

Andalusia Design
Specification Guide

Triangles

Perforate™ Parametric
Wall and Ceiling System

ANDALUSIA DESIGN

Andalusia Design is a manufacturer of specialty ceiling, wall and space divider solutions. We combine the power of parametric design with best-in-class digital fabrication capabilities to deliver high-design architectural systems with unparalleled speed and efficiency. We have a large showroom and vertically-integrated manufacturing facility in Austin, TX, USA.

PERFORATE

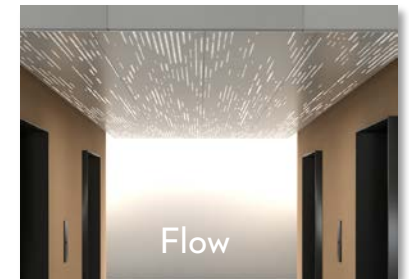
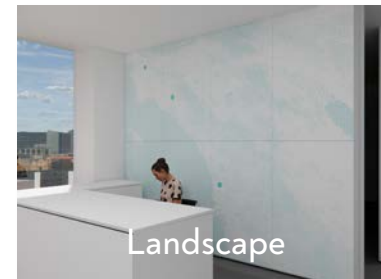
Andalusia Design's Perforate metal wall and ceiling system is a highly-configurable platform that gives designers the freedom to create unique perforated patterns for their client's spaces.

Driven by Andalusia's parametric design engine and in-house digital fabrication, Perforate is ideal for brand-forward, high-traffic areas for commercial and hospitality applications. Designs and hole patterns can be specified and optimized for both aesthetic and budget.

PERFORATE OPTIONS

Perforate is offered in standard configurable and customizable pattern styles. Key Perforate system attributes:

- Available in steel and aluminum, in a variety of standard and custom powder coated finishes
- Standard and custom fiber-laser cut patterns can be fit to your exacting wall and ceiling dimensions
- Option to integrate backlighting with acrylic diffuser to create a dynamic visual effect
- Option to add a composite backing for sound absorption
- Fits into standard grid configurations or can be customized



Enhance your space with Triangles, where the interplay of triangular tiles at different scales and rotations offers a captivating visual experience.



PERFORATE – HOW DO RESPONSIVE TRIANGLES WORK?

Andalusia’s “Responsive Triangle” style is a perfect example of how you can create interesting, novel designs using the power of parametric design. This versatile design can be executed in both our Etch and Perforate products, bringing a unique blend of geometric precision and organic movement to any space.

A. It all starts with an equilateral triangle grid base

B. The triangles within the grid can scale and rotate

C. The scale and rotations of the triangles are done by a parametric concept known as an “attractor curve” – a tool used to influence or modify geometric shapes or patterns based on their distance from a given curve. Imagine you have a wavy line (the attractor curve on the right) on a surface, and you want to change the size, position, or rotation of nearby triangles. The closer these shapes are to the attractor curve, the more they are affected—growing bigger, rotating more, or shifting position—while shapes farther away are less affected or stay the same. This creates a dynamic and visually interesting design that reacts to the proximity of the attractor curve.

D. Users are able to modify the variables to optimize for design taste, functional requirements and budgetary constraints:

- Resolution (grid size)
- Contrast (size of holes)
- Backlighting, acoustic backing or open
- Material and finish



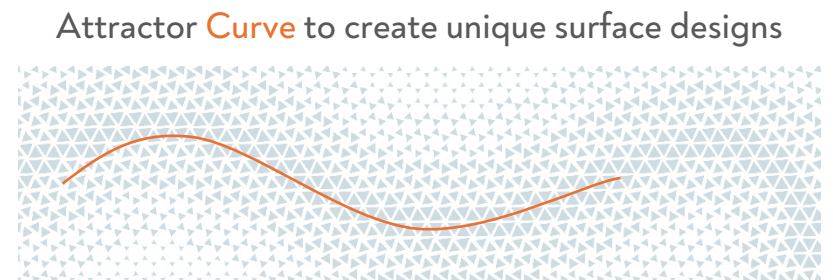
Equilateral Grid



Scaled and Rotated Tiles



Attractor Curve

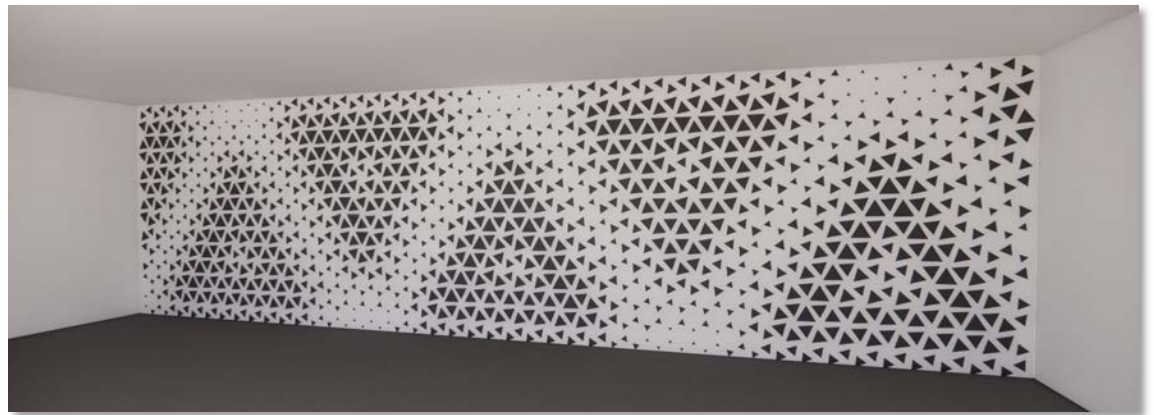
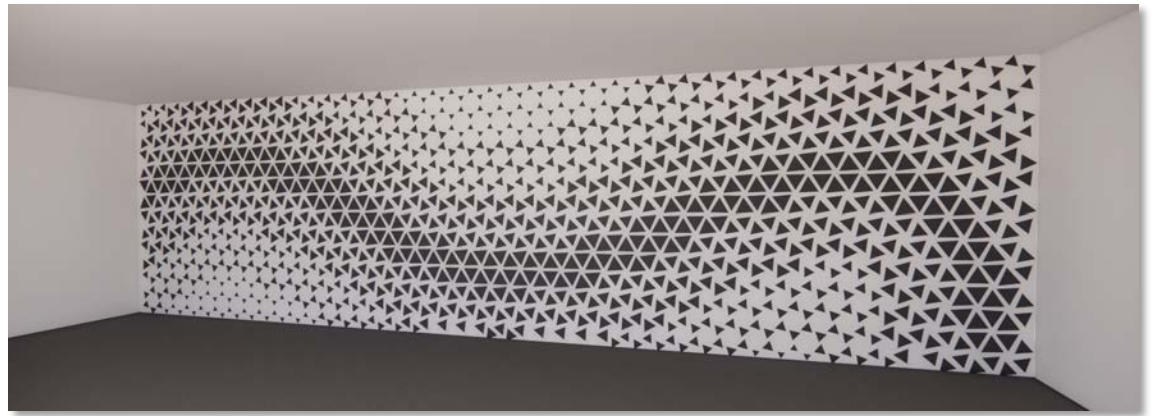
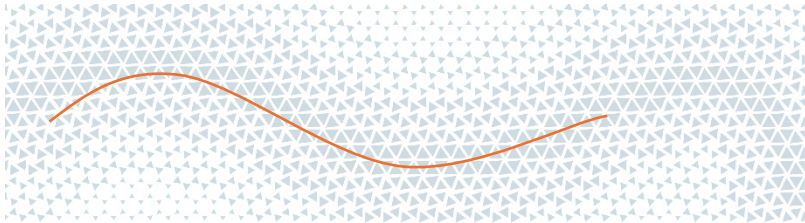


Attractor Curve to create unique surface designs

PERFORATE – HOW DO RESPONSIVE TRIANGLES WORK?

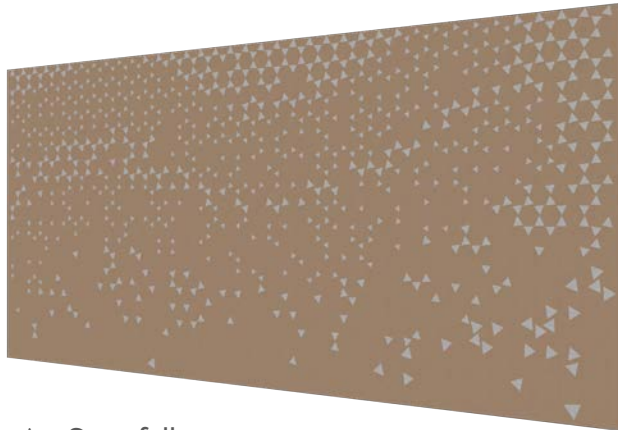
Andalusia's parametric tool allows the user to draw an object – shape, curve, logo, letter, etc. – and let the system perform the magic of creating a responsive triangular system for you!

You can see from the examples below that the closer the triangles are to the attractor curve, the larger they grow. The triangles begin to shrink, rotate and eventually dissipate the further they are from the user-defined curve.

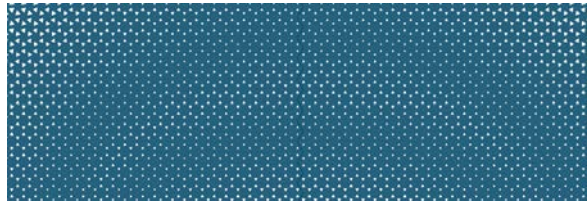


DESIGN STEP 1: PICK A PATTERN OR DRAW YOUR DESIGN

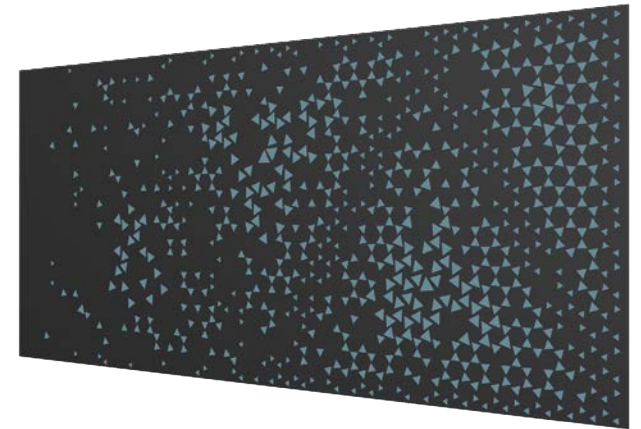
Choose from a library of patterns that best suits your application!



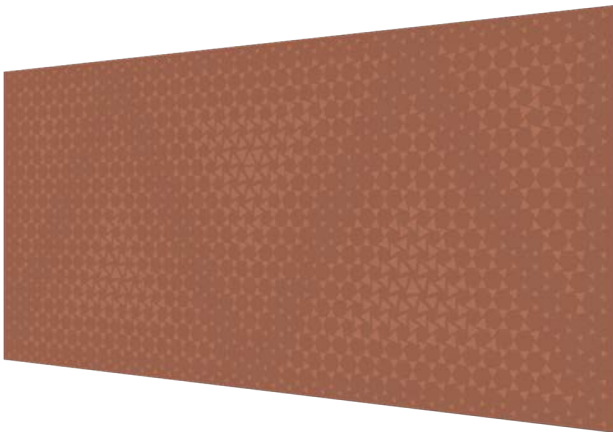
A - Snowfall



C - Glow



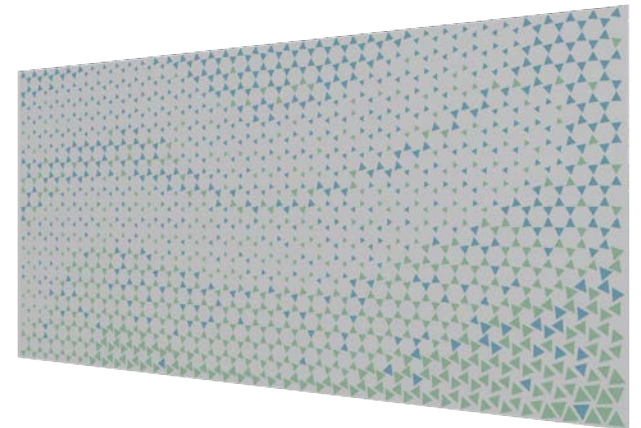
E - Dissipate



B - Pyramid



D - Heat



F - Wave

DESIGN STEP 1: PICK A PATTERN OR DRAW YOUR DESIGN

Or draw / insert your own design!

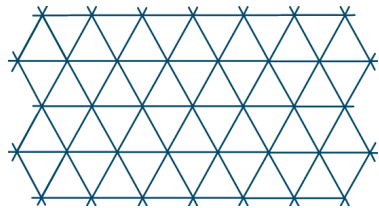


Draw!

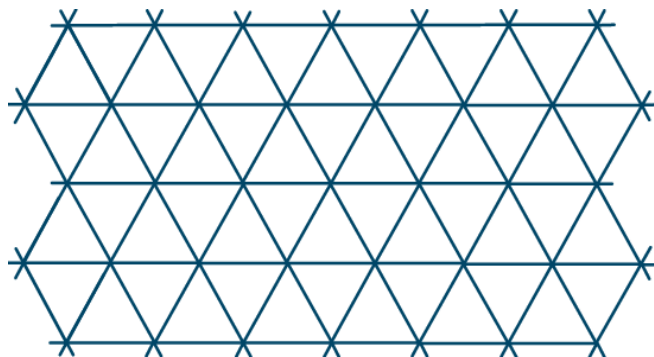
DESIGN STEP 2: CHOOSE A RESOLUTION (TRIANGULAR GRID SIZE)

Your Perforate triangular grid resolution / size (or perforations per inch) can impact your aesthetic and price point. The fewer holes per array, the less time it spends on our fiber laser, thus the less expensive it is. You sacrifice resolution but you gain larger triangle sizes if you're looking for a more bold statement. Below are examples of small, medium and large grid sizes.

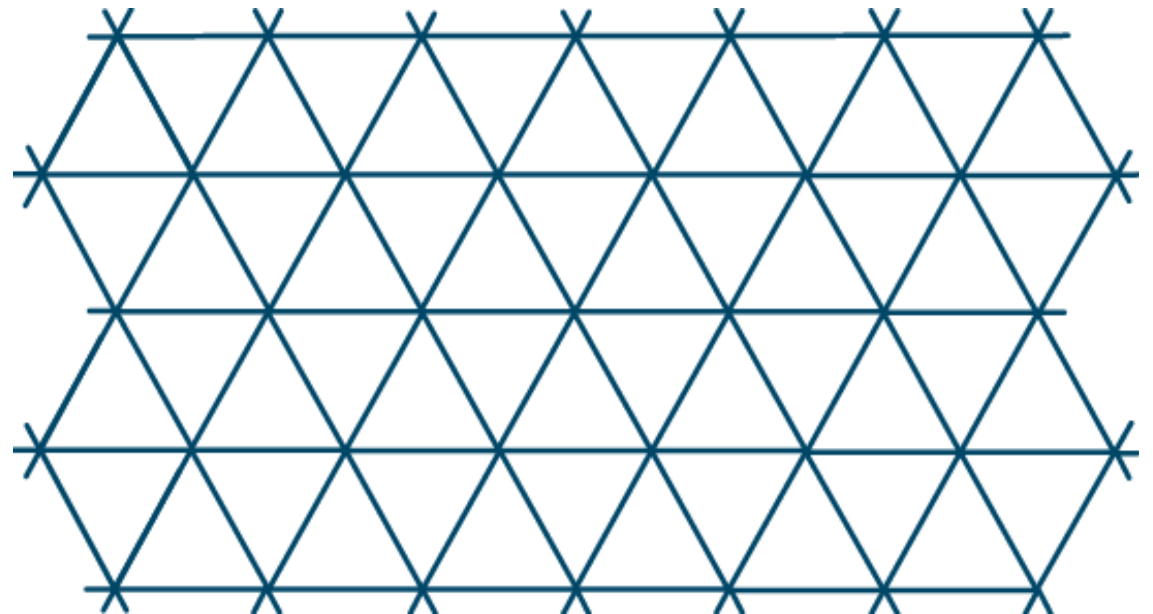
Small (<1/2" max triangle size)



Medium (1/2"-2" max triangle size)

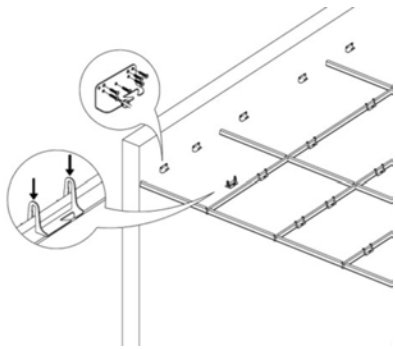


Large (>2" max triangle size)

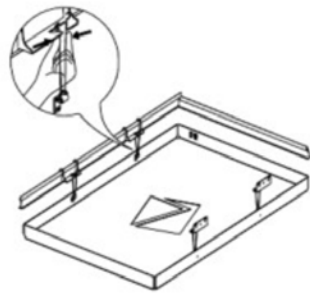


DESIGN STEP 3: CHOOSE YOUR APPLICATION – CEILING, WALL OR WALL-TO-CEILING

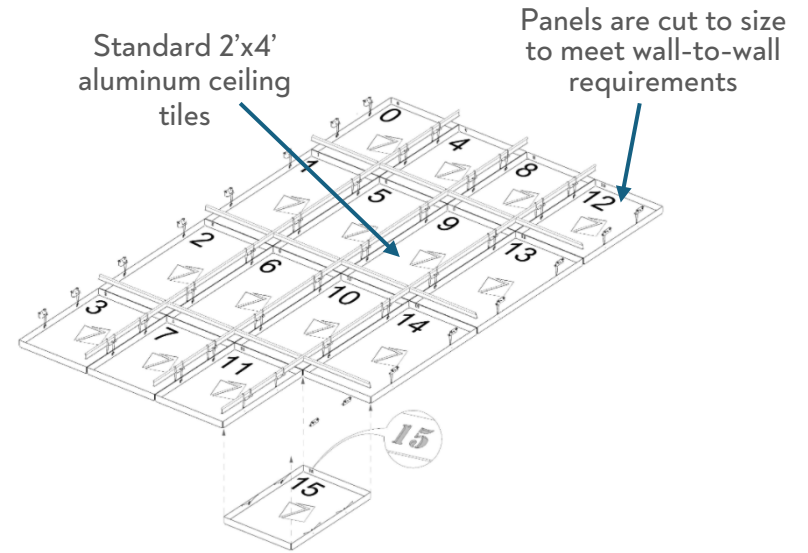
Perforate can be used for wall, ceiling and wall-to-ceiling applications. Wall and ceiling materials and installation differ slightly, but both work with standard installation components and are easy to install.



Andalusia saddle clips are added to standard ceiling grid



Torsion spring mechanism locks ceiling panels in place



Wall-mounted system uses simple Drop and Lock mechanism

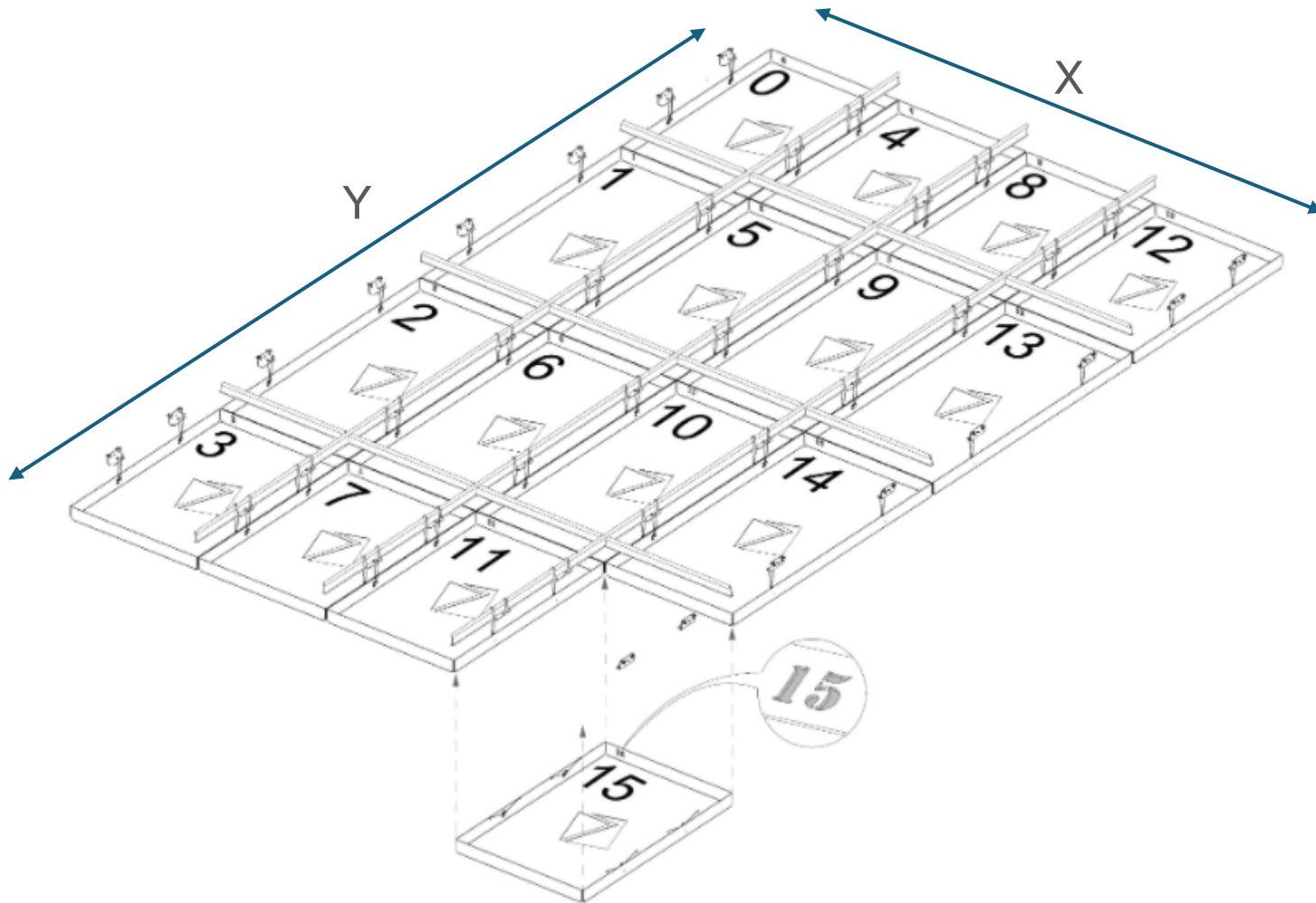


All tiles are numbered with the associated final schematic to ensure ease-of-installation

DESIGN STEP 4: DETERMINE YOUR ARRAY SIZE

Determine the dimensions of your wall and/or ceiling plane. Andalusia will typically work with standard 2'x4' grid tile sizes for ceilings and 4'x4' tiles for walls, but can accommodate different sizes, including near edge conditions.

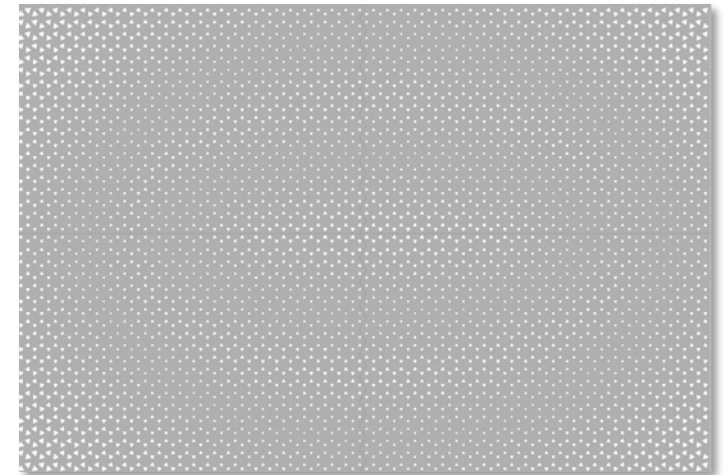
Measure the overall dimension of your array –
X and Y dimensions.



DESIGN STEP 5: SELECT YOUR COLOR / FINISH

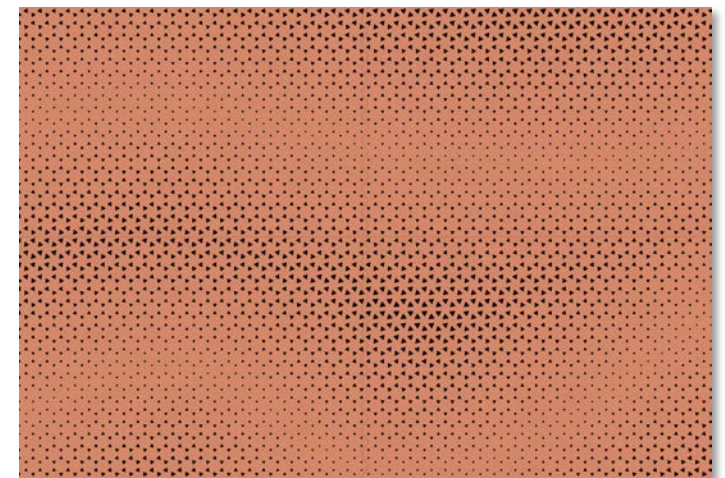
Choose from a variety of standard color / finish options, or work with Andalusia to create something unique!

Standard Color Palette



Anodized Silver

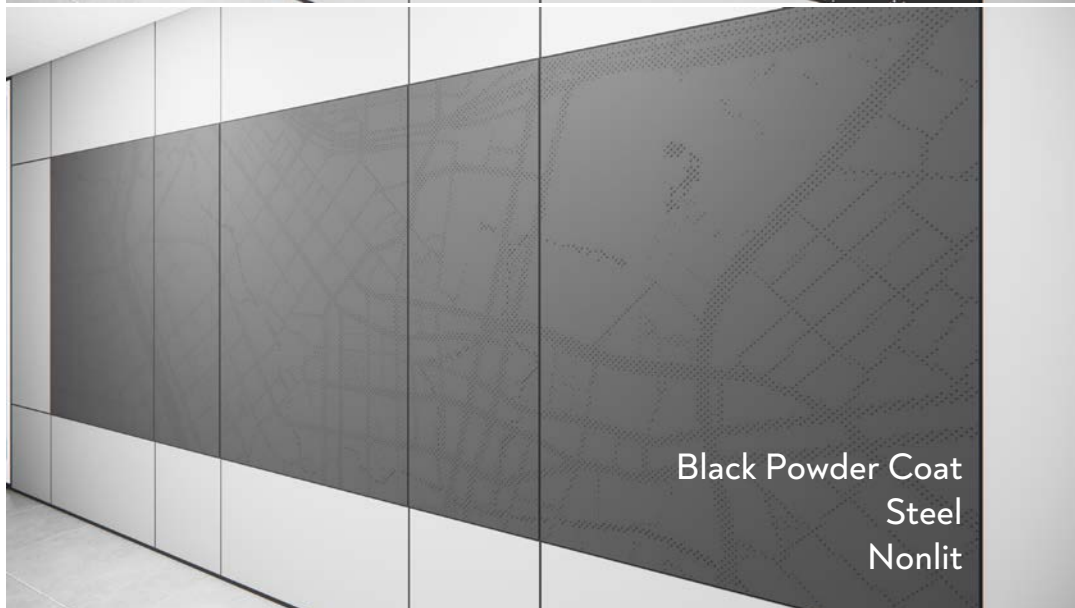
Premium Color Palette



Copper Ember

DESIGN STEP 6a: OPTIONAL BACKLIGHTING

Perforate can be enhanced with backlighting to make the Street Grid 'pop'. Backlighting the system adds additional cost and complexity – below are considerations when designing.



- A. Andalusia does not offer its own backlighting solution, but has recommended partners in every region
- B. When specifying backlighting, Andalusia offers a standard acrylic diffuser that is custom fit into each Perforate panel
- C. For most backlighting applications, a sheet LED array with 6" diode spacing is ideal. The LED array must be mounted at least 3" from the panel diffuser
- D. The more room there is behind the panels, the more opportunities there are for cost-effective lighting solutions. Contact Andalusia to learn more
- E. Andalusia can work with you to optimize hole sizes and patterns to help achieve any functional lighting requirements you may have

DESIGN STEP 6b: OPTIONAL FELT BACKER

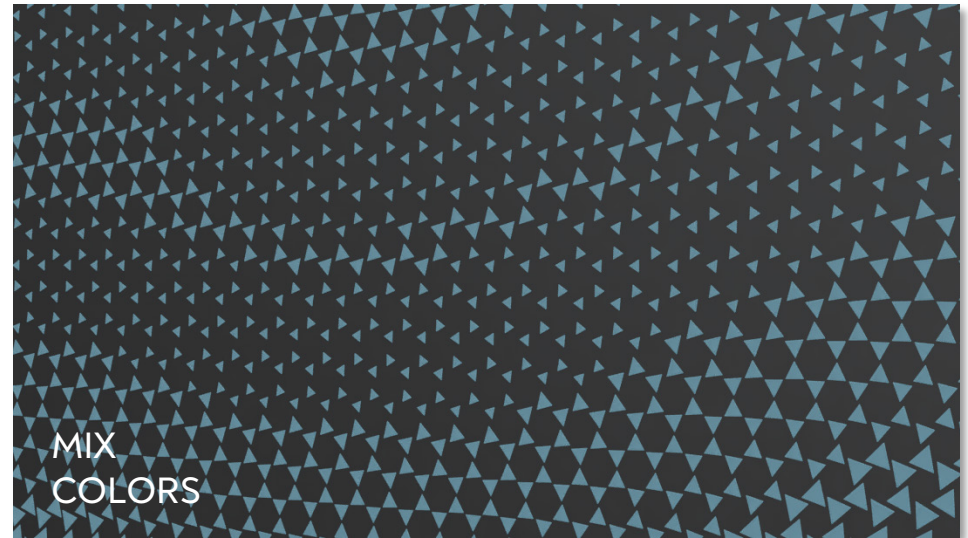
If the Triangles are in a well-lit area of a space and you're looking to add a pop of color and/or functional acoustic performance, Perforate can be supplied with a standard composite backer. Contact Andalusia for more information on standard and custom options, along with functional specifications.



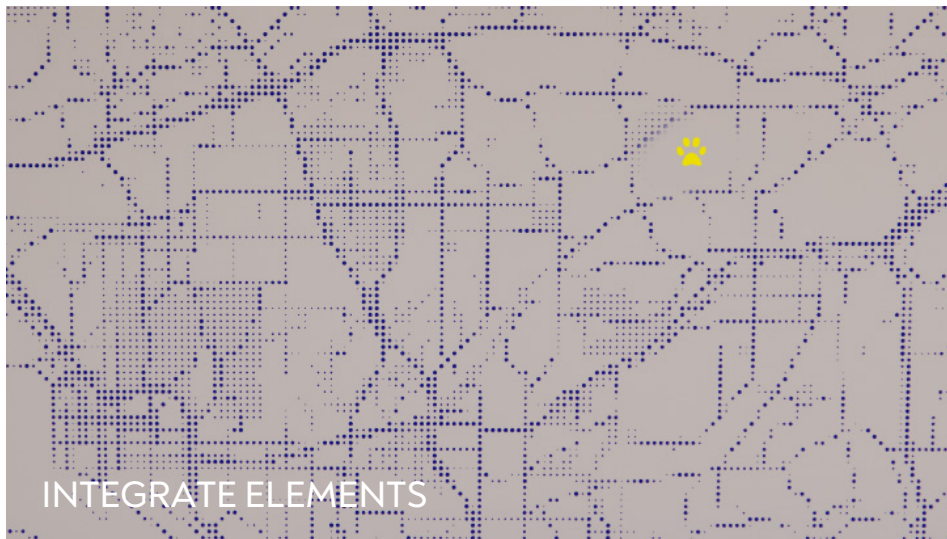
CUSTOMIZATION OPPORTUNITIES



Add a replaceable magnetic center insert that can be used to highlight a brand / logo; light it independently with RGB!



With custom backing, you can add a great pop of color to your Perforate system



Downlights, sprinkler heads and other elements can be added without losing design intent.



Wall-to-wall and wall-to-ceiling applications are easy to work with. Contact us to ensure the right fit with custom panels to fill the surface!

SERVICES AND DOCUMENTATION

Below is a list of typical design and technical services, along with the documentation you can expect to receive when designing, specifying, procuring and installing an Andalusia Perforate system.

DESIGN PHASES

Services and Outputs:

- Collaborative and iterative design development, starting as early as concept design
- 3D parametric model development; ability to collaborate in Rhino and Revit or output to any standard CAD platform
- Renderings in Enscape, V-Ray
- Real-time pricing information during design iterations and design-for-budget / VE support
- Thorough product design proposals
- Physical material samples and color swatches
- Custom samples to demonstrate form / function of unique designs
- Assistance with client-facing presentations, as desired

POST-DESIGN / SPEC SUPPORT

Services and Outputs (in addition to Design outputs):

- Technical drawings – elevations, sections, details
- CSI MasterSpec document
- Comprehensive dimensions, thickness, weight information
- Final digital 3D model
- Final contractor net pricing
- Performance data, including ASTM E84 fire ratings, structural data, acoustic analysis, along with necessary supporting test data
- Sustainability certifications, EPD, HPD, Declare
- Detailed step-by-step installation instructions
- Maintenance and warranty information
- Reference part numbers and details
- Andalusia contact information

ONE-PAGE PERFORATE DESIGN CHECKLIST

Let's get started! Fill out the attached form, along with a full pattern in CAD or other medium, and we'll get to work!

APPLICATION

- W – Wall mount
- C – Ceiling
- WC – Wall-to-ceiling

PATTERN

- A – Snowfall
- B – Pyramid
- C – Glow
- D – Heat
- E – Dissipate
- F – Wave
- Attached curve / design
- Notes

POWDER COAT FINISH

- Signal White
- Traffic White
- Pure White
- Champagne
- Quartz Gray
- Anodized Silver
- Black
- Sea Blue*
- Azure Horizon*
- Copper Ember*
- Vintage*
- Scarlett Shine*
- Tourmaline*
- Ancient Ore*
- RAL _____

* Denotes Premium Finish

GRID ELEMENT SIZE

- Small
- Medium
- Large
- Exact Dimension:

BACKING OPTION

- Backlighting with Acrylic diffuser
- Composite backing
- Color: _____

ARRAY SIZE

- X Dimension

- Y Dimension

CUSTOMIZATION

- Custom Insert

- Wall-to-wall
- Integrated components (HVAC, sprinklers, etc.)

OTHER QUESTIONS

Project stage _____
Approximate SF _____
Approximate budget / SF _____
Modeling software _____
Other unique variables

Need Assistance on your next Project?

Contact us at
hello@andalusia.design