

**CURVATURA™  
3-DIMENSIONAL  
CEILING SYSTEM**

**SYSTEM GUIDE**



IT'S YOUR WORLD. BUILD IT.®



Offices

Retail

Entertainment

High-bay Areas

## **DESIGN IN 3-D**

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.

# CURVATURA™ 3-DIMENSIONAL CEILING SYSTEM

## SYSTEM GUIDE

### UNDERSTAND YOUR SYSTEM

### DESIGN YOUR SYSTEM

### SPECIFY YOUR SYSTEM

### FOR MORE INFORMATION

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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.

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| <b>4</b>  | Overview<br>System Hardware      |
| <b>6</b>  | Design Development               |
| <b>18</b> | Application Guide Specifications |
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800 USG.4YOU (874-4968)

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[usg.com](http://usg.com) or [cgcinc.com](http://cgcinc.com)

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# CURVATURA™ 3-DIMENSIONAL CEILING SYSTEM

## SYSTEM GUIDE

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### 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 15.

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### 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.

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### SUSPENSION SYSTEM PROFILES

The system is available in one suspension system profile: traditional Curvatura™. Traditional Curvatura™ offers a 15/16" grid profile for a professional, polished look.

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### FLEXIBLE INFILL PANELS

2' x 2' infill panels are available in metal (smooth aluminum and perforated aluminum), Diamondflex™ expanded metal (Sheer and Louvered), and Transluents™ (PETG) panels. 2' x 6' panels are available in metal (smooth aluminum and perforated aluminum) only.

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### EDGE TRIM

Finish your curved designs with a 2-1/4" high trim or leave it off for an industrial look.

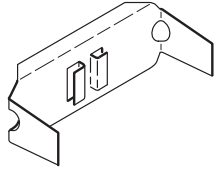
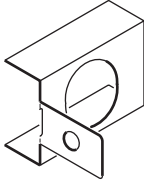
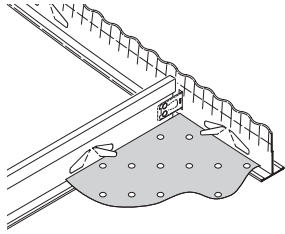
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### UNLIMITED COLORS

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.

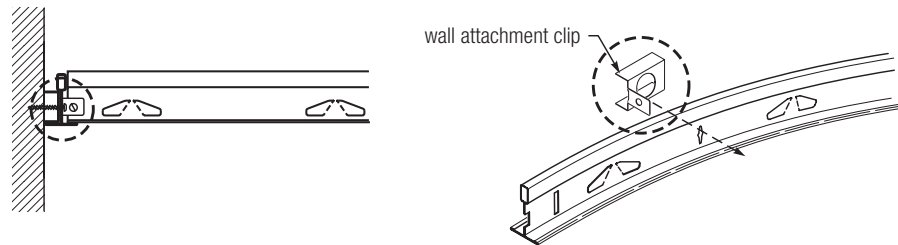
# SYSTEM HARDWARE

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

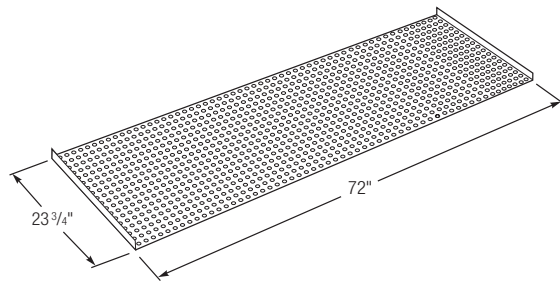
The Curvatura™ system comes in two configurations: Choose One-Directional Curvatura™ with 2' x 6' infill panels or Two-Directional Curvatura™ with 2' x 2' infill panels. The selection of the configuration will determine the overall look of the Curvatura™ system. If you choose a one-directional system, 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 uses traditional Curvatura™ (15/16" face) suspension system. Infill panels are available in smooth or perforated aluminum.

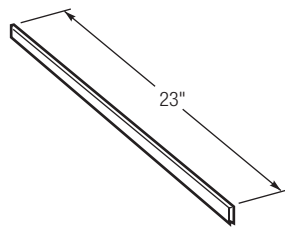
### INFILL PANEL SIZE

2' x 6'

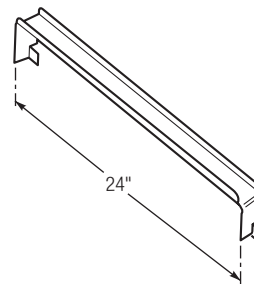


### ACCESSORIES

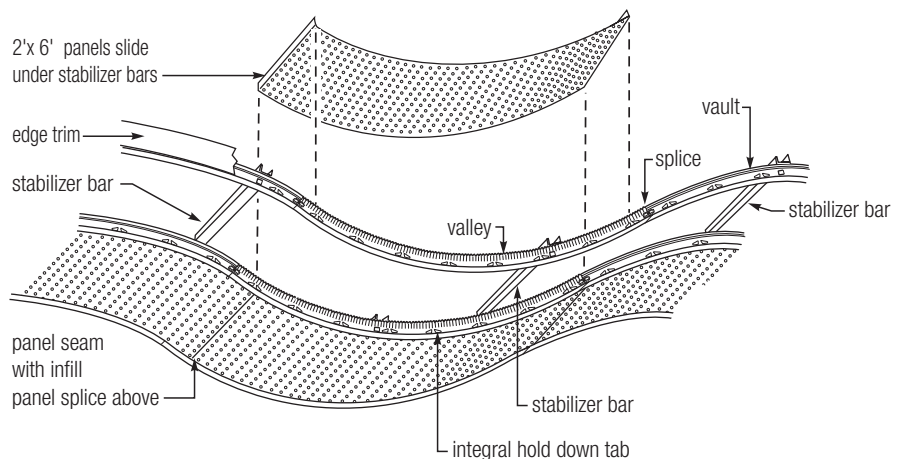
#### Infill Panel Splice



#### Stabilizer Bar



### ASSEMBLY\*



\*This is a view from below.

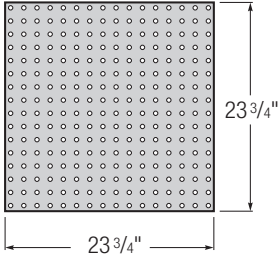
# STEP 1: SELECT CONFIGURATION

## TWO-DIRECTIONAL

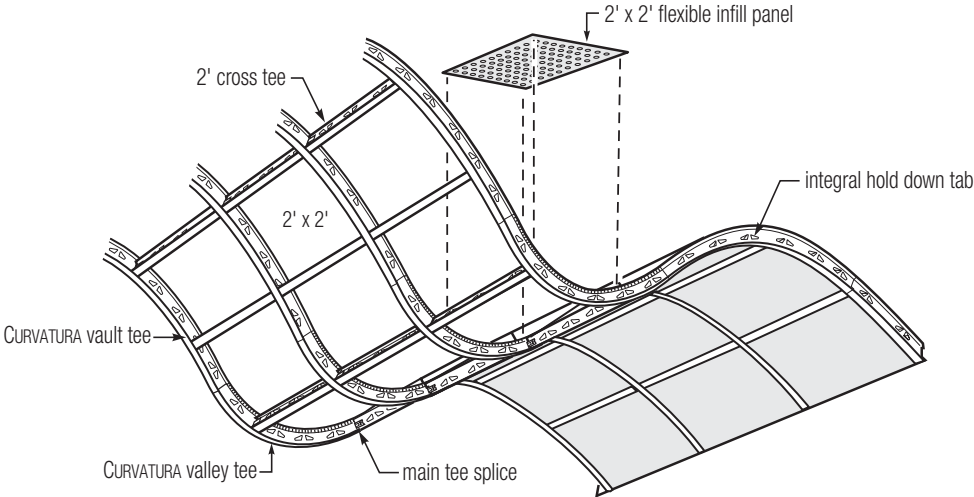
The Two-Directional Curvatura™ System consists of pre-engineered, vertically curved main tees, 2' cross tees, flexible infill panels, and optional 2-1/4" edge trim. The system uses traditional Curvatura™ (15/16" face) suspension system. 2' x 2' panels are available in smooth or perforated aluminum, Diamondflex™ expanded metal, and Translucents™ panels.

### INFILL PANEL SIZE

2' x 2'



### ASSEMBLY\*

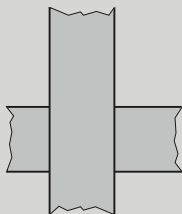
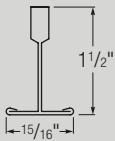


\*This is a view from below.

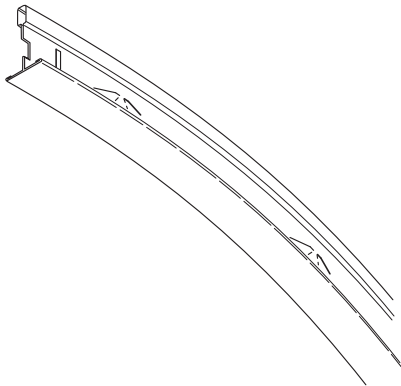
# STEP 2: SUSPENSION PROFILE

The next step in designing your Curvatura™ system is selecting the traditional Curvatura™ (15/16" face) suspension system.

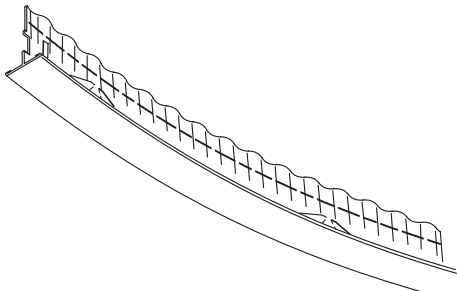
**STANDARD  
15/16" FACE**



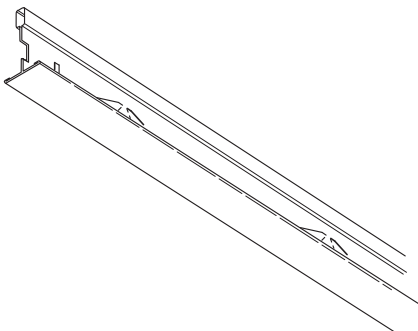
**Vault Main Tee Segment**



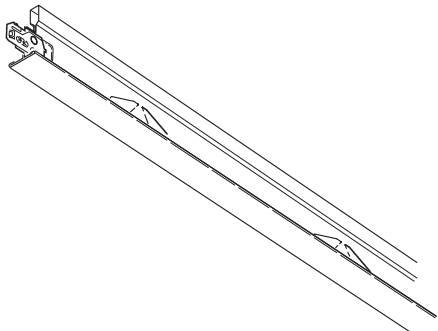
**Valley Main Tee Segment**



**Straight Main Tee Segment**



**2 Cross Tee**



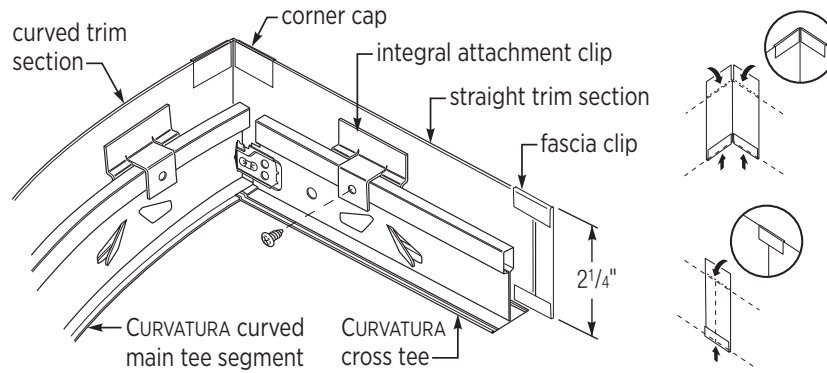


# STEP 3: SELECT TRIM AND COLORS

## EDGE-TRIM (OPTIONAL)

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.

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.

Transluents™ panels are available in PETG.

Diamondflex™ expanded metal panels are available in Bright White and Bright Silver.

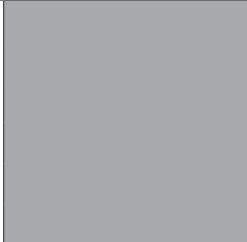
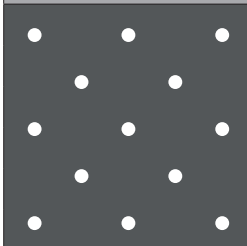
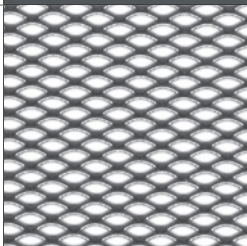
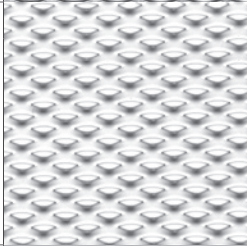

# STEP 4: SELECT INFILL AND FINISH

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), Diamondflex™ expanded metal (sheer and louvered), and Transluents™ (PETG) panels.

## AVAILABLE INFILL PANELS

System Configuration	Infill Panel			
	Aluminum		Diamondflex™	Transluents™
	Smooth	Perforated		PETG
One-Directional (2' x 6')	●	●		
Two-Directional (2' x 2')	●	●	●	●

## ALUMINUM

		Product Code	Open Area %	Panel Size	Colors <sup>1</sup>
Solid		002	0%	2' x 2' 2' x 6'	Silver Satin 002
					Flat White 050
Perforated		See Pages 12-14	1% to 70%	2' x 2' 2' x 6'	Metallic Oyster 1652
					Metallic Gold 1691
					Metallic Copper 1690
					Custom colors
					Silver Satin 002
					Flat White 050
Sheer		DFS	52%	2' x 2'	Bright White
					Bright Silver
Louvered		DFS	22%	2' x 2'	Bright White
					Bright Silver
PETG <sup>4</sup>		PETG <sup>4</sup>	0%	2' x 2'	See data sheet IC406 for Decors and Color Gallery.

## DIAMONDFLEX™<sup>3</sup>

## TRANSLUCENTS™

<sup>1</sup> Curvatura™ suspension components are available in 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.

<sup>2</sup> Aluminum panels are available in both standard stock and non-stock perforation patterns. See pages 12-14 for listing. Custom perforations are also available.

<sup>3</sup> Diamondflex™ panels are directional—each panel has a corner notch placed at the same corner of the module.

<sup>4</sup> Clear Matte in Polycarbonate and Rain in Acrylic.

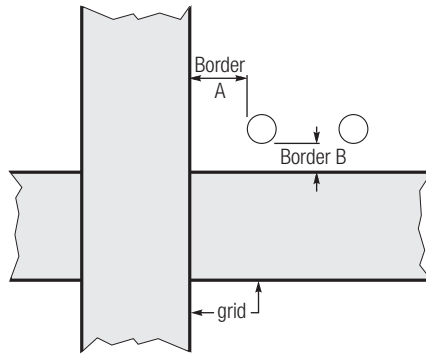
# PERFORATION PATTERNS

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 suspension system and perforation patterns.

### Traditional Curtvatura™ (15/16" Face)



## STANDARD PERFORATIONS

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

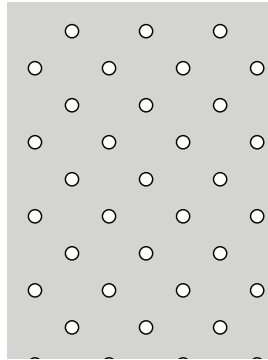
	Product Code	Perforation Pattern	Open Area %	Hole edge-to-grid Curtvatura™		Panel Size Available
				Border A	Border B	
<b>Standard</b>	CD06305NB	Round 1/16" Perforations, 1/4" o.c.	5%	None	None	2' x 2', 2' x 6'
	CD18803	Round 3/16" Perforations, 1" o.c.	3%	0.12	0.12	2' x 2', 2' x 6'
	CE25058	Round 1/4" Perforations, .32" o.c.	58%	None	None	2' x 2', 2' x 6'
	CS37509	Round 3/8" Perforations, 1.125" o.c.	9%	0.09	0.09	2' x 2', 2' x 6'
	SS25011	Square 1/4" Perforations, .75" o.c.	11%	0.53	0.53	2' x 2', 2' x 6'
	SS37511	Square 3/8" Perforations, 1.125" o.c.	11%	0.47	0.47	2' x 2', 2' x 6'
	SS50070	Square 1/2" Perforations, .595" o.c.	70%	None	None	2' x 2', 2' x 6'
<b>Non-Standard</b>	CD11717	Round 15/128" Perforations 11/32" o.c.	17%	None	None	2' x 2', 2' x 6'
	CD25039	Round 1/4" Perforations, 1/2" o.c.	39%	None	None	2' x 2', 2' x 6'
	CD50055	Round 1/2" Perforations, 19/32" o.c.	55%	0.05	0.05	2' x 2', 2' x 6'
	CE07906	Round 5/64" Perforations 5/16" o.c.	6%	0.67	0.63	2' x 2', 2' x 6'
	CE12510	Round 1/8" Perforations, 3/8" o.c.	10%	0.29	0.22	2' x 2', 2' x 6'
	CE18833	Round 3/16" Perforations, 1/4" o.c.	33%	0.34	0.29	2' x 2', 2' x 6'
	CE19735	Round 13/64" Perforations 5/16" o.c.	35%	0.17	0.14	2' x 2', 2' x 6'
	CE25030	Round 1/4" Perforations, 7/16" o.c.	30%	0.23	0.14	2' x 2', 2' x 6'
	CE31246	Round 5/16" Perforations, 7/16" o.c.	46%	0.33	0.21	2' x 2', 2' x 6'
	CE50063	Round 1/2" Perforations, 19/32" o.c.	63%	0.58	0.37	2' x 2', 2' x 6'
	CS06302	Round 1/16" Perforations, 11/32" o.c.	3%	None	None	2' x 2', 2' x 6'
	C062A	Round 1/16" Perforations, 11/64" o.c.	8%	0.29	0.29	2' x 2', 2' x 6'
	CS11708	Round 15/128" Perforations 11/32" o.c.	34%	None	None	2' x 2', 2' x 6'
	CS25012	Round 1/4" Perforations, 3/4" o.c.	8%	0.53	0.53	2' x 2', 2' x 6'
	CS18801	Round 3/16" Perforations, 1-13/32" o.c.	1%	0.13	0.13	2' x 2', 2' x 6'
	CS50009	Round 1/2" Perforations, 1.5" o.c.	9%	0.03	0.03	2' x 2', 2' x 6'
	SS50011	Square 1/2" Perforations, 1.5" o.c.	11%	0.03	0.03	2' x 2', 2' x 6'

# PERFORATION PATTERNS

## STANDARD PERFORATIONS

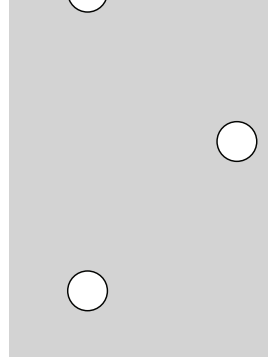
STANDARD

Pattern No. CD06305NB



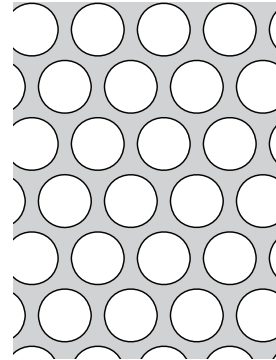
Circle— 45 degrees—.0625"  
5% open area (A062)

Pattern No. CD18803



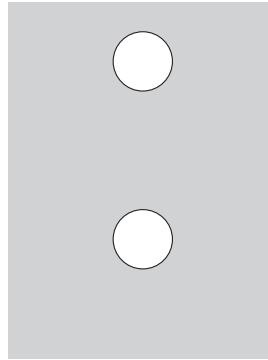
Circle— 45 degrees—.188"  
3% open area (A188)

Pattern No. CE25058



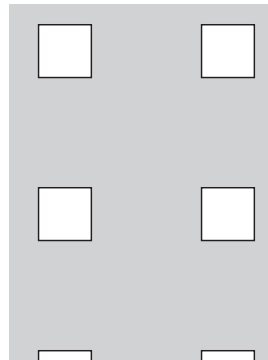
Circle— 60 degrees—.250"  
58% open area (B250H)

Pattern No. CS37509



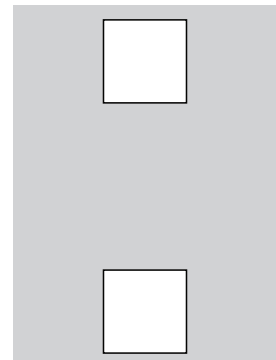
Circle— 90 degrees—.375"  
9% open area (C375)

Pattern No. SS25011



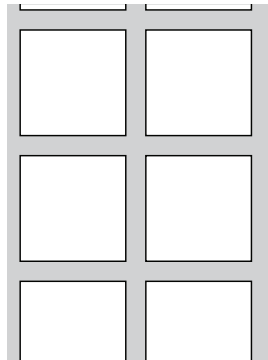
Square— 90 degrees—.250"  
11% open area (D250)

Pattern No. SS37511



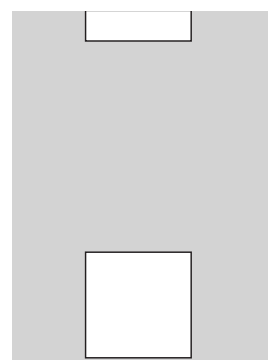
Square— 90 degrees—.375"  
11% open area (D375)

Pattern No. SS50070



Square— 90 degrees—.500"  
70% open area (D500D)

Pattern No. SS50011



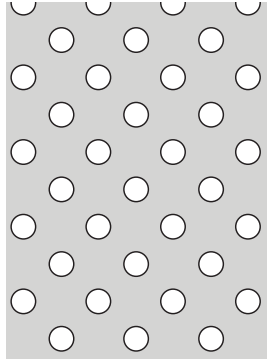
Square— 90 degrees—.500"  
11% open area (D500)

# PERFORATION PATTERNS

## STANDARD PERFORATIONS

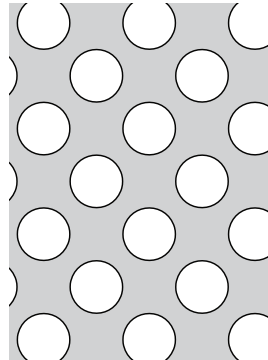
NON-STANDARD

Pattern No. CD11717



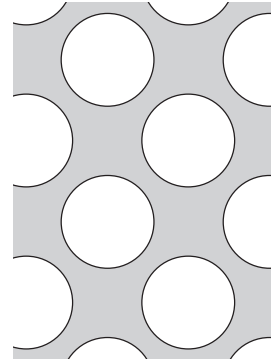
Circle— 45 degrees—.1165"  
17% open area (A116)

Pattern No. CD25039



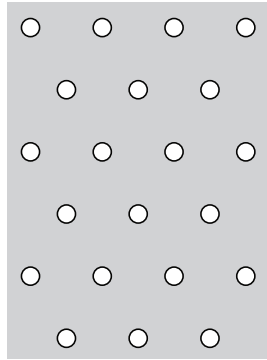
Circle— 45 degrees—.250"  
39% open area (A250)

Pattern No. CD50055



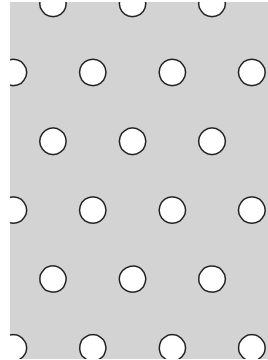
Circle— 45 degrees—.500"  
55% open area (A500)

Pattern No. CE07906



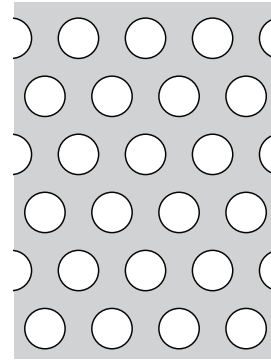
Circle— 60 degrees—.079"  
6% open area (B079)

Pattern No. CE12510



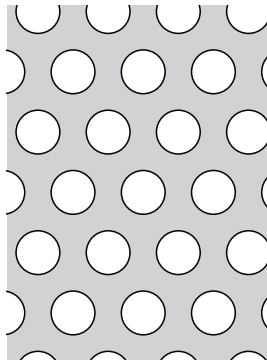
Circle— 60 degrees—.125"  
10% open area (B125)

Pattern No. CE18833



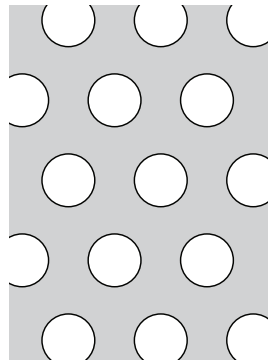
Circle— 60 degrees—.188"  
33% open area (B188A)

Pattern No. CE19735



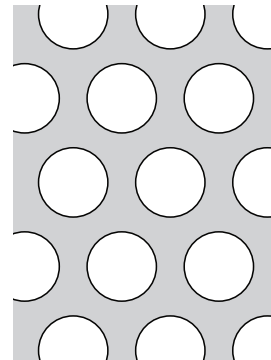
Circle— 60 degrees—.197"  
35% open area (B197)

Pattern No. CE25030



Circle— 60 degrees—.250"  
30% open area (B250)

Pattern No. CE31246



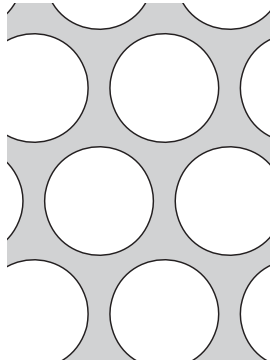
Circle— 60 degrees—.312"  
46% open area (B312)

# PERFORATION PATTERNS

## STANDARD PERFORATIONS

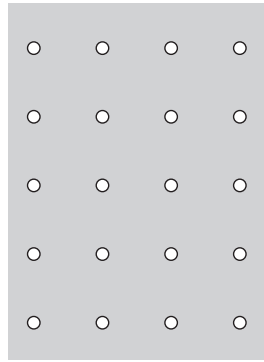
NON-STOCK

Pattern No. CE50063



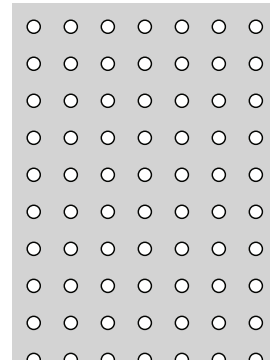
Circle— 60 degrees—.500"  
63% open area (B500)

Pattern No. CS06302



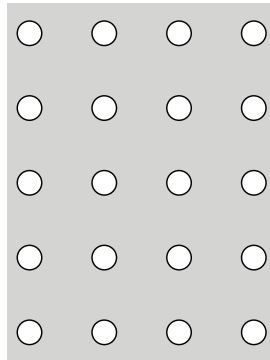
Circle— 90 degrees—.0625"  
2.5% open area (C062)

Pattern No. CS06310



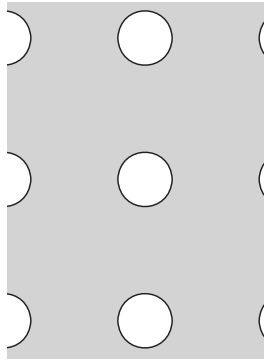
Circle— 90 degrees—.0625"  
10% open area (C062A)

Pattern No. CS11708



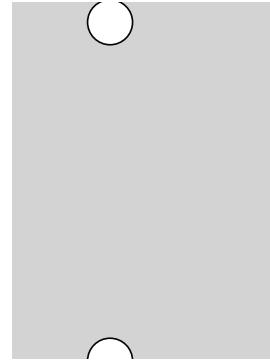
Circle— 90 degrees—.1165"  
8% open area (C116)

Pattern No. CS25012



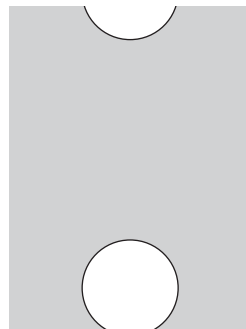
Circle— 90 degrees—.250"  
12% open area (C250A)

Pattern No. CS18801



Circle— 90 degrees—.188"  
1% open area (C188)

Pattern No. CS50009



Circle— 90 degrees—.500"  
9% open area (C500)

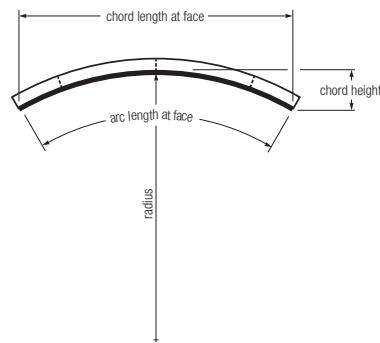
# STEP 5: CONNECT THE CURVES

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.

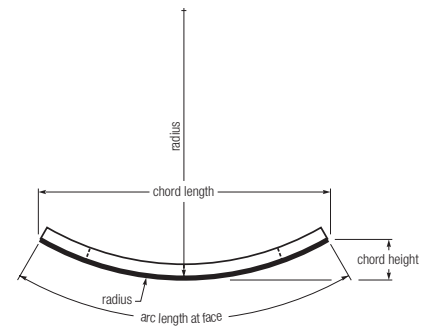
## MAIN TEES

Arc Length	Product 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

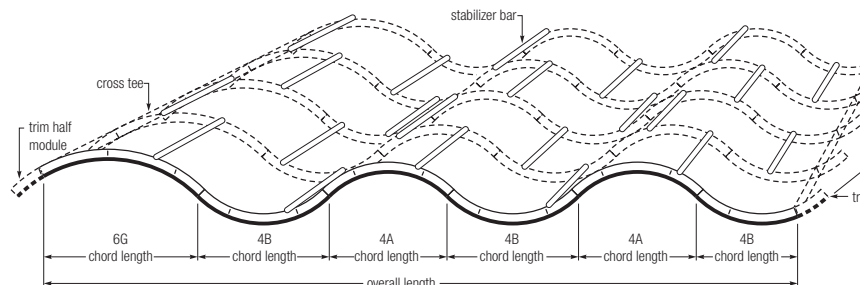


### Valley Segments



## 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)

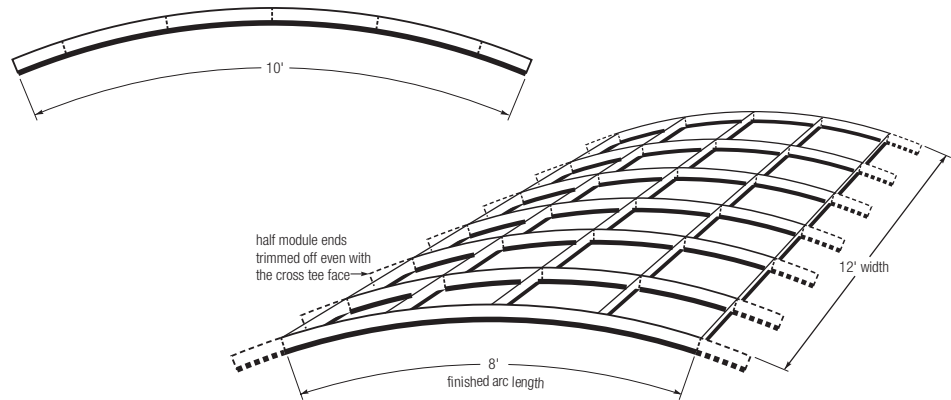
**6G** **4B** **4A** **4B** **4A** **4B** x 8'

# STEP 5: CONNECT THE CURVES

## 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).

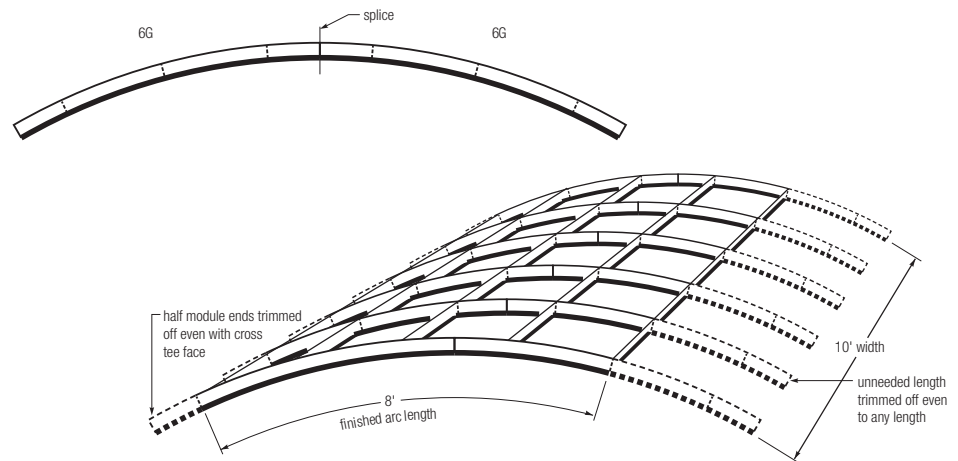


Specify (Genetic Code x Width): **10E** x 8' width

## MULTI-SEGMENT CURVES

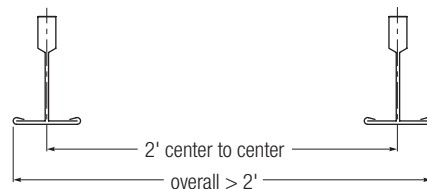
Comprised of 2 or more Curvatura™ Vault or Valley main tee segments trimmed to full modules as specified.

**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.





# APPLICATION GUIDE SPECIFICATIONS

## PART 1: GENERAL

**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.

### 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.

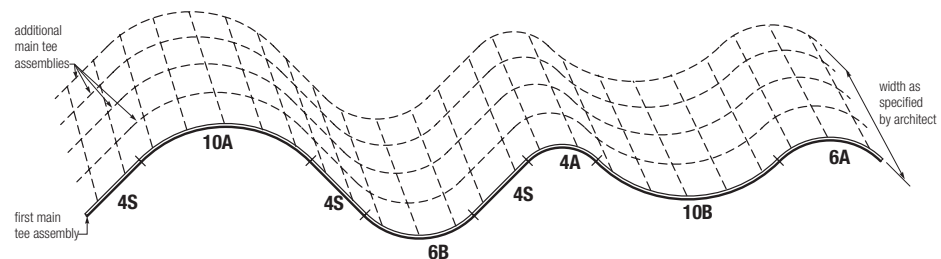
Example: Main Tee #10A connects to Main Tee #6B connects to Main Tee #4A connects to Main Tee #10B equals **Curvatura™ Genetic Code #10A, 6B, 4A, 10B**

**Curvatura™ system genetic code ( ) x width ( )** modules wide as manufactured by USG Interiors, Inc.: suspension color ( ), flexible infill (smooth aluminum), (perforated aluminum (pattern # ) (color ), Translucent™ color ( ), Diamondflex™ expanded 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
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# APPLICATION GUIDE SPECIFICATIONS

<b>1.03 Quality Assurance</b>	<ul style="list-style-type: none"> <li>A. Subcontractor qualifications: Installer shall have successful experience installing ceiling suspension systems.</li> <li>B. Requirements of regulatory agencies: Codes and regulations of authorities having jurisdiction.</li> </ul>
<b>1.04 References</b>	<ul style="list-style-type: none"> <li>A. ASTM C635, Standard Specifications for Metal Suspension Systems for Acoustical Tile and Lay-In Panel Ceilings.</li> <li>B. ASTM C636, Recommended Practice for Installation of Metal Suspension System for Acoustical Tile and Lay-In Panels.</li> <li>C. CISCA Ceiling Systems Installation Handbook.</li> </ul>
<b>1.05 Submittal</b>	<ul style="list-style-type: none"> <li>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.</li> <li>B. Shop drawings:             <ul style="list-style-type: none"> <li>1. Contractor shall provide reflected ceiling plan and section through elevations: Submit ceiling suspension system layout to indicate ceiling modules.</li> <li>2. Assembly drawings: Indicate module dimensions, accessory attachments, and installation of related components.</li> </ul> </li> <li>C. <b>Manufacturer's data:</b> <ul style="list-style-type: none"> <li>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.</li> <li>2. Color chart: Submit manufacturer's standard color chart sample or match of color choice for approval.</li> </ul> </li> <li>D. Maintenance materials: Provide _____ percent of amount of Curvatura™ components.</li> </ul>
<b>1.06 Delivery, Storage and Handling</b>	<ul style="list-style-type: none"> <li>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.</li> <li>B. Inspection: Promptly inspect delivered materials, file freight claims for damage during shipment, and order replacement materials, as required.</li> <li>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.</li> <li>D. Handling: Handle in such manner to ensure against racking, distortion or physical damage of any kind.</li> </ul>
<b>1.07 Project Conditions</b>	<ul style="list-style-type: none"> <li>A. Existing conditions: (Include specific alteration work requirements for the project.)</li> <li>B. Coordination with other work:             <ul style="list-style-type: none"> <li>1. General: Coordinate with other work supported by or penetrating through the system.</li> <li>2. Mechanical work: Ductwork above suspension system shall be complete, and permanent heating and cooling systems operating.</li> <li>3. Electrical work: Installation of conduit above the Curvatura™ system shall be complete before installation of suspension system.</li> </ul> </li> <li>C. Protection:             <ul style="list-style-type: none"> <li>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.</li> <li>2. Existing Completed Work: Protect completed work above suspension system from damage during installation of Curvatura™ system components.</li> </ul> </li> </ul>

# APPLICATION GUIDE SPECIFICATIONS

## 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:

- General: Suspension system shall be Curvatura™ color of the suspension shall be (List color selected)
- 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"

- 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.
- Curvatura™ main tee curved segments
  - 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
  - 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, cross tee holes at 24" o.c., integral panel hold-down tabs and main tee splice plate. Genetic code sequence per paragraph 1.02A
- Flexible infill options:
  - (Select one) Nominal 2' x 2' or 2' x 6' aluminum perforated, color \_\_\_\_\_. Perforation pattern no. \_\_\_\_\_
  - Spec. Note, Optional infill panels types are as follows unless otherwise indicated infill option shall be per paragraph 2.02.D.1 above.
    - Solid aluminum
    - Diamondflex™
    - Transluents™ (PETG)
- Accessories
  - Wall Attachment clips
  - FGB 2' x 2' x 1" fiberglass batt in poly bag.
  - Wall molding GWM9 12' x 9/16" x 1-1/2" color to match suspension system
    - 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.

# APPLICATION GUIDE SPECIFICATIONS

## PART 3: EXECUTION

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<b>3.01 Inspection</b>	<ul style="list-style-type: none"><li>A. Examine areas to receive materials for conditions which will adversely affect installation. Provide written report Execution Inspection of unacceptable surface.</li><li>B. Do not start work until unsatisfactory conditions are corrected.</li><li>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.</li><li>D. Beginning of installation shall signify acceptance of conditions in areas to receive ceiling suspension system.</li></ul>
<b>3.02 Preparation</b>	<ul style="list-style-type: none"><li>A. Field dimensions must be verified prior to installation.</li></ul>
<b>3.03 Installation</b>	<ul style="list-style-type: none"><li>A. Standard reference: Install in accordance with ASTM C636, CISCA installation standards, and other applicable code requirements.</li><li>B. Manufacturer's reference: Install in accordance with manufacturer's current printed recommendations.</li><li>C. Drawing reference: Install in accordance with approved shop drawings and locate ceiling in accordance with main tee dimensions relative to elevations.</li><li>D. Hanger wires:<ul style="list-style-type: none"><li>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.</li><li>2. Limitations: Do not support wires from mechanical and/or electrical equipment, piping, or other equipment occurring above ceiling.</li><li>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.</li></ul></li><li>E. Accessories: Install accessories as applicable to meet the project requirements.</li></ul>
<b>3.04 Cleaning</b>	<ul style="list-style-type: none"><li>A. Suspension: Remove infill material and perform any necessary cleaning maintenance with nonsolvent-based commercial cleaner.</li><li>B. Immediately remove any corrosive substances or chemicals that would attack painted finishes (i.e., wallpaper adhesives).</li><li>C. Touch up all minor scratches and spots, as acceptable, or replace damaged sections when touchup is not permitted.</li><li>D. Painting: Repainting of suspension members shall be with a high-quality, solvent-based paint and applied as recommended by paint manufacturer.</li><li>E. Removal of debris: Remove all debris resulting from work of this section.</li></ul>

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**Technical Service**  
800 USG.4YOU

**Website**  
usg.com

**Samples/Literature E-mail**  
samplit@usg.com

**Customer Service**  
800 950.3839

#### PRODUCT INFORMATION

System brochure: IC399  
Data sheet: IC310  
Design selector: IC36109  
Perforation selector: IC425  
Warranty: SC2102  
Stabilizer Bars: IC592  
Installation Guides: IC402, IC461, IC483  
Seismic Technical Guide: SC2494  
Cleaning Instructions: IC518

See usg.com or cgcinc.com for the most up-to-date product information.

#### INSTALLATION

Must be installed in compliance with ASTM C636, ASTM E580, CISCA and standard industry practices, within all applicable code requirements. Alternative assemblies and installation methods may be utilized when approved by the authority having jurisdiction. USG recommends checking with the authority having jurisdiction prior to designing and installing a suspended ceiling system.

#### CODE COMPLIANCE

The information presented is correct to the best of our knowledge at the date of issuance. Because codes continue to evolve, check with a local official prior to designing and installing a ceiling system. Other restrictions and exemptions may apply.

#### NOTICE

We shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. Our liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing to us within thirty (30) days from date it was or reasonably should have been discovered.

#### COLOR VARIATIONS

Some commercially acceptable color variation may occur between lots and between different size products of the same color. For more information about metal ceiling finishes, refer to *Metal Ceilings Technical Guidelines* published by the Ceilings & Interior Systems Construction Association.

#### SEISMIC APPLICATIONS

Refer to *Seismic Technical Guide, Specialty Decorative Ceilings* (SC2494) for more information on architectural components. One-Directional USG Curvatura™ Systems shall not be used in seismic design categories C, D, E and F.

#### SAFETY FIRST!

Follow good safety/industrial hygiene practices during installation. Wear appropriate personal protective equipment. Read SDS and literature before specification and installation.

#### WARRANTY

One (1) year limited warranty. See *USG Ceilings Commercial Application Warranty* (SC2102) for additional details. For Canadian product needs, please contact your local sales representative.

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