THE WESTERN GROUP

OPEN

TO YOUR IDEAS

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Goodyear – Innovation Way Parking Facility | Akron, OH
Architect: GPD Group
TWG: Stainless steel woven wire tension screen

From our origins eighty years ago as a local maker of residential fencing in Portland, Oregon, The Western Group has grown to become a leading North American manufacturer of wire mesh and perforated plate. We now have eleven production facilities across the United States and Canada, so we're rarely far from a job. Although much of our original growth came from supplying the mining and mineral processing industries, the Tech Mesh line of products and our design-focused Tech Mesh team have opened a world of possibilities for architects, landscape architects, planners and contractors. We emphasize sustainability in all we do, using materials that are greater than 90% recycled and that are 100% recyclable.

The Western Group's in-house team of architecturally-trained designers, engineers and project managers focuses on helping our clients achieve their vision on every project. From early conceptual brainstorming and cost analysis to shop drawings and product delivery, we are here each step of the way. If needed, we can assist with LEED certification documents and can even suggest plantings for our popular Living Screen® fencing and cladding system.

We pride ourselves on our ability to find customized solutions for unusual situations.

~ Zan Galton III
Owner

First Unitarian Church – Bard Hall | San Diego, CA
Architect: Platt/Whitelaw Architects, Inc
TWG: Living Screen®

OPEN TO YOUR IDEAS

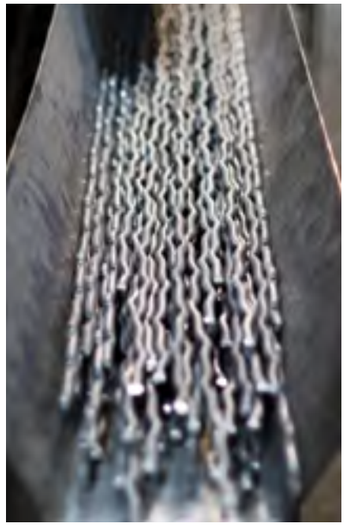
The Western Group is a family-owned domestic manufacturer of architectural mesh products – woven wire, welded wire and perforated plate. We're different from the competition: instead of forcing our choice of material onto your concept, we help the architect, designer, general contractor and owner find a material specification that works within each project's design and budget.

Our architectural materials are used to enhance the beauty, healthiness, and safety of interior and exterior spaces. Mesh allows for natural airflow and filtered light penetration which can reduce a building's operating costs. We aspire to use materials with a high recycled content and strive to control waste in all aspects of our processes. Our efforts can assist in achieving sustainability goals sought for many of today's environmentally-conscious projects.

Our team is available in all phases of the process. Many clients find that consultation with TWG's staff during design phases promotes a smooth installation months later.

"Open to Your Ideas" isn't merely a catch phrase, it's the reason we're here. Call us today to start the conversation.

The Think Tank (T3) | Austin TX
Architect: Danze Blood Architects / Cotera + Reed
TWG: Living Screen®



LOCALLY MADE

With eleven facilities across the United States and Canada, most major metropolitan areas are located within 500 miles of our facilities, so we're often local wherever you are. This allows us to meet your needs in weeks, not months – which can be the case when products are shipped from overseas.

Our ability to custom-manufacture our screens gives a design professional the ability to create a unique look, distinguishing their project from its peers. Our materials are typically 90+% recycled and 100% recyclable and our team can help you with LEED certification needs.

Manufacturing at The Western Group:
Raw materials, Triple Shot High-Carbon Steel, Perforated Plate

PROJECTS

COLLABORATION IS KEY

We welcome complex jobs; it's where we've built our reputation over the years. From the largest parking structure to the smallest balcony, every project is an opportunity for us to help you make the world more beautiful. Contact our design team today and let's work together to ensure your project stands out.

TWG PARTNERS:

GBD Architects
ZGF Architects
SERA Architects
Desman Associates
ASK Studio
Carrier Johnson + Culture
Mahlman Studio Architecture
Niles Bolton Associates
Platt/Whitelaw Architects
Dull Olson Weekes/IBI Group
Sowinski Sullivan Architects
Richard Meier & Partners
SmithGroup JJR
Leddy Maytum Stacy Architects
Gensler
Oslund and Associates
Gresham, Smith and Partners
International Parking Design
Chris Dikeakos Architects
Studio RED
Land Concern ASLA
NOW Specialties, Inc.
Mithun
Harley Ellis Devereaux
Dougherty Architects
Kirksey
Eley Guild Hardy Architects
Nichols Naylor Architects
Danze Blood Architects
Siteworks Design-Build
Mayer/Reed, Inc.
Vallaster Corl Architects
Stantec
AVRP Studios
Neumann Monson Architects
The Harman Group
Perkins + Will
HKS Architects
Hacker Architects
Opsis Architecture
frk architects + engineers
HMC Architects
Ankrom Moisan Architects
Dick Clark + Associates
Cotera + Reed Architects
Ai3 Architects
C2K Architecture
Revery Architecture *(formerly Bing Thom Architects)*
Corgan
Cutler Anderson Architects
Johnston Architects
LS3P
Allied Works
SWA Group
Studio Outside Landscape Architects
Design Workshop
BRPH
FFA Architecture + Interiors
GreenWorks
Archcon Architecture
Landon Bone Baker Architects
Goettsch Partners
Bora Architects


© Ema Peter


© Peter Laver

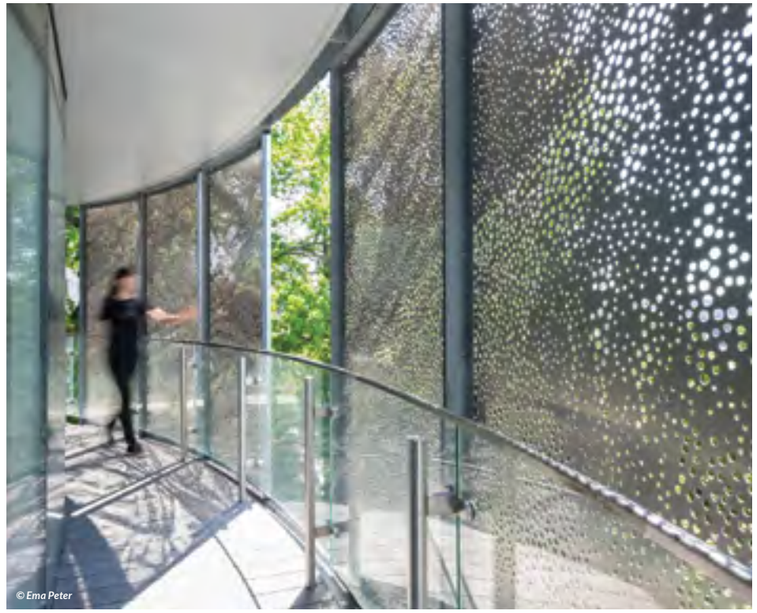
Harwood Condominiums

Location: Vancouver, BC
Architect: Bing Thom Architects (now Revery Architecture)
TWG: Perforated Plate, Sunshade

Perforated stainless steel panels encircle and crown this 17-story condominium tower in Vancouver's Davie Village neighborhood. These screens provide privacy and shade for the balconies of residential units, as well as the amenity deck atop and the porte-cochère at ground level. With patterns inspired by nature, the architect's vision became reality thanks to our fabrication capabilities; the free-flowing organic forms are created using only three different round hole sizes. The effect is stunning both day and night.

TWG SUPPORT:

A custom perforated punch pattern (Cascadia) was developed and fabricated in collaboration with the architectural team. When design was completed, detailed production drawings were created from CAD files provided.


© Ema Peter

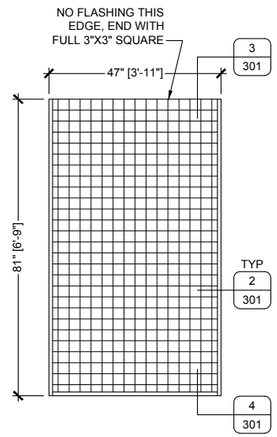
University of Texas Arlington – Parking Structure

Location: Arlington, TX
Architect: Corgan
TWG: Living Screen®

Lush vines envelop our powder coated Living Screen® which clads every elevation of this 800-space parking structure at the University of Texas – Arlington. Some individual screen panels span as much as 20 feet and combine to cover up to five stories. Vertical screens connect every level to steel plates embedded in concrete; The Western Group meticulously coordinated with the contractor to locate the attachments during construction. The end result is a beautiful green feature that enhances the building and enlivens the campus.

TWG SUPPORT:

Fabrication drawings were created from CAD files provided by the architect. We coordinated exact placement of embedded mounts with the construction team. Some screens were internally strengthened to span greater distances unsupported.



Iowa River Landing – Parking Structure

Location: Coralville, IA
Architect: Neumann Monson Architects
TWG: Living Screen®, Rail Fill, Security Screens, Sunshades

Nearly 500 framed and powder coated panels surround all four façades of this parking structure. This system is a modification of standard Living Screen®, using wire mesh on one face to promote climbing plant growth and perforated plate on the opposite face to provide visual interest and security. The perforated pattern (Matrix) was designed by the architect in collaboration with our engineering team. The random arrangement of punched openings reduces transparency and casts shadows that simulate camouflage.

TWG SUPPORT:

A custom perforated punch pattern was developed and fabricated in collaboration with the architectural team. When design was completed, detailed production drawings were created from CAD files provided. To ensure quality control, an on-site project coordination meeting was held before and after installation.

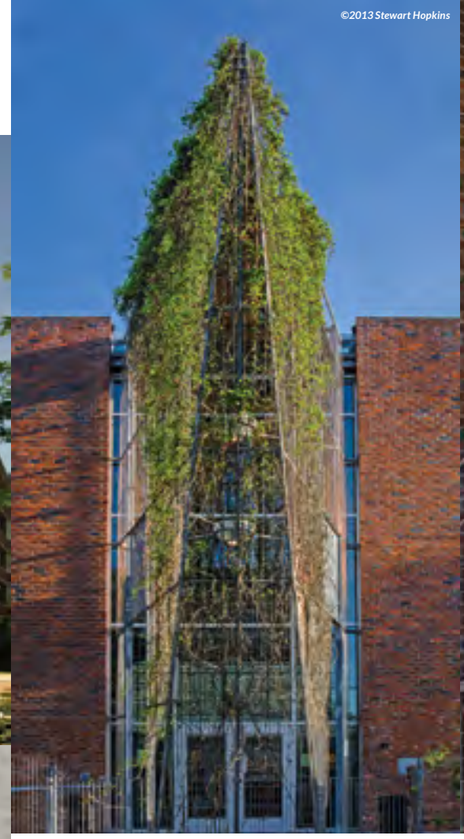
Goodyear – Parking Structure

Location: Akron, OH
Architect: GPD Group
TWG: Tension Screen System

Located prominently on the Goodyear Tire & Rubber campus, this six-story parking structure is clad with two different stainless steel tension screens. The custom weave pattern at ground level, Venetian Waterways 5C, surrounds the entire structure and provides security with greater transparency. The weave applied to the upper western and southwest-ern façades, Venetian Waterways I, is a standard pattern that provides similar transparency, excellent sunshading and a reflective exterior. Both screens form a sleek, corrosion-resistant skin that glistens in sunlight.

TWG SUPPORT:

A custom weave pattern and bracket mounting system were developed with the architectural team. To ensure quality control, multiple site visits were made before, during, and after installation.



Seattle Public Library – Capitol Hill

Location: Seattle, WA
Architect: Cutler Anderson Architects & Johnston Architects
TWG: Custom Welded Wire Trellis, Rail Fill

This urban branch of Seattle's Public Library is fronted with a stainless steel living trellis which wraps the perimeter with evergreen and deciduous vines. It creates a bold entry, evocative of a ship's prow. Maturing plants soften the brick façades and exterior walls are illuminated at night behind a veil of greenery. The vertical garden extends inside, flanking a two-story reading room with the same plant-supporting trellis. The entire mounting system was custom-designed and fabricated for this project.

TWG SUPPORT:

Provided design assistance to refine the architect's concept then manufactured custom welded wire panels with varying slot openings.

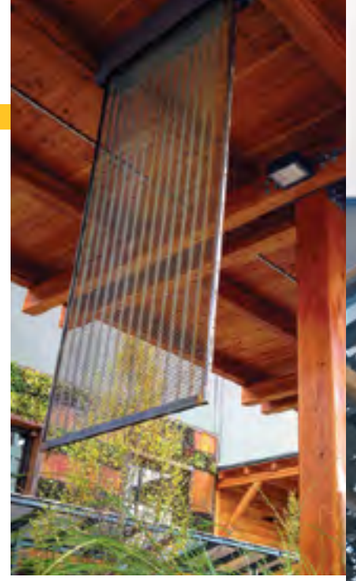
APPLICATION
CREATE CUSTOM DESIGNS

The Western Group can help you make the world more beautiful in whatever form you envision. We can laser cut a unique design, provide a variety of colors and finishes, or create a totally new weave or perforation pattern based on your concept. For custom work, it's especially important to consult with us in the earliest phases. Give us a call to discuss your project today.

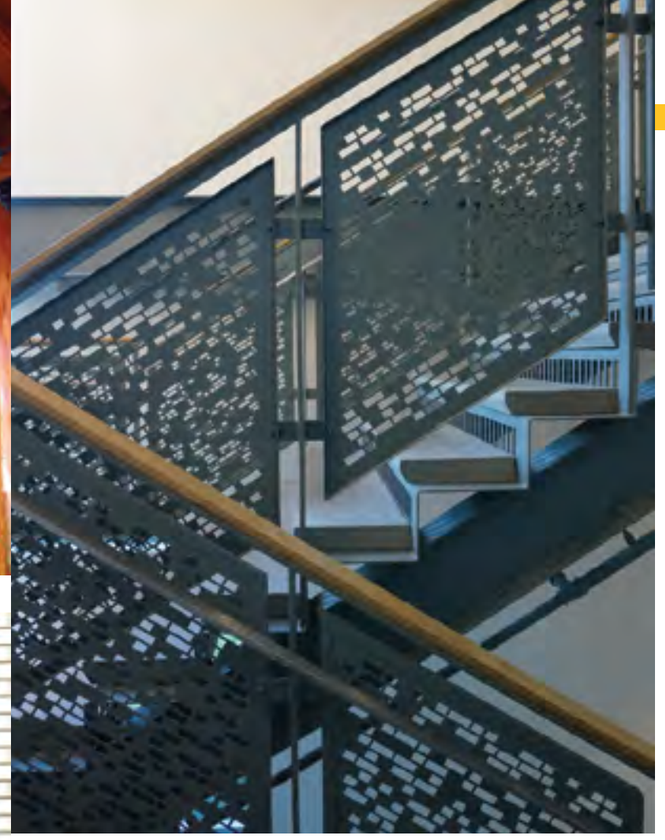
Residential Landscape Art | Portland, OR

LOCA "Goat Blocks" | Portland, OR

Rain Screen
New Seasons Market Slabtown | Portland, OR



LL Hawkins Apartments | Portland, OR



Chemeketa Community College, Building 20 | Salem, OR

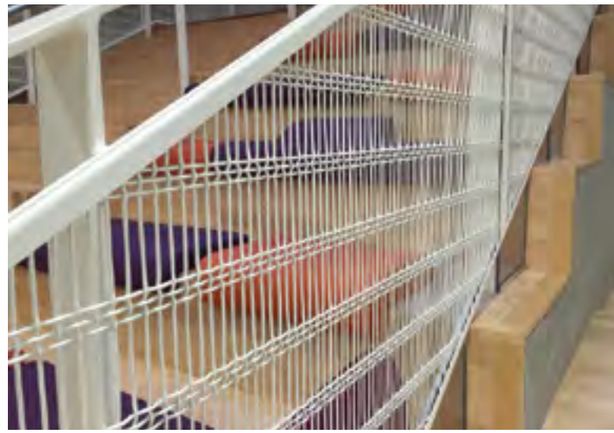
Beauregard Hall at Nicholls State University | Thibodaux, LA

Cadence Apartments | Portland, OR

APPLICATION
RAIL FILL

The Western Group offers a wide variety of economical woven wire, welded wire, and perforated plate options for stair rail fills. With our in-house engineering and fabrication capabilities we're often able to provide complete finished panels for your project. Due to our years of experience in custom designs, we can help you find the exact specification you need.

RiverEast Center | Portland, OR



Annenberg School for Communication – USC | Los Angeles, CA

APPLICATION
LIVING SCREEN®

The Western Group's Living Screen® system is made of modular parallel-paneled grids of welded wire which are fabricated into a growing surface for climbing plants. Living Screen® can be used to enhance mundane parking structure façades or to enliven barren landscapes. This product creates beautiful transitions between nature and the built environment. Adding greenery to your design provides many benefits including improved air quality, natural shading and cooling, and noise and pollution reduction.

Living Screen® panels can be easily adapted into existing or new construction. We offer attachment methods for connecting Living Screen® directly to structures or to freestanding posts. No matter your site conditions, our team can work with you to design customized screen shapes, sizes, and connections to match your specific needs.

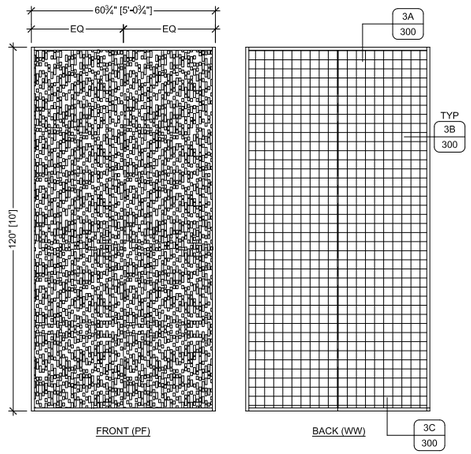
Mills Fleet Farm Parking Structure | Minneapolis, MN

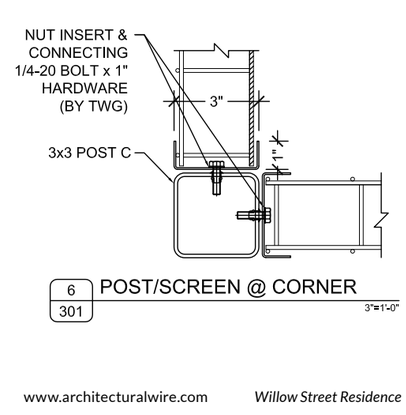
Liberty Community Plaza | Whittier, CA

MoZaic West | Minneapolis, MN

University of Texas at Arlington - Park Central | Arlington, TX

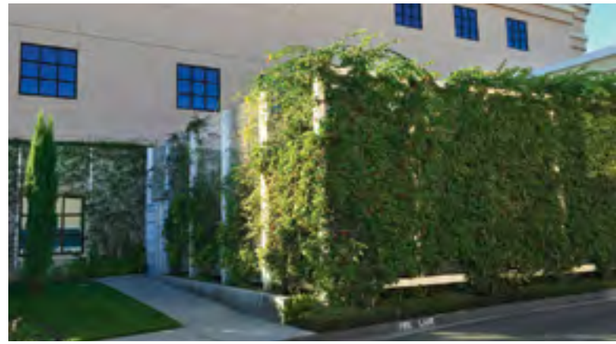
Viceroy Hotel | Chicago, IL





Willow Street Residence | Chicago, IL

Portland Expo Center | Portland, OR



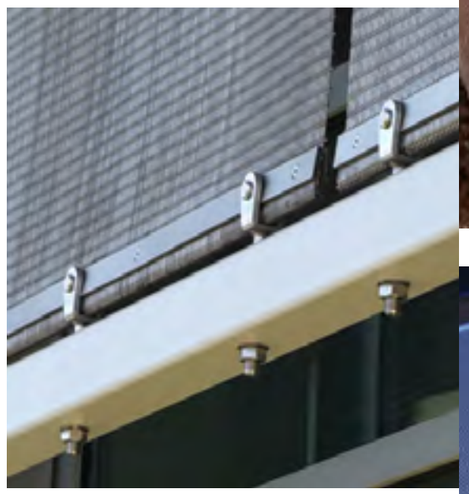
Huntington Hospital | Pasadena, CA

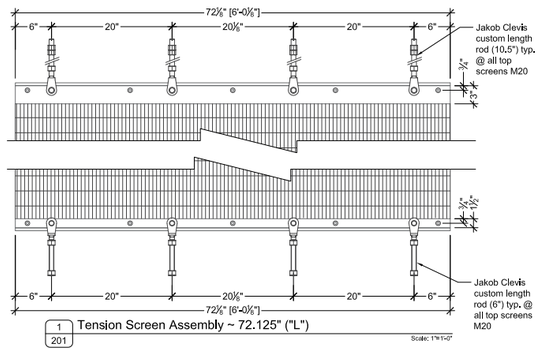
APPLICATION
TENSION SCREEN

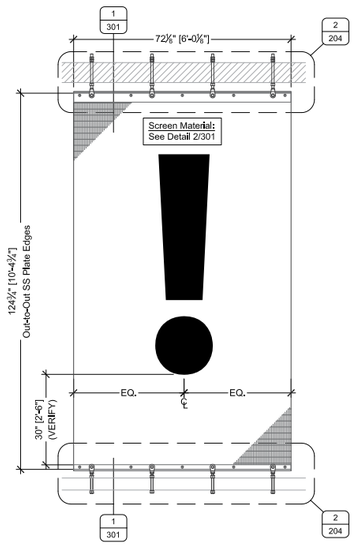
The Western Group's tension screen assemblies can be used for a variety of functions, both externally and internally. These eye-catching screens provide security while allowing light, sound, heating, and cooling to flow through your space. Contact us for any custom needs, including applied graphics and unique attachment systems.

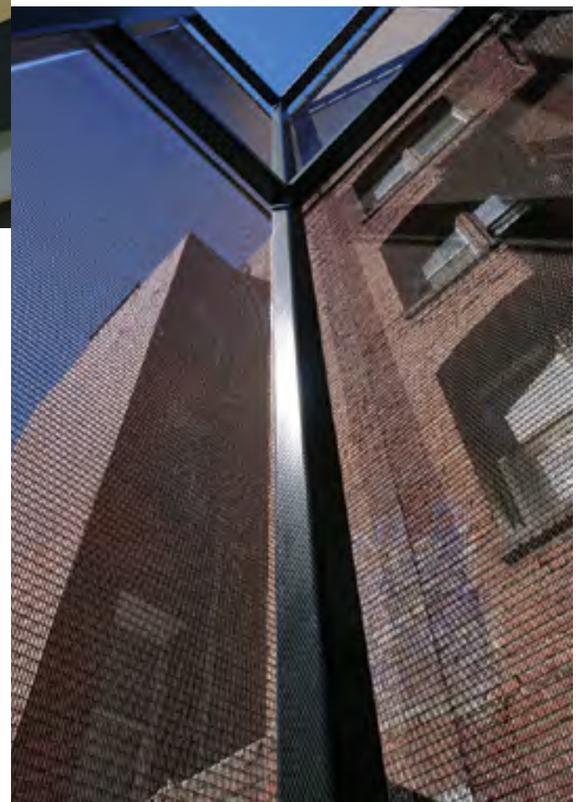
Traville Gateway Garage – University of Maryland | Shady Grove, MD

Library! at Bown Crossing | Boise, ID









Goodyear – Innovation Way Parking Facility | Akron, OH

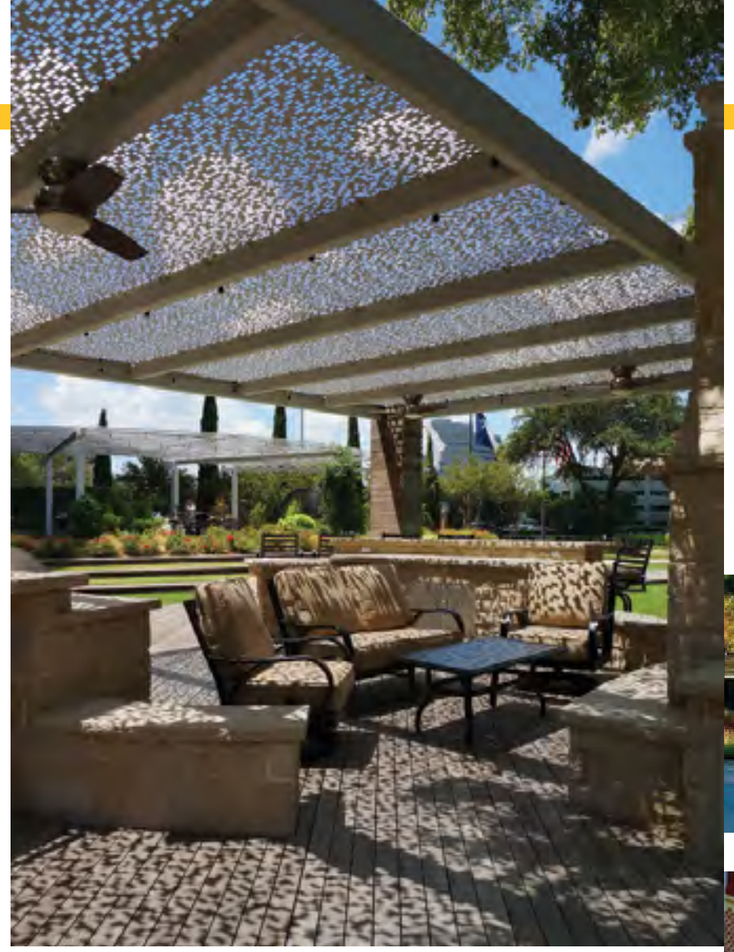
College of Creative Studies at Taubman Center | Detroit, MI

APPLICATION
SUNSHADE

With sunshades, a designer can add texture, contrast, and color to a building or structure while reducing solar heat gain. The Western Group's woven wire or perforated plate sunshades offer a more refined treatment than traditional louvers or fabric awnings. Whether shading is required from natural or artificial light, our sunshades can be installed horizontally over glass roofs or vertically in front of glass wall systems.

NW 23rd & Glisan | Portland, OR

North Texas Tollway Authority Gantry | Dallas, TX



Mandalay Tower 2 | Irving, TX

Costa Mesa Middle School - Costa Mesa, CA

JLL Real Estate | Portland, OR

APPLICATION
SIGNAGE

The Western Group's architectural products create interesting backdrops for signs of all types, using pattern, texture, and transparency in eye-catching ways. Clients often project custom lighting onto the textured surface in order to provide dramatic contrast and visibility.

Martin Luther King, Jr. Boulevard Gateway | Portland, OR

Nogales High School | La Puente, CA

Safeway, SW Jefferson Street | Portland, OR

Rex Hill Winery | Newberg, OR

Wieden + Kennedy | Portland, OR

APPLICATION
SECURITY SCREENS

Architectural mesh and perforated panels are used for all types of security and safety applications including pedestrian guardrails, commercial entrances, parking structures and municipal detention facilities. The Western Group's strict manufacturing standards meet the highest levels of structural integrity.

Daimler Trucks North American Parking Structure | Portland, OR

Legacy Emmanuel Medical Center, Parking 4 | Portland, OR

APPLICATION
PERFORATED CLADDING

Perforated cladding provides natural airflow and light penetration, reducing the need for mechanical air handling and electric daytime lighting. Cladding may be used as a partition, security enclosure, guardrail, sunshade or landscape element. The Western Group produces a large variety of hole shapes, patterns, and margins. Whether you need a standard pattern or a custom design, let us know how we can assist you.

Miramar College Parking Structure | San Diego, CA

Tollway Plaza | Dallas, TX

Costa Mesa Middle School | Costa Mesa, CA

Hotel Eastlund | Portland, OR

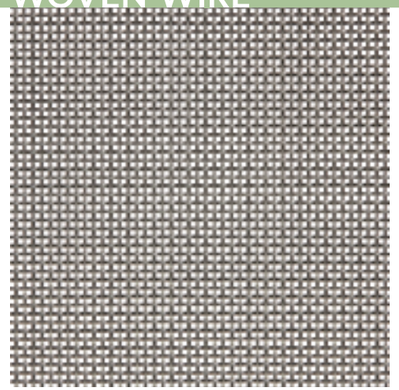
EV Lofts | San Diego, CA

Harwood Condominiums | Vancouver, BC

JLL Real Estate | Portland, OR

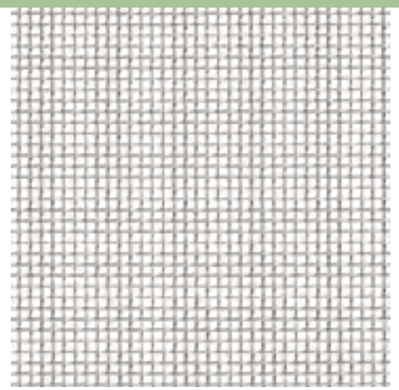
PRODUCT MATERIALS

WOVEN WIRE



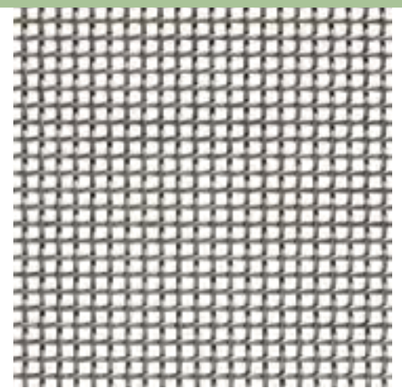
Over & Under I

Weave: 5 Mesh 14 ga. (.080”)
Alloy: T304 Stainless Steel
Open Area: 36%
Weight: 2.2 lbs/sq ft



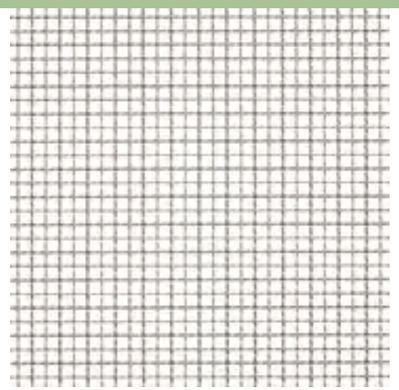
Over & Under II

Weave: 4 Mesh 16 ga. (.063”)
Alloy: T304 Stainless Steel
Open Area: 56%
Weight: 1.0 lbs/sq ft



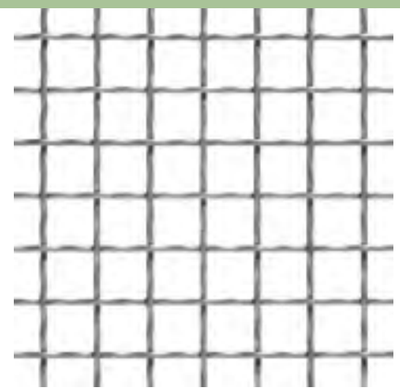
Over & Under III

Weave: 1/4” Square Opening 11 ga. (.120”)
Alloy: High-carbon Steel
Open Area: 46%
Weight: 2.6 lbs/sq ft



Sound Waves I

Weave: 1/4” Square Opening 18 ga. (.047”)
Alloy: T304 Stainless Steel
Open Area: 71%
Weight: 0.5 lbs/sq ft

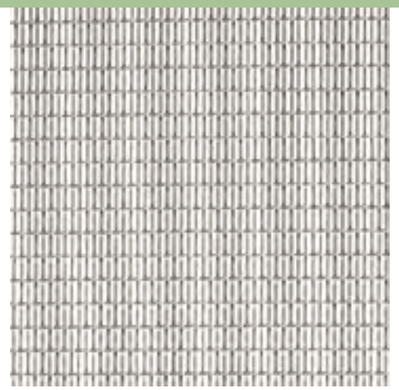


Sound Waves II

Weave: 1” Square Opening 10 ga. (.135”)
Alloy: Plain Steel
Open Area: 78%
Weight: 1.0 lbs/sq ft

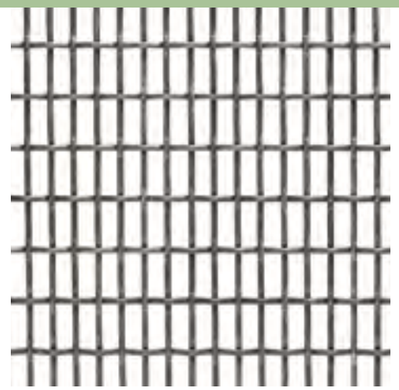
Sound Waves III

Weave: 2” Square Opening 3 ga. (.244”)
Alloy: Plain Steel
Open Area: 79%
Weight: 1.7 lbs/sq ft



Venetian Waterways I

Weave: 3/32” x 2 Mesh 16 ga. (.063”)
Alloy: T304 Stainless Steel
Open Area: 56%
Weight: 1.2 lbs/sq ft

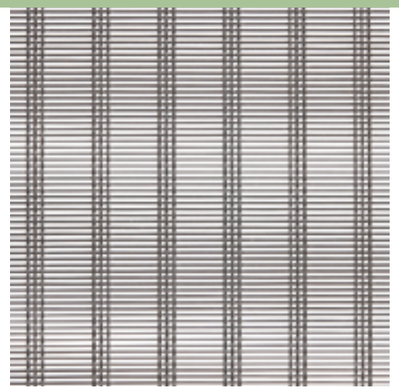


Venetian Waterways II

Weave: 3/8” x 1” 10 ga. (.135”)
Alloy: High-carbon Steel
Open Area: 66%
Weight: 1.7 lbs/sq ft

Venetian Waterways III

Weave: 3/8” x 1-1/2” 6 ga. (.192”)
Alloy: Galvanized Steel
Open Area: 59%
Weight: 2.9 lbs/sq ft



Coastal Boardwalk I

Weave: 7 Mesh x 1” 18 ga. (.047”)
Alloy: High-carbon
Open Area: 60%
Weight: 0.8 lbs/sq ft

Coastal Boardwalk II

Weave: 1/4” x 3” 11 ga. (.120”)
Alloy: T304 Stainless Steel
Open Area: 64%
Weight: 1.7 lbs/sq ft

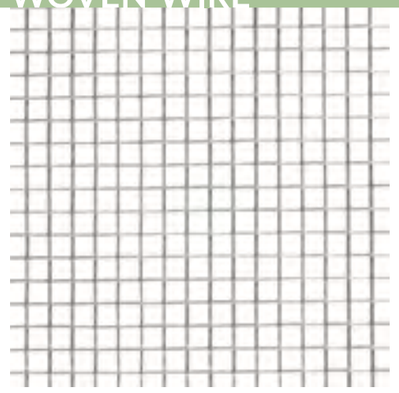
Coastal Boardwalk III

Weave: 3/4” x 5” 3 ga. (.243”)
Alloy: Galvanized Steel
Open Area: 69%
Weight: 2.8 lbs/sq ft

Call us for more information about available alloys & patterns – 844.894.2724 (844.TWG.ARCH)

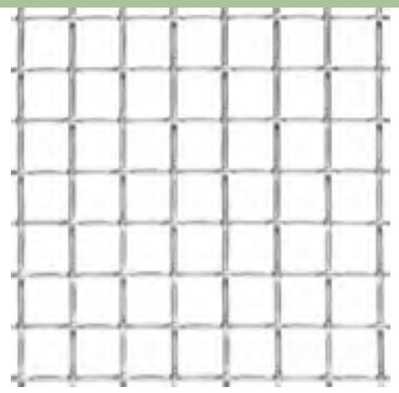
PRODUCT MATERIALS

WOVEN WIRE



Himalayan Foothills I

Weave: 2 Mesh 16 ga. (.063”)
Alloy: T304 Stainless Steel
Open Area: 76%
Weight: 0.5 lbs/sq ft



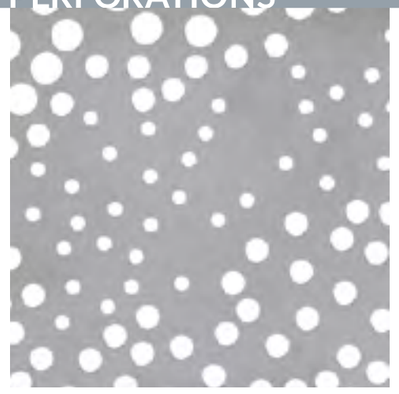
Himalayan Foothills II

Weave: 1” Square Opening 10 ga. (.135”)
Alloy: Galvanized Steel
Open Area: 78%
Weight: 1.0 lbs/sq ft

Himalayan Foothills III

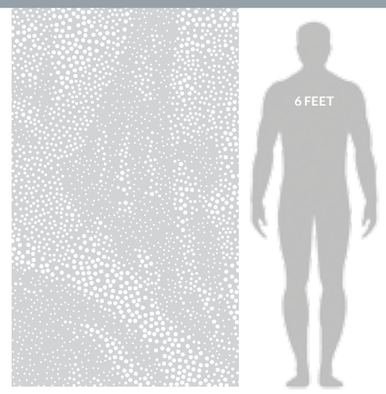
Weave: 2” Square Opening 3 ga. (.243”)
Alloy: Aluminum
Open Area: 79%
Weight: 0.6 lbs/sq ft

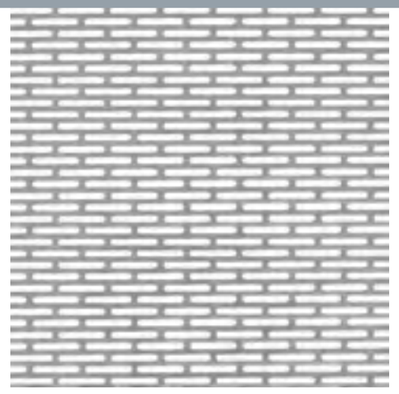
PERFORATIONS



Cascadia

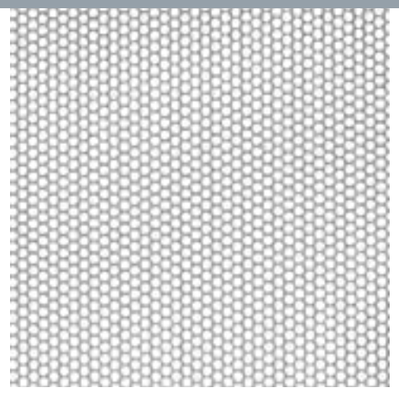
3 Hole Sizes: 5/16” – 1/2” – 11/16” Round
Hole Pattern: Random Centers
Open Area: 20-50% (range)





Oblong Small

Hole Size: 1/8” x 1” Oblong Slot
Hole Pattern: 1/4” x 1-1/8” On Centers
Side Staggered
Open Area: 43%

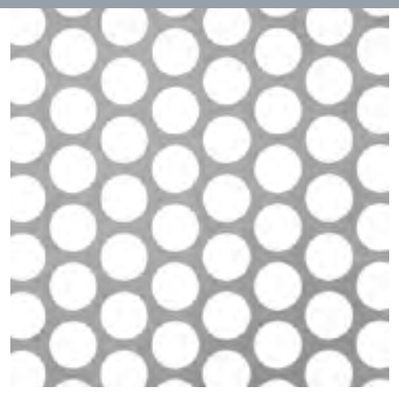


Round Small

Hole Size: 3/16” Round
Hole Pattern: 1/4” On Centers Staggered
Open Area: 51%

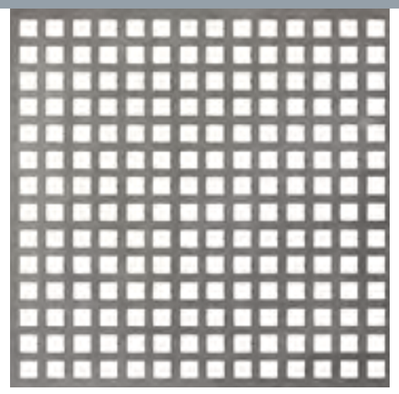
Round Medium

Hole Size: 1/2” Round
Hole Pattern: 11/16” On Centers Staggered
Open Area: 48%



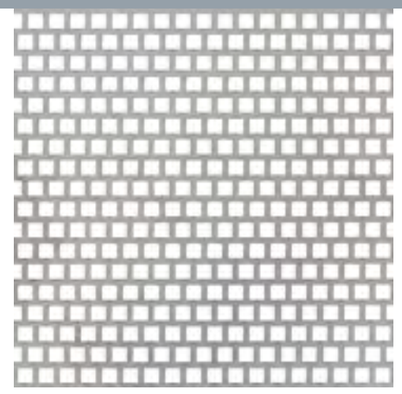
Round Large

Hole Size: 1” Round
Hole Pattern: 1-1/4” On Centers Staggered
Open Area: 58%



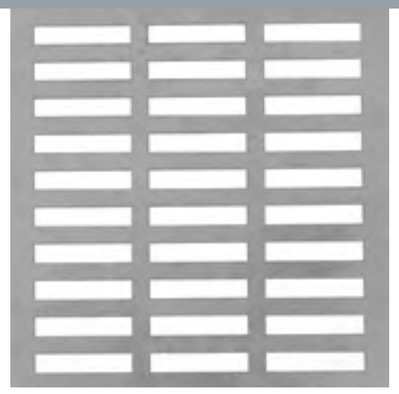
Square Inline

Hole Size: 3/8” Square
Hole Pattern: 9/16” On Centers Inline
Open Area: 44%



Square Stagger

Hole Size: 5/16” Square
Hole Pattern: 7/16” On Centers Staggered
Open Area: 51%



Rectangle Inline

Hole Size: 3/8” x 2” Rectangle
Hole Pattern: 3/4” x 2-3/8” On Centers Inline
Open Area: 42%

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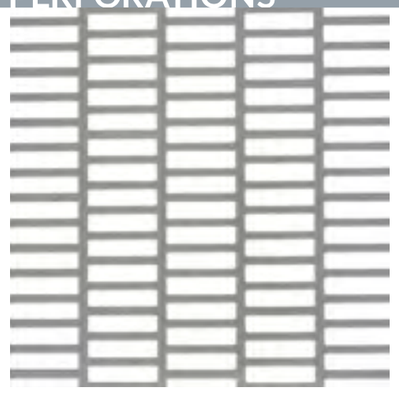
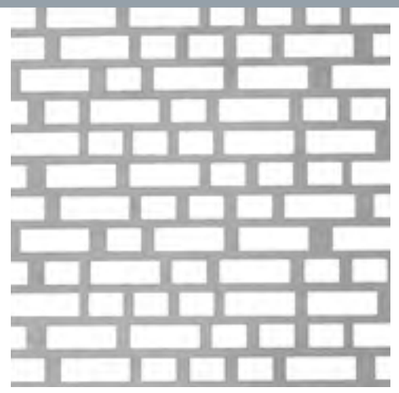
PRODUCT MATERIALS

PERFORATIONS



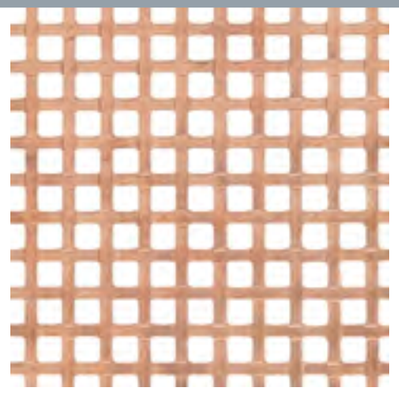
Rectangle Stagger

Hole Size: 5/16” x 1-3/8” Rectangle
Hole Pattern: 1/2” x 1-9/16” End Stagger
Open Area: 55%



Mini Matrix

Hole Size: 0.5” x 0.8” / 0.5” x 1.6” Rectangle
Hole Pattern: 0.3” and 0.2” Spacing, Minimum
Open Area: 51% +/-

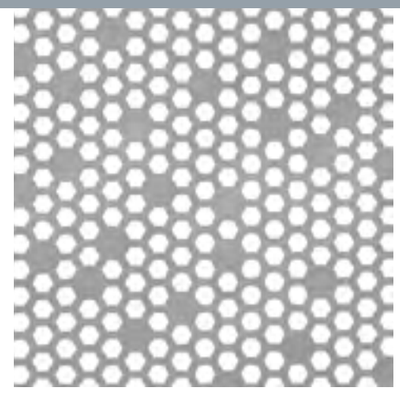


Flatbar Weave

Hole Size: 1/2” Square
Hole Pattern: 3/4” On Centers Inline
Alloy: Copper, Other Materials Available
Open Area: 44%

Hexagon

Hole Size: 3/4” Hexagon
Hole Pattern: 1-1/8” On Centers Staggered
Open Area: 44%



Honeycomb

Hole Size: 3/8” Hexagon
Hole Pattern: 9/16” On Centers Staggered
10% of Holes Randomly Removed (as shown)
Open Area: 40% +/-

Atomic

Hole Size: 1.2” wide / 2.4” long
Repeating Pattern
Open Area: 60% +/-

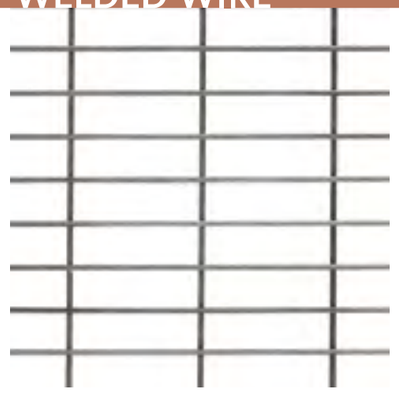
Matrix

Hole Size: 0.7” x 1.1” / 0.71” x 2.1” Rectangle
Hole Pattern: 0.7” Spacing, Minimum
Open Area: 37-42% (range)

Aqua Matrix

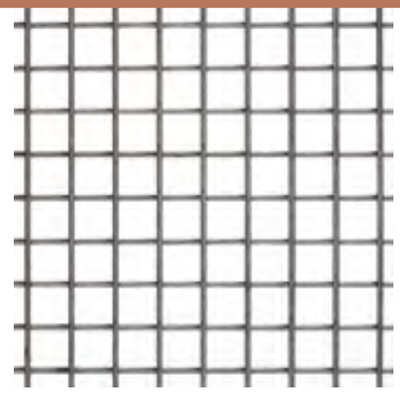
Hole Size: 0.7” x 1.1” / 0.7” x 2.1” Ellipse
Hole Pattern: 0.7” Spacing, Minimum
Open Area: 34-39% (range)

WELDED WIRE



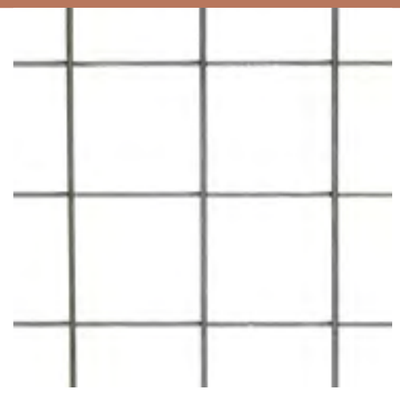
Slotted Narrow

Weave: 1”x 3” 10 ga. Welded
Alloy: Plain Steel
Open Area: 84%
Weight: 0.9 lbs/sq ft



1” Square

Weave: 1” x 1” 10 ga. Welded
Alloy: Plain Steel
Open Area: 76%
Weight: 1.1 lbs/sq ft



3” Square

Weave: 3” x 3” 10 ga. Welded
Alloy: Plain Steel
Open Area: 91%
Weight: 0.4 lbs/sq ft

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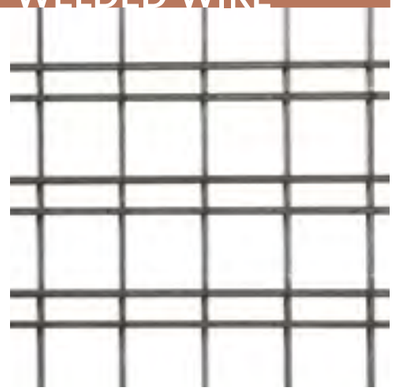
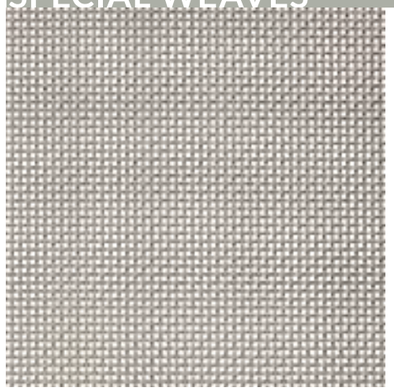
PRODUCT MATERIALS

WELDED WIRE



Straight Wire Double

Weave: 1” x 3” x 3” x 3 ga (.244)
Alloy: Plain Steel
Open Area: 80%
Weight: 1.9 lbs/sq ft



Mini Flat Bar

Weave: 1/8” Square Opening
Wire Size: 0.02” x 0.07” Flat Bar
Alloy: Stainless Steel
Open Area: 42%
Weight: 0.9 lbs/sq ft

Straight Wire Warp

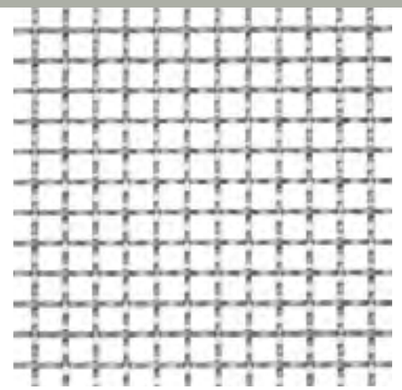
Weave: 1/2” x 1-1/2” Mesh
Wire Size: 8 ga. (.162”)
Alloy: Stainless Steel
Open Area: 66%
Weight: 1.9 lbs/sq ft

Double Shot/ Flat Top Warp

Weave: 6-1/2 Mesh x 3/4”
Wire Size: 14 ga./18 ga. (pair)
Alloy: T304 Stainless Steel
Open Area: 48%
Weight: 2.1 lbs/sq ft

Flat Bar Fill

Weave: 3/16” x 3” on 12ga. (.105”)
Description: 1/8” x 3/8” Flat Bar
Alloy: T304 Stainless Steel
Open Area: 56%
Weight: 2.4 lbs/sq ft



Mini Columbia Bar

Weave: 1/2” square opening
Flat Bar Size: 0.05” x 1/8”
Alloy: T304 Stainless Steel
Open Area: 64%
Weight: 1.2 lbs/sq ft

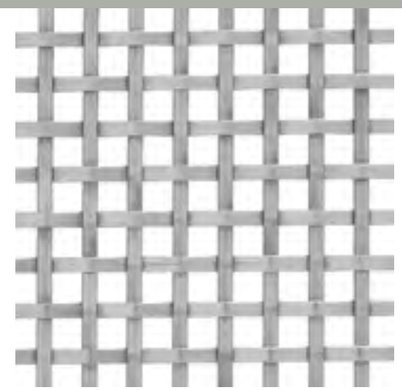
SPECIAL WEAVES

Highland

Weave: 1.9” x 1/2” Mesh
Wire Size: 8 ga. (.162”)
Alloy: T304 Stainless Steel
Open Area: 75%
Weight: 1.4 lbs/sq ft

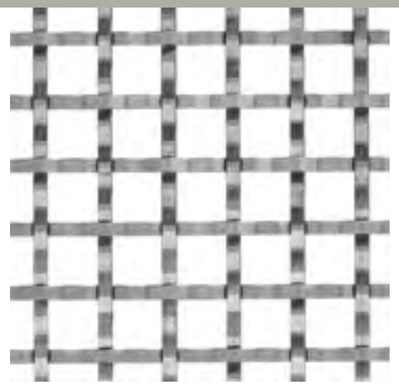
Double-Double Weave

Weave: 1” Square Opening
Wire Size: 3 ga.
Alloy: Aluminum
Open Area: 55%
Weight: 1.5 lbs/sq ft



Columbia Shoals

Weave : 5/8” Square Opening
Flat bar: 0.08” x 5/16”
Alloy: Steel
Open Area: 44%
Weight: 2.1 lbs/sq ft

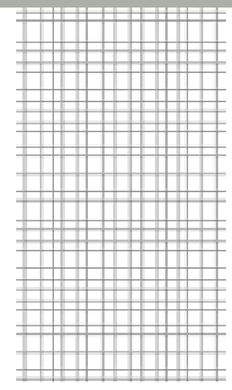


Columbia Bar

Weave: 1-1/16” Square Opening
Flat bar: 0.08” x 5/16”
Alloy: Bright Basic Steel
Open Area: 60%
Weight: 1.5 lbs/sq ft

Hullu

Weave: Variable Openings
Description: 3 ga. (.244”)
Alloy: Plain Steel
Open Area: 76%
Weight: 1.8 lbs/sq ft



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To help select the proper product for your application, use the following charts and information as a step-by-step guide to draft your base specifications. Contact us and we'll help develop the specification within your budget and plan.

1. MATERIAL TYPE

STEEL

Low-carbon and high-carbon steel can be used when tensile strength is required. Unless the designer wishes the material to age naturally, these steel types need a protective coating applied to prevent rusting. Carbon steel is the most economical choice when selecting wire material.

STAINLESS STEEL

Type 304 and 316 Stainless Steel are excellent choices in outdoor applications where rust is undesirable. Stainless wire can be provided with several finishes: soap-drawn wire has a matte finish, grease drawn wire has a shiny finish, and electro-polished has a mirror finish. Stainless is more expensive than carbon wire and less expensive than most exotics.

COPPER AND COPPER ALLOYS

Copper is resistant to atmospheric corrosion, salt air, and brine. Copper wire has a red to yellow color and develops a wonderful patina as part of the natural aging process. Copper and its alloys are more expensive than stainless and carbon products.

Brass has a muted yellow color, somewhat similar to gold, and is relatively resistant to tarnishing. It contains 80% copper and 20% zinc and is used for its flexibility.

Bronze has superior resistance to atmospheric corrosion, making this alloy suitable for exterior applications. Bronze also provides excellent strength and toughness and develops a patina as part of the natural aging process.

ALUMINUM AND ALUMINUM ALLOYS

The light weight and multiple finish options of aluminum and its alloys make them versatile materials, especially where dead load issues exist. Aluminum products generally fall into the middle of the pricing range.

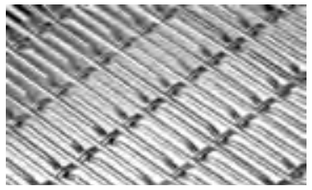
OTHER METALS

The Western Group can supply a range of rare metals which can be used in small quantities to achieve big design ideas.

2. CRIMP STYLE

PLAIN CRIMP

The Plain Crimp is a standard crimp with wire intersections at each pocket.



FLAT TOP

The Flat Top style offsets crimps to one side of the material, creating a smooth surface on one side and a ribbed surface on the opposite.

LOCK CRIMP

With the Lock Crimp style, straight wires have one defined crimp at each intersection, giving a uniform look to both sides of the screen.

TRIPLE SHOT

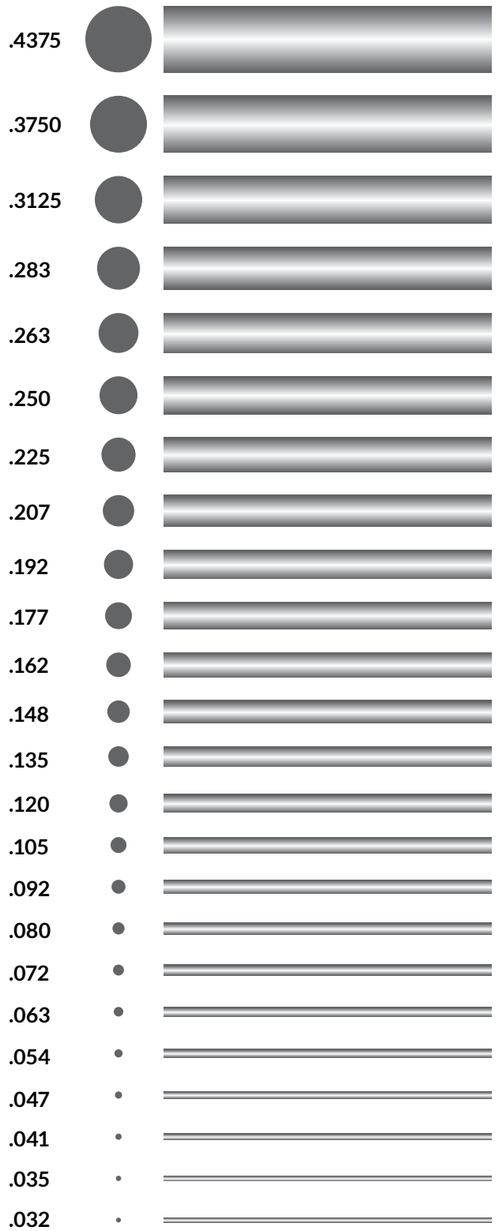
The Triple Shot style has straight sections of wire connected by a tight grouping of three Plain Crimp wires.

INTERMEDIATE CRIMP

Intermediate Crimp styles have multiple crimps between wire intersections, producing a very textured look that is similar on both sides of the screen.

3. WIRE GAUGE SIZE

Shown in decimals of inch*



* Drawing size is approximate

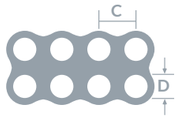
Gauge	SIZES OF WIRE Fraction	Decimals
	3/8	.375
3/0		.362
	23/64	.359
	11/32	.344
2/0		.331
	5/16	.313
1/0		.307
	19/64	.297
1		.283
	9/32	.281
	17/64	.266
2		.263
	1/4	.250
3		.244
	15/64	.234
4		.225
	7/32	.219
5		.207
	13/64	.203
6		.192
	3/16	.188
7		.177
	11/64	.172
8		.162
	5/32	.156
9		.148
	9/64	.140
10		.135
	1/8	.125
11		.120
	7/64	.109
12		.105
	3/32	.094
13		.092
14		.080
	5/64	.078
15		.072
16	1/16	.063
17		.054
18		.049
	3/64	.047
19		.041
20		.035
21		.032
	1/32	.031
22		.028
24		.023

4. OPEN AREA CALCULATIONS

SLOTTED OPENINGS

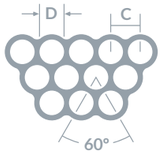
Specify direction of slots, type of pattern, and width of bar or open area.

Straight Round Holes



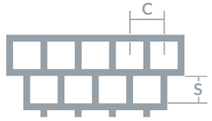
$$\frac{D^2 \times 78.54}{C^2} = \%$$

Staggered Round Holes



$$\frac{D^2 \times 90.69}{C^2} = \%$$

Square Holes
Straight or Staggered

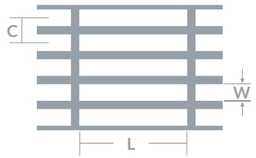


$$\frac{S^2 \times 100}{C^2} = \%$$

PERFORATED PLATE

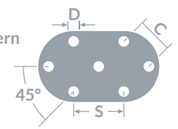
The following formulas can be used for determining the percentage of open area for perforated metals.

Square End Slot



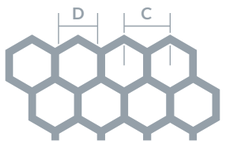
$$\frac{L \times W}{C^2} \; 100 = \%$$

45° Staggered Centers Pattern
(Special)



$$\frac{157.08\ D^2}{S^2} = \%$$

Hexagon



$$\frac{100 \times D^2}{C^2} = \%$$

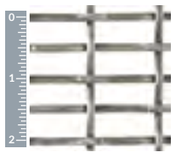
Holes per sq. in. of perforated

$$\text{H/sq. in.} = \frac{\%\ \text{OPEN AREA}}{78.54 \times D^2}$$

Where D = Diameter of hole

WOVEN WIRE AND WELDED WIRE

Specify the size of the space between wires, the size of the wire you wish, and for slotted openings, indicate if the slots run parallel to the width or length of the screen.



MESH OPENING

To determine the mesh, count the number of openings from the center of any one wire to the center of a parallel wire, one inch in distance.

WIRE CLOTH OPENING

Multiply the wire diameter by mesh count, subtract that figure from 1, and divide by the mesh count.

$$\text{OPENING} = \frac{1 - (N \times D)}{N}$$

N = Wires per inch of mesh
D = Wire diameter

MESH OPENING

Count the number of openings per linear inch, or if wire diameter and open space is known, add both together and divide the sum into 1.

$$\text{MESH} = \frac{1}{(D + O)}$$

D = Wire diameter
O = Opening

WIRE CLOTH OPEN AREA

Compute the percentage of open area in standard wire cloth, plain or twilled weave.

MESH CLOTH:
Percentage of open area = $(1\text{-}ND)^2 \times 100$

D = Wire diameter
N = Wires per inch of mesh

SPACE CLOTH:
Percentage of open area = $\left(\frac{O}{O + D}\right)^2 \times 100$

O = Width of clear opening in fractions of an inch
D = Wire diameter

For rectangular weave and cloth in which the warp and shot wires are of different sizes.

Percentage of open area = $(1\text{-}ND)(1\text{-}nd) \times 100$

N = Wires per inch in warp
n = Wires per inch in shute

D = Diameter of warp
d = Diameter of shute

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5. FINISHES

Not only are finishes beautiful, they can also provide long lasting durability. We often recommend powder coating – it's electrostatically applied and heat-cured, forming a protective skin that resists corrosion. Below is a sampling of the dozens of standard colors and textures we offer – and a multitude of custom options are available. Contact us to learn about all of the possibilities.

Power Coat Options (shown: Cardinal Paint. Other options available.)

Hammertone Semi-Gloss

Patina Texture Semi-Gloss

Whenever we can be of assistance, please contact our design team directly or connect with one of our eleven North American locations near you.

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