PERFORATE™

Architectural Metal Systems

ANDALUSIA

A configurable metal platform for feature surfaces and illuminated architecture.

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Perforate – Irvine, CA Skyline

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Andalusia Advantage

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Customize Any Project

$10K or $1M budget? We provide the same level of design freedom & support

Lighting & Acoustics Expertise

We treat lighting & acoustics as critical elements in design – not an afterthought

Contractor's Best Friend

Short lead times, predictable installation, fast shop drawings & no pricing games

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LS Power, East Brunswick, NJ

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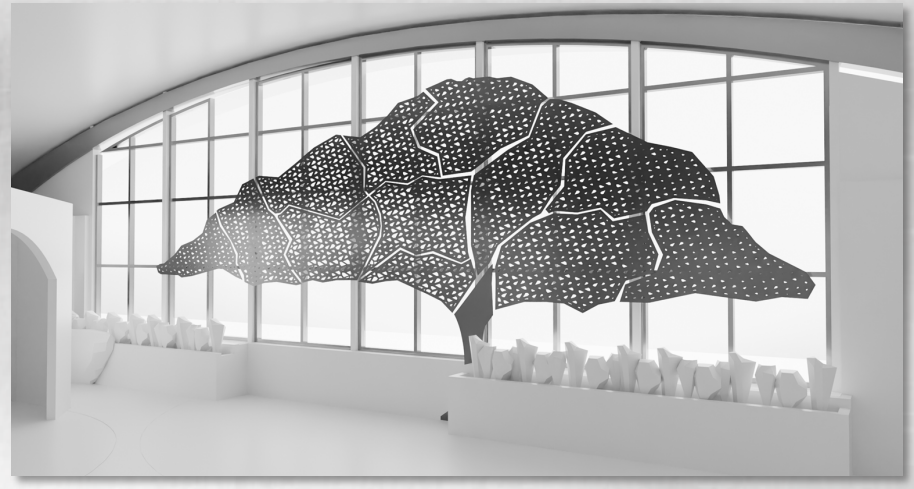
Customization

Andalusia is not just the most competitive solution for perf metal projects – we're opening new markets for custom designs

- Dedicated Andalusia design resource on day one
- Concept renderings
- Transparent pricing
- Buildable Revit models
- Specification documents
- Physical samples



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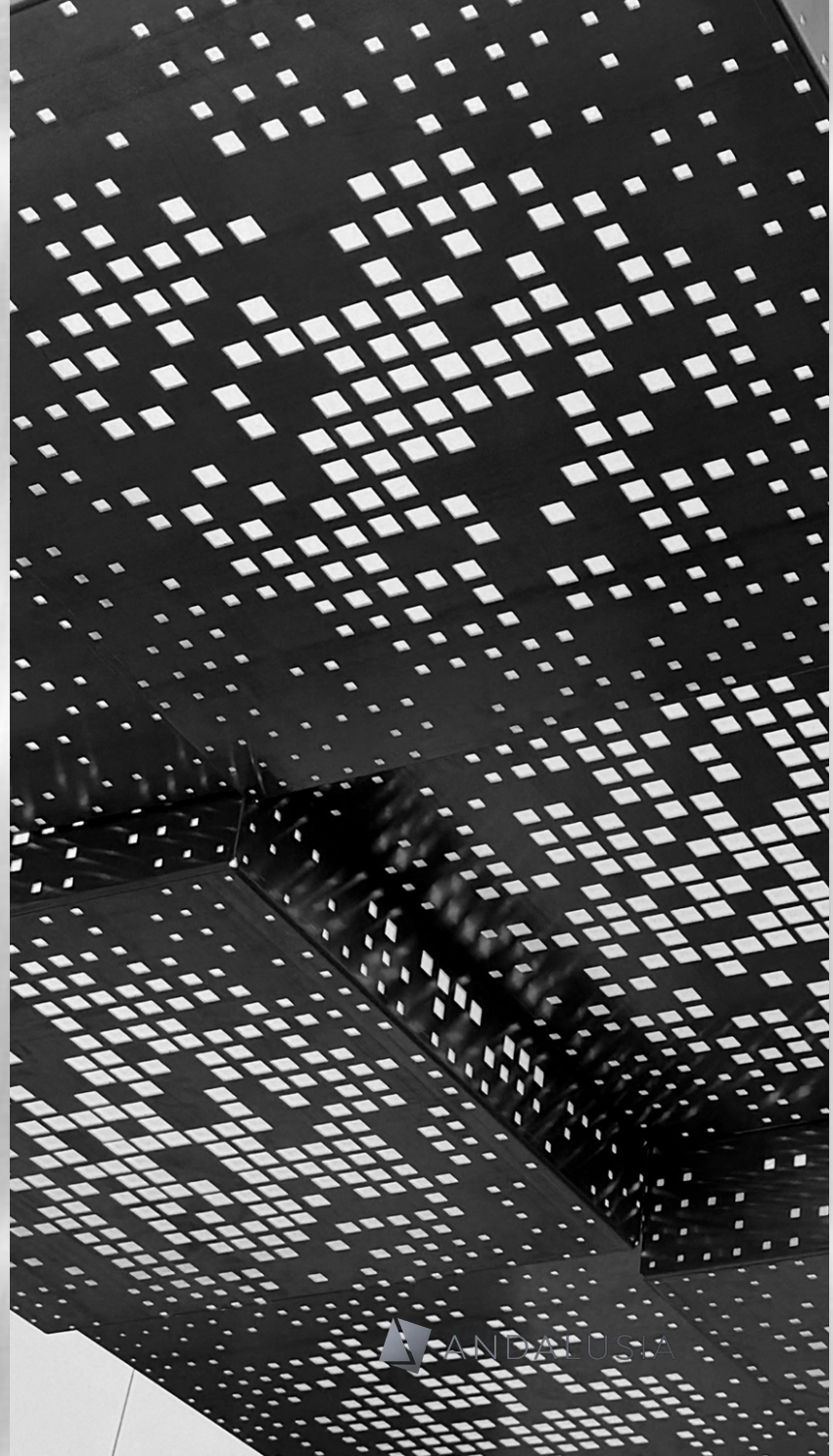
Lighting & Acoustics

Andalusia's founding team came out of the commercial acoustics and lighting world – these elements are integral to our Perforate designs

- Fully-integrated lighting and acoustics – not an afterthought
- Lighting, diffuser and perf panel are designed as a single system
- Commercial control options
- Acoustic infill options
- Photometric models and NRC data



Contractor-Friendly

Perforate systems integrate cleanly into standard construction workflows – reducing risk, coordination time, and surprises in the field

- Designed for standard attachments
- Predictable installation
- No specialty trades required
- Field-serviceable by design
- Clear submittals and shop drawings
- Known performance, fewer RFIs

Applications & Product Architecture

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Product Envelopes

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Interior Ceilings

Andalusia's Perforate ceiling panels deliver fast, contractor-friendly installs with integrated lighting and acoustics

Installs directly into standard 15/16” T-grids

Torsion spring panels allow for quick installation with predictable labor estimates

Tiles are pre-engineered to accept Andalusia lay-in lighting panels

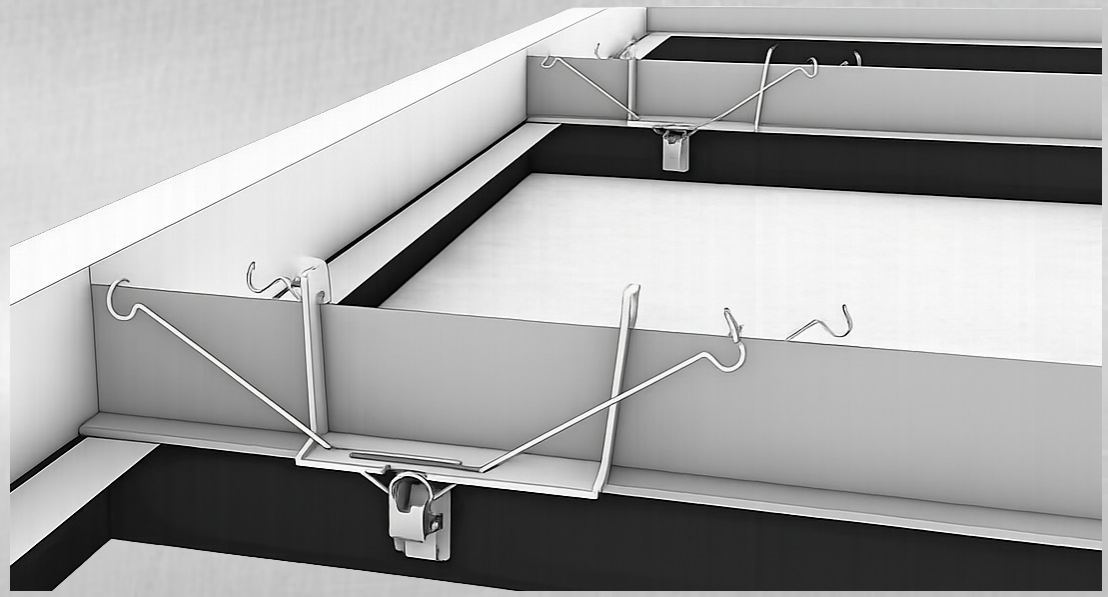
Acoustic infill options provide strong NRC performance

Ceiling panels, lighting and acoustic backing are delivered as a single coordinated system – reducing scope gaps and RFIs

Panels remain fully removable for plenum access and future maintenance

Perforate panels install directly into standard 15/16” T-grids using torsion spring engagements

We provide saddle clip hardware sized for the grid profile in applications where we do not provide the integrated lighting pan



Saddle clip hardware provided by Andalusia with panel torsion spring engagement

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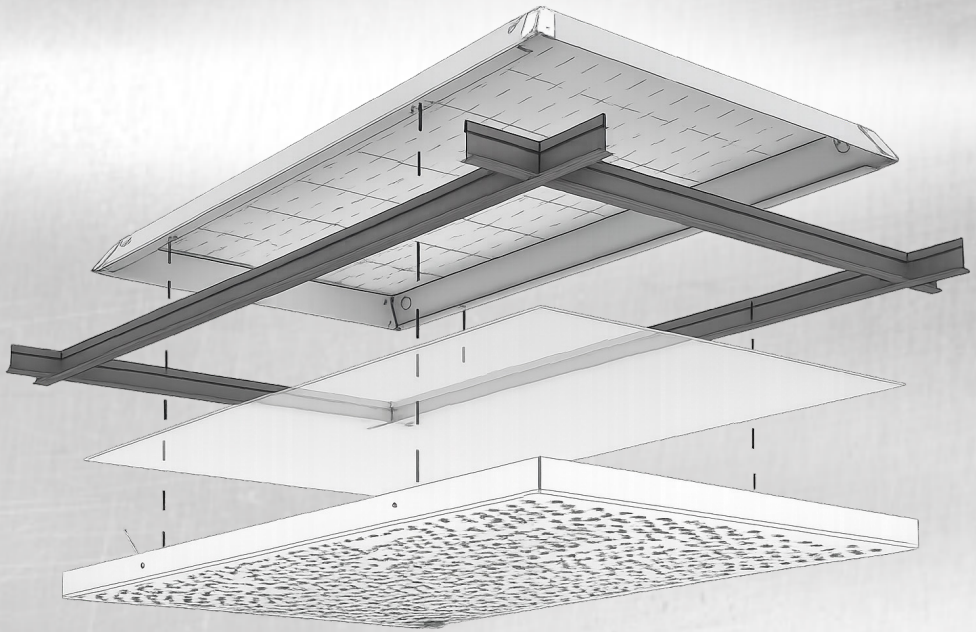
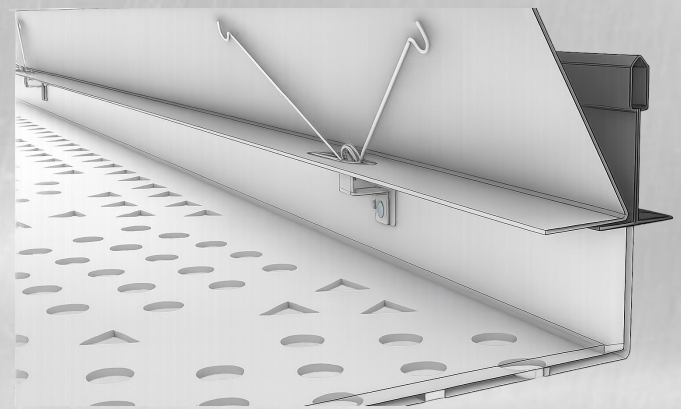


Exploded view of lay-in lighting pan, grid, acrylic diffuser and Perforate panel



Torsion springs engage directly to slots in the lighting pan

Andalusia lighting pans lay-in directly onto standard 15/16” T-grid and come with the appropriate tie-offs

Perforate panel torsion springs engage with the slots on the lighting pans – no additional hardware required for grid installation

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Exploded view of the Perforate panel / PET infill / Grid with saddle clip stack

Perforate with acoustic material backing is a high-performance panel system that combines precision-perforated aluminum face panels with acoustic backing integrated directly to the back of the panels

Acoustic backing can be design-forward PET or cost-effective commodity infill

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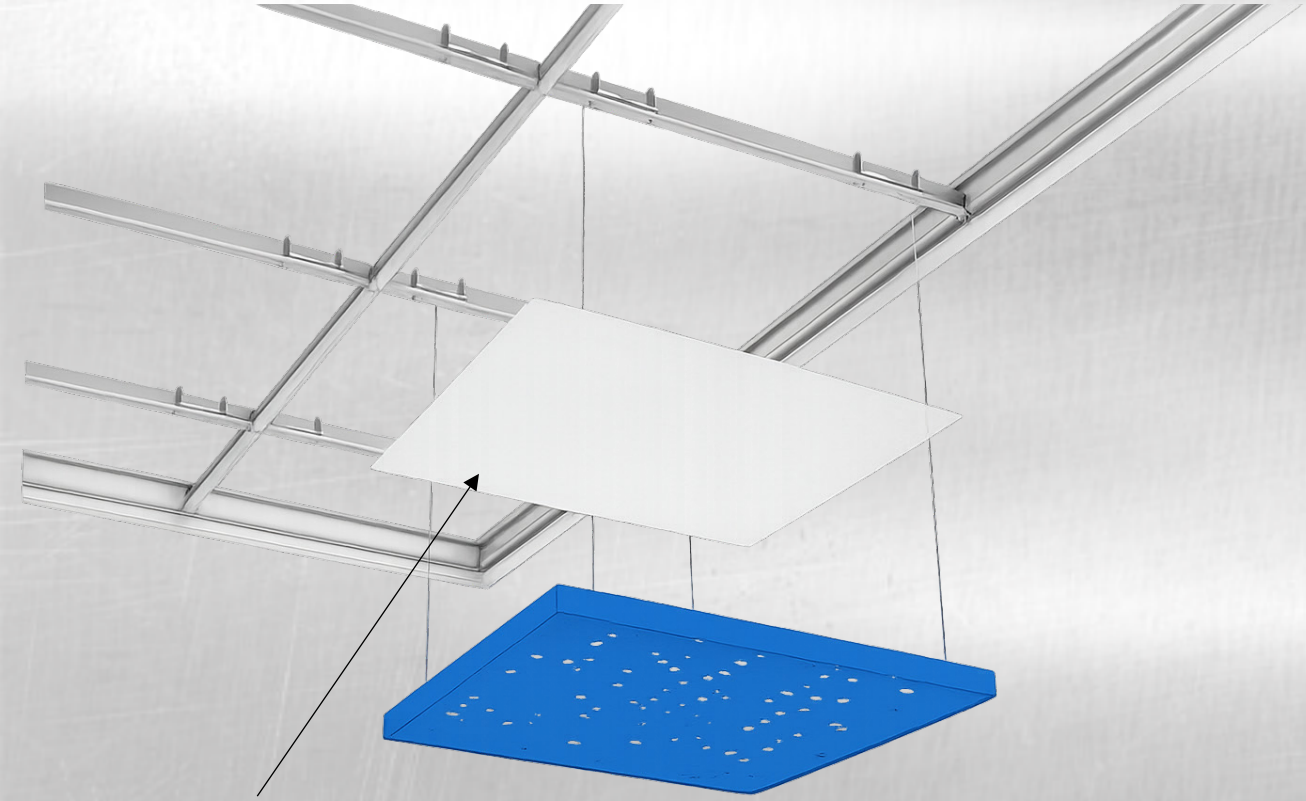
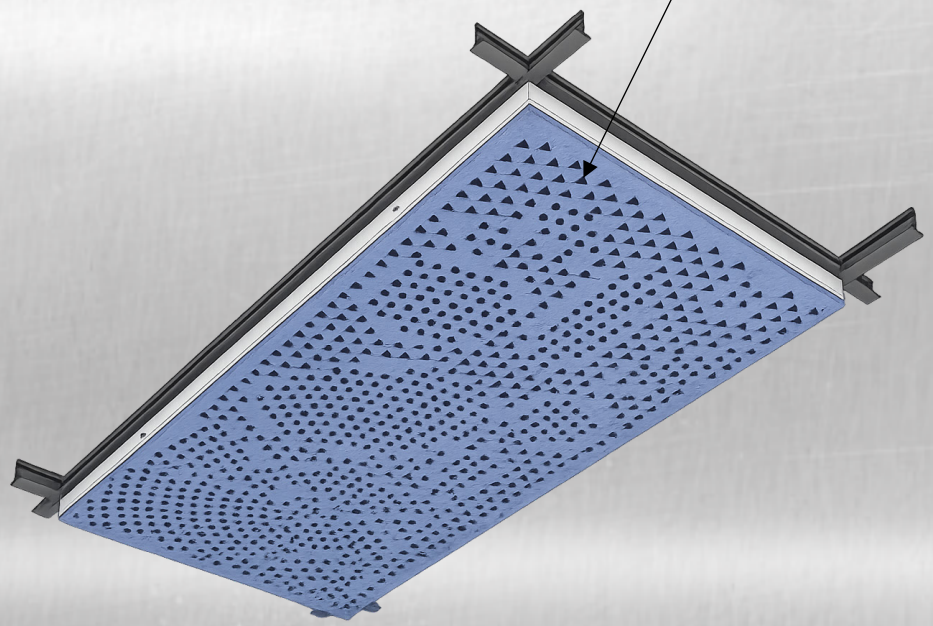


PET or acoustic
infill on metal tile

PET Felt Face on
standard panel



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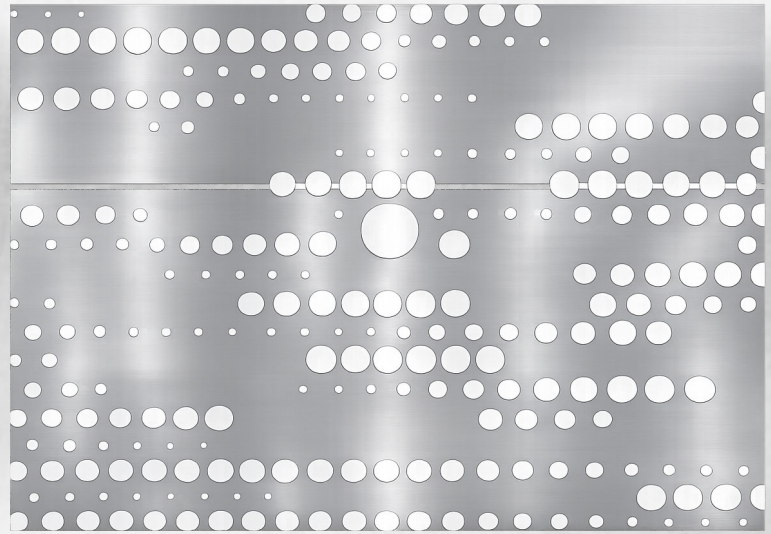
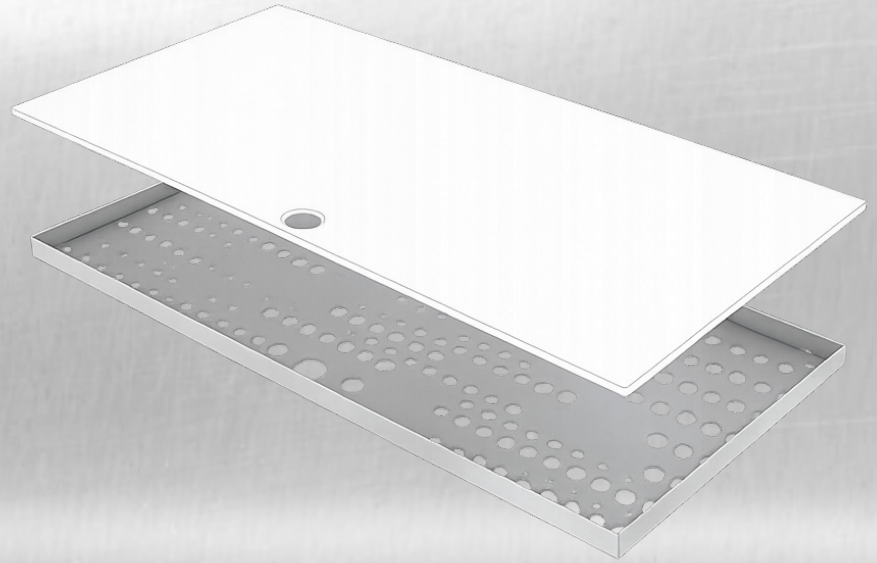
We can pre-cut areas for component integration or provide guidance on field cutting

Components can include:

- Sprinkler heads
- Speakers
- Air return
- Lighting





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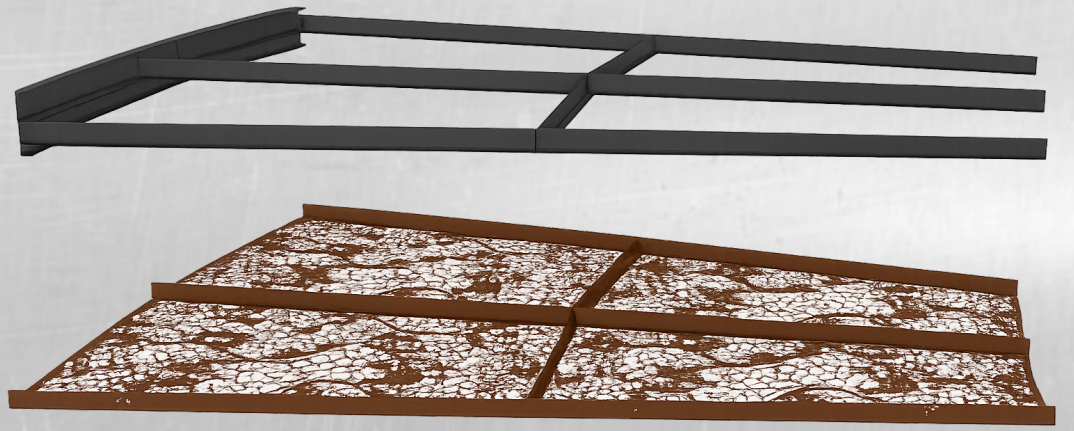

Andalusia Perforate systems can work with multiple T-grid systems and manufacturers

We collaborate with contractors to ensure the Perforate system leverages the cleanest and most cost-effective grid trim solutions for each project

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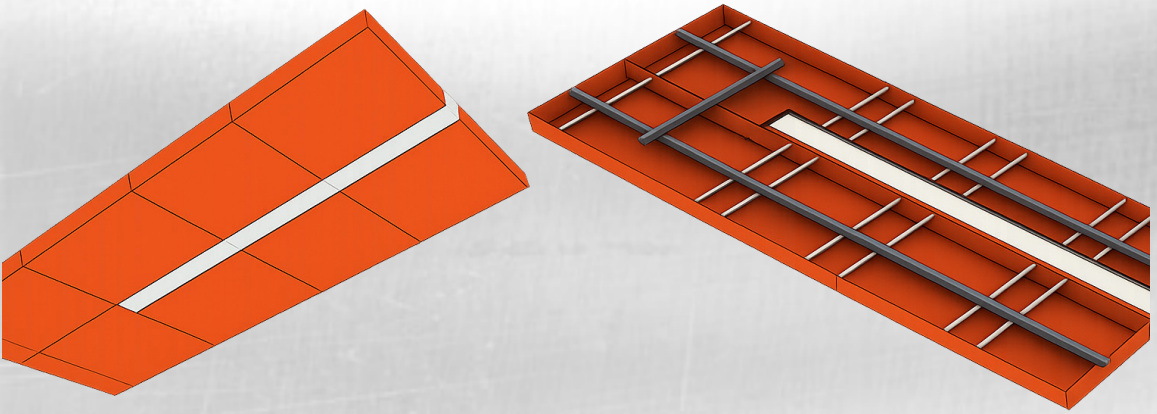
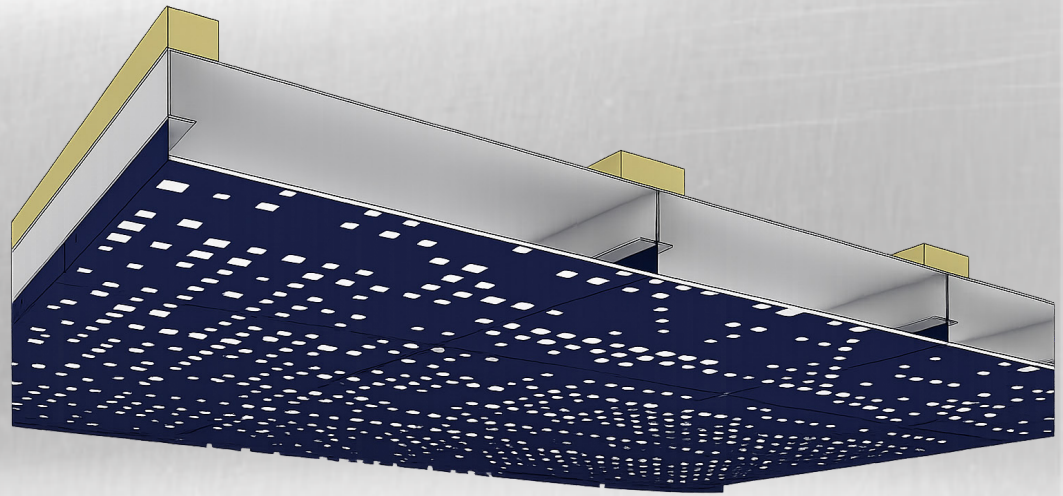


We can provide alternate construction methods for non-grid applications, including custom strut layouts for ceiling cloud applications

Our direct-to-ceiling surface-mount Perforate system delivers a clean, low-profile ceiling solution without the need for grid or suspension systems.



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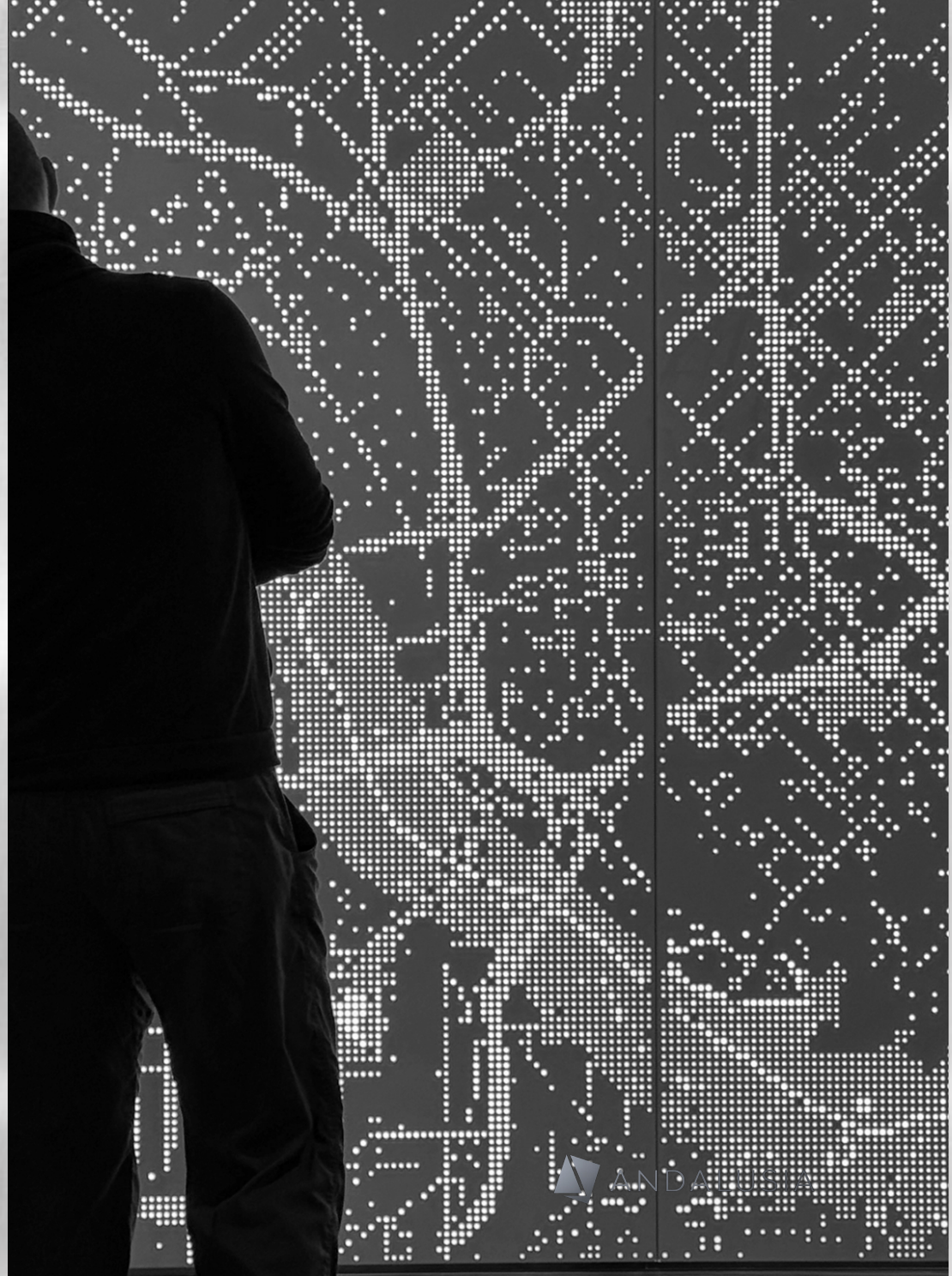
Interior Walls

Andalusia's drop-and-lock Perforate wall panels deliver fast, contractor-friendly installs with integrated lighting and acoustics



Panels install on the wall with a drop-and-lock rail system – both the rails and the panels are provided by Andalusia

Backlighting mounts to the wall between the rails; all lighting pans are provided with defined wire paths and driver hardware

PET felt backers and infill options provide NRC performance without adding trades or field modification

Panels can be comprised of different material thicknesses and types depending on project requirements

Panels remain fully removable for wall access and future maintenance

We provide mounting rails and hardware for the wall. Rail spacing can be modified based on panel sizes and wall blocking.

Perforate panels with drop-and-lock tabs fit directly into the mounting rail slots. Acrylic diffuser is pre-applied to panel. LED lighting pans are mounted between the mounting rails.

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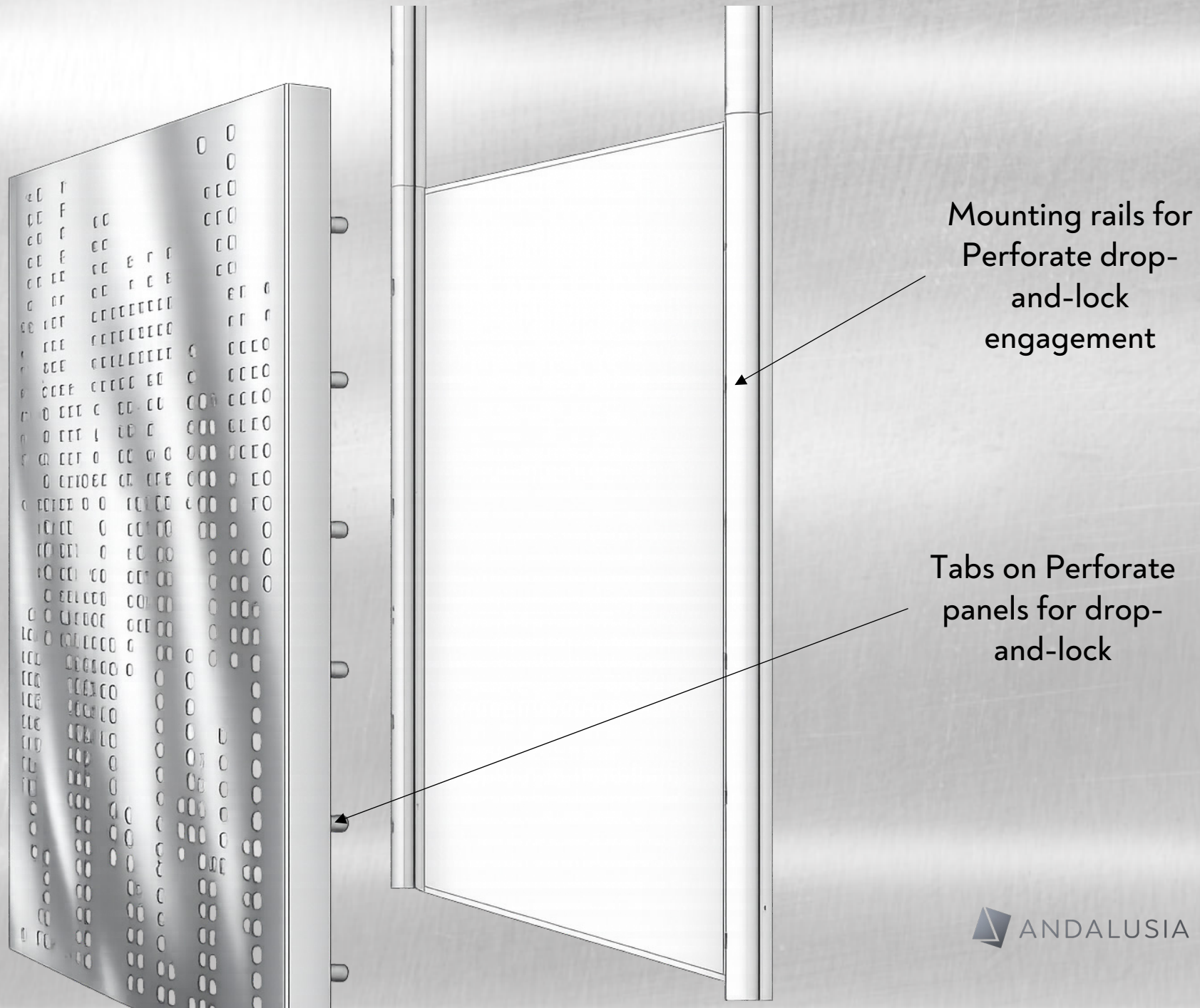
Mounting rails for Perforate drop-and-lock engagement
Tabs on Perforate panels for drop-and-lock

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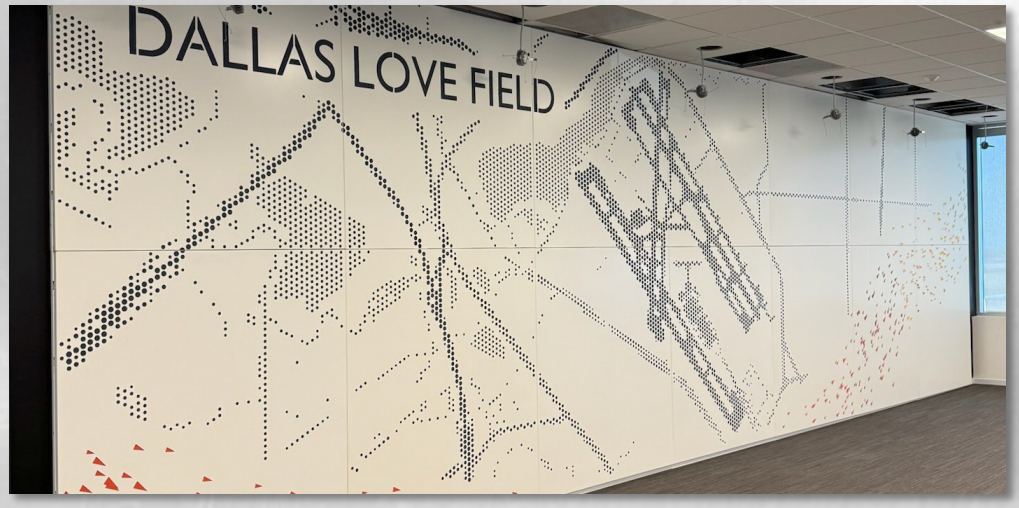

Perforate with acoustic material backing is a high-performance panel system that combines precision-perforated aluminum face panels with acoustic backing integrated in the panels

Acoustic backing can be design-forward PET or cost-effective commodity infill

Material can be custom designed and cut for increased visual interest

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Interior Portals

Transform walls and ceilings into a single, continuous perforated surface

Interior Portals wrap walls and ceilings in a continuous Perforate system, creating seamless transitions between architectural planes

Panels install using coordinated wall and ceiling mounting systems, allowing alignment and clean geometry across orientation changes

Integrated backlighting can be incorporated on walls, ceilings, or both

PET felt backers and infill options can be applied to vertical and overhead surfaces to enhance acoustic performance

Panels remain fully removable for access, serviceability, and long-term adaptability across wall and ceiling conditions

Column Covers

Cover columns and corners with custom perforation patterns and graphics

Panels install using face-mounted attachment systems

Perforate can be applied directly to concrete or steel columns without modifying the structure

Custom panel layouts accommodate square column geometries, maintaining pattern continuity and clean perimeter reveals

0.125” aluminum with a variety of finish options

Dividers

Laser-cut metal screens that define space while maintaining openness

Perforate dividers create visual separation while preserving light, airflow, and spatial connection

Panels can be ceiling-hung or mounted to an extruded structure using minimal, architecturally clean attachment points

Custom perforation patterns and panel layouts

Exterior

Cover columns and corners with custom perforation patterns and graphics

Exterior systems extend Perforate across exterior walls and ceilings to create durable, visually cohesive architectural surfaces in protected outdoor and semi-exposed environments

Panels install using coordinated wall and soffit mounting systems

Panels are engineered for exterior conditions using corrosion-resistant materials and high-performance powder coating finishes

Optional integrated exterior-rated lighting can be incorporated to highlight surfaces, provide wayfinding, or create visual impact

Panels remain removable for access, maintenance, and long-term adaptability while preserving a refined architectural appearance

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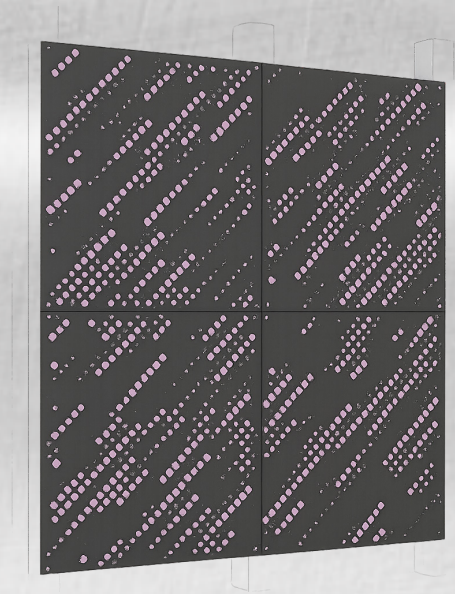
Exterior Facades

Perforate exterior façade systems integrate into a wide range of building envelopes, providing expression within standard construction

- Designed to attach to a variety of substructures – channel-mounted or face-mounted
- Predictable installation and clear shop drawings
- Panel-only option for contractor's preferred attachment method



Exterior panels with pre-drilled face-mounting locations (above) or pre-drilled channel mounting (below)

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Exterior Ceilings

Perforate exterior ceiling systems integrate into a wide range of soffit and canopy conditions, providing visual interest and durability within standard exterior assemblies

- Designed for soffits and canopies
- Compatible with steel framing, hat channel, Unistrut, or custom substructures
- Engineered for outdoor environments – material thickness, coatings, and attachments selected for exterior

Exterior ceiling with backlighting

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Design Options

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Patterns

Perforate is a parametric design system that allows us to generate, manipulate, and fabricate unique perforated metal surfaces at architectural scale

- Unique patterns without the risk and lead times of “custom”
- Fabrication-ready designs
- Walls, ceilings, dividers, column covers and facades

How it Works

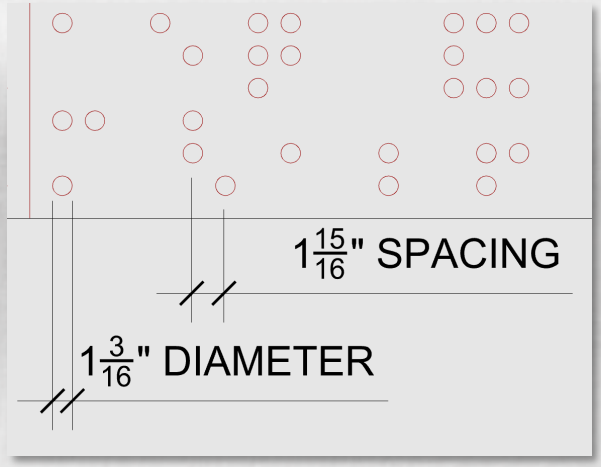
Patterns generated from rules and inputs

Inputs we can control:

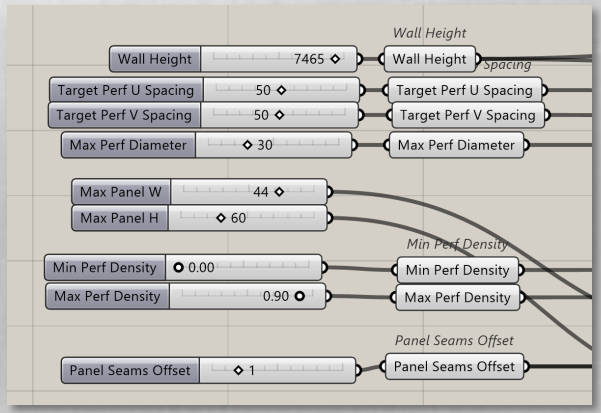
- Hole size, shape, and density
- Panel size and layout
- Gradient behavior (dense → open)
- Image, map, or geometry source
- Open area targets (acoustics, lighting output airflow, code)

Output:

- Fabrication-ready parametric models with pricing and spec details



Granular control over perforation sizes, shapes and density



Programmatic control over key project and system variables

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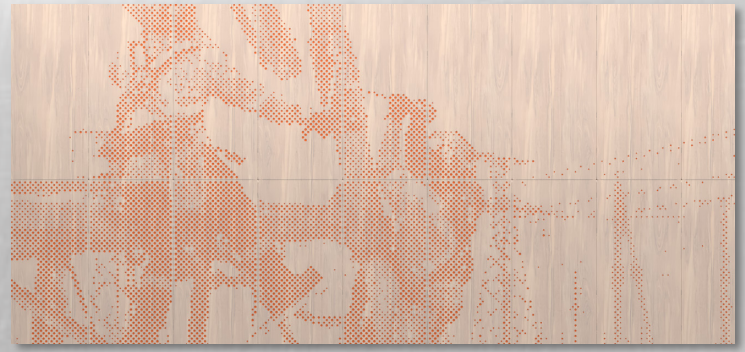
Image-Based Patterns

Patterns derived from imagery and translated into perforation logic

- Raster images: JPG, PNG, TIFF (photography, textures, scans)
- Vector graphics: AI, EPS, SVG, PDF (logos, linework, branding)
- High-contrast graphics: Black/white or grayscale artwork optimized for clarity
- Photographic imagery: Landscapes, people, objects, abstract photos
- Scanned artwork & hand drawings: Sketches, illustrations, analog artwork
- Brand assets: Logos, wordmarks, graphic motifs
- Generated imagery: AI-generated art, renders, or computational graphics

Original inspiration JPG image



Perforated pattern in a wood grain finish, panelized for wall size

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Maps and Street Grids

Patterns generated from real-world location-based datasets

How We Source the Pattern

- Public mapping platforms (Google Maps, etc.)
- Client-provided plans, diagrams, or campus maps
- CAD or vector linework (DWG, DXF, AI, PDF)
- Screenshots, scans, or historical references

How We Model the Pattern

- Source data translated into parametric rules
- Lines and zones drive hole size, spacing, and direction
- Density and gradients tuned across the surface
- Pattern coordinated across panel seams
- Output optimized for fabrication, structure, and open area

Original Lower Manhattan Street Map

Panelized Perforate Street Map

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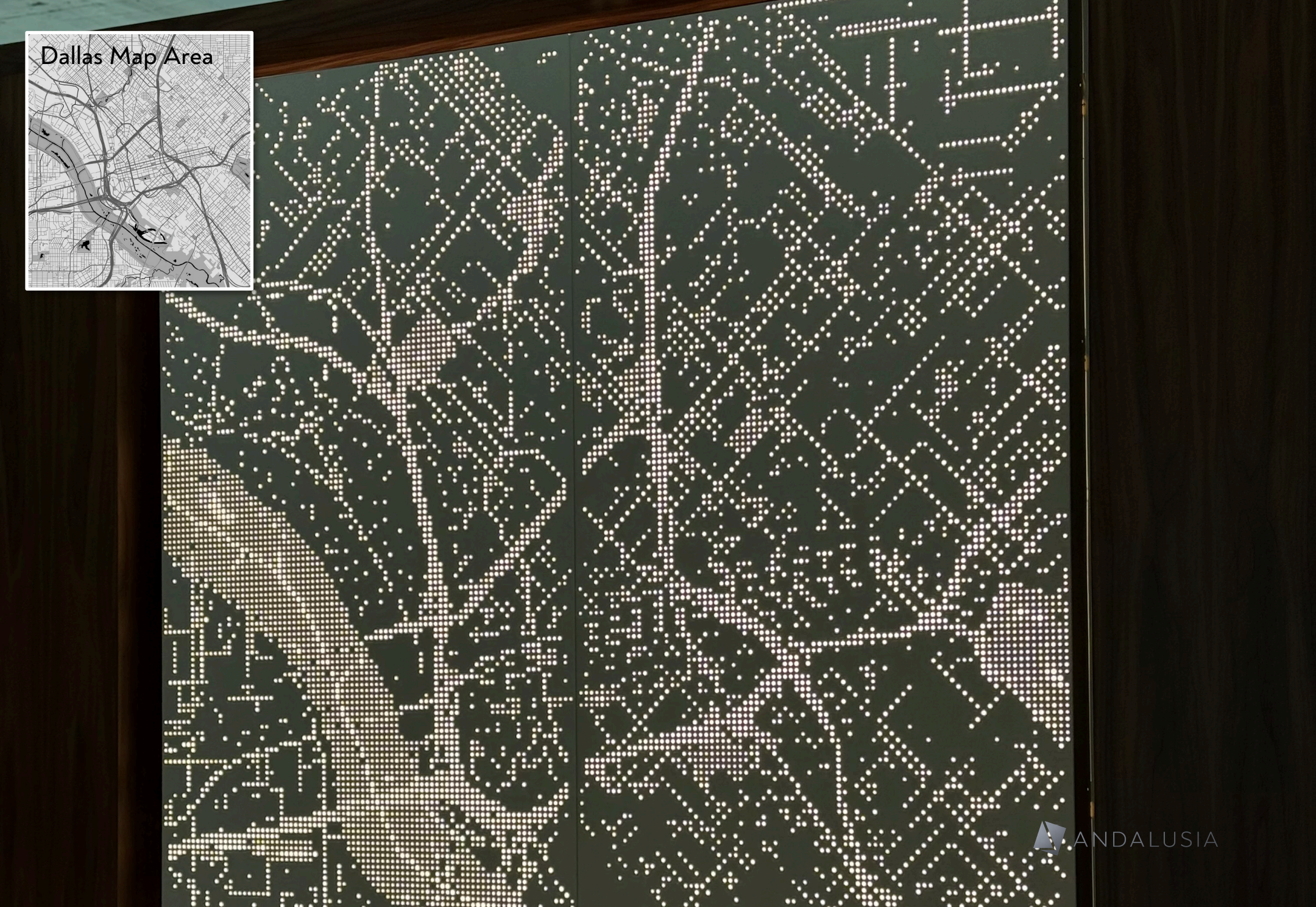
Dallas Map Area
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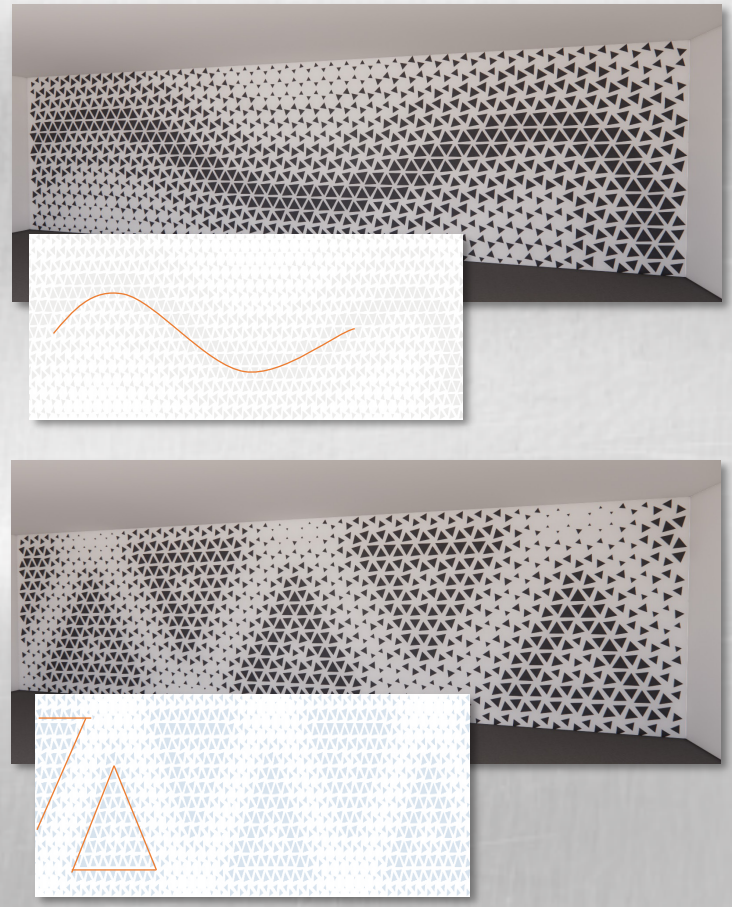
Responsive Triangles

A dynamic, parametric pattern that brings motion and depth to architectural surfaces

- Pattern begins with a continuous triangular grid
- Individual triangles can scale, rotate, and shift within the grid
- Transformations are driven by one or more attractor curves
- Proximity to the attractor curve controls intensity of change
- Creates gradients of density, motion, and visual depth
- Variables tuned for resolution, openness, lighting, and acoustics
- Pattern flows seamlessly across panels, walls, and ceilings



Attractor Curves change density and rotation of triangles to create unique patterns

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Flow

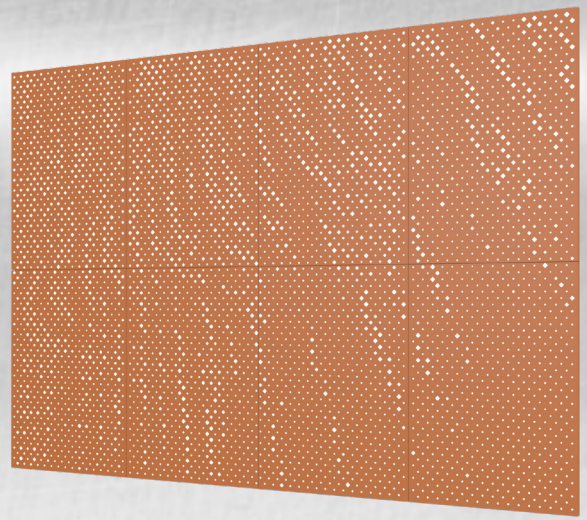
A parametric pattern that expresses movement through linear variation

How Flow Works

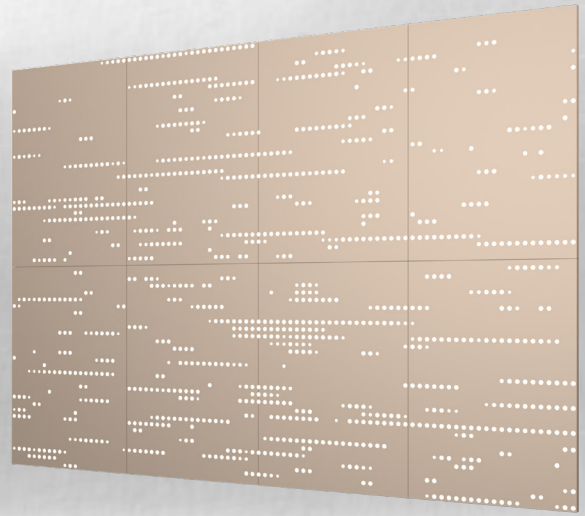
- Pattern is generated along directional or linear paths
- Perforation size, spacing, and alignment can vary
- Movement can be subtle or expressive
- Lines can bend, stretch, compress, or fade
- Pattern remains controlled and fabrication-ready

What Designers Can Control

- Direction and orientation of flow
- Degree of variation and contrast
- Open area for light, airflow, and acoustics
- Pattern resolution and panel scale



Radiant Flow



Linear Flow

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Field Waves

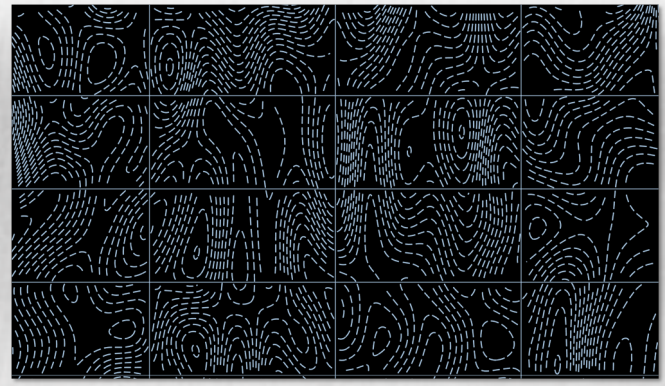
A continuous field producing ripples, currents, and wave interference that feel organic and immersive

How Field Waves Work

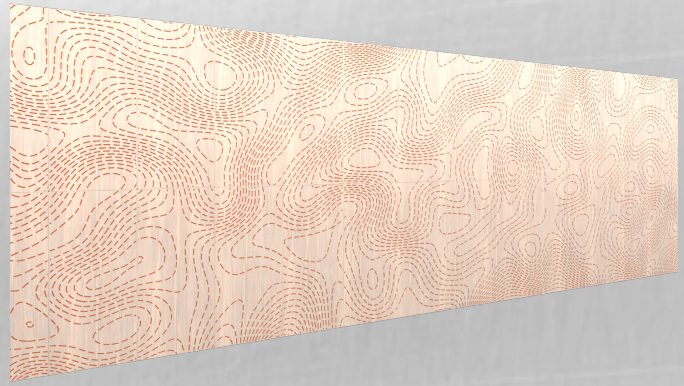
- Pattern generated from wave-based parametric logic
- Perforations follow curved, flowing paths rather than discrete holes
- Line density and spacing vary to create movement
- Waves propagate across the surface as a field

What Designers Can Control

- Overall intensity: calm and subtle to bold and expressive
- Wave scale, frequency, and overlap
- Open area for light transmission, airflow, and acoustics
- Line thickness and contrast



Random EM field waves



More purposeful topological or field effects

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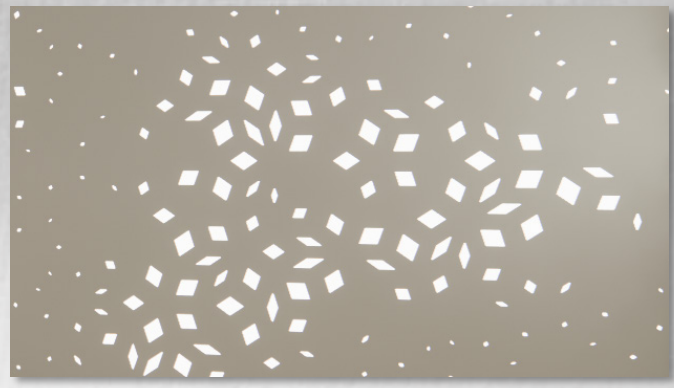
Computational Geometry

Computational Geometry patterns are generated using mathematical and algorithmic rules that would be extremely difficult to design otherwise

Pattern Types

- Non-repeating or quasi-periodic patterns
- Penrose tiling and non-periodic tessellations
- Recursive and fractal-inspired patterns
- Rule-based tiling systems
- Algorithmic fields and distributions
- Geometry that evolves across a surface



Penrose Tiling

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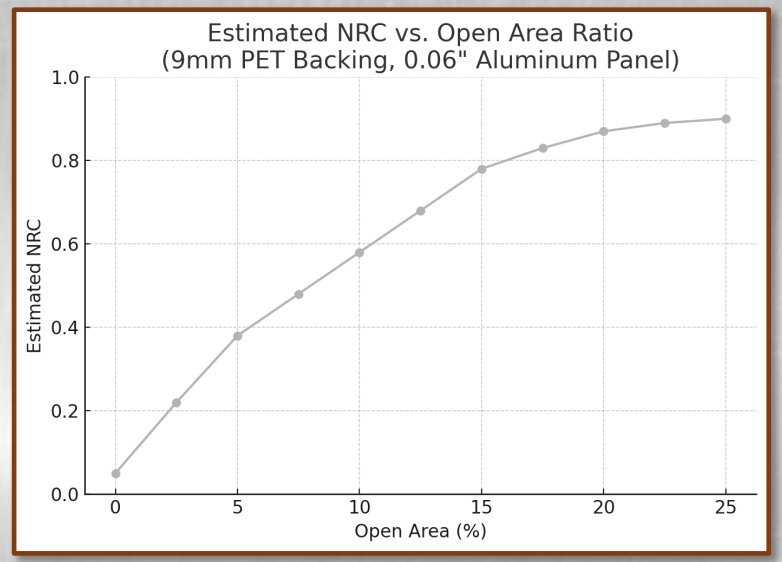
Performance Patterning

Parametric design gives you the power to not only create a tailored Perforate system, but it also allows you to control the pattern to meet functional performance requirements

Variables Within Our Control

- Open area % (airflow, code, structure)
- Acoustics (with felt or backing)
- Light transmission (backlit)
- Sightlines and privacy
- Budget
- Fabrication efficiency



Acoustic performance based on open area % and PET backing

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Finishes

Perforate is not constrained by standard finishes. Our system is designed to support custom colors, textures, and coatings efficiently – without the penalties of traditional custom fabrication.

Powder Coat Finishes

Perforate systems are finished using commercial-grade powder coating – providing performance, color flexibility, and long-term durability

- AAMA 2603 / 2604 / 2605 compliant powder coatings
- Interior and exterior finish options
- Standard color sets
- Custom color matching available
- Commercial-grade, repeatable coating processes

Standard Colors

Signal White

Traffic White

Pure White

Champagne

Quartz Gray

Anodized Silver

Black

Sea Blue

Azure Horizon

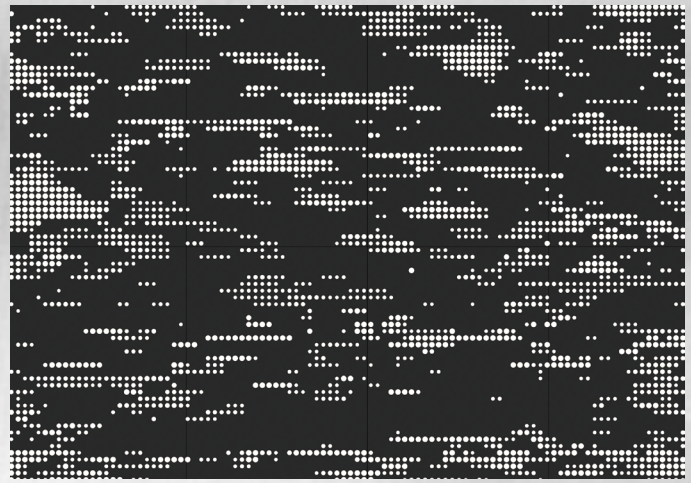
Copper Ember

Scarlett Shine

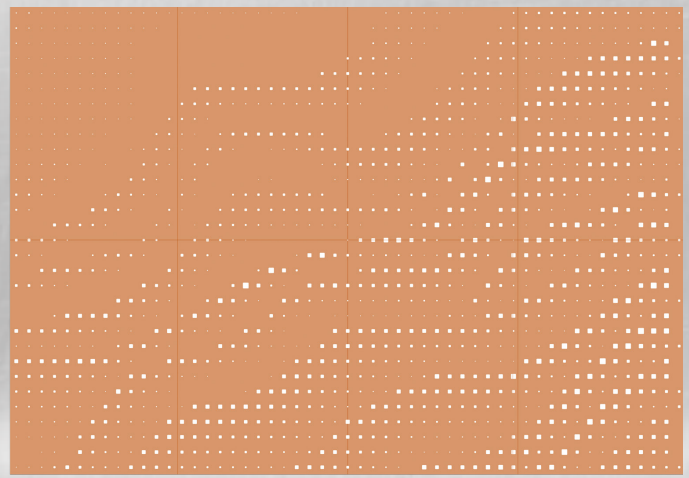
Tourmaline

Ancient Ore

Vintage



Black



Copper Ember

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Wood Grains

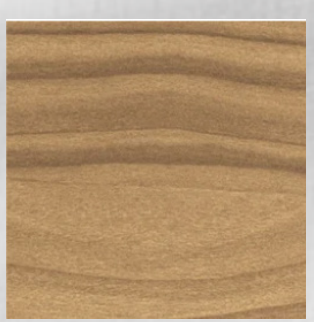
The warmth and character of natural wood combined with the performance and durability of architectural metal

- Realistic wood grain appearance with subtle natural variation
- Durable metal construction with inherent fire performance
- Consistent finish with minimized visual repetition across panels
- Fully compatible with Perforate patterns, sizes, and integrations

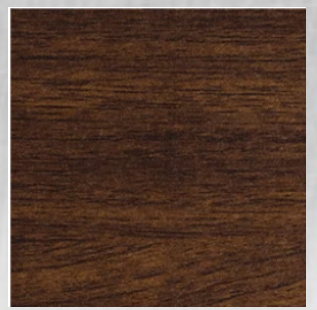
Standard Wood Grains

Weathered
Ash

Charcoal
Driftwood

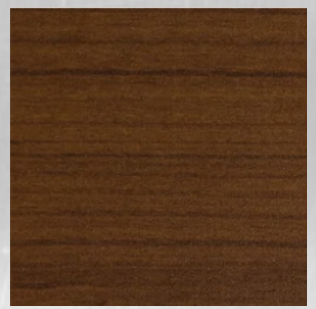


Warm
Pecan



Dark
Walnut

Smoked
Walnut



Espresso
Oak

Natural
Maple

Douglas
Fir

Amber
Teak

Aged
Oak

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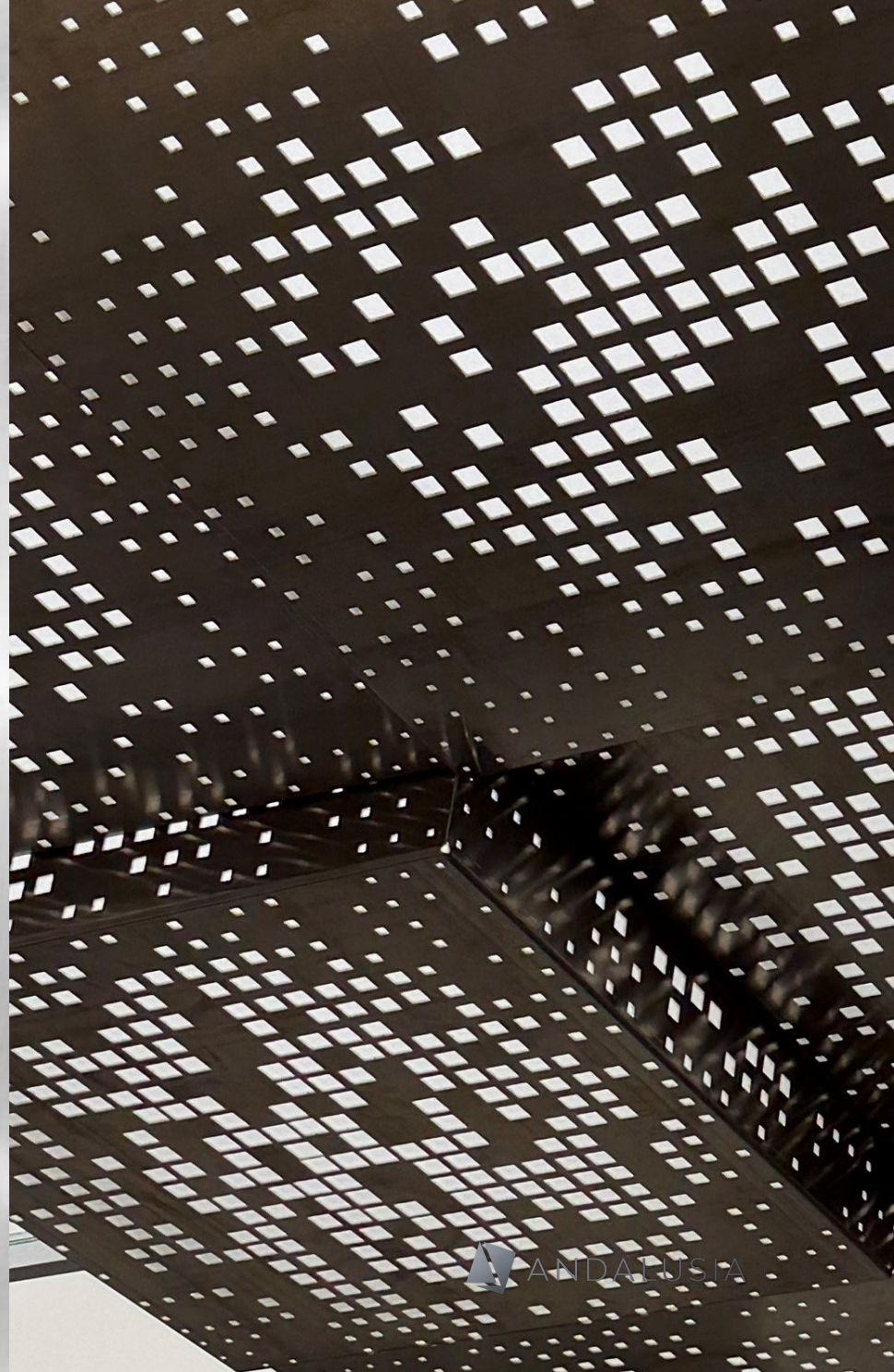
Specialty Metallics

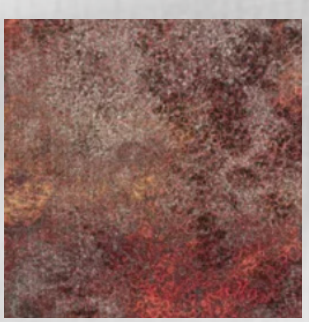
Visually rich metallic finishes that emulate aged, rustic, and specialty metal surfaces, delivered on a lightweight aluminum substrate

- Aged and specialty metal visuals with rich depth and character
- Lightweight aluminum substrate ensures durability and stability
- Consistent finish with subtle variation to reduce repetition
- Fully compatible with Perforate patterns, sizes, and integrations



Standard Metallics

Charcoal Patina

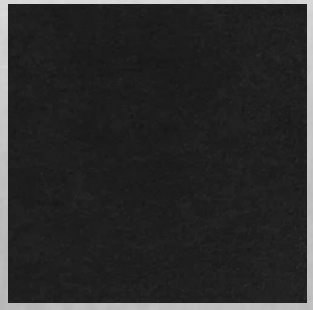


Oxidized Ironwood

Copper Oxide

Burnished Ember

Oaken Patina



Carbon Black

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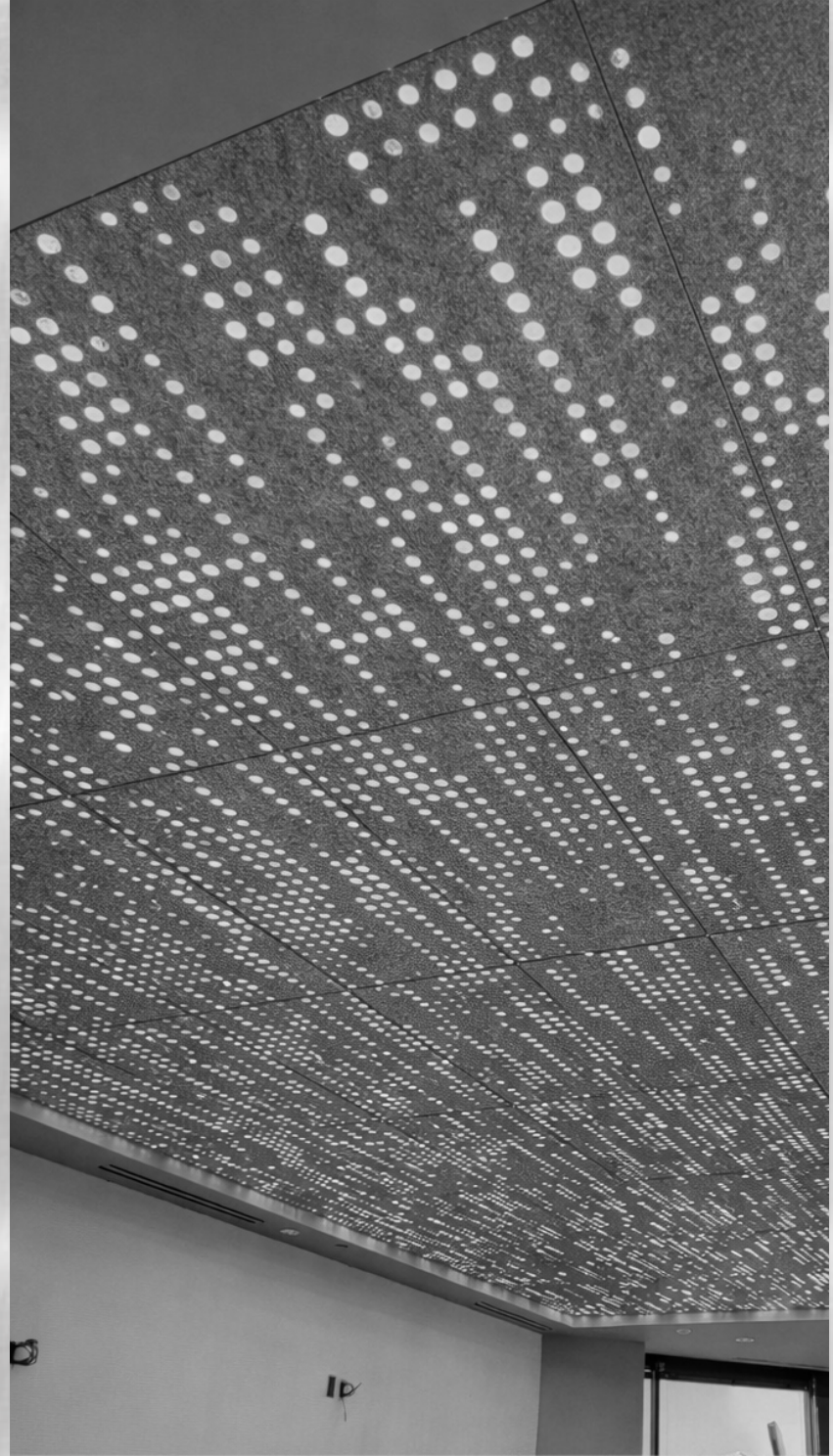
Andalusia's Perforate platform integrates acoustic materials directly behind or on the face of perforated metal panels, combining sound absorption, visual depth, and color within a single coordinated system.

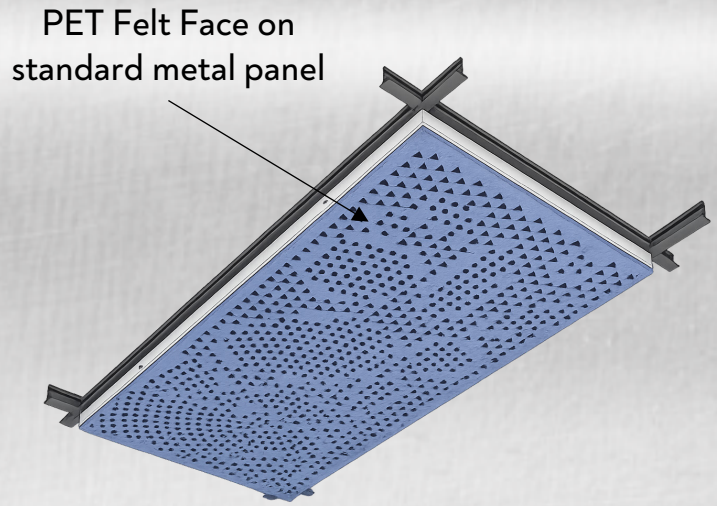


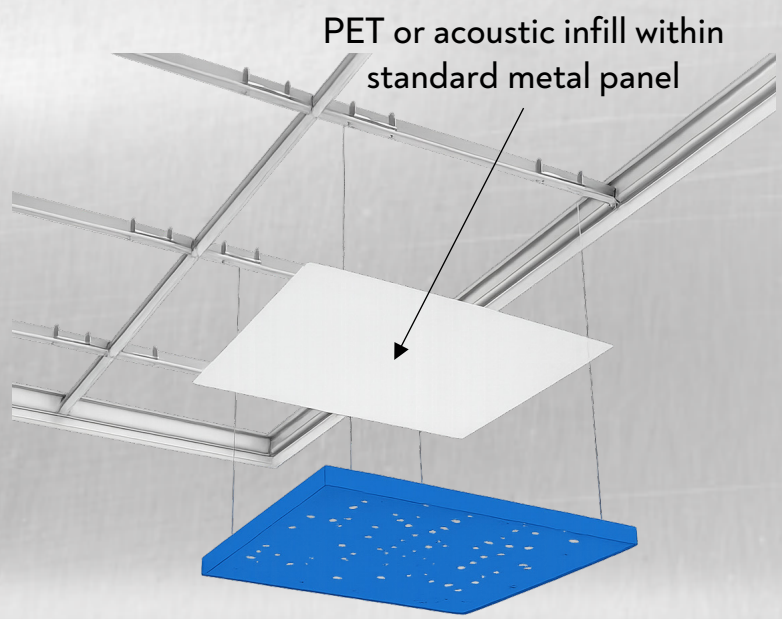
Option A — Acoustic Insert

- PET felt or alternative acoustic infill installed behind the perf metal face
- Maintains metal-forward aesthetic
- Absorption is dependent on openness area of the perf panel

Option B – Acoustic Face

- Designer PET felt applied to the face of the perforated panel
- Felt is perforated to match the metal pattern
- Maximizes acoustic performance and softens visual language





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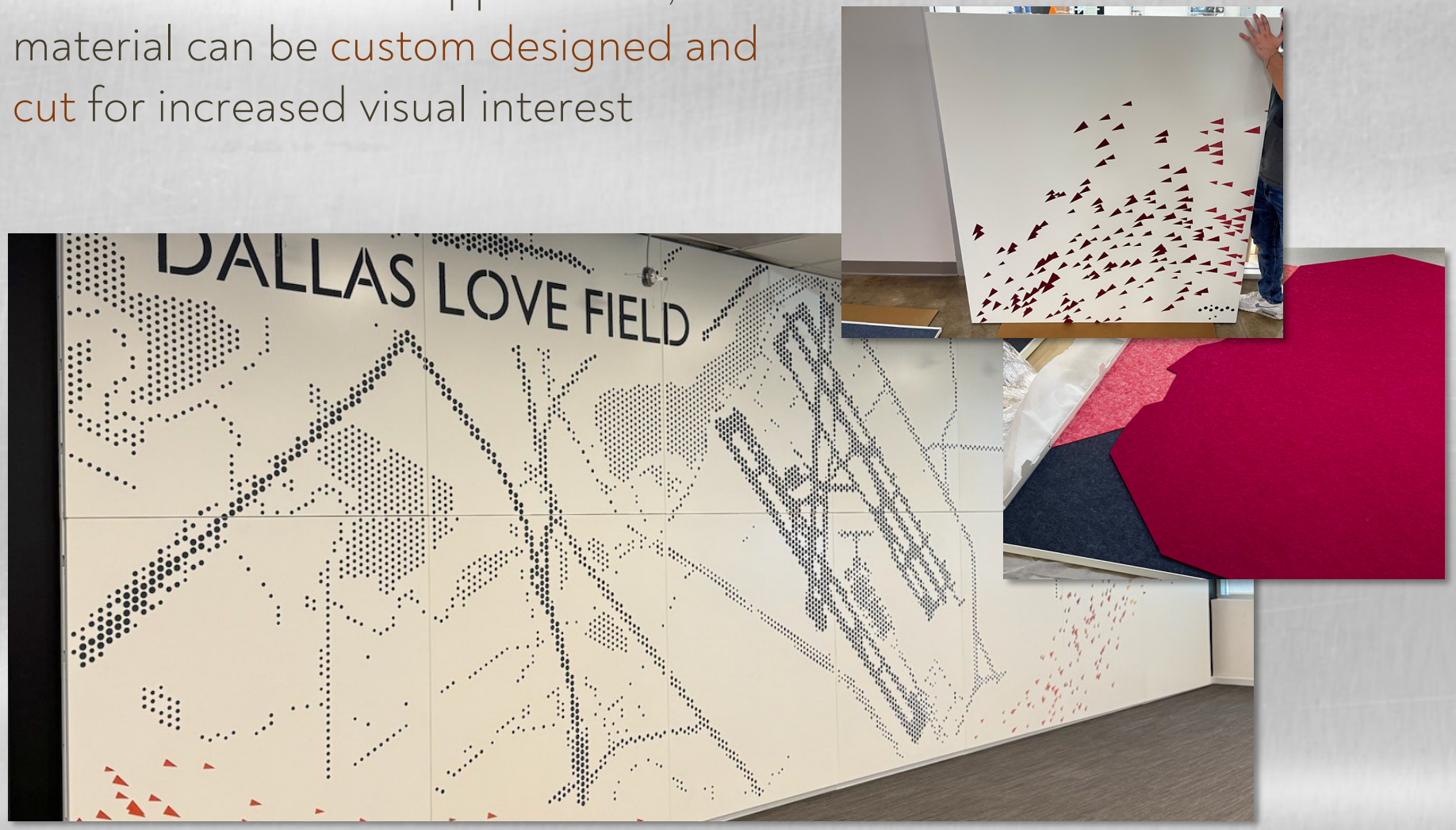
For acoustic backed applications, the material can be custom designed and cut for increased visual interest



ANDALUSIA

Acoustic Materials

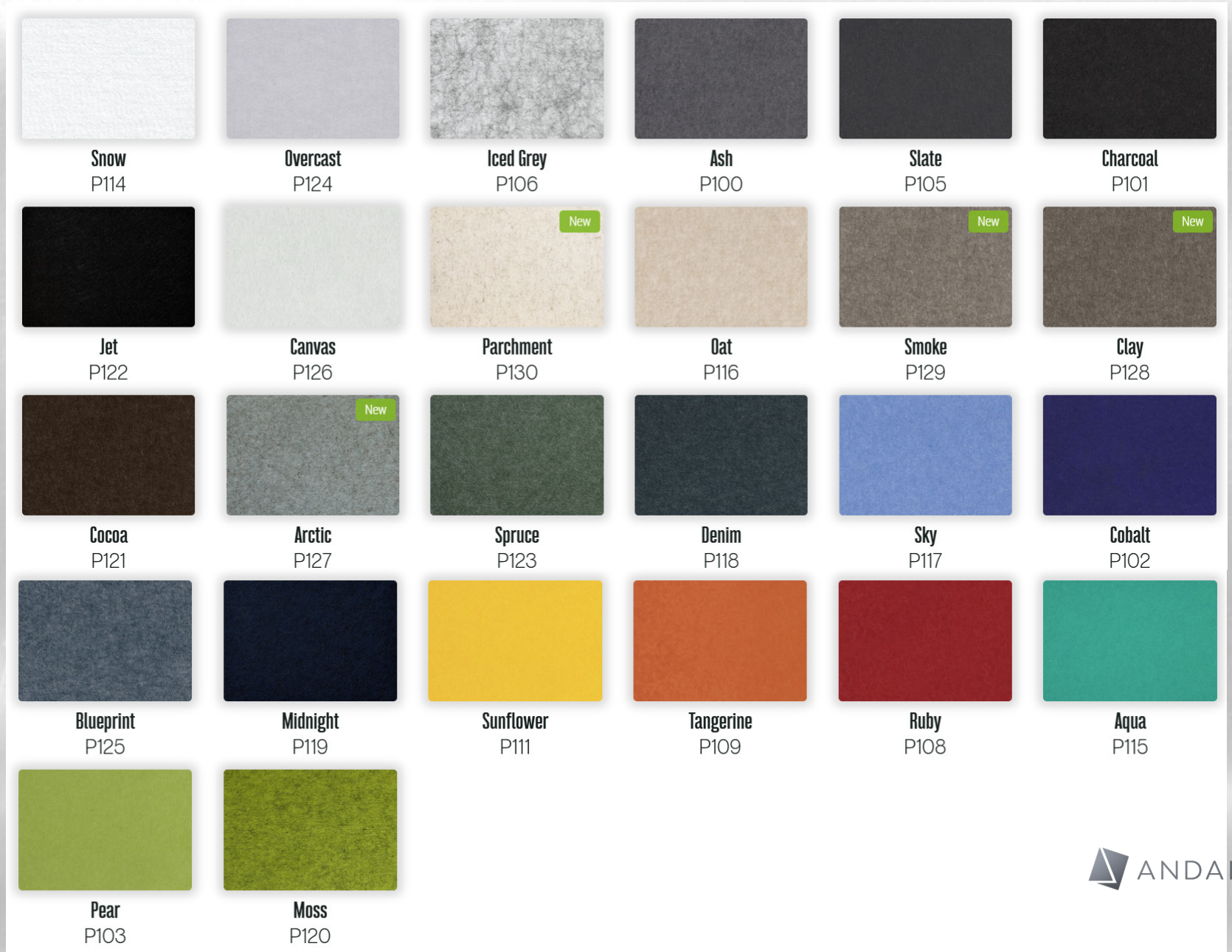
Primary Material — PET Acoustic Felt

- 9mm PET felt (up to 60% recycled)
- Durable, non-fibrous, and cleanable
- Available as insert or face material
- Compatible with complex perforation patterns and parametric designs

Secondary Materials (for felt-backed applications only)

- Rigid or semi-rigid acoustic infill installed behind the perforated metal panel
- Fiberglass or mineral fiber acoustic board
- Provides effective sound absorption without premium finishes
- Material selection coordinated based on acoustic targets, fire-rating requirements, and project constraints

Standard PET Felt Colors



ANDALUSIA

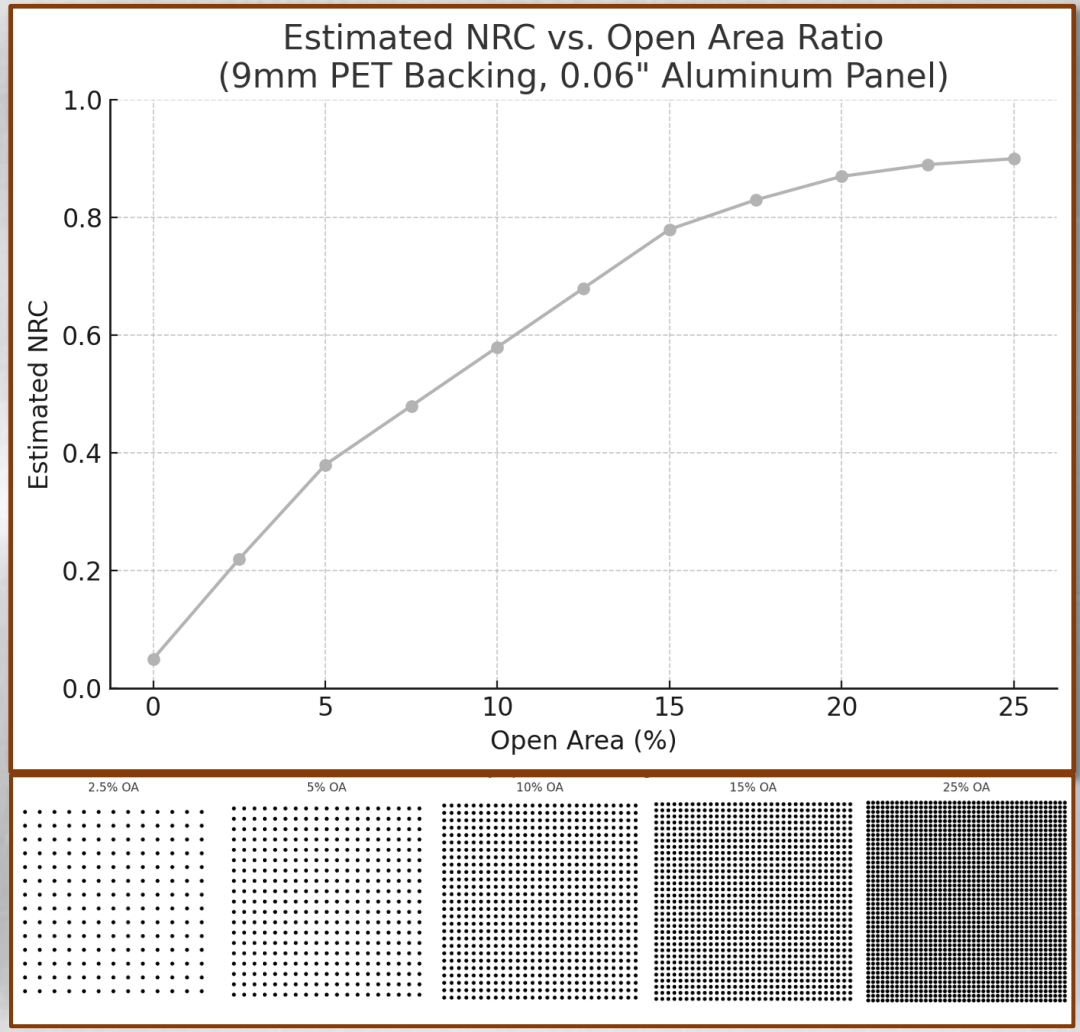
Acoustic Performance

PET-backed perforated panels reduce noise by allowing sound waves to pass through the perforations and be absorbed by the PET felt behind.

The result is improved clarity and reduced echo in a space.

The more open the panel, the more sound it absorbs. NRC values of 0.90 or higher with proper backing and openness area.

PET-face surfaces have NRC values around 0.50



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HIGH DESIGN MEETS DIGITAL FABRICATION

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