuildingEnvelope™
SunGlass® was the perfect fit for what has been called 'The Greenest Building in Downtown Orlando.' We are proud of how our LEED® design contributes to the Orlando landscape.

— Wayne Dunkelberger
Baker Barrios Architects

CHALLENGE

Conceived with the commitment of the Orlando Utilities Commission to be environmentally responsible, the vision for this 9-story facility was to meet the Gold-level requirements for LEED® certification, using 24% less energy and 40% less water than a traditional structure.

SOLUTION

Solar heat gain was minimized with Oldcastle BuildingEnvelope™ SunGlass®, which reduced cooling heat gain yet has high visible light transmittance and decreases the need for light fixtures around the perimeter offices. This architectural glass also reinforced the layered concept of the facades.

SUNGLASS®

SunGlass® was the perfect fit for the Orlando Utilities project as it provides architects with a fresh, neutral-color, non-reflective glass product that delivers unmatched form and function for today’s most challenging designs.

ENERGY SAVINGS

The Light to Solar Gain (LSG) value of SunGlass® far outperforms high-performance solar control Low-E glass. The higher the LSG value, the better the glass performs at transmitting daylight and reducing heat gain from the sun.

why specify us?

LIMITLESS PRODUCT RANGE

We offer the most comprehensive collection of architectural glass in North America. And all of our architectural glass seamlessly integrates with our curtain wall, windows and entrance doors.

ENERGY EFFICIENT

Exclusives such as SunGlass® can dramatically reduce energy costs and HVAC equipment expense.

DECORATIVE

i-Glass™ decorative glass allows designers to create truly one-of-a-kind looks.

STRUCTURAL

Our exclusives include Stackwall®, Finwall™ and Vision Vue® structural glass systems.

LAMINATED SAFETY

Exclusives such as SunGlass® can dramatically reduce energy costs and HVAC equipment expense.

ORDER TRACKING

e-Track™ our online order tracking system, puts you in control of where and when your glass will arrive at their destination.

TESTING

Oldcastle BuildingEnvelope™ continually invests in technologies that make your job easier and buildings better.

Orlando Utilities Commission
Orlando, FL
Innovations in Glass
If it is happening in glass, chances are we are at the forefront. With innovations such as SunGlass® offering unprecedented solar performance and our new i-Glass™ decorative glass where you can imprint any image you can imagine on glass for a truly unique look.

Peace-of-Mind Dealing With Global Powerhouse
We are a part of one of the world’s top five international building products companies, and we are the largest in North America. So you can be sure we’ll be around if and when you have a problem.

Hundreds of the Best Project and Technical Assistance Personnel
From your local sales and support people to some of the most experienced engineers and project managers—the industry’s best people are here to help you.

The Best Online Resource in the Industry
The industry’s best online resource according to Glass Magazine, our website is packed with all of the information you need to select, track, specify, even calculate LEED® points for our products.

Track Your Order Online Anytime
Oldcastle BuildingEnvelope™ is committed to investing in technologies that make your job and doing business with us easier. e-Track™ is our exclusive online tracking software that allows you to know exactly where your glass is, from the moment you place the order.

RBC Centre, Toronto, ON
Architect: Kohn Pedersen Fox Associates, PC and BregmanHamann Architects
Architectural Glass by Oldcastle BuildingEnvelope™

From shower doors, to storefronts, to skyscrapers and everything in between.

Whether you need one piece of replacement glass in 24 hours or 100,000 square feet of solar control glass for a monumental project, only Oldcastle BuildingEnvelope™ is uniquely structured to handle both seamlessly. Our strategically located plants allow us to satisfy not only your everyday architectural glass needs, but places us in the unique position to also successfully service large monumental projects throughout North America. And our dozens of local manufacturing plants handle smaller scale projects on a daily basis. The benefit? You will never hear from us that your project is caught behind someone’s skyscrapers. We have some of the best engineering minds in the industry for you to rely on, as well as experienced and knowledgeable local representation to help you with your daily needs. Add to that, a client list on monumental glass projects that reads like a who’s who in architecture. From Vinoly, Foster, Kohn Pedersen Fox to Skidmore Owings and Merrill, HOK and many others, our glass graces some of the most highly regarded architecture. What’s more, we offer the most comprehensive collection of glazing products available anywhere. From high-performance products such as our exclusive ArmorProtect® series of security glazing and StormGlass® hurricane-resistant glazing to highly visual design products such as StackWall®, the industry standard for structural glass wall systems and new i-Glass™ decorative glass for one-of-a-kind custom effects. So whether your next project is one story or 100, we have the glass products you want, when and where you need them.
**PROJECT OVERVIEW:** This 600,000 square foot complex features a 14-story limestone-clad tower with a 2-story conference and visitor center that satisfies the need for functionality and security as a shining fortress on a hill. Located in the center of the city, employees and visitors are inspired by sweeping views of city landmarks through laminated glass by Oldcastle BuildingEnvelope™.

**PROJECT DETAILS**
- Location: Dallas, TX
- Architect: FKP Architects
- Product: Insulating Glass: PPG Vistacool Azuria™ Reflective #2 over PPG Solarban® #50 Low-E #3, PPG Solarban® #50 Low-E #2 over PPG Azuria™ high-performance tint, PPG Solarban® #50 Low-E #2 over Clear Laminated Glass

**PROJECT Overview:** This 8-story Ambulatory Surgical Outpatient Building provides 209,000 square feet of space for health care services to help meet the needs of the City of Dallas and its citizens. Oldcastle BuildingEnvelope™ insulating glass units are integral to the construction of this facility. Many different types of glass are featured in this center, including a custom silk-screened pattern on insulating Low-E glass.

**PROJECT DETAILS**
- Location: Kansas City, MO
- Architect: FKP Architects
- Product: Insulating Laminated: Guardian SunGuard SuperNeutral™ 68 on Clear Low-E #2 over Clear Laminated Glass

**PROJECT OVERVIEW:** This 8-story Ambulatory Surgical Outpatient Building provides 209,000 square feet of space for health care services to help meet the needs of the City of Dallas and its citizens. Oldcastle BuildingEnvelope™ insulating glass units are integral to the construction of this facility. Many different types of glass are featured in this center, including a custom silk-screened pattern on insulating Low-E glass.

**PROJECT DETAILS**
- Location: Dallas, TX
- Architect: FKP Architects
- Product: Insulating Glass: Versakul™ Blue over PPG Solarban® 60 on Clear Low-E #3, PPG Solarban® 60 on Clear Low-E #3 over Clear Custom Color and Pattern Silk-screened #2 over PPG Solarban® 60 on Clear Low-E #3
PROJECT OVERVIEW: Located on a 24-acre former brownfield site, this 3-story administration building is part of the corporate headquarters and technology center for a leading global automotive supplier. Its cantilevering structure and translucent glass curtain wall are major features of this 105,000 square foot building. Two-sided silicone structural glazing is used throughout this office building, conveying a transparent and productive corporate setting.

PROJECT DETAILS
Location: Southfield, MI
Product: Insulating Glass: PPG Solarban® 60 on Clear Low-E #2 over Clear, PPG Solarban® 60 on Clear Low-E #2 over White Laminated, PPG Solarban® 60 on Clear Low-E #2 over Custom Gradient Silk-screened, PPG Solarban® 60 on Clear Low-E #2 over Spandrel

PROJECT OVERVIEW: A marvel of glass and steel, this skybridge required glass that was thermally efficient, translucent and safe. Composed of glass inset panels, the floor supports heavy foot traffic while providing a soft translucent glow to the streets below. Montage® by Oldcastle BuildingEnvelope™ has proven to be both strong and aesthetically appealing for this important landmark.

PROJECT DETAILS
Location: Denver, CO
Architect: Holabird & Root and Neumann Monson, P.C.
Product: Insulating Glass: Pilkington EverGreen™ over Clear; Laminated: Multiply Laminated Glass with Non-alkaline Ceramic Frit #1 and SatinEtch Ceramics; Frit #5

PROJECT OVERVIEW: Located at West 25th Street in Manhattan, this 20-story condominium commercial gallery building showcases the extraordinary versatility of concrete and glass. With high ceilings and flexible open spaces, the units in this 110,000 square foot building offer panoramic views to the south and west. Architectural glass by Oldcastle BuildingEnvelope™ served a critical role in achieving this engineering masterpiece.

PROJECT DETAILS
Location: New York, NY
Architect: Kossar & Garry Architects
Product: Insulating Glass: Pilkington Clear Eclipse Advantage™ Radiant Low-E #2 over PPG Solarban® 60 on Clear Low-E #3

PROJECT OVERVIEW: Achieving the distinction of being Alabama’s tallest residential building, Turquoise Place offers 400 luxury condominiums housed within two towers that rise up 370 feet. This beachfront vacation resort was designed for residents to enjoy magnificent views of the white sandy beaches and turquoise blue waters of the Gulf of Mexico. The resort is encased in a unique and appropriate shimmering turquoise glass facade by Oldcastle BuildingEnvelope™.

PROJECT DETAILS
Location: Orange Beach, AL
Architect: Forrest Daniel & Associates
Product: Insulating Glass: Versalux™ Green 2000T over Clear

PROJECT OVERVIEW: Located on a 24-acre former brownfield site, this 3-story administration building is part of the corporate headquarters and technology center for a leading global automotive supplier. Its cantilevering structure and translucent glass curtain wall are major features of this 105,000 square foot building. Two-sided silicone structural glazing is used throughout this office building, conveying a transparent and productive corporate setting.

PROJECT DETAILS
Location: Southfield, MI
Product: Insulating Glass: PPG Solarban® 60 on Clear Low-E #2 over Clear, PPG Solarban® 60 on Clear Low-E #2 over White Laminated, PPG Solarban® 60 on Clear Low-E #2 over Custom Gradient Silk-screened, PPG Solarban® 60 on Clear Low-E #2 over Spandrel
Stackwall®
This exclusive structural wall system with glass panels includes the facade and vertical glass mullions to resist horizontal forces.

Finwall®
For openings <16’ high, exterior flush glass glazed wall uses interior glass fins (not metal); monolithic or insulating glass facade. For a more transparent look without metal mullions, these systems allow for bolted fittings of glass; popular in vertical walls & canopy applications.

Bentemp®
This tempered or heat-strengthened glass that is bent during the heat-treating process to a specified radius allows for creative design.

Structural Glass

SunGlass®
High-performance Solar Control Low-E Glass allows 50% visible light transmission while providing a low 0.25 Solar Heat Gain Coefficient.

Light to Solar Gain (LSG)

<table>
<thead>
<tr>
<th>Glass Type</th>
<th>LSG Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clear Insulating Glass Unit</td>
<td>1.13</td>
</tr>
<tr>
<td>High-Performance Low-E Glass</td>
<td>1.44</td>
</tr>
<tr>
<td>SunGlass®</td>
<td>2.00</td>
</tr>
</tbody>
</table>

The Light to Solar Gain (LSG) value of SunGlass® superiors typical high-performance solar control Low-E glasses. The higher the LSG value, the better the glass performs at transmitting daylight and reducing heat gain from the sun.

Heat-strengthened & Tempered
For more resistance to impact, wind loads and thermal stress breakage, annealed glass is heated and rapidly air-cooled.

Heat-treated Product Chart

<table>
<thead>
<tr>
<th>Products</th>
<th>Strength vs. Annanled</th>
<th>Specifications / Standards</th>
<th>Products Attributes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heat-strengthened</td>
<td>2x</td>
<td>ASTM C1048</td>
<td>Increased resistance to thermal and wind loads</td>
</tr>
<tr>
<td>Fully Tempered</td>
<td>4x</td>
<td>ASTM C1048, CPSC: 16 CFR-1201, ANSI 297.1 CAN/CGSB-12.1</td>
<td>Breaks into small particles, meeting safety glazing requirements</td>
</tr>
</tbody>
</table>

Decorative Glass

i-Glass®
Complex and multi-color digital images printed on heat-treated glass for monolithic, laminated and insulating glass applications.

Specifications
- Applications: Interior, Exterior Glass
- Minimum Size: 12” x 12”
- Maximum Size: 36” x 144”
- Print Resolution: 360 dpi
- File Formats: PDF, PS, AI, EPS, TIFF, BMP and JPEG

Silk-Screened & Spandrel
Available, please visit oldcastlebe.com for more information.

Montage®
Architects and designers are able to create unique custom effects by combining a variety of standard designs and technologies.

Features + Options
- Allows for combining textured patterned glass, custom-colored coatings & designer silk-screened patterns, even unique rice paper designs
- Custom-colored Coatings: Choose from 12 designer colors or create a custom color
- Silk-screened: 12 Standard silk-screened designs are available
- Rice Paper: Six designer rice paper patterns are available
- Textured Patterned Glass: A choice of standard designer textures are available

Energy Efficient

Stackwall®
For a floor-loaded system up to 42’ height or a suspended-fin system up to 60’ plus seismic loading, glass plates are joined to the fins with metal patch or “spider” fittings and structural silicone. Metal framing (revealed or recessed) is used at the perimeter only.

Finwall®
For openings <16’ high, exterior flush glass glazed wall uses interior glass fins (not metal); monolithic or insulating glass facade.

Point-Support
For a more transparent look without metal mullions, these systems allow for bolted fittings of glass; popular in vertical walls & canopy applications.

Bentemp®
This tempered or heat-strengthened glass that is bent during the heat-treating process to a specified radius allows for creative design.

Characteristics
- Bentemp® is offered in a large variety of glass products, including clear, low iron, Low-E, standard or high-performance (spectrally selective) tints and reflectives. Although Bentemp® glass is usually specified as fully-tempered, Bentemp® can also be heat-strengthened.

Size Requirements

<table>
<thead>
<tr>
<th>Glass Thickness</th>
<th>Min. Inside Radius</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/16” (1.6mm)</td>
<td>30” (762mm)</td>
</tr>
<tr>
<td>3/32” (1.9mm)</td>
<td>36” (914mm)</td>
</tr>
<tr>
<td>3/16” (4.8mm)</td>
<td>36” (914mm)</td>
</tr>
<tr>
<td>1/8” (3.2mm)</td>
<td>100” (2550mm)</td>
</tr>
<tr>
<td>3/32” (1.9mm)</td>
<td>108” (2750mm)</td>
</tr>
</tbody>
</table>

For more information on these glass products visit oldcastlebe.com
ArmorResist® With multiple layers of glass and PVB bonded as a monolithic unit, this multi-ply laminated glass minimizes the spall & meets UL 752 needs.

Using PVB and/or a Thermo Plastic Urethane as the interlayer, this combines glass and polycarbonate for 250 times the impact strength.

ArmorProtect® Plus Resistant to prolonged physical attacks, ArmorProtect® Plus security glazing provides maximum resistance in jails & other settings.

For more information on these glass products visit: oldcastlebe.com
As the leading supplier of architectural glass, Oldcastle BuildingEnvelope™ offers the most comprehensive portfolio of products specified to close the building envelope. Our products include custom-engineered curtain wall and window wall, architectural windows, storefront systems, doors, skylights and architectural glass.