RUSKIN®

GO GREEN GO RUSKIN

THE ARCHITECT'S GUIDE

TO SUN CONTROL PRODUCTS

TABLE OF CONTENTS

Leadership in **E**nergy & **E**nvironmental **D**esign

LEED® GUIDE

Ruskin engineered aluminum sunshades can contribute to LEED certification.

- **LEED EA Credit 1, Optimize Energy Performance**
  Preserving energy includes reducing solar heat gain in the summer months, and directing sunlight to be used effectively in the winter months.
- **LEED MR Credits 4.1 and 4.2, Recycled Content**
  Ruskin aluminum sunshades contain high percentages of both post-consumer and pre-consumer recycled content. Contact Ruskin for up-to-date recycled content.
- **LEED MR Credits 5.1 and 5.2, Regional Materials**
  Depending on the job location, Ruskin sunshades can be transported within the 500 mile radius. Contact Ruskin for manufacturing locations.
- **LEED IEQ Credits 8.1 and 8.2, Daylight and Views**
  Ruskin sunshades control glare, and increase lighting quality while still creating a connection to the outdoor space.

FREQUENTLY
ASKED QUESTIONS

Q: Can a Ruskin sunshade benefit my design by making it more sustainable?

A: Not only are sunshades a great way to put your mark on a building as an architect, but they are also an ideal way to accumulate LEED® points. See LEED® information on the left.

Q: Can Ruskin provide documentation supporting recycled materials and regional values?

A: Yes, we can provide a project specific letter that addresses LEED® Credits MR 4, and 5.

Q: Does Ruskin offer AIA continuing education courses online?

A: Visit www.Ruskin.com for the latest continuing education information.

Q: What finish types are available on sunshades?

A: Ruskin offers endless possibilities of color in standard 2-coat 50% PVDF and 70% PVDF, as well as our Pearledize 50 and 70 (2-coat mica). These painted finishes all carry a 20 year warranty. Clear and Color Anodize finishes are also available, but highly discouraged due to the variation in metal alloys.

Q: Does Ruskin have Sunshade designs suitable for 3-D modeling?

A: Yes. Ruskin has a variety of options for Revit®, including our COOL SHADES Revit sunshade configurator add-in, as well as our standard Revit® family files (.rfa) that can be easily downloaded at www.ruskin.com.

Q: What if I would like to incorporate a design not shown in this brochure?

A: Yes! Ruskin can modify standard concepts to meet your project's needs!

Q: What are intermediate outriggers?

A: Intermediate outriggers are a great solution when blades span a distance beyond their maximum structural limits. To function correctly, they require front and rear fascias.

Q: What does Ruskin recommend with regard to attachment brackets?

A: We can provide custom attachment brackets when necessary. An alternative installation method that saves time, money and material is direct attachment to the structure.

Q: Welding vs. Mechanical Fastening, which is better?

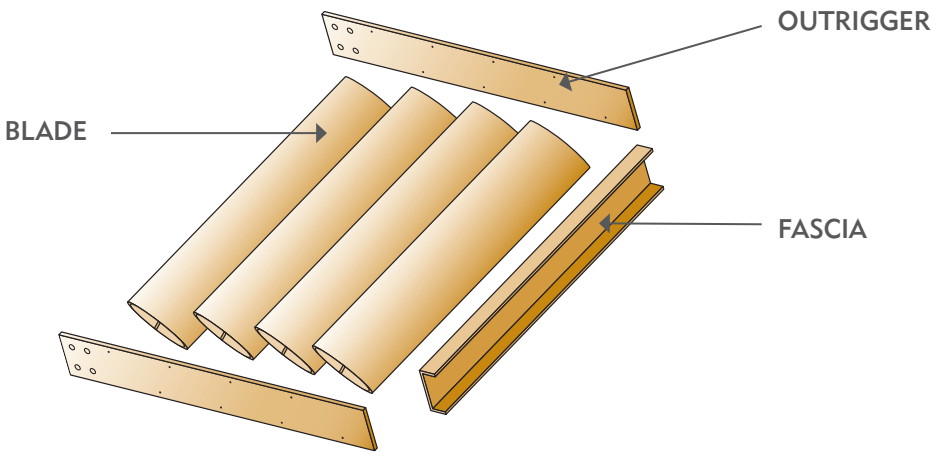
A: Ruskin recommends mechanical fastening for superior fit and finish and making component replacement possible.

Q: Can Ruskin provide stamped, structural calculations by a professional engineer in my state?

A: Yes we can! We have design engineers in-house that perform the calculations for review by a professional engineer in the applicable state to check and stamp. Please call your local Ruskin Architectural representative for more details.

DESIGNING

A SUNSHADE



STEP 1– BLADE

Blades are the most crucial part of the sunshade. The blade profile determines shading, the spans between outriggers, and a large portion of the cost. Manipulating blade spacing and angle is the easiest way to dictate the effectiveness of the sunshade.

Airfoil Blade
4" – 16"

Diamond Blade
4"

Square Tube Blade
1" – 4"

Rectangular Tube Blade
2" – 10"

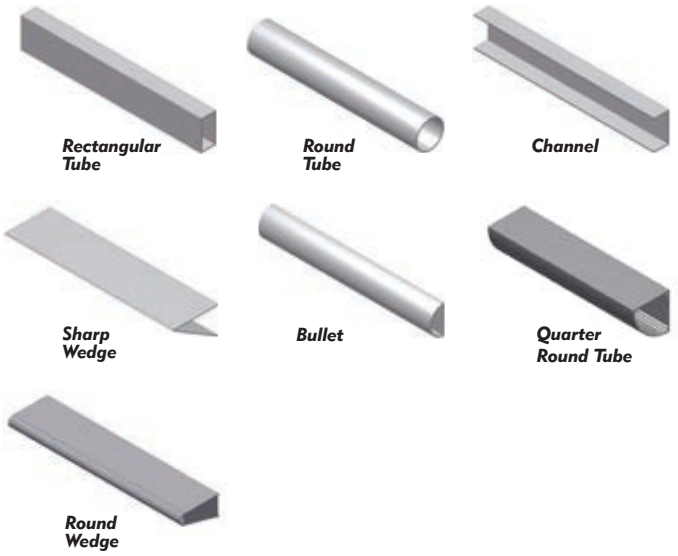
Louver Blade
4" – 8"

Wing Blade
5" – 7"

Round Tube Blade
1" – 6"

Flat Blade
Consult Ruskin

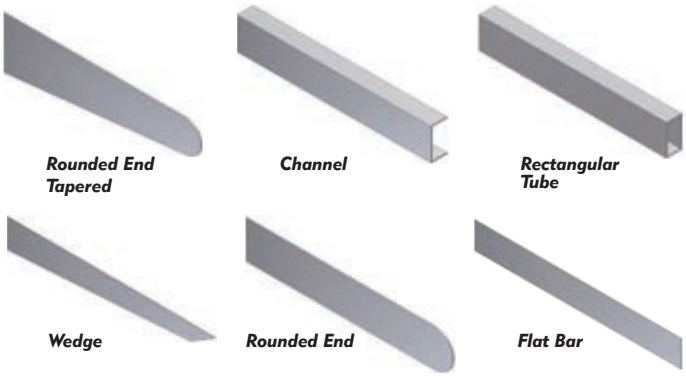
STEP 2 – FASCIA (front, rear, both)



The fascia is the front and/or back edge of the sunshade. Front fascia designs can have a bigger effect on appearance than a blade design. When choosing a fascia profile, keep in mind the span has to be greater than or equal to the span of the blade chosen.

STEP 3 – OUTRIGGER

Outriggers are the arms that extend out from the building. They provide the connection to the building, and therefore when choosing an outrigger type, loading should be factored. The profile of the outrigger dictates how far they can cantilever from the wall. The thicker the outrigger, the greater weight it can support.



STEP 4 – FINISH TYPE

- Standard 2-coat 50% & 70% PVDF
- Pearledize 50 and Pearledize 70 (2-coat mica flake)
- 3-coat metallic or exotic finishes are available on special order
- Anodize finishes are available, but not suggested, due to variation in appearance from different metals

HOW TO

SHADE CORRECTLY*

STEP 1

Find the Solar Altitude of the building during peak heating seasons (e.g. January) and the Solar Altitudes during the heating and cooling swap seasons (e.g. April/September).

Example: In Kansas City, the altitude on January 20th at noon is 30.75 degrees. The average altitude of April and September 20th at noon is 57.25 degrees.

SOLAR ALTITUDE

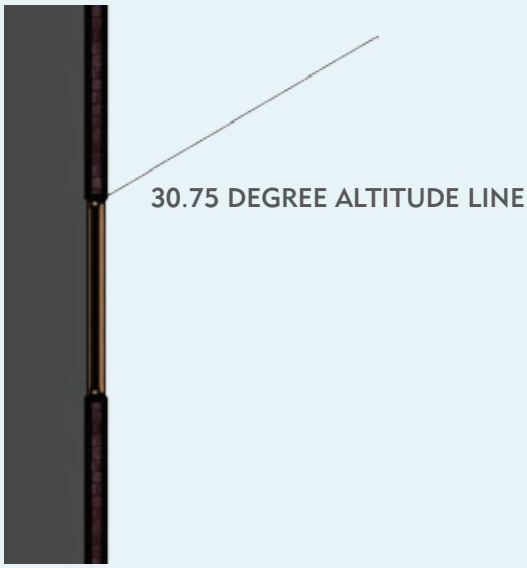
is the angular height of the sun measured from the horizon. When the sun is directly in the center of the sky, it has a Solar Altitude of 90 degrees.

STEP 2

Draw a section view of the wall and window.

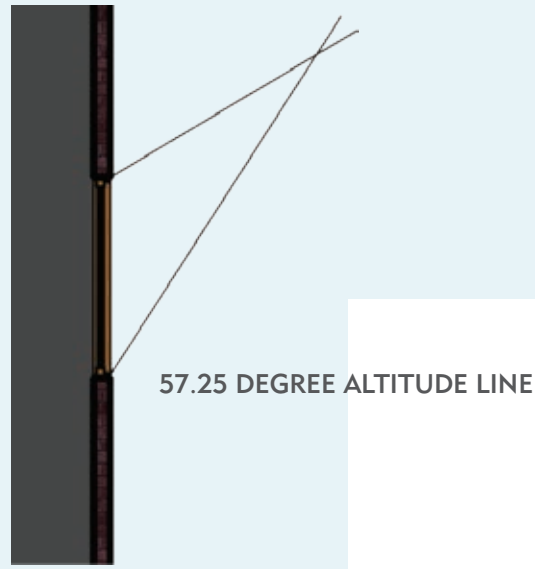
STEP 3

Draw the altitude angle of the peak heating season starting at the top of the window. On our example this is a 30.75 degree line.



STEP 4

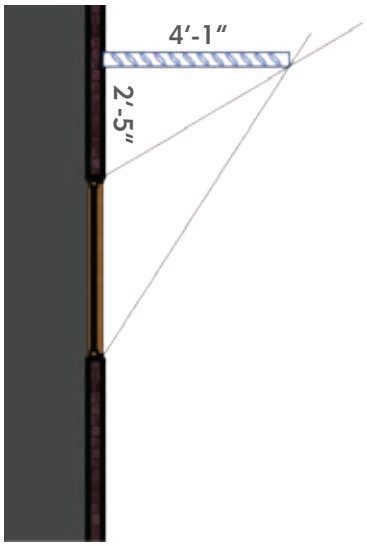
Draw the altitude angle of the heating and cooling swap seasons starting at the bottom of the window. On our example this is a 57.25 degree line.



* This shading technique is best used for South elevations

STEP 5

The altitude lines will intersect. Draw a line from the intersection to the wall. This line represents the most effective projection dimension, as well as the location of the bottom of the sunshade. On our model, this dimension is 4′-1″. This line also tells us where to mount the sunshade above the window. On this example, this dimension is 2′-5″ above the top of the window.



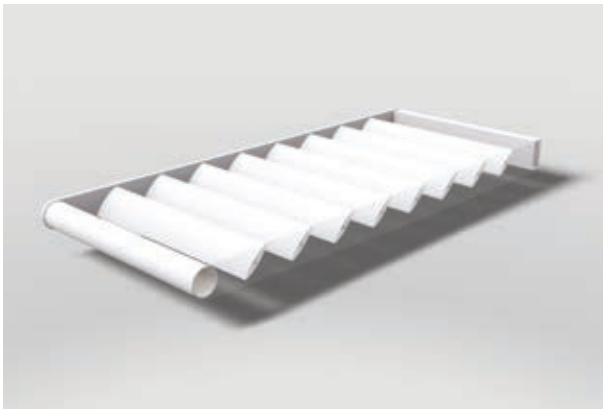
STEP 6

Create your sunshade in Ruskin's COOL SHADES Revit Add-In and see how effective a sunshade with stationary blades can be!

JANUARY

SEPTEMBER

JULY



Saint Louis Science Center's 13,000 square foot exhibition hall addition was completed to provide better accommodations for traveling exhibitions and special events. Purely architectural in use, this project uses the Ruskin sunshade to boldly enhance the appearance of the entire addition.

PROJECT

SAINT LOUIS
SCIENCE CENTER

LOCATION

SAINT LOUIS, MO

DESIGNER

PGAV DESTINATIONS

PROJECT

STEPHEN F. AUSTIN HIGH SCHOOL

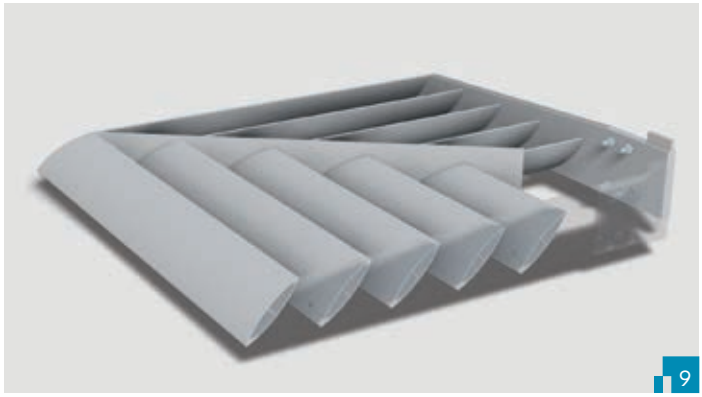
LOCATION

AUSTIN, TX

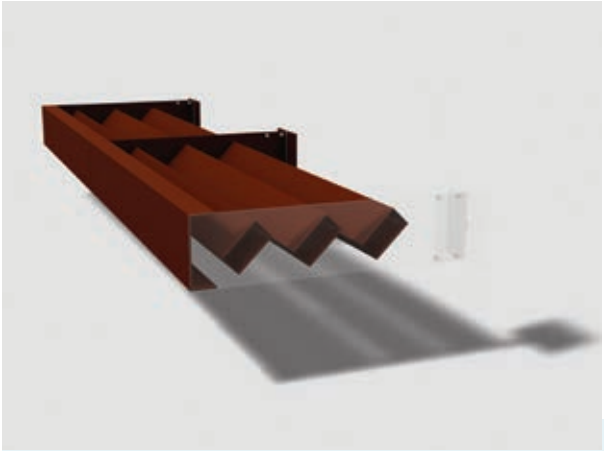
DESIGNER

BLGY ARCHITECTURE

The renovation of Stephen F. Austin High School included uniquely mounted sunshades above the windows. It was designed to have an architectural wall bearing plate that connected to a bracket holding the sunshade outrigger. This design alleviated the contractor from connecting into the window mullion during the retrofit. This product contributed to earning the school a 3-Star Austin Energy Green Build program rating.



3 Star Austin Energy Green Build Program Rating!



Named the Associated General Contractors of America "Green Project of the Year" in 2008, and the "Landmark Award Green Project of the Year", the Wildcat Glades Conservation and Audubon Center in Joplin, MO used Ruskin sunshades to help obtain those titles. Ruskin's sun control devices help lower the solar heat gain in the summer months, allowing the building to be more efficient. Due to the sustainable additions, this building plans to save approximately $6K-$10K annually, as well as register with the certification goal of LEED® Silver.

PROJECT

WILDCAT GLADES CONSERVATION & AUDUBON CENTER

LOCATION

JOPLIN, MO

DESIGNER

GASTINGER, WALKER, HARDEN ARCHITECTS

PROJECT

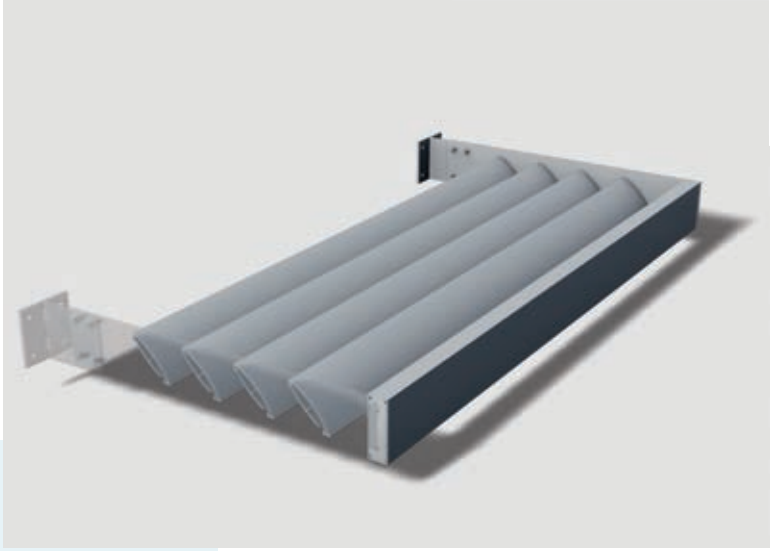
FT. ZUMWALT
HIGH SCHOOL

LOCATION

O'FALLON, MO

DESIGNER

CANNON DESIGN



The Fort Zumwalt West High School additions included a three-story building housing 14 classrooms. Ruskin custom sunshades were ordered with a continuous fascia and intermittent blades to cover the new windows. This design was admired so much, it was also chosen for the Fort Zumwalt North addition.

AIRFOIL BLADE

A simple and effective design shades windows along the entrance side to this free-standing medical building in San Antonio, TX. The finish is a 2-coat 70% PVDF that mimics a clear anodized coating. This finish type and color was chosen to avoid the difference in color that can occur with anodizing different aluminum alloys. Since the outriggers are aluminum plate, and the other components are extrusions, there is a risk of color variance with anodizing. The 2-coat sprayed and baked-on PVDF finish comes with a standard 20 year finish warranty, as well as the comfort of knowing there will be consistent color throughout the different aluminum alloys.

PROJECT

GEVIGA
MEDICAL CENTER

LOCATION

SAN ANTONIO, TX

DESIGNER

PHIL LLOYD SHOOP, JR.
AIA ARCHITECT

PROJECT

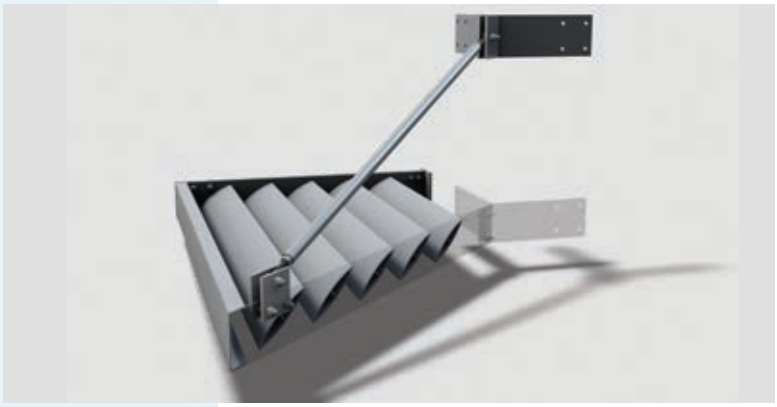
HAMPTON ROADS TRANSIT BUS MAINTENANCE AND ADMINISTRATION BUILDING

LOCATION

NORFOLK, VA

DESIGNER

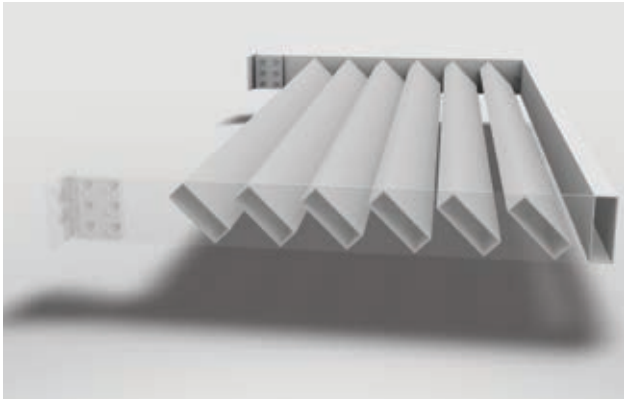
PARSONS BRINCKERHOFF



Hampton Roads Transit used Ruskin sun control devices as part of an 18-month renovation and new construction project for the bus maintenance and administration buildings. As part of the design process, the HRT maintenance building was planned and registered with the certification goal of LEED® Gold. The sunshades wrap around a 43,689 square foot administration building that finished the four-building project.

RECTANGULAR TUBE BLADE

After Simonsdale Elementary School was approved to be rebuilt and expanded to include another local elementary school, the decision was made to incorporate sustainable designs that would save on long-term energy costs. Ruskin's sun control systems were installed over windows that were otherwise uncovered, providing protection from the sun on those elevations. Sustainable design changes helped to make the 81,165 square foot elementary school register with a LEED® Gold certification goal.



PROJECT

SIMONSDALE
ELEMENTARY SCHOOL

LOCATION

PORTSMOUTH, VA

DESIGNER

TYMOFF + MOSS ARCHITECTS

PROJECT

EDUCATIONAL PARK
BRANCH LIBRARY

LOCATION

SAN JOSE, CA

DESIGNER

ANDERSON BRULE
ARCHITECTS

Built for the City of San Jose, the Educational Park Branch Library is an 18,057 square foot building that incorporates Ruskin's SSAFH6 design over the south elevation windows. The project goal was to achieve LEED® Silver certification, but the project exceeded those requirements and actually achieved LEED® Gold certification!

RECTANGULAR TUBE BLADE

The West Seneca, NY branch of M&T Bank is the largest branch built, and serves as a model for future branches. The vertical, rectangular tube sunshade curves at the corner, allowing the sunshade to follow the curve of the glass and wrap around the 9,226 square foot building. These sunshades serve two purposes, shading the windows from the sun, and also adding a unique linear feature to the outside of the building.

PROJECT
M&T BANK

LOCATION
WEST SENECA, NY

DESIGNER
KIDENEY ARCHITECTS

PROJECT

EMPORIA STATE
MEMORIAL UNION

LOCATION

EMPORIA, KS

DESIGNER

TREANOR ARCHITECTS

For its full renovation, Treanor Architects designed a trellis for the entrance of Emporia State University's Memorial Union. Using a Ruskin rectangular tube sunshade along with a unique tube outrigger, the trellis updates the eighth oldest student union entryway in the United States, and gives reprieve from precipitation to people walking underneath by having plexiglass placed over spider brackets at the top.

RECTANGULAR TUBE BLADE

As part of a multi-phase, 280,000 square foot addition and renovation project for Iowa State University, Ruskin custom tube sunshades were added to the Small Animal Hospital Facilities in Ames, IA. The goals for the university included having more access to natural light, and decreased annual operational costs across the campus. With the help of these custom sunshades, they were able to achieve this goal, as well as others due to major updates. The second phase of the total update and renovation is a LEED® registered project with the certification goal of LEED® Gold.

PROJECT

IOWA STATE UNIVERSITY
SMALL ANIMAL
HOSPITAL FACILITY

LOCATION

AMES, IA

DESIGNER

INVISION ARCHITECTURE

PROJECT

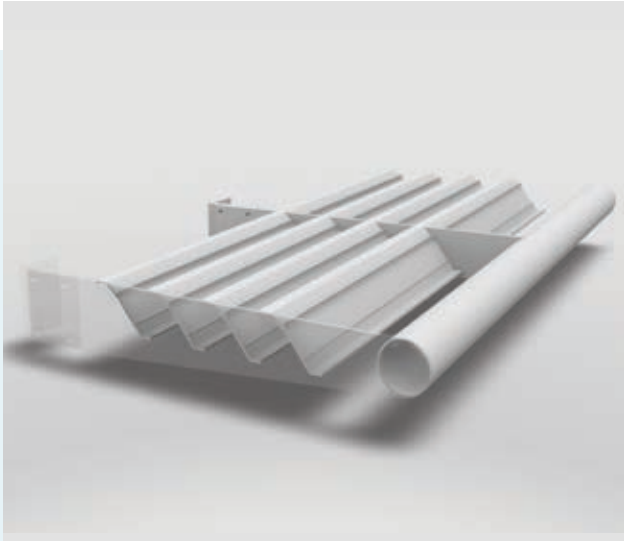
TANTAU
OFFICE BUILDING

LOCATION

CUPERTINO, CA

DESIGNER

DEVCON
CONSTRUCTION, INC.



The dramatic, curved lobby of the 102,540 square foot Tantau Office Building in Cupertino, CA appears to be a curved sunshade, however, cost savings were taken advantage of when segmented sections were selected instead of curving each individual sunshade component. Straight rows of sunshades were placed over the remainder of the windows, creating a comprehensive look for the building. Lowering solar heat gain and creating an uninterrupted view assisted in making this building certified LEED® Gold.

AIRFOIL BLADE

Vertically-mounted sunshades were used on the Nixon-Smiley High School Gymnasium addition to help block the intense sun and glare on the front windows. Due to the required blade spans between steel posts, large airfoil blades were selected for this project. Ruskin's design team worked with the general contractor to create a custom connection in front of the tube structure, and in between the CMU block wall and steel posts.

PROJECT

NIXON-SMILEY
HIGH SCHOOL
GYMNASIUM

LOCATION

NIXON, TX

DESIGNER

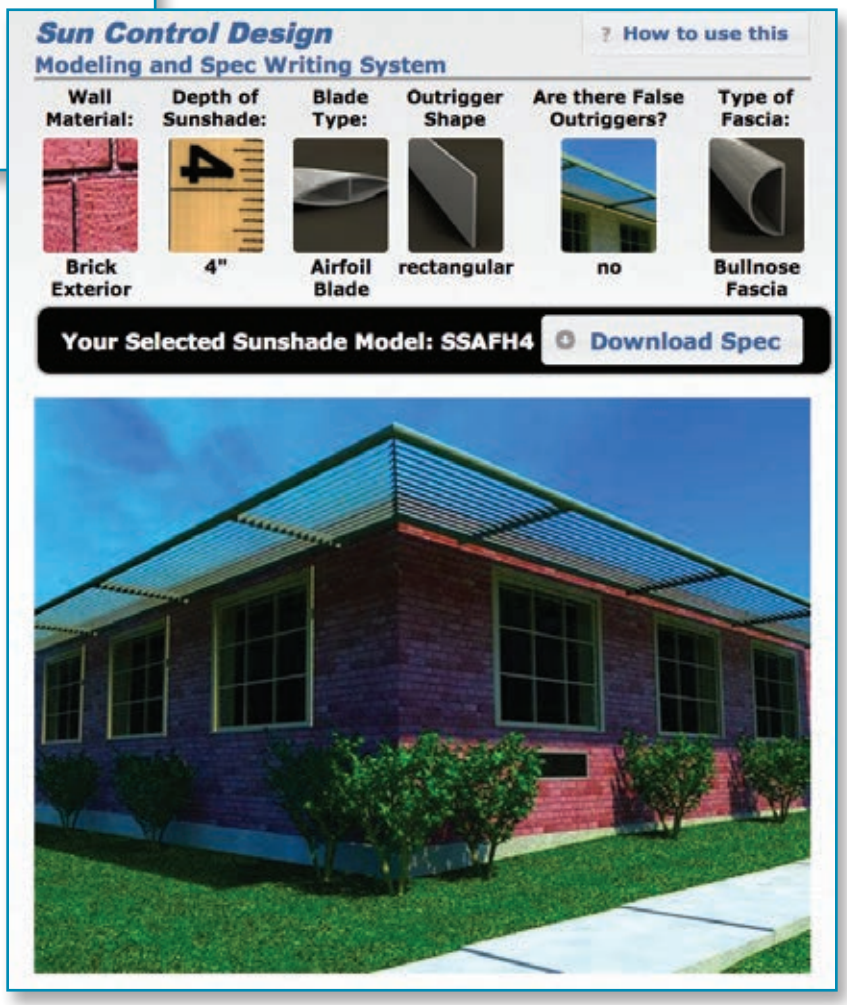
SHW GROUP

SPECIFICATIONS

WHERE CAN I FIND SPECIFICATIONS FOR RUSKIN'S SUN CONTROL PRODUCTS?

If you need a quick specification, Ruskin has CSI 3-Part Specifications ready for use located in the online product catalog.

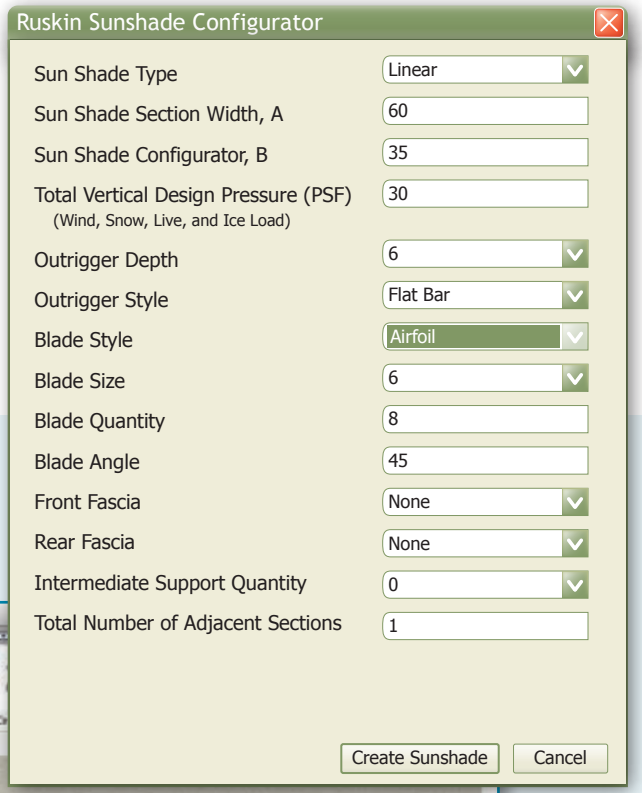
If you want a custom specification, Ruskin has a NEW Sun Control preview tool with a specification writer built-in! Visit **www.ruskin.com/sunshades/model.aspx** to get a glance at the sunshade with your chosen components and write a specification by clicking the "Download Spec" button! It's that easy!

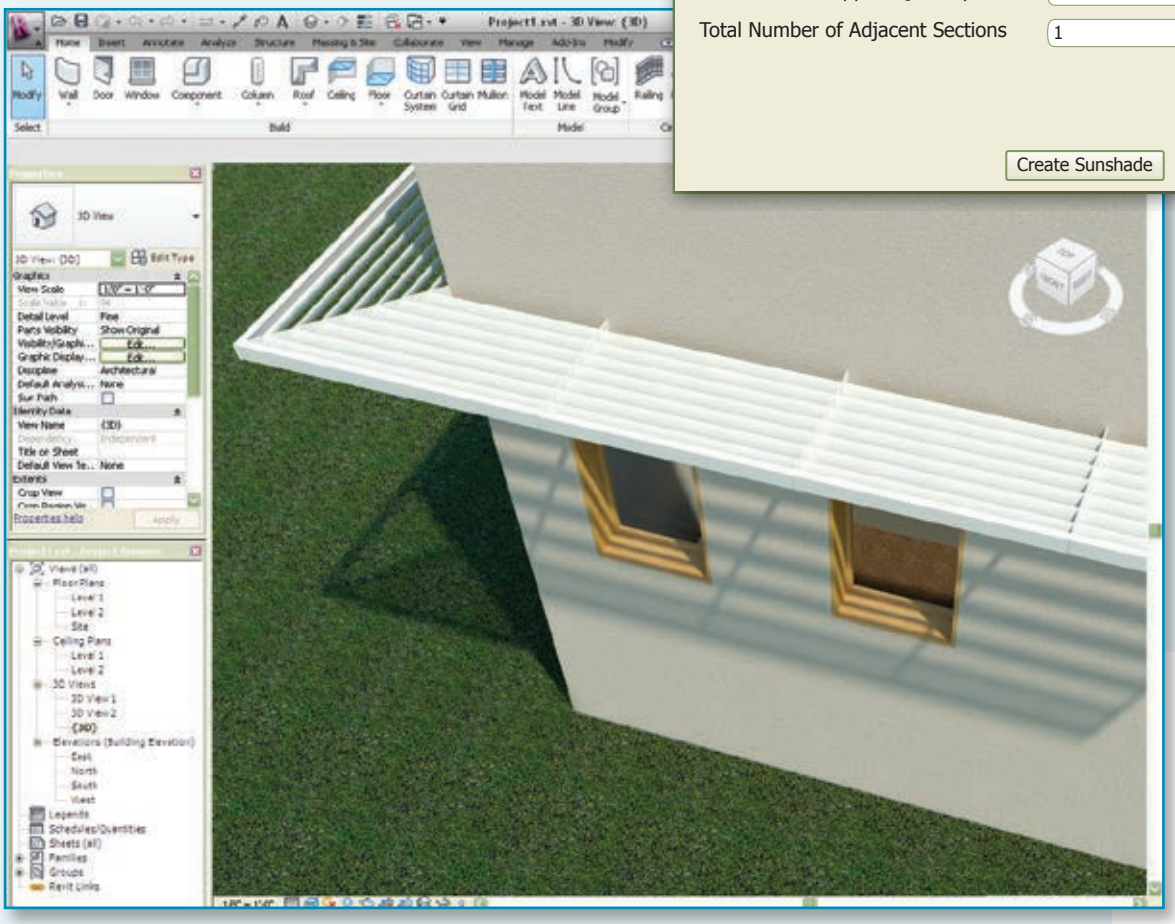


COOL SHADES

REVIT ARCHITECTURE ADD-IN

Ruskin's NEW Sun Control Add-In tool for Revit Architecture makes every architect's life easier by creating the Revit family you want in just a few short steps! To download for FREE, simply go to **www.ruskin.com/Revit-Add-In** and the next time you open your Revit Architecture program, it will show up ready to use in the Add-Ins Tab under External Tools!





BLADE SPAN/CANTILEVER DESIGN

WWW.RUSKIN.COM/SSD

Use this helpful guide to see how wind load affects the cantilever and blade spans on your design! This reference page is a great way to get started designing your sun control device. It allows any architect to start a schematic design based on real wind load and blade limitations!

Maximum Sunshade Cantilevers

Flat Plate Outrigger

Outrigger Depth	Design Vertical Load (PSF)*			
	30	40	50	60
4	31	27	24	22
5	39	34	30	28
6	47	41	36	33
7	55	48	42	39
8	63	54	49	44
9	71	61	55	50
10	79	68	61	56
11	87	75	67	61
12	90	82	73	67
13	90	89	79	72
14	90	90	85	78
15	90	90	90	84
16	90	90	90	89

1

Channel Outrigger

Outrigger Depth	Design Vertical Load (PSF)*			
	30	40	50	60
4	53	48	44	40
5	58	50	45	41
6	61	53	47	43
7	66	57	51	46
8	71	62	55	50
9	78	67	60	55
10	84	73	65	60
11	90	79	71	64
12	90	85	76	70
13	90	90	82	75
14	90	90	88	80
15	90	90	90	85
16	90	90	90	90

1

Tube Outrigger

Outrigger Depth	Design Vertical Load (PSF)*			
	30	40	50	60
4	57	51	48	44
5	69	62	58	53
6	81	73	67	61
7	90	84	76	70
8	90	90	85	78
9	90	90	90	85
10	90	90	90	90
11	90	90	90	90
12	90	90	90	90
13	90	90	90	90
14	90	90	90	90
15	90	90	90	90
16	90	90	90	90

1

Note 1: Consult Ruskin for sizes under this line

Blade Span

¼ Flat Bar Blade

BLADE SPAN	Design Vertical Load (PSF)*			
	30	40	50	60
4" (102)	34	31	28	26
6" (152)	34	31	28	26
8" (203)	34	31	28	26

Airfoil Blade

BLADE SPAN	Design Vertical Load (PSF)*			
	30	40	50	60
4" (102)	70	64	60	57
6" (152)	97	88	81	77
8" (203)	120	111	103	97

Rectangular Tube Blade

BLADE SPAN	Design Vertical Load (PSF)*			
	30	40	50	60
4" (102)	120	120	120	120
6" (152)	120	120	120	120
8" (203)	120	120	120	120

Louver Blade

BLADE SPAN	Design Vertical Load (PSF)*			
	30	40	50	60
4" (102)	66	60	53	49
6" (152)	53	46	41	37

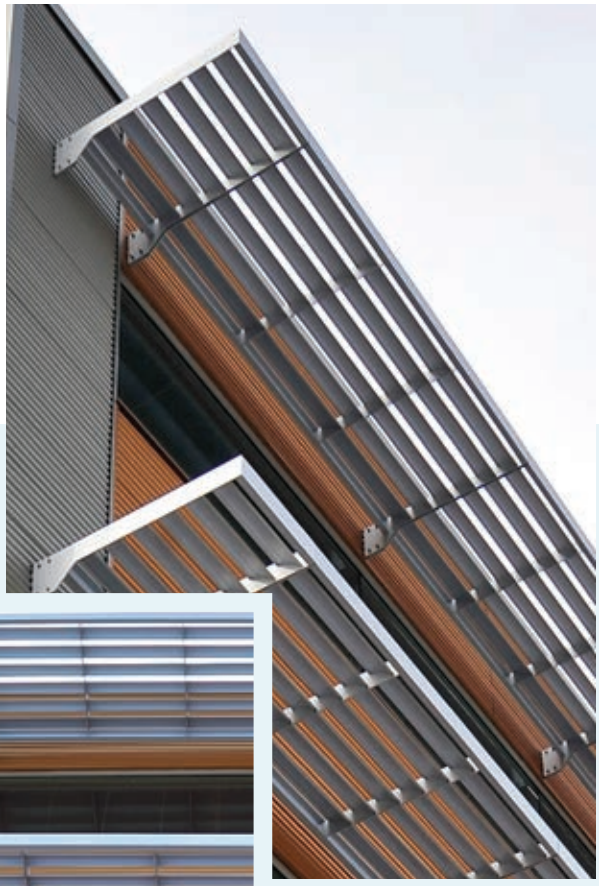
BLADE SPAN/CANTILEVER DESIGN

WWW.RUSKIN.COM/SS

INTERMEDIATE OUTRIGGERS

When do I use them?

If a blade is greater than the unsupported width then specify intermediate outriggers. Reference Ruskin's Design Guide, page 23, for blade span and cantilever information .



Support Outriggers connect directly to the building

Intermediate Outriggers do not connect to building

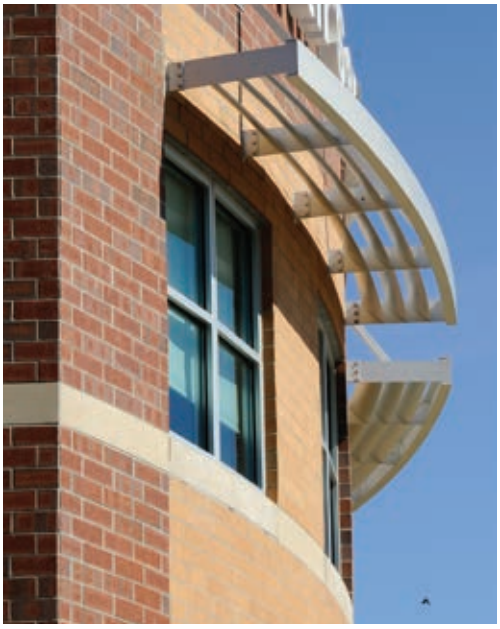
STRUCTURAL CALCULATIONS/DELEGATED DESIGN SUBMITTALS

Ruskin offers in-house calculations for your convenience!

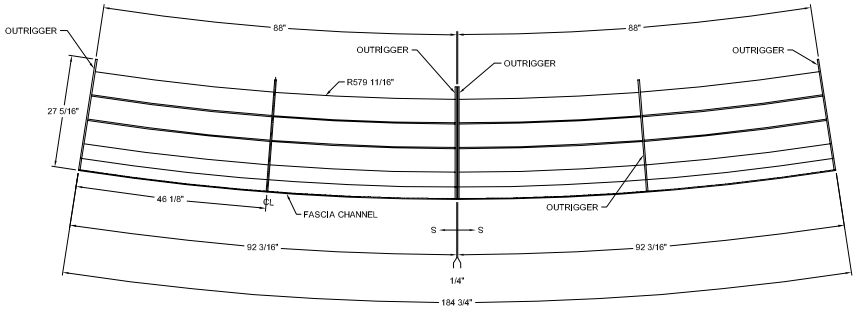
Ruskin suggests you order stamped, structural calculations performed by a Professional Engineer corresponding to the state of the job site. Ruskin's in-house engineers have many years of experience calculating forces specifically applicable to sun control devices. These calculations will ensure that your sunshade will be supported, taking into account the following loads: wind, snow, live, & ice. An S1 drawing is required before calculations can begin.

CURVED BLADES

CAN I INCORPORATE CURVED BLADES INTO MY SUNSHADE

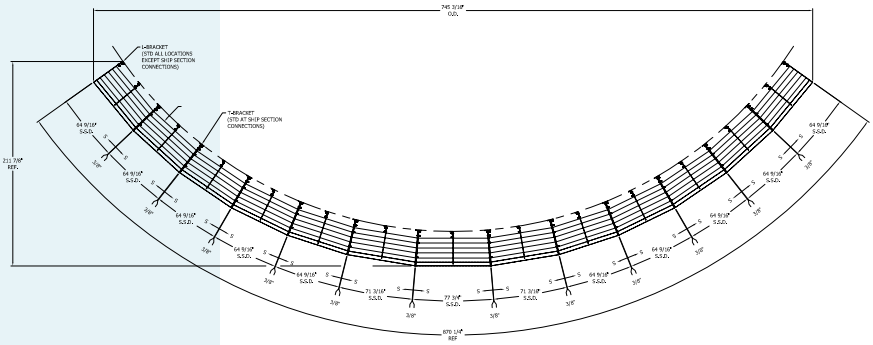


Ruskin can curve blades and fascias to match the curve of a building, however, the most economical design is to curve the front fascia piece, while segmenting straight blades (as shown in the photo). That will give the overall appearance of a curved sunshade without adding the cost to curve every blade!



WANT TO AVOID CURVED BLADES ALTOGETHER?

Eliminate curving costs altogether by segmenting the fascia and blades into smaller sections! The sunshade wraps around the building with ease, appearing to be curved from the outside!

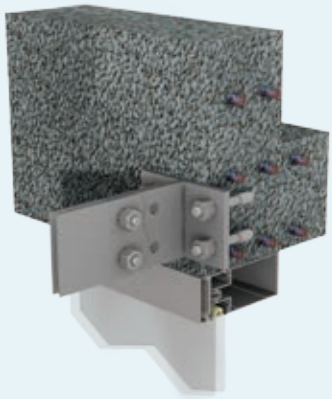


INSTALLATION BRACKETS

INCLUDE ALL ACCESSORIES FOR YOUR RUSKIN SUNSHADE

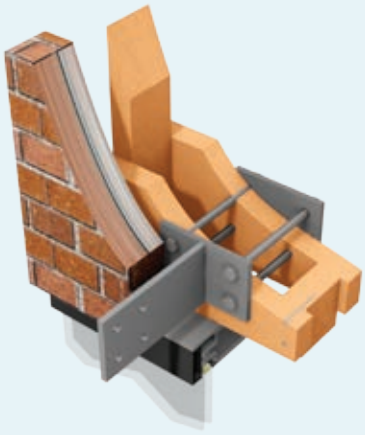
Bolted Connection to Steel

Bolted through Concrete Block

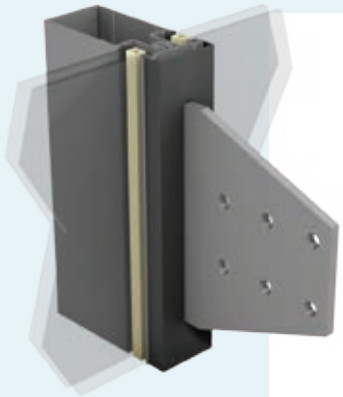


Concrete Anchor Connection

Welded Steel Knife Plate Connection



Bolted through Wood Connection

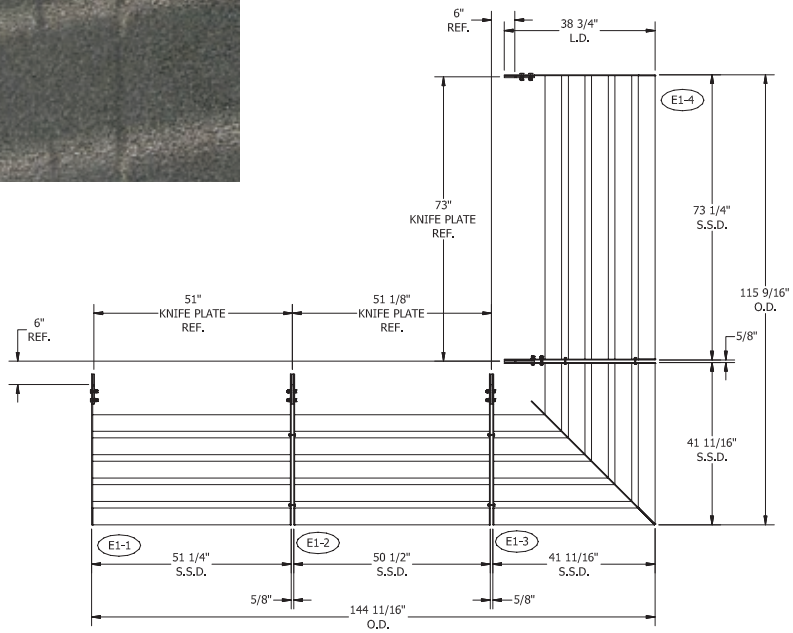


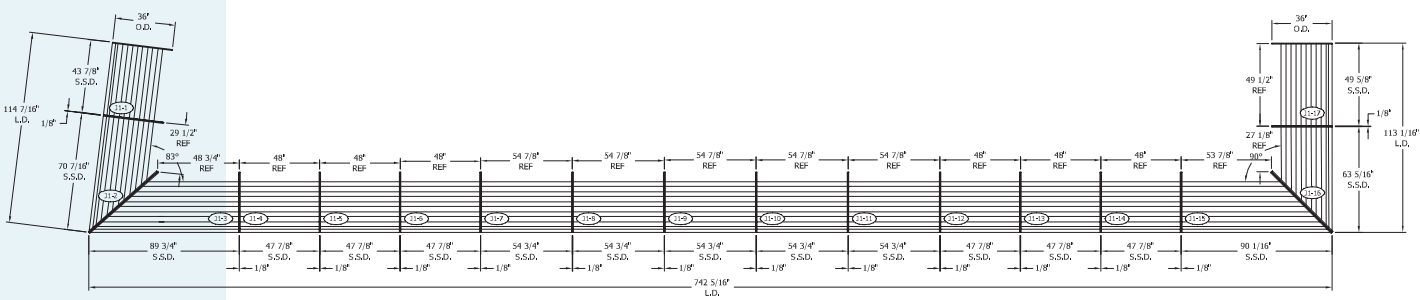
Curtain Wall Connection

MITERED CORNERS

MAKE YOUR CORNERS LOOK POLISHED!

Let Ruskin's sun control products wrap around your unique building shape! Ruskin's state-of-the-art miter saw makes any corner angle available! Ruskin can easily help design the connection at the corner!





RUSKIN FINISHES

FOR LOUVERS & SUNSHADES

IN-HOUSE PAINTED ARCHITECTURAL FINISHES

- 70% PVDF Coatings meet or exceed AAMA 2605 requirements
- 50% PVDF Coatings meet or exceed AAMA 2604 requirements
- 50% and 70% Pearledize Finishes (Mica) to match Clear and Color Anodize
- Numerous Standard Pearledize Colors available with optional custom color matches
- In-house Color Matching System
- Automated Finish System meets all ISO 14001 standards
- Standard 20 Year Warranty for all PVDF finishes applied to aluminum products

IN-HOUSE ANODIZED ARCHITECTURAL FINISHES

- Meets or exceeds all AMCA 611 performance specifications
- 204-R1 Clear Coat AAMA AA-C22A31 .04 mils minimum depth
- 215-R1 Clear Coat AAMA AA-C22A41 .07 mils minimum depth
- Color Anodize AAMA AA-C22A44 is available for Louvers/Sunshades*
- Standard 5 Year Warranty for all anodize systems

* 70% PVDF Finishes are recommended for Sunshade Systems to ensure durable and consistent finish for varying component alloys.

RUSKIN® ARCHITECTURAL

valspar if it matters, we're on it.®

Our mission is to make you comfortable.

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RSCB-613 replaces SCB-809

ISO9001 CERTIFIED