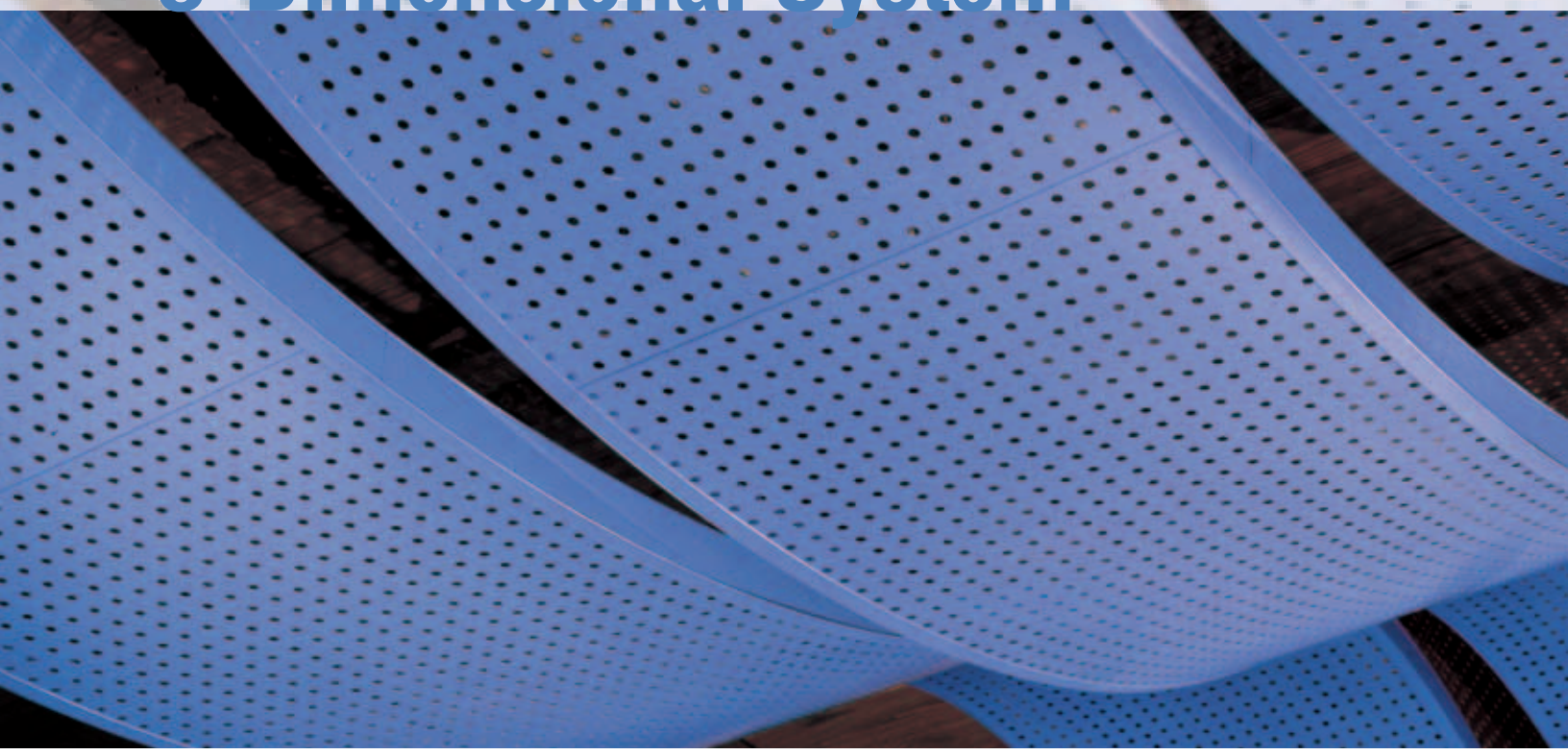
Soar to New Heights

USG

Curvatura™

3-Dimensional System



Offices

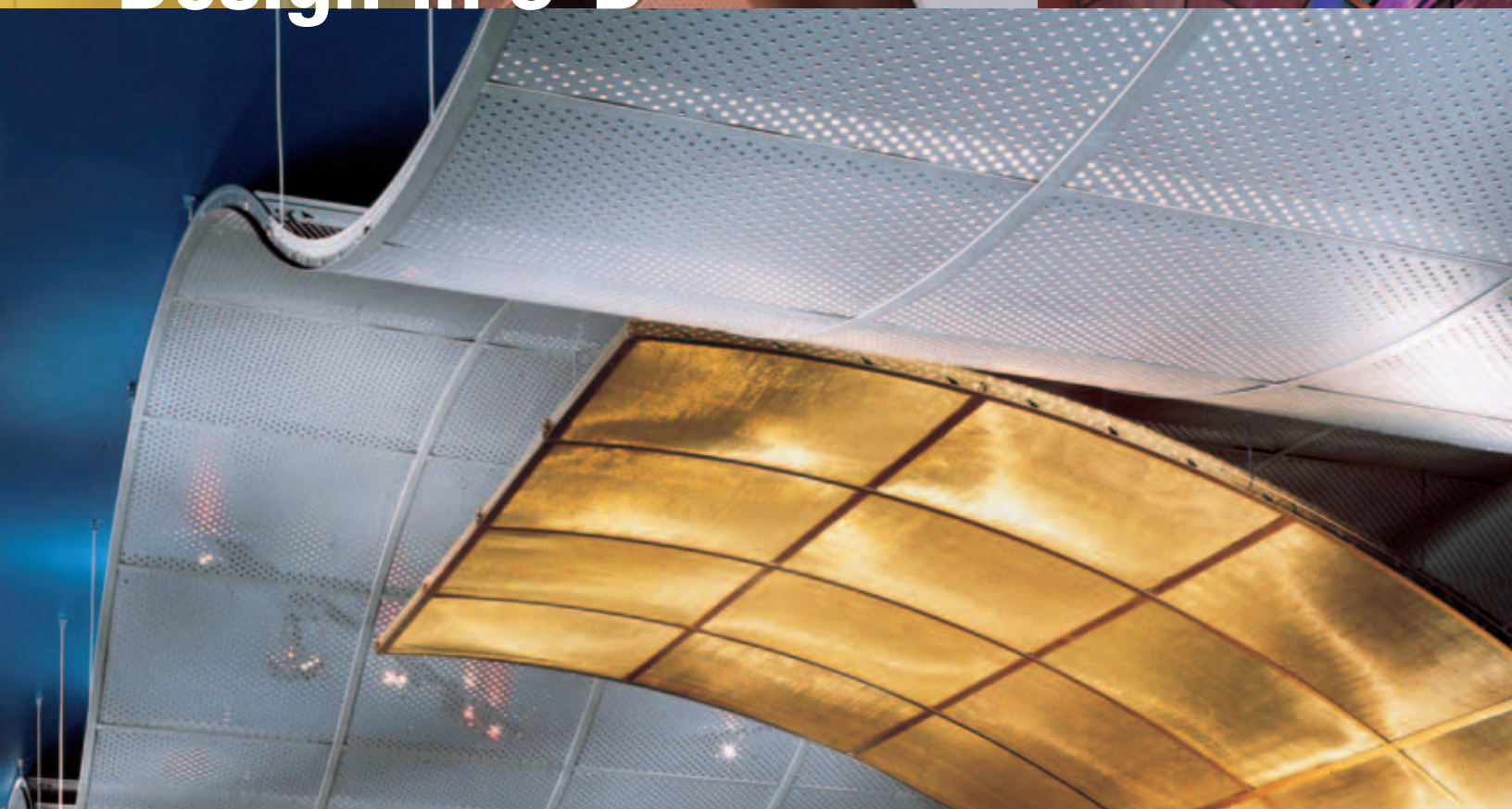
Retail

Entertainment

High-bay Areas

The CURVATURA™ 3-D System gives you the freedom to create dramatic three-dimensional curved designs that combine shape, texture, and lighting. CURVATURA systems are ideal for retail spaces, contemporary office environments, entertainment and gaming establishments, high-bay areas, or anywhere that a unique, signature look is desired.

Design in 3-D



User's Guide

The CURVATURA™ 3-D System offers curved main tee segments, suspension profiles, optional edge trim, and flexible infill panels to provide endless possibilities for creating beautiful and dramatic designs. In this workbook, you will find a step-by-step guide to help you design and specify your CURVATURA system.

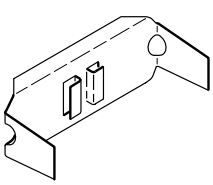
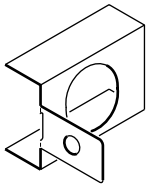
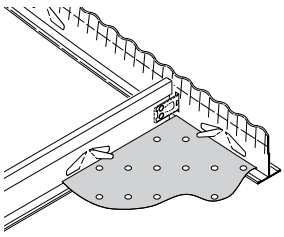
	Pages	
Understand Your System	**2**	**Overview** **System Hardware**
Design Your System	**4**	**Design Development** **Design Tools**
Specify Your System	**16**	**Application Guide Specifications**
For More Information		**Technical Service** **800 USG.4YOU** **Web Site** **www.usg.com**

Curvatura™ 3-Dimensional System

Components	The CURVATURA 3-D System is a "pre-engineered" collection of 16 curved "vault" main tee segments and 16 curved main "valley" tee segments and 4 straight main tee segments. Custom curved segments are also available. Combine the segments to create an infinite number of undulating waves and sweeping curves. See page 14.
Configurations	The system is available in two configurations: One-Directional CURVATURA with 2′ x 6′ infill panels, and Two-Directional CURVATURA with 2′ x 2′ panels.
Suspension System Profiles	The system is available in two suspension system profiles: traditional CURVATURA and CURVATURA Elite. Traditional CURVATURA offers a 15/16″ grid profile for a professional, polished look. CURVATURA Elite has a sleek 9/16″ profile with a 5/32″ reveal for a monolithic appearance. Use CURVATURA Elite in the one-directional configuration to maximize this look.
Flexible Infill Panels	2′ x 2′ infill panels are available in metal (smooth aluminum and perforated aluminum), woven wire mesh (brass and stainless steel), DIAMONDFLEX™ anodized metal (sheer and louvered), and TRANSLUCENTS™ (LEXAN® and FRP-Fiber Reinforced Plastic) panels. 2′ x 6′ panels are available in metal (smooth aluminum and perforated aluminum) only.
Edge Trim	Finish your curved designs with a 2-1/4″ high trim or leave it off for an industrial look.
Unlimited Colors	System components are available in standard colors and are painted 360° (face and body). Custom colors are also available. For help choosing a color, the Sherwin-Williams Color Answers Selector is a good reference

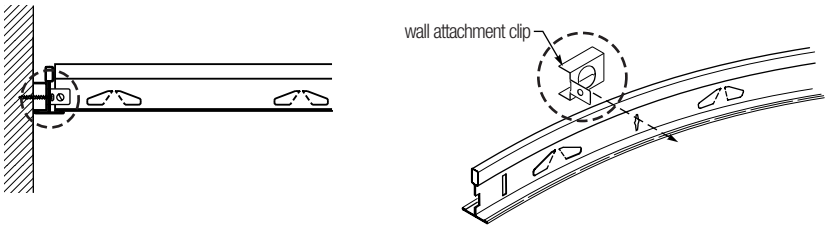
System Hardware

The CURVATURA system fits together better with main tee splice plates, wall attachment clips, integral hold-down tabs, and one of two types of hanger wire. For easier installation, consider these system hardware items.

Main Tee Splice Plate	Wall Attachment Clip	Integral Hold-down Tabs
		

CURVATURA Wall Intersection (Main Tees Parallel to Wall)

90° Intersection of Straight Cross Tee



Hanger Wire

CURVATURA hanger wire is available in two options: 18 gauge stainless steel wire and 1/32″ multi-strand aircraft cable. Both wires work well in areas where wires are exposed. Each eliminates unsightly wire wraps and allows for tight and clean twists. The stainless steel wire and specially coated cable are rust-resistant. The aircraft cable is about three times stronger than 18 gauge wire. **Note:** Local codes may require 12 gauge hanger wire. Check with local code officials.

18 Gauge Stainless Steel Wire	1/32″ Multi-Stranded Aircraft Cable

Step 1: Select Configuration

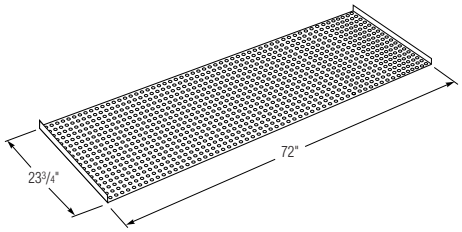
The CURVATURA system comes in two configurations: Choose One-Directional CURVATURA with 2′x 6′ infill panels or Two-Directional CURVATURA with 2′x 2′ infill panels. The selection of the configuration will determine the overall look of the CURVATURA system. If you choose a one-directional system, you will create a monolithic look. If you select the two-directional system, the look you will achieve is more modular.

One-Directional

The One-Directional CURVATURA System consists of pre-engineered, vertically curved main tees, 2′ stabilizer bars, flexible infill panels, and 2-1/4″ edge trim. Stabilizer bars are spaced 48″ o.c. and are staggered between main tee segments. They are used with 2′x 6′ panels and panel splices to create an almost invisible seam. The system can use either traditional CURVATURA (15/16″ face) or CURVATURA Elite (9/16″ face) suspension systems. Infill panels are available in smooth or perforated aluminum.

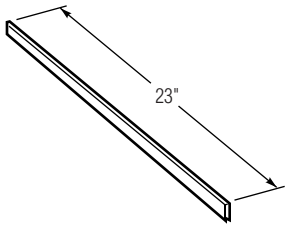
Infill Panel Size

2′ x 6′

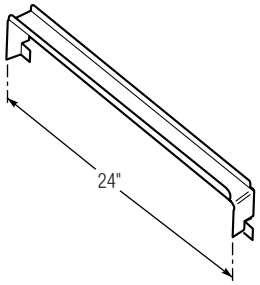


Accessories

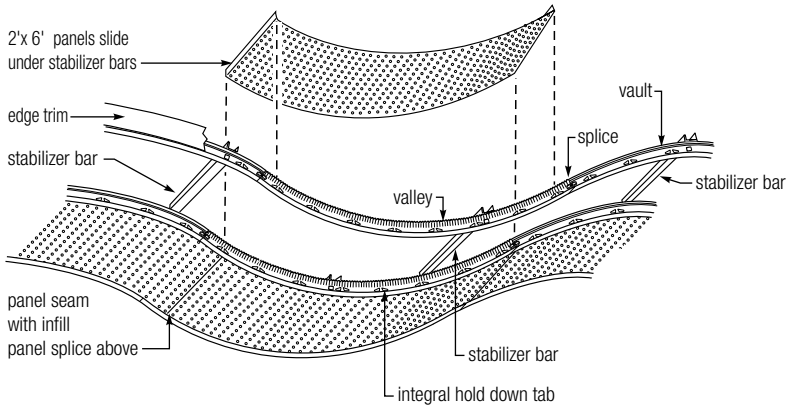
Infill Panel Splice



Stabilizer Bar



Assembly*



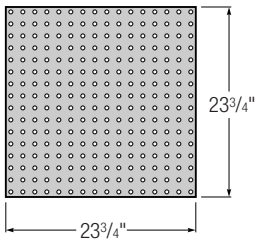
*This is a view from below.

Two-Directional

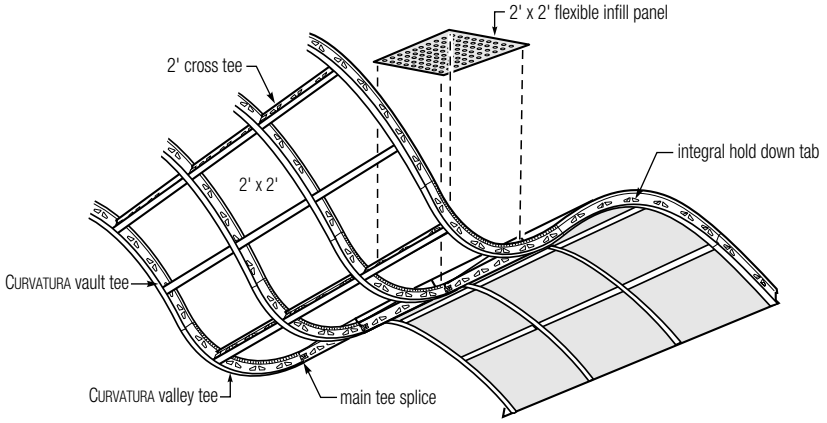
The Two-Directional CURVATURA System consists of pre-engineered, vertically curved main tees, 2′ cross tees, flexible infill panels, and optional 2-1/4″ edge trim. The system uses either traditional CURVATURA (15/16″ face) or CURVATURA Elite (9/16″ face) suspension systems. 2′ x 2′ panels are available in smooth or perforated aluminum, woven wire mesh, DIAMONDFLEX anodized metal, and TRANSLUCENTS (LEXAN and FRP) panels.

Infill Panel Size

2′ x 2′



Assembly*



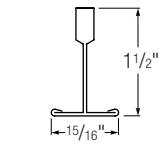
*This is a view from below.

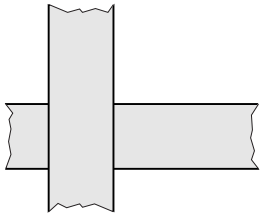
Step 2: Select Suspension Profile

The next step in designing your CURVATURA system is to select a suspension system profile. You can select either a traditional CURVATURA (15/16″ face) or CURVATURA Elite (9/16″ face) suspension system.

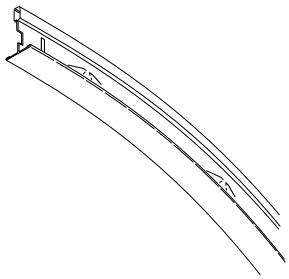
Standard

15/16″ Face

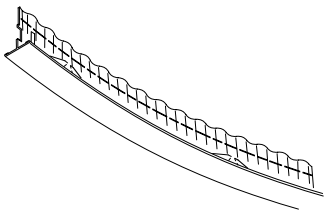




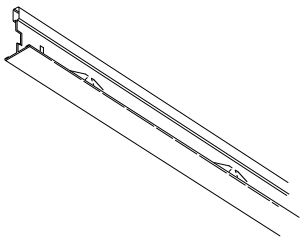
Vault Main Tee Segment



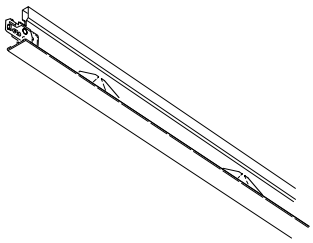
Valley Main Tee Segment



Straight Main Tee Segment

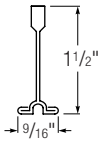


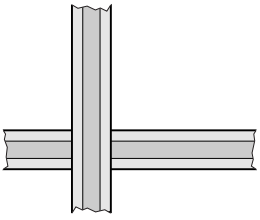
2′ Cross Tee



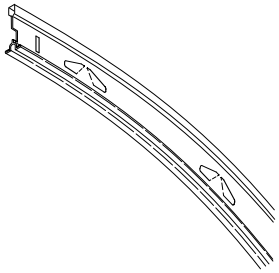
Elite

9/16″ Face

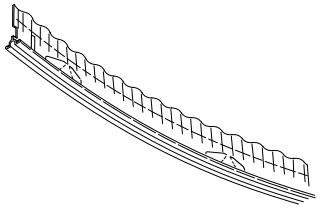




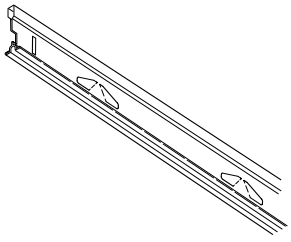
Vault Main Tee Segment



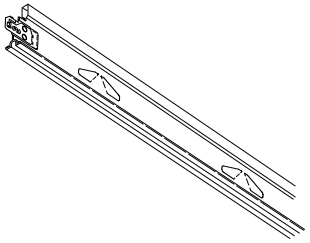
Valley Main Tee Segment



Straight Main Tee Segment



2′ Cross Tee

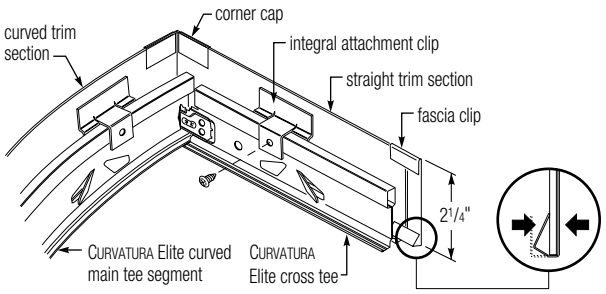


Step 3:
Select Trim and Colors

In this step trim is optional. We recommend that you choose the edge trim if your CURVATURA system is free-standing and will be viewed at close proximity. Without edge trim, your system will offer an industrial look.

Edge-Trim (Optional)

CURVATURA edge trim is available. 2-1/4″ high steel trim sections are laser cut to match each main tee segment to provide a finished perimeter. The trim system consists of integral attachment clips, corner caps and fascia clips.



Color

CURVATURA suspension components and painted aluminum infill panels are available in all USG standard colors. The suspension system is painted 360° (face and body). Aluminum panels are finished on one side only. Custom colors are also available; see the Sherwin-Williams Color Answers Selector.

TRANSLUCENTS panels are available in FRP-Fiber Reinforced Plastic (Natural) and LEXAN (Glass Green Matte and Clear Matte).

DIAMONDFLEX anodized metal panels are available in Silver, Brass, and Gunmetal.

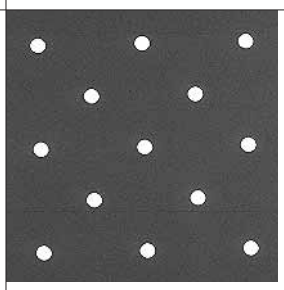
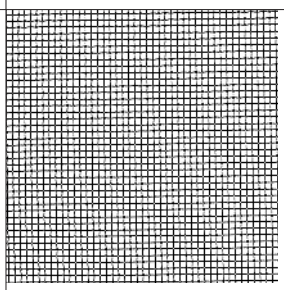
Woven Wire Mesh panels are available in Stainless Steel and Brass.

Step 4: Select Infill Panel and Finish

Now, you are ready to select infill panels to complete the system. 2′ x 6′ panels are available in metal (smooth aluminum and perforated aluminum). 2′ x 2′ infill panels are available in metal (smooth aluminum and perforated aluminum), woven wire mesh (brass and stainless steel), DIAMONDFLEX™ anodized metal (sheer and louvered), and TRANSLUCENTS (LEXAN and FRP) panels.

Available Infill Panels

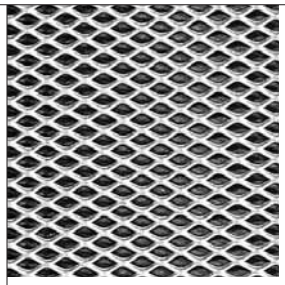
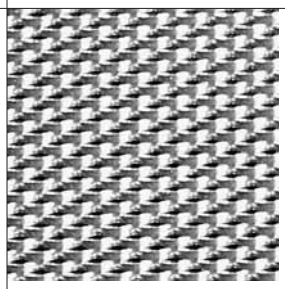
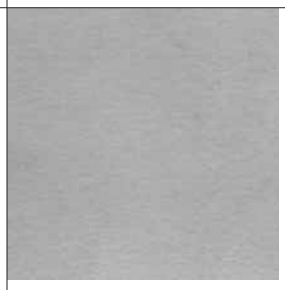
System Configuration	Infill Panel: Aluminum – Smooth	Infill Panel: Aluminum – Perforated	Infill Panel: Wire Mesh	Infill Panel: DIAMONDFLEX	Infill Panel: TRANSLUCENTS – LEXAN	Infill Panel: TRANSLUCENTS – FRP
One-Directional (2′ x 6′)	•	•				
Two-Directional (2′ x 2′)	•	•	•	•	•	•

			Product Code	Open Area %	Panel Size	Colors[1]	
Aluminum	**Solid**		**002**	0%	2′ x 2′ 2′ x 6′	Beige 142 Straw 143 Silvertone 052 Mist 053 Manila 246 Taupe 107 Sandstone 090	Parchment 103 Flat Black 205 Silver Satin 002 Flat White 050 Metallic Oyster 1652 Metallic Gold 1691 Metallic Copper 1690 Custom colors
	Perforated[2]		**See pages 10-13**	1% to 70%	2′ x 2′ 2′ x 6′	Beige 142 Straw 143 Silvertone 052 Mist 053 Manila 246 Taupe 107 Sandstone 090	Parchment 103 Flat Black 205 Silver Satin 002 Flat White 050 Metallic Oyster 1652 Metallic Gold 1691 Metallic Copper 1690 Custom colors
Woven Wire Mesh[3]			**WM**	51%	2′ x 2′	Brass Stainless Steel	

[1] CURVATURA suspension components are available in all USG Interiors standard colors (see above). The suspension system is painted 360° (face and body). Aluminum panels are finished on one side only. For custom color options see the Sherwin-Williams Color Answers Selector.

[2] Aluminum panels are available in both standard stock and non-stock perforation patterns. See pages 10-13 for listing. Custom perforations are also available.

[3] The woven wire mesh panels, due to their natural material and construction, will vary in color and texture, and may "pillow" slightly in flat or gentle curves.

			Product Code	Open Area %	Panel Size	Colors
DIAMONDFLEX[1]	**Sheer**		**DFS**	48%	2′ x 2′	Anodized Silver Anodized Brass Anodized Gunmetal
	Louvered		**DFL**	22%	2′ x 2′	Anodized Silver Anodized Brass Anodized Gunmetal
TRANSLUCENTS	**FRP[2] (Flat and Corrugated)**		**FRP**	0%	2′ x 2′	Natural
	LEXAN[3]		**LEXAN**	0%	2′ x 2′	Glass Green Matte Clear Matte

[1] DIAMONDFLEX panels are directional—each panel has a corner notch placed at the same corner of the module.
[2] FRP panels have a light transmission of 64%.
[3] LEXAN panels have a light transmission of 79% (Glass Green Matte) and 85% (Clear Matte). These panels also have a clear protective coating that requires removal before installation.

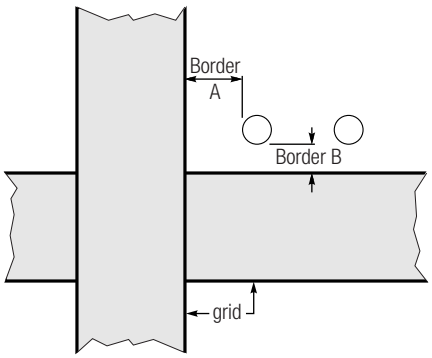
Perforation Patterns

Aluminum infill panels are available in standard stock and non-stock perforations. Custom perforations are also available.

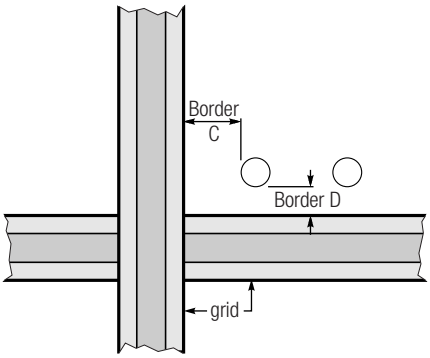
Perforation Border

The illustrations below show the relationship between each suspension system and perforation patterns.

Traditional CURVATURA (15/16″ Face)



CURVATURA Elite (9/16″ Face)



Standard Perforations

The chart below lists standard and non-standard perforation patterns with the percentage of open area around each pattern for both CURVATURA suspension systems.

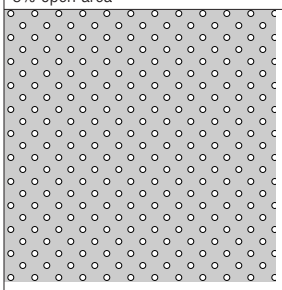
				Hole edge-to-grid CURVATURA		Hole edge-to-grid CURVATURA Elite		
	Product Code	**Perforation Pattern**	**Open Area %**	**Border A**	**Border B**	**Border C**	**Border D**	**Panel Size Available**
Stock	A062	Round 1/16″ Perforations, 1/4″ o.c.	5%	None	None	None	None	2′ x 2′, 2′ x 6′
	A188	Round 3/16″ Perforations, 1″ o.c.	3%	0.12	0.12	0.31	0.31	2′ x 2′, 2′ x 6′
	H250	Round 1/4″ Perforations, .32″ o.c.	58%	None	None	0.11	0.01	2′ x 2′, 2′ x 6′
	C375	Round 3/8″ Perforations, 1.125″ o.c.	9%	0.09	0.09	0.28	0.28	2′ x 2′, 2′ x 6′
	D250	Square 1/4″ Perforations, .75″ o.c.	11%	0.53	0.53	0.72	0.72	2′ x 2′, 2′ x 6′
	D375	Square 3/8″ Perforations, 1.125″ o.c.	11%	0.47	0.47	0.66	0.66	2′ x 2′, 2′ x 6′
	D500D	Square 1/2″ Perforations. .595″ o.c.	70%	None	None	0.18	0.18	2′ x 2′, 2′ x 6′
Non-Stock	A116	Round 15/128″ Perforations 11/32″ o.c.	17%	None	None	None	None	2′ x 2′, 2′ x 6′
	A250	Round 1/4″ Perforations, 1/2″ o.c.	39%	None	None	0.09	0.09	2′ x 2, 2′ x 6′
	A500	Round 1/2″ Perforations, 19/32″ o.c.	55%	0.05	0.05	0.23	0.23	2′ x 2′, 2′ x 6′
	B079	Round 5/64″ Perforations 5/16″ o.c.	6%	0.67	0.63	0.86	0.82	2′ x 2′, 2′ x 6′
	B125	Round 1/8″ Perforations, 3/8″ o.c.	10%	0.29	0.22	0.47	0.41	2′ x 2′, 2′ x 6′
	B188	Round 3/16″ Perforations, 1/4″ o.c.	51%	0.34	0.29	0.53	0.48	2′ x 2′, 2′ x 6′
	B197	Round 13/64″ Perforations 5/16″ o.c.	35%	0.17	0.14	0.42	0.36	2′ x 2′, 2′ x 6′
	B250	Round 1/4″ Perforations, 7/16″ o.c.	30%	0.23	0.14	0.50	0.42	2′ x 2′, 2′ x 6′
	B312	Round 5/16″ Perforations. 7/16″ o.c.	46%	0.33	0.21	0.51	0.40	2′ x 2′, 2′ x 6′
	B500	Round 1/2″ Perforations, 19/32″ o.c.	63%	0.58	0.37	0.77	0.56	2′ x 2′, 2′ x 6′
	C062	Round 1/16″ Perforations, 11/32″ o.c.	3%	None	None	0.12	0.12	2′ x 2′, 2′ x 6′
	C062A	Round 1/16″ Perforations, 11/64″ o.c.	8%	0.29	0.29	0.26	0.26	2′ x 2′, 2′ x 6′
	C116	Round 15/128″ Perforations 11/32″ o.c.	34%	None	None	None	None	2′ x 2′, 2′ x 6′
	C250A	Round 1/4″ Perforations, 3/4″ o.c.	8%	0.53	0.53	0.72	0.72	2′ x 2′, 2′ x 6′
	C188	Round 3/16″ Perforations, 1-13/32″ o.c.	1%	0.13	0.13	0.31	0.31	2′ x 2′, 2′ x 6′
	C500	Round 1/2″ Perforations, 1.5″ o.c.	9%	0.03	0.03	0.22	0.22	2′ x 2′, 2′ x 6′
	D500	Square 1/2″ Perforations. 1.5″ o.c.	11%	0.03	0.03	0.22	0.22	2′ x 2′, 2′ x 6′

Standard Perforations

Stock

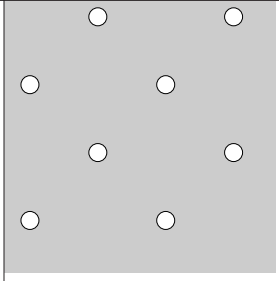
Pattern No. A062

Round—1/16″ Perforations
6% open area



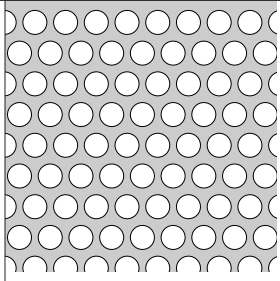
Pattern No. A188

- Round—3/16″ Perforations
- 5% open area



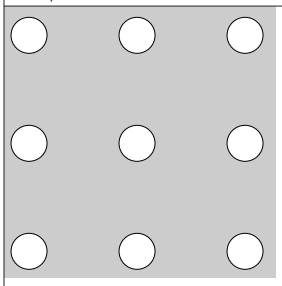
Pattern No. H250

Round—1/4″ Perforations
58% open area



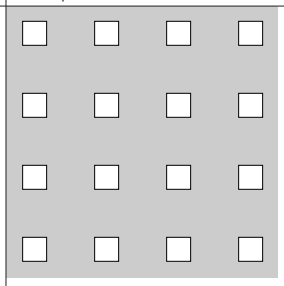
Pattern No. C375

Round—3/8″ Perforations
9% open area



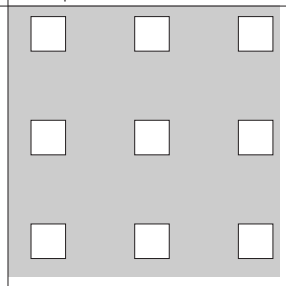
Pattern No. D250

Square—1/4″ Perforations
11% open area



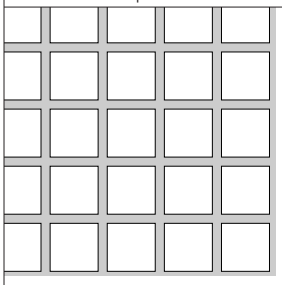
Pattern No. D375

Square—3/8″ Perforations
11% open area



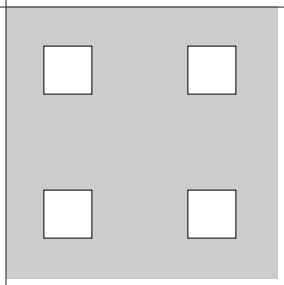
Pattern No. D500D

Square—1/2″ Perforations
70% open area
Meets NFPA for sprinklers above



Pattern No. D500

Square—1/2″ Perforations
11% open area

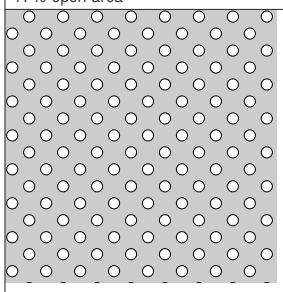


Perforation patterns shown at 50% of actual size.

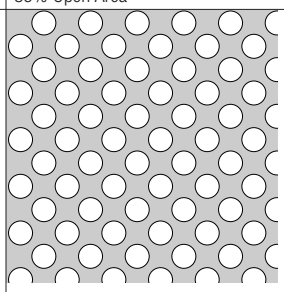
Perforation Patterns

Standard Perforations **Non-Stock**

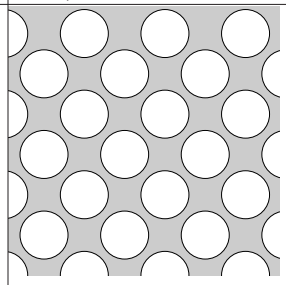
Pattern No. A116
Round—5/128″ Perforations
17% open area



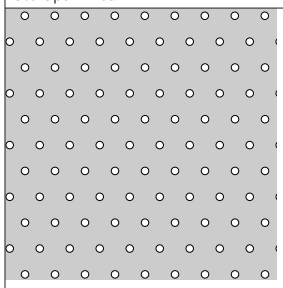
Pattern No. A250
Round—1/4″ Perforations
39% Open Area



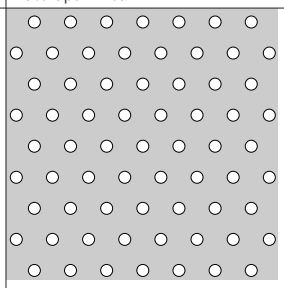
Pattern No. A500
Round—1/2″ Perforations
55% Open Area



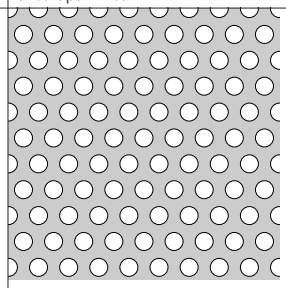
Pattern No. B079
Round—5/64″ Perforations
6% Open Area



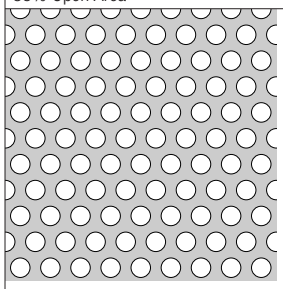
Pattern No. B125
Round—1/8″ Perforations
10% Open Area



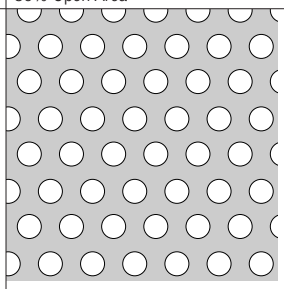
Pattern No. B188A
Round—3/16″ Perforations
51% Open Area



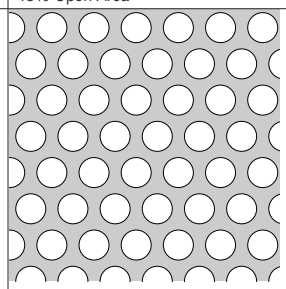
Pattern No. B197
Round—13/64″ Perforations
35% Open Area



Pattern No. B250
Square—1/4″ Perforations
30% Open Area



Pattern No. B312
Round—5/16″ Perforations
46% Open Area



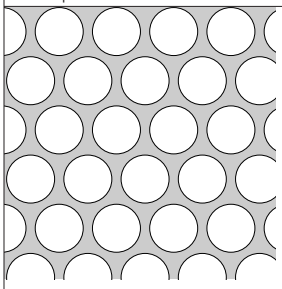
Perforation patterns shown at 50% of actual size.

Standard Perforations

Non-Stock

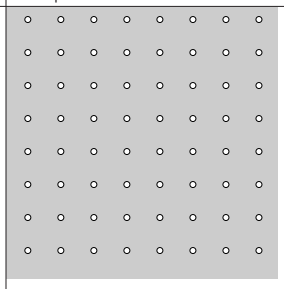
Pattern No. B500

Round—1/2″ Perforations
63% Open Area



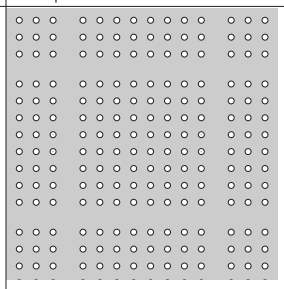
Pattern No. C062

Round—3/16″ Perforations
3% Open Area



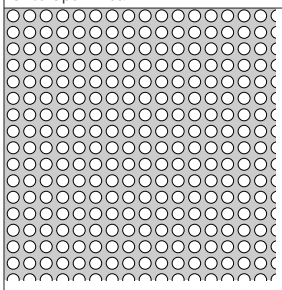
Pattern No. C062A

Round—1/16″ Perforations
8% Open Area



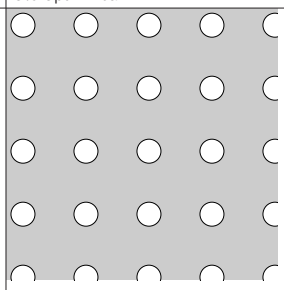
Pattern No. C116

Round—15/12″ Perforations
34% Open Area



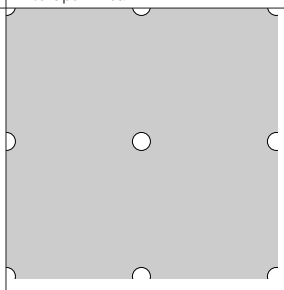
Pattern No. C250A

Round—1/4″ Perforations
9% Open Area



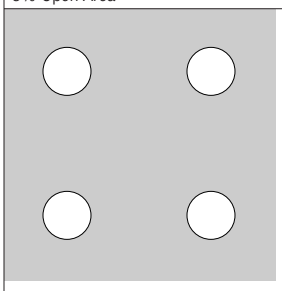
Pattern No. C188

Round—3/16″ Perforations
1% Open Area



Pattern No. C500

Round—1/2″ Perforations
9% Open Area



Perforation patterns shown at 50% of actual size.

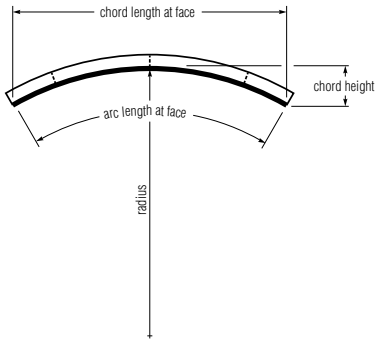
Step 5: Connect the Curves

The CURVATURA 3-D System is a collection of 16 curved "vault" main tee segments and 16 curved "valley" main tee segments (both available in four arc series: 30˚, 40˚, 60˚, and 90˚), and 4 straight main tee segments. Custom curves are also available. Each grid segment is identified by an alphanumeric part number. When combined, these alphanumeric part numbers create the "genetic code" for a CURVATURA wave. See page 2 for design tools.

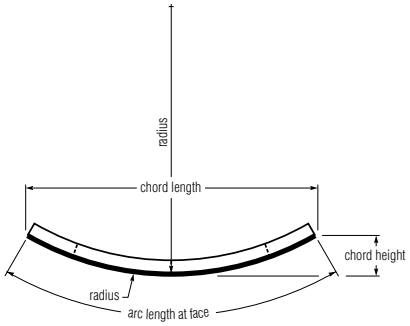
Main Tees

Arc Length	Genetic Code		Radius	Arc Angle	Chord Height	Chord Length
	Vault	Valley				
4′	**4A**	**4B**	31″	90°	8.95″	43.22″
	4C	**4D**	46″	60°	6.14″	45.84″
	4E	**4F**	61″	45°	4.65″	46.78″
	4G	**4H**	92″	30°	3.12″	47.45″
6′	**6A**	**6B**	46″	90°	13.43″	64.82″
	6C	**6D**	69″	60°	9.21″	68.76″
	6E	**6F**	92″	45°	6.98″	70.16″
	6G	**6H**	138″	30°	4.69″	71.18″
8′	**8A**	**8B**	61″	90°	17.90″	86.43″
	8C	**8D**	92″	60°	12.28″	91.67″
	8E	**8F**	122″	45°	9.30″	93.55″
	8G	**8H**	183″	30°	6.25″	94.91″
10′	**10A**	**10B**	77″	90°	22.38″	108.04″
	10C	**10D**	115″	60°	15.35″	114.59″
	10E	**10F**	153″	45°	11.63″	116.94″
	10G	**10H**	229″	30°	7.81″	118.63″

Vault Segments

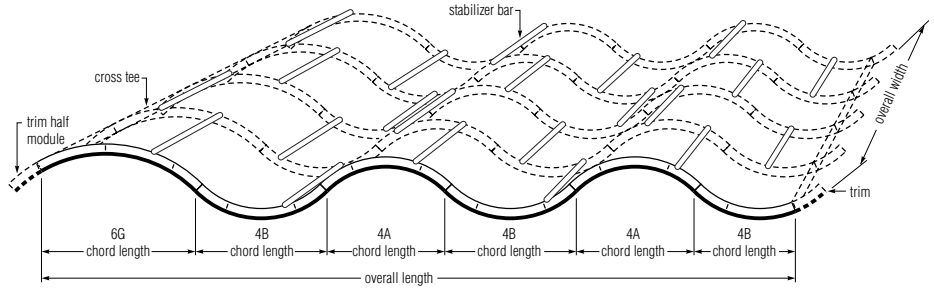


Valley Segments



Genetic Code

You can string together any combination of vaults and valleys to create your design. CURVATURA waves (see below) can remain relatively horizontal or be inclined. The overall length is the sum of the arc lengths of each segment minus the half module at the beginning and end of the run that will be trimmed off. CURVATURA waves are defined by the CURVATURA genetic code x the width of the design in 2′ increments.



Specify (Genetic Code x Width)

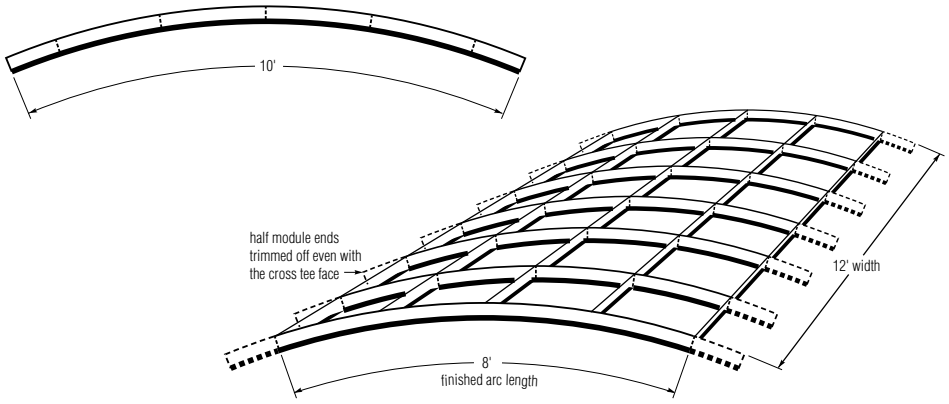
6G	4B	4A	4B	4A	4B	x 8′

Single-Segment Curves

Comprised of one CURVATURA Vault or Valley main tee segment trimmed to full module lengths.

Example

10E main tee segment becomes **10E** vault (8′arc length after trimming one foot from each end).



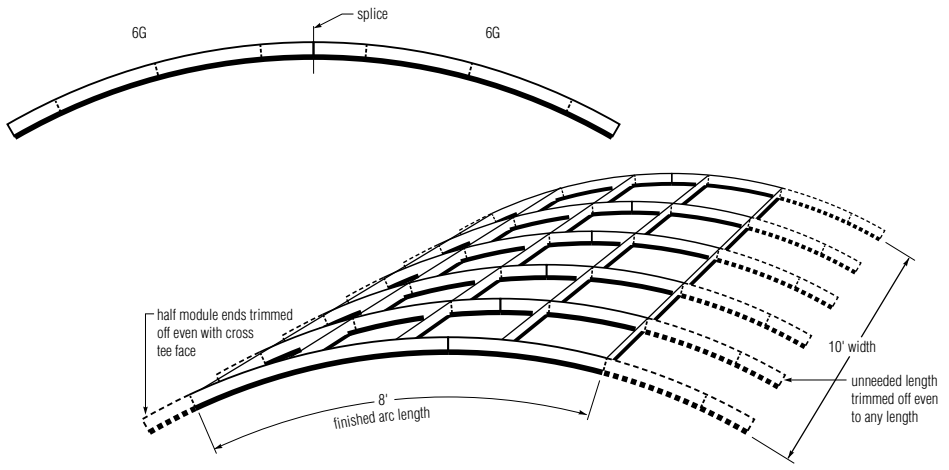
Specify (Genetic Code x Width): **10E** **x 8′ width**

Multi-Segment Curves

Comprised of 2 or more CURVATURA Vault or Valley main tee segments trimmed to full modules as specified.

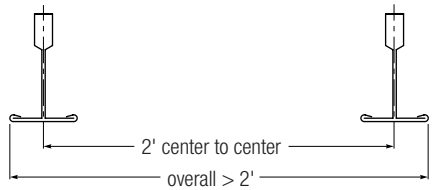
Example

6G, 6G vault with 8′ arc length x 10′ width



Specify (Genetic Code x Width): **6G, 6G** **x 10′ width** to achieve an 8′ x 10′ module

Note: Main tees are 2′ on center. Overall width is dependent on traditional CURVATURA vs. CURVATURA Elite.



Design Tools

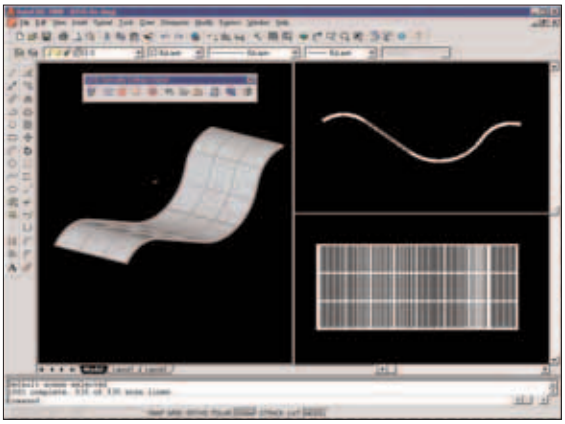
The CURVATURA system can be created using three methods: USG Design Wizard, CURVATURA Design Selector, or CURVATURA Design Template. Each method offers an easy way to design your CURVATURA system. Use this workbook as a guide to designing CURVATURA systems or use any one of the tools below.

USG Design Wizard

The USG Design Wizard is an intuitive, interactive software tool that makes designing and specifying CURVATURA systems easy. It allows you to quickly generate and present multiple design scenarios to enable clients to view completed systems within a space. The Design Wizard is a unique plug-in application that integrates seamlessly with AutoCAD® Release 14.01, 2000, and 2000i to allow you to draw a CURVATURA system, view your design in full color in 2- or 3-D, and then create a detailed, accurate specification. Go to www.usg.com to download the Design Wizard for free and to register to receive free upgrades. A help desk is available by calling 800.750.5341, or by e-mail at USGdwHelp@perceptual-eng.com.

How it works

Select the product specifications (such as infill panel, suspension system profile, and color) for your design from the Design Wizard menus. The interactive Design Wizard toolbar allows you to apply design decisions that translate into 2-D and 3-D objects in AutoCAD. Using AutoCAD rendering options, you can see how the system will look in a finished space.



USG Toolbar

The USG toolbar feature of the Design Wizard is intuitive and easy-to-use. Just point and click, and the program responds to your selections. A built-in help function (F1 on your keypad) is also available.

CURVATURA Design Selector

The CURVATURA Design Selector lets you use any of numerous traceable designs. You can string together any combination of vaults and valleys to create your design. Each vault and valley has a specific alphanumeric part number assigned to it. By listing the string of part numbers separated by commas, you now have the identification (the CURVATURA "Genetic Code") for your unique shape. Add to the Genetic Code the width of the ceiling in 2′ increments, choose One-Directional CURVATURA or Two-Directional CURVATURA, select suspension system, and then specify finishes. See pages 4-15 for more information on how to specify the system.

CURVATURA Design Template

The plastic CURVATURA Design Template allows you to create unique, discrete curved main tee segments. Each segment is assigned an alphanumeric part number. Note this number for each segment as you draw your wave. CURVATURA segments can be combined into an infinite number of combinations for total control in creating your own unique design. To order a CURVATURA Design Template (IC36109), call 888-874-2450.

Application Guide Specifications

Note to specifier: The following specification for CURVATURA System is a guide for decorative, modular, vertically curved suspension systems. Delete such items that are not related to the particular project. Where blank spaces occur, provide information to the particular project for which the specification is prepared.

Part 1: General

1.01 Related Work

A. Related work specified elsewhere:
1. Gypsum Board Systems: Section ____.
2. Acoustical Ceilings: Section ____.
3. Integrated Assemblies: Section ____.
4. Air Handling: Section ____.
5. Lighting: Section ____.

B. Work installed, but furnished under other sections: (include applicable requirements).

C. Work furnished, but installed under other sections: (include applicable requirements).

1.02 System Description

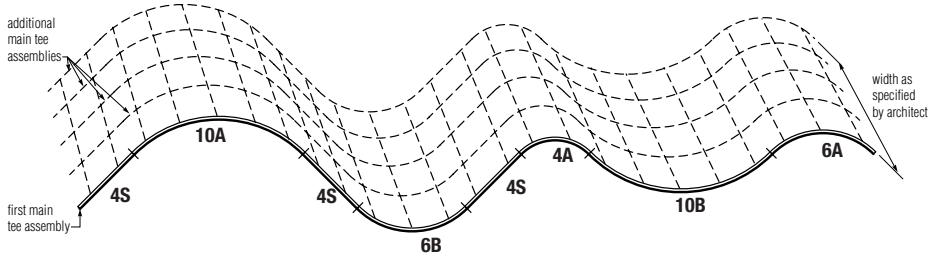
A. Pre-formed, pre-finished, vertically curved suspension system and infill material as designated, consisting of curved and straight main tees, as well as straight cross tees snapped together to form: (select one) two-directional 2′ x 2′ modules that curve up (vaults), down (valleys), or undulate (waves), or one-directional 2′ x 6′ modules that curve up (vaults), down (valleys), or undulate (waves). These curved main tees consist of combinations of the following 36 discrete components:

Arc Angle	10′ (5 Cross tees) Part No.	8′ (4 Cross tees) Part No.	6′ (3 Cross tees) Part No.	4′ (2 Cross tees) Part No.
90° Vault (∩)	10A	8A	6A	4A
90° Valley (∪)	10B	8B	6B	4B
60° Vault (∩)	10C	8C	6C	4C
60° Valley (∪)	10D	8D	6D	4D
45° Vault (∩)	10E	8E	6E	4E
45° Valley (∪)	10F	8F	6F	4F
30° Vault (∩)	10G	8G	6G	4G
30° Valley (∪)	10H	8H	6H	4H
Straight (—)	10S	8S	6S	4S

CURVATURA systems specified as follows:
Designed shapes from standard curves.
Any shape designed from the 36 standard main tee segments and specified by the CURVATURA Genetic Code. Width is specified in two-foot increments.
Example: Main Tee #10A connects to Main Tee #6B connects to Main Tee #4A connects to Main Tee #10B equals **CURVATURA Genetic Code #10A, 6B, 4A, 10B**
CURVATURA system genetic code ( ) x width ( ) modules wide as manufactured by USG Interiors, Inc.: suspension color ( ), flexible infill (smooth aluminum), (perforated aluminum (pattern #) (color), wire mesh (brass or stainless), TRANSLUCENT GE LEXAN color ( ) FRP (smooth, corrugated), DIAMONDFLEX anodized metal (sheer, louvered) color ( ), (with trim) (without trim).
Note to Architect: When specifying CURVATURA, be sure to indicate elevation dimensions approximately every 8 feet along the wave to aid contractor in accurately locating your ceiling.

Example of CURVATURA Installation with Corresponding Genetic Code

CURVATURA Installation



CURVATURA Genetic Code

4S	10A	4S	6B	4S	4A	10B	6A	x Width

Application Guide Specifications

1.03 Quality Assurance

A. Subcontractor qualifications: Installer shall have successful experience installing ceiling suspension systems.

B. Requirements of regulatory agencies: Codes and regulations of authorities having jurisdiction.

1.04 References

A. ASTM C635, Standard Specifications for Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.

B. ASTM C636, Recommended Practice for Installation of Metal Suspension System for Acoustical Tile and Lay-In Panels.

C. CISCA Ceiling Systems Installation Handbook.

1.05 Submittal

A. Samples: Submit data for suspension system main tees and cross tees, infill panels and if specified optional trim for review of finish color and appearance.

B. Shop drawings:

1. Contractor shall provide reflected ceiling plan and section through elevations: Submit ceiling suspension system layout to indicate ceiling modules.

2. Assembly drawings: Indicate module dimensions, accessory attachments, and installation of related components.

C. **Manufacturer's data:**

1. System details: Submit manufacturer's descriptive literature or standard drawings showing details of system with project conditions clearly identified, and manufacturer's recommended installation instructions.

2. Color chart: Submit manufacturer's standard color chart sample or match of color choice for approval.

D. Maintenance materials: Provide _____ percent of amount of CURVATURA components.

1.06 Delivery, Storage and Handling

A. Delivery of materials: Deliver materials in original, unopened packages clearly labeled with manufacturer's name, item description, part number, type and class, as applicable.

B. Inspection: Promptly inspect delivered materials, file freight claims for damage during shipment, and order replacement materials, as required.

C. Storage: Store in manner that will prevent warpage, scratches, or damage of any kind. Prevent interference to/by other trades and any other adverse job conditions due to storage locations or methods.

D. Handling: Handle in such manner to ensure against racking, distortion or physical damage of any kind.

1.07 Project Conditions

A. Existing conditions: (Include specific alteration work requirements for the project.)

B. Coordination with other work:

1. General: Coordinate with other work supported by or penetrating through the system.

2. Mechanical work: Ductwork above suspension system shall be complete, and permanent heating and cooling systems operating.

3. Electrical work: Installation of conduit above the CURVATURA system shall be complete before installation of suspension system.

C. Protection:

1. Personnel: Follow good safety and industrial hygiene practices during handling and installing of all products and systems, with personnel to take necessary precautions and wear appropriate personal protective equipment as needed. Read material safety data sheets and related literature for important information on products before installation. Contractor to be solely responsible for all personal safety issues during and subsequent to installation; architect, specifier, owner and manufacturer will rely on contractor's performance in such regard.

2. Existing Completed Work: Protect completed work above suspension system from damage during installation of CURVATURA system components.

Part 2: Products

2.01 Manufacturer

A. CURVATURA 3-Dimensional Curved System as manufactured by USG Interiors, Inc., Chicago, Illinois U.S.A.

2.02 Materials

A. General: ASTM C635, commercial quality, cold-rolled steel; all exposed surfaces post painted in manufacturer's standard enamel paint finish for 360° coverage, color (as selected from manufacturer's standard colors). (Custom—supply paint chip for color match.)

B. Suspension system components:

1. General: Suspension system shall be CURVATURA (select one) (Standard) (Elite) color of the suspension shall be (List color selected)

2. Cross Tees 2′ on center for two-directional system or stabilizer bars 4′ on center with 2′ cross tees at row ends when using one directional system.

Genetic Code		Radius	Arc Angle	Arc Length	Chord Height	Chord Length
Vault	Valley					
4A	**4B**	31″	90°	48″	8.95″	43.22″
4C	**4D**	46″	60°	48″	6.14″	45.84″
4E	**4F**	61″	45°	48″	4.65″	46.78″
4G	**4H**	92″	30°	48″	3.12″	47.45″
6A	**6B**	46″	90°	72″	13.43″	64.82″
6C	**6D**	69″	60°	72″	9.21″	68.76″
6E	**6F**	92″	45°	72″	6.98″	70.16″
6G	**6H**	138″	30°	72″	4.69″	71.18″
8A	**8B**	61″	90°	96″	17.90″	86.43″
8C	**8D**	92″	60°	96″	12.28″	91.67″
8E	**8F**	122″	45°	96″	9.30″	93.55″
8G	**8H**	183″	30°	96″	6.25″	94.91″
10A	**10B**	77″	90°	120″	22.38″	108.04″
10C	**10D**	115″	60°	120″	15.35″	114.59″
10E	**10F**	153″	45°	120″	11.63″	116.94″
10G	**10H**	229″	30°	120″	7.81″	118.63″

3. Spec. Note: Hanger Wire: Because the CURVATURA system is decorative and often incorporates "see through" panels see paragraph 3.03 D.3 for hanger wire options and consult with local building officials.

4. CURVATURA main tee curved segments

a. Vault tees (length of face of grid concave) (SELECT ONE face width) 1-1/2″ high x 15/16″ face with 1/2″ x 1/4″ bulb, or 9/16″ face with 5/32″ reveal and 3/8″ x 3/16″ bulb, cross tee holes at 24″ o.c., integral panel hold-down tabs and main tee splice plate. Genetic code sequence per paragraph 1.02A

b. Valley tees (length of face of grid convex) (SELECT ONE face width) 1-1/2″ high x 15/16″ face with 1/2″ x 1/4″ bulb or 9/16″ face with 5/32″ reveal and 3/8″ x 3/16″ bulb, cross tee holes at 24″ o.c., integral panel hold-down tabs and main tee splice plate. Genetic code sequence per paragraph 1.02A

C. Flexible infill options:

1. (Select one) Nominal 2′ x 2′ or 2′ x 6′ aluminum perforated, color _____. Perforation pattern no. _____

2. Spec. Note, Optional infill panels types are as follows unless otherwise indicated infill option shall be per paragraph 2.02.D.1 above.

a. Solid aluminum

b. DIAMONDFLEX

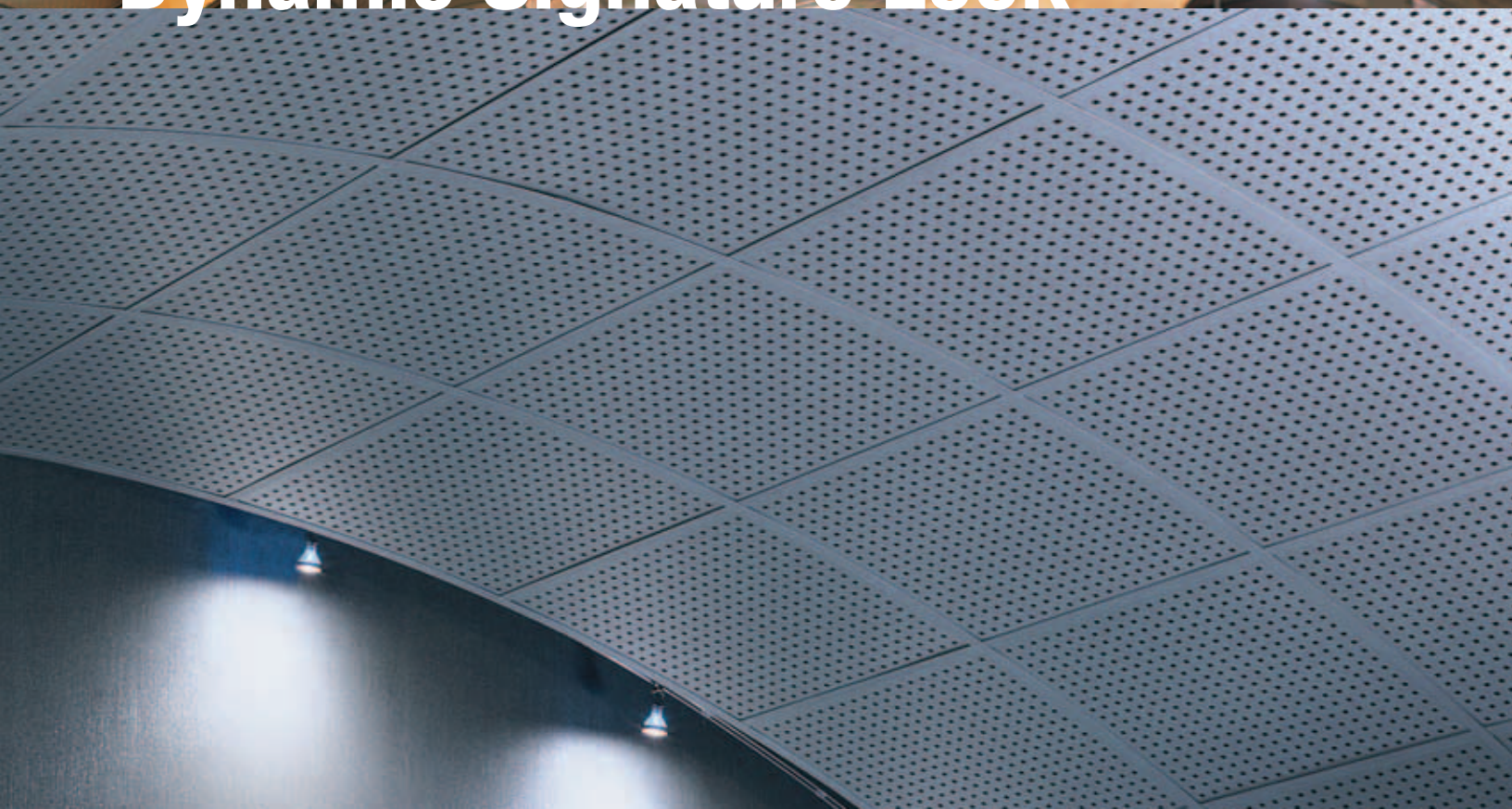
c. Wire Mesh

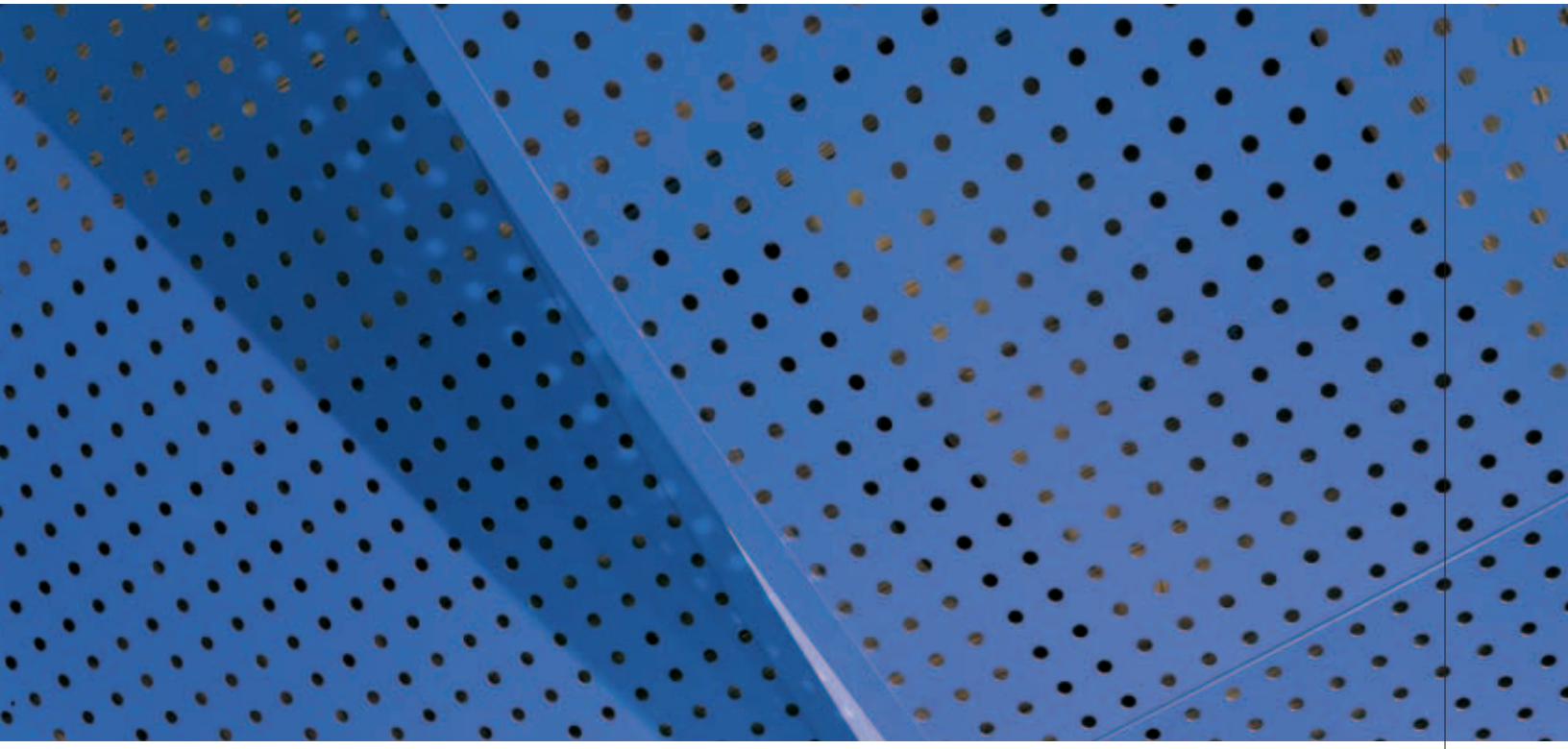
d. TRANSLUCENTS (LEXAN or FRP)

Application Guide Specifications

		D. Accessories **1.** Wall Attachment clips **2.** FGB 2′ x 2′ x 1″ fiberglass batt in poly bag. **3.** Wall molding GWM9 12′ x 9/16″ x 1-1/2″ color to match suspension system **E.** CURVATURA trim option 2-1/4″ high steel trim sections to match each main tee segment to provide a finished perimeter. The Genetic code for the CURVATURA trim is to match each main tee segment to provide a finished perimeter. Trim color selected is _____.
	2.03 Fabrication	**A.** Manufacturing: Suspension members to conform to ASTM C635, designed to support infill panels and trim. **B.** Main tees: Roll-formed, splice clip connection, cross tee holes and hanger wire holes at 12″ from ends and 24″ o.c. **C.** Cross tees: Roll-formed, butt cut ends, high tensile steel end clinches to web section, double-locking and self-indexing design. **D.** Finish: Manufacturer's standard metal cleaning and finishing process to attain color selected.
Part 3: Execution	**3.01 Inspection**	**A.** Examine areas to receive materials for conditions which will adversely affect installation. Provide written report of unacceptable surfaces. **B.** Do not start work until unsatisfactory conditions are corrected. **C.** Work to be concealed: Verify work above ceiling suspension system is complete and installed in manner which will not affect layout and installation of suspension system components. **D.** Beginning of installation shall signify acceptance of conditions in areas to receive the CURVATURA system.
	3.02 Preparation	**A.** Field dimensions must be verified prior to installation.
	3.03 Installation	**A.** Standard reference: Install in accordance with ASTM C636, CISCA installation standards, and other applicable code requirements. **B.** Manufacturer's reference: Install in accordance with manufacturer's current printed recommendations. **C.** Drawing reference: Install in accordance with approved shop drawings and locate ceiling in accordance with main tee dimensions relative to elevations. **D.** Hanger wires: **1.** Spacing: Space hanger wires on main tees at the alternate cross tee holes (maximum of 48″ o.c.). Attach hangers directly to structure above as needed. Wires to hang plumb. **2.** Limitations: Do not support wires from mechanical and/or electrical equipment, piping, or other equipment occurring above ceiling. **3.** Quality of Workmanship: Because the CURVATURA system is decorative and often incorporates "see through" panels, care should be taken to ensure that all hanger wires are straight and plumb, that wire wraps are neat and tight and that hanger wires are free of kinks. With local approval, consideration can be given for using #18 black annealed wire or #18 stainless steel wire for a more sleek appearance. **E.** Accessories: Install accessories as applicable to meet the project requirements.
	3.04 Cleaning	**A.** Suspension: Remove infill material and perform any necessary cleaning maintenance with nonsolvent-based commercial cleaner. **B.** Immediately remove any corrosive substances or chemicals that would attack painted finishes (i.e., wallpaper adhesives). **C.** Touch up all minor scratches and spots, as acceptable, or replace damaged sections when touchup is not permitted. **D.** Painting: Repainting of suspension members shall be with a high-quality, solvent-based paint and applied as recommended by paint manufacturer. **E.** Removal of debris: Remove all debris resulting from work of this section.

Dynamic Signature Look





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SAFETY FIRST!
Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.

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