

# institutional project case studies



Entrances • Storefronts • Curtain Walls • Windows • Hurricane Resistant Systems  
Blast Resistant Systems • Ribbon Walls • Sun Control Products



United States  
**ALUMINUM**



**ENL**

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# Building Possibilities

At United States Aluminum, we are working with the architectural community all across North America to develop the best product solutions available to the Educational, Medical, and Government construction sectors. Architects, Engineers, Specification Consultants, Municipalities Manufacturers, and Building Owners are all contributing to our effort to provide products for successful institutional buildings.

The green building revolution is transforming society's understanding of how we interact with the built environment. The United States Green Building Council, a national non-profit organization, is setting the standard for green building with their LEED® (Leadership in Energy and Environmental Design) rating system. The LEED® Rating System has been widely embraced, both nationally and internationally, as the green building design standard. The Canadian Green Building Council's LEED® rating system is very similar to the USGBC system. As the list of municipalities requiring LEED® certification grows, the construction industry is looking more critically than ever at each product that goes into their buildings.

A primary concern regarding green building is how it affects overall project cost. The 2006 Davis Langdon study 'Cost of Green Revisited' addresses this concern with its conclusion, "There is no significant difference in average costs for green buildings as compared to non-green buildings. Many project teams are building green buildings with little or no added cost, and with budgets well within the cost range of non-green buildings with



Hollenbeck Police Station With Series 3250 Curtain Wall and Custom Decorative Bullet Resistant Glass Panels

similar programs.” As a fenestration products manufacturer, United States Aluminum has played an integral role in supporting LEED® construction. Inherently, aluminum products lend themselves well to LEED® projects due to the inert nature of aluminum and its recyclable quality. Two of the most common credits our products contribute to are LEED® Materials and Resources Credit 4 Recycled Content and LEED® Indoor Environmental Quality Credit 4.2 Low Emitting Materials. Our standard extrusions feature a high recycled content, and inert Volatile Organic Compounds (VOC) anodized and painted finishes.

The following pages of this brochure will demonstrate how for more than fifty years United States Aluminum has collaborated with the design and construction industry to provide the right product solutions for outstanding projects across North America.





# EDUCATION

## Series 3600 Sunshade 1

This system reduces direct UV exposure to the glazed opening, while allowing for views of the exterior and ambient light.

## Series 3250 Curtain 2

Wall This exterior glazed system represents an optimal blend of thermal performance, structural integrity, flexibility, and economic advantage.

## 3 LEED® EQ 8.2 Daylight & Views

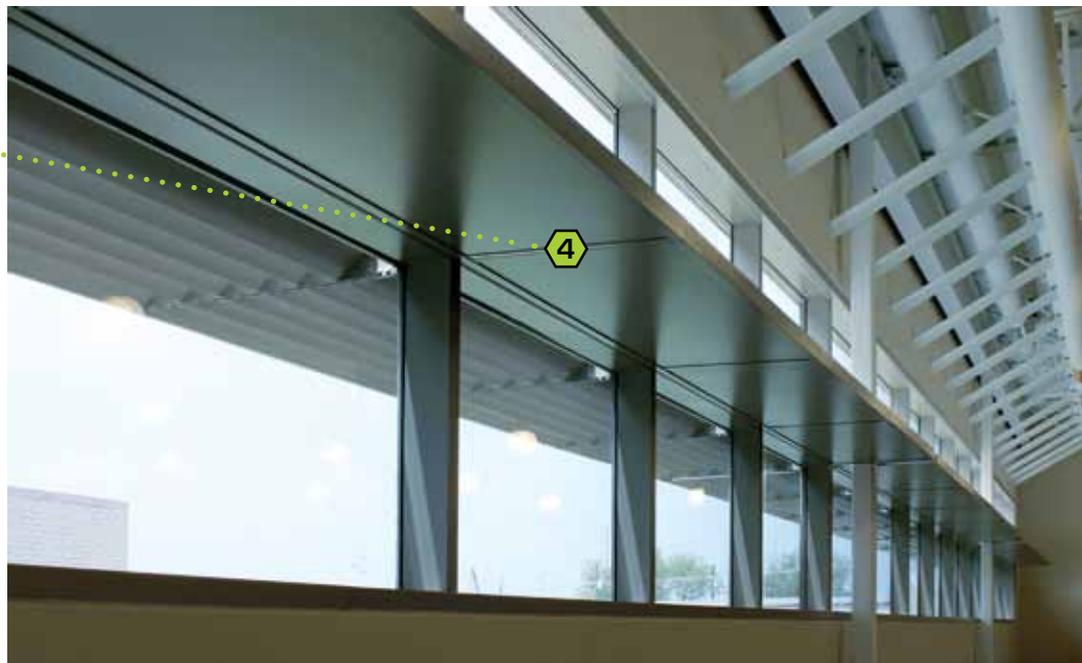
- Provide for the building occupants a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.

## Custom Light Shelf 4

One method of getting daylight further into a structure while mitigating heat gain is to employ a light shelf system that reflects sunlight into the building. The Richland College project used a combination of the Series 3600 Sunshade on the exterior and a custom designed light shelf on the interior to help the project qualify for the LEED® IEQ 8.2 Daylight & Views Credit.

top & right  
**Richland College**  
**Garland Campus**  
Garland, TX

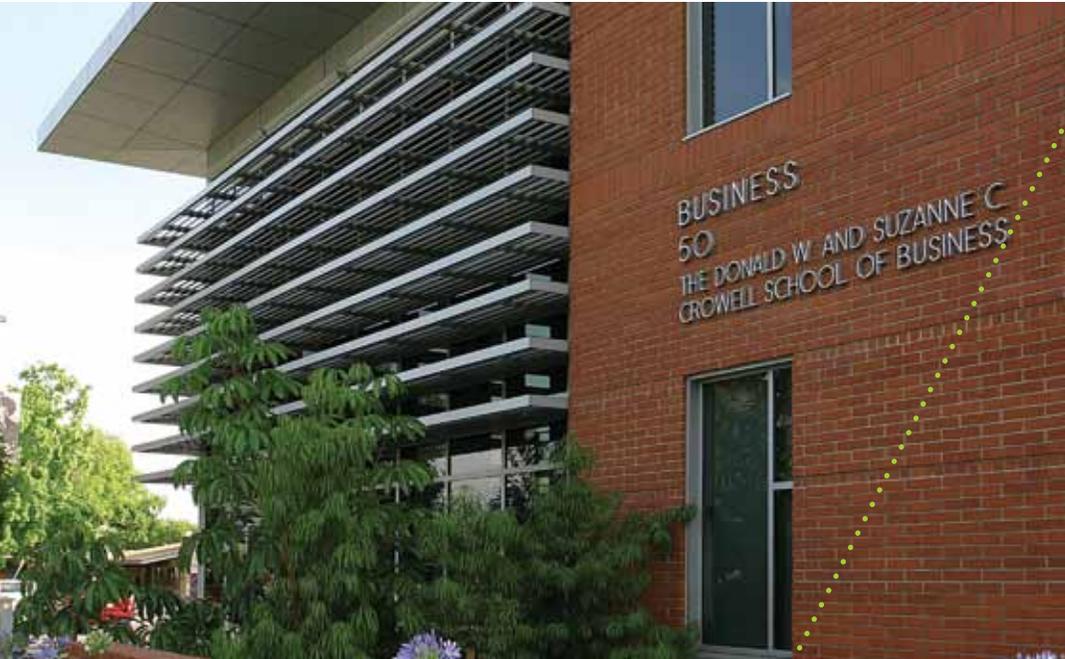
opposite page  
**Georgia State University**  
**Alpharetta Center**  
Alpharetta, GA



Gone are the days when schools were designed with minimal fenestration in accordance with the now discarded theory that windows were a distraction to a student's studies. The 1999 landmark PG&E study 'Daylighting In Schools' found that students with the most daylighting in their classrooms progressed 20 percent faster on math tests and 26 percent faster on reading tests in one year than students in classrooms with the least daylight.

Daylighting is just one feature that resulted in the LEED®-Gold Certified Richland College being chosen, as one of only 12 higher education institutions across America, to participate in the Rocky Mountain Institute's (RMI) project to Accelerate Campus Climate Change Initiatives.

# EDUCATION



**1 LEED® MR Credit 4:  
Recycled Content:**  
The Albany Park Multicultural Academy obtained this credit by using materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project.

The aluminum billet used in our extrusions contain on average 48% pre-consumer and 30% post-consumer material; resulting in a total of 54% applicable recycled content value.

**2 Series 800 Durafront  
Entrances**  
Ideal for high traffic conditions, these medium stile Durafront Doors and Frames are fabricated from tubular aluminum extrusions with heavy-duty wall thicknesses to withstand everything from the somber entries in September to the frenzied exits in June. The Durafront entrance is available in a Wide Stile entrance as the Series 850 Durafront Entrance.

Reducing truancy – one school at a time. United States Aluminum is helping architects realize the next generation of environmentally responsible school designs that kids don't mind walking to . . . uphill both ways . . . in the snow.

In support of Mayor Daley's effort to make Chicago the most environmentally friendly city in the nation, Cannon Design specified the Series 3250 Curtain Wall and Series 800 Durafront Medium Stile Entrances for the Albany Park Multicultural Academy. The large amount of recycled aluminum material in these systems helped the LEED® Certified school obtain the LEED® MR Credit 4.

top  
**Biola University  
Crowell School of Business**  
La Mirada, CA

bottom  
**Albany Park Multicultural  
Academy**  
Chicago, IL

# HEALTHCARE

1



2

2

3



Architectural firm JBHM Architects carved The Hope Center from the left over shell of a long vacant grocery store; effectively turning a retail casualty into an AIA award winning cancer treatment center.

“One of the problems you have with a big box is that you don’t have any windows,” architect Michael Grey Jones said. “Getting natural light in the building is important for people. ... So in our design approach, we sacrificed square footage and cut a couple of bays out of the building to allow an interior courtyard ... so we could let light in and let views out.”

# HEALTHCARE



**1 BG Window Wall**  
Our BG Systems are vertically butt glazed horizontal ribbon window systems that are ideal for low to high rise applications. BG and BT Systems are engineered for continuous long runs of glass, creating a monolithic appearance. Intermediate horizontals can be added for accenting horizontal bands. The BT series features the Poly-Aluminizer™ and Struct-Link™ thermal break technology.



**2 OS-2 Window Wall**  
OS-2 framing offers a shallow face reveal creating a flush exterior appearance. OS-2 is designed for labor saving stacking type installations and may be interior or exterior glazed using "top load" E.P.D.M. glazing gaskets. Internal water deflectors at intersections of intermediate horizontal and vertical mullions allow infiltrated water to be drained into a continuous sill gutter and weeped to the exterior. Optional vertical mullions for structural silicone glazing are available.

The United States Aluminum entrances and framing systems specified and used for institutional projects across North America are field proven, tried and true systems that have been continuously improved over the years. Our most commonly used systems have been in use for decades; Entrance systems like the Series 250/400/550 Entrances and the Durafront Entrances, Storefront systems like Series 400/450/451 and the Thermal IT451, Curtain Wall systems like Series 3250 and Series 4500, and Window Wall Systems like the BG System and the OS-2 System.

top  
**Ernest D Wells**  
**Medical Office Building**  
Whittier, CA

bottom  
**Sierra Health Services**  
Las Vegas, NV

# GOVERNMENT

## Series 7200 Windows ①

The full facade of Series 3250 Curtain Wall with Series 7200 Windows give the Surrey City Hall a grand view of the spectacular Surrey, British Columbia landscape. The Series 7200 Windows feature tubular members that are mitered, reinforced with corner keys, and hydraulically crimped to withstand years of civic duty.

## LEED® EQ 6.2 ②

### Controllability of Systems: Thermal Comfort

Provide a high level of thermal comfort system control by individual occupants or by specific groups in multi-occupant spaces (i.e. classrooms or conference areas) to promote the productivity, comfort and well-being of building occupants.

## Series 4500 Curtain Wall ③

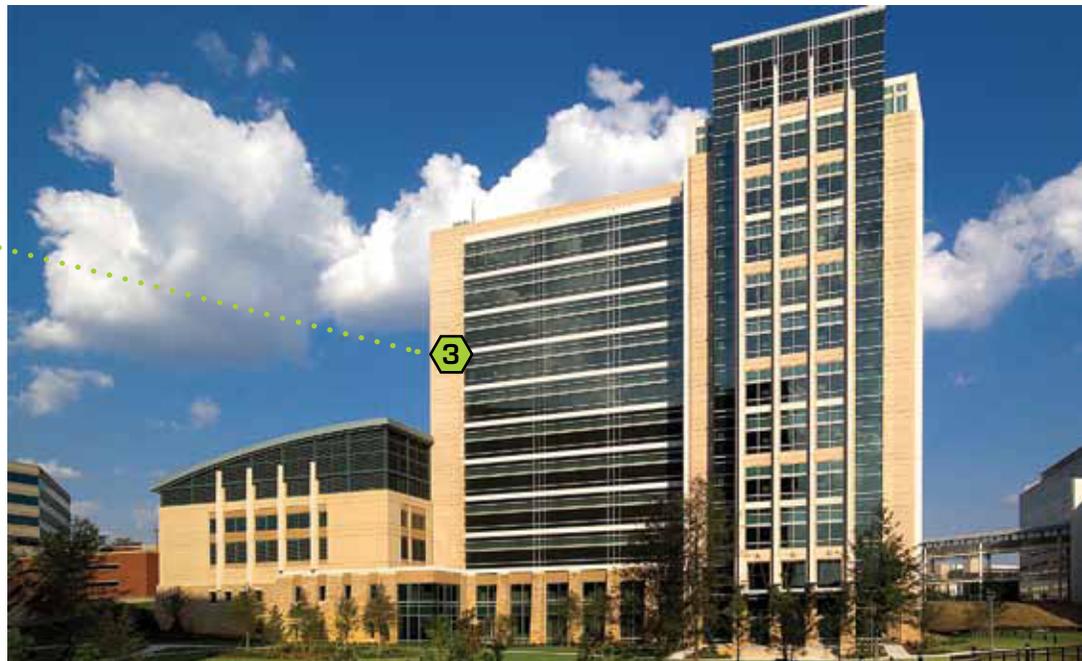
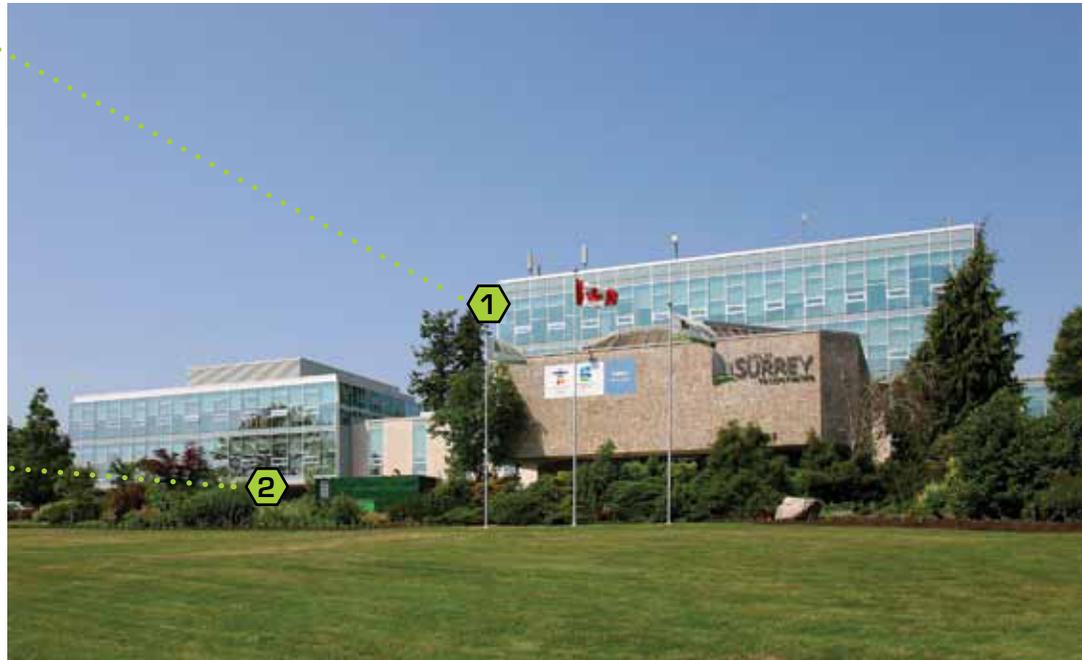
The Series 4500 Curtain Wall is a high performance system with enhanced thermal performance, structural values and features the UNIfash™ integral, extruded flashing to control moisture. The exterior glazed curtain wall is capable of a two-tone finish.

top

**Surrey City Hall**  
Surrey, BC

bottom

**Centers for Disease Control Building 18**  
Atlanta, GA



The 450,000-sf, 12-story Centers for Disease Control Emerging Infectious Diseases Laboratory facility including Vivarium, Bio-Safety Level-4 laboratories, and central utility plant employed an aggressive daylighting strategy in its pursuit of LEED® Silver certification. As the largest facility of its kind in the world, the structure includes Bio-Safety Level (BSL)-4 laboratories capable of handling life-threatening and exotic pathogens for which there are no treatments or vaccines. Architect CUH2A was tasked with designing a structure that balanced safety and security issues while pursuing the LEED® Silver Rating. The Series 4500 Curtain Wall was chosen for the project for its combination of enhanced structural and thermal values.

# GOVERNMENT



## 1 Custom Engineered Product Solutions

When standard products don't satisfy a project's requirements, United States Aluminum has the engineering expertise and staff to work through challenging design situations to provide custom engineered product solutions.



Nadel Architects came up with an interpretive design for the Henry Medina West Los Angeles Parking Enforcement Building. Designed to resemble a parking meter the building features a coin-slot-look awning over the Series 400 Medium Stile Entrance set in a cantilevered Series 3250 Curtain Wall topped with paneling that feature numbers indicating time left on the meter. The Series IS451 Storefront System is used in secondary openings around the structure.

top  
**Mesquite Police Station**  
Mesquite, TX

bottom  
**Henry Medina**  
**LA Parking Enforcement**  
Los Angeles, CA

opposite page  
**Evansville Public Library**  
Evansville, IN





The New U.S. Aluminum Facility in Los Angeles, California

## U.S. Aluminum is a Manufacturer and Supplier of:

- Entrances and Storefronts
- Windows and Curtain Walls
- Hurricane Resistant Building Fronts
- Sun Control Systems
- Blast Mitigation Systems
- Ribbon Wall Systems
- Custom Extrusions

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