Go Your Own Way

Libretto™

Gridless Metal Ceiling System
Get Off the Grid
LIBRETTO™ gridless metal ceiling system creates islands, canopies, radial ceilings and other dynamic shapes that define space and architectural features – all based on your own design concept! You determine the shape and style of your ceiling, and USG brings it to reality with custom-manufactured components that fit together with precision. Each assembly is designed for turnkey installation and delivered complete, assuring that the installation looks just as you envisioned.
The LIBRETTÒ™ gridless metal ceiling system features individually fabricated aluminum panels that interconnect to form a continuous, uninterrupted plane. Collaborate with USG to create a custom design tailored to your space, and enhance the aesthetic with perforations that follow the contours of your unique ceiling. Even the concealed carrier system is custom-fit, with a choice of three perimeter profiles to achieve the proper scale for your space.

<table>
<thead>
<tr>
<th>Understand Your System</th>
<th>Pages</th>
<th>Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>Overview</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Design Your System</th>
<th>Pages</th>
<th>Design Guide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4</td>
<td>Selector Worksheet</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Application Details</td>
</tr>
<tr>
<td></td>
<td></td>
<td>System Components</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lighting</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Specify Your System</th>
<th>Pages</th>
<th>Application Guide Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>For More Information</th>
<th>Pages</th>
<th>Technical Service</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>800 USG.4YOU</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Web Site</td>
</tr>
<tr>
<td></td>
<td></td>
<td>usg.com</td>
</tr>
</tbody>
</table>
System Overview

Metal Panels
The LIBRETT0 system features Interlocking metal panels that form a shape and size directed by the architect or designer. The assembly is manufactured complete to require no cutting or fitting by the installer. Optional access ports may be specified at the initial design stage; point access only.

Carrier System
Engineered, concealed system suspended from the structure. Components include:
- Carrier channel
- Channel splice/extension
- Panel hanger clip

Perimeter Profile
Each assembly is finished with a perimeter profile 4", 6" or 8" in height. Components include:
- Curved and straight perimeter profile sections
- Factory pre-mitered corners
- Profile attachment clips
- Profile splices

Materials

<table>
<thead>
<tr>
<th>Components</th>
<th>Recycled Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panels</td>
<td>Aluminum 80%</td>
</tr>
<tr>
<td>Carrier system</td>
<td>Cold-rolled steel 25%</td>
</tr>
<tr>
<td>Edge profile</td>
<td>Cold-rolled steel 25%</td>
</tr>
</tbody>
</table>

Colors
Standard colors: Flat White and Silver Satin. Custom colors available on request.

Perforation
- Contoured pattern that follows the shape of your LIBRETT0 ceiling.
- Custom graphic with a pattern you provide.
- Standard patterns for square and rectangular ceilings.
- Smooth, unperforated metal.

Lighting
LIBRETT0 assemblies may be lit from above with a variety of lighting systems to create a range of effects, from ambient to dramatic. See USG design guide IC533 for more information.

Plenum Depth
Minimum 12", with 8" clearance above top edge of perimeter profile. See page 19 for details.

Design Process
USG takes care of the design work for you! Simply send us the general shape and size of the LIBRETT0 ceiling you want to create (see pages 10-11 for guidelines). We will design the assembly to fit your space, including an optional contoured perforation pattern that flows with the shape of your ceiling.
See page 21 for more information about system components.
System Overview

Application Concepts

Individual Islands

LIBRETTO ceilings provide an excellent solution for creating visual interest in conference rooms, retail spaces and reception areas. The shape and perforation pattern is fully customizable, allowing you to highlight functional zones, echo the shape of workstations or open floor area, and draw attention to architectural details. Crescents, serpentine, toruses, and even simple squares and rectangles provide the basis for unlimited creativity.
Application Concepts
System Overview

Application Concepts

Multiple Islands

LIBRETTO ceilings provide an easy, cost-effective solution for creating visual energy by repeating and nesting shapes. Align multiple islands to accentuate linear space and provide wayfinding. Or, group islands in tandem to break up bland expanses with geometric interest. Islands may also be positioned at varying heights to reflect the scale of high spaces.
Application Concepts
System Overview

Application Concepts

Radial Applications

Made with the latest computer-controlled manufacturing technology, LIBRETTÒ ceilings offer unprecedented accuracy, ensuring that even the largest assemblies provide a seamless fit. Design expansive concentric and multi-level radial designs with confidence, bringing intimacy and visual interest to large spaces such as amphitheaters, showrooms and auditoriums.
Application Concepts
LIBRETTO ceilings can be configured to create a wide range of shapes, with multiple perforation options to enhance the visual interest of the ceiling itself, integrate custom patterns or icons, and create unique lighting effects. Following are the steps and guidelines for creating a LIBRETTO ceiling that will provide a crowning touch to your project.

**Step 1**

**Select Shape**

LIBRETTO ceilings may be shaped as crescents, serpentines, four-sided polygons, and toruses. The illustrations in this section show basic design concepts and guidelines.

<table>
<thead>
<tr>
<th>Crescent, Serpentine, and Polygon</th>
<th>Criteria</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>− Must have two straight opposite ends.</td>
<td><img src="image" alt="Ceiling shape must have flat ends" /></td>
</tr>
<tr>
<td></td>
<td>− Length of each end must be 30&quot;-144&quot;.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>− Corners must be 15°-165°.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>− Sides may include curved and straight sections.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>− All curves must have minimum 18&quot; radius.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>− Opposite sides not required to be concentric.</td>
<td></td>
</tr>
<tr>
<td>Note: Appropriate panel widths will be determined by the USG design staff.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Crescent**

**Serpentine**

**Four-sided Polygon**
Torus

A torus is a crescent, serpentine, or polygon with ends that meet, so the preceding guidelines also apply to torus shapes. Additional standards apply to the shape of the opening relative to the Libretto ceiling island:
- The inside perimeter must be at least 1/3 the outside perimeter.
- Both the outside perimeter and the opening may include curved and straight sections.
- All curves must have a minimum 18" radius; all straight sections must be at least 8" long.

Examples
**Step 2**

**Select Perforation**

LIBRETTÒ panels are available in solid metal or a choice of perforation options:

- Contoured perforation flows with the shape of your ceiling without interruption across panel joints. You specify perforation shape, size and orientation, and we customize the pattern to fit your LIBRETTÒ ceiling.
- Custom graphic lets you make your own statement! Design a pattern or provide an image to appear on individual panels or radiate over the entire ceiling.
- Standard perforations are available in a selection of 14 patterns and are recommended for rectangular islands only.
- Optional black or white ACoustibond® backer available.

Punches available for contoured and custom graphic perforation:

<table>
<thead>
<tr>
<th>1/8&quot;</th>
<th>1/4&quot;</th>
<th>3/8&quot;</th>
<th>1/2&quot;</th>
<th>3/4&quot;</th>
<th>1&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Contoured Perforation**

Available with all panel shapes and especially recommended for curved and trapezoidal islands, this option creates an attractive landscape of flowing patterns of light and dark. Patterns are uninterrupted over panel joints, and perforations are generally larger and more widely spaced than standard patterns (shown on page 14). Perforations may be round or square.
Custom Graphic Perforation

Provide your own illustration or use up to five standard hole sizes to design a custom pattern. An electronic drawing (.dwg or .dxf) will be required at time of manufacture. **Note:** Custom graphic perforation patterns require a minimum 3/4" break across panel joints.
**Design Guide**

**Standard Perforation**  
Recommended for rectangular panels only. Each panel will have a minimum 3/8" unperforated border.

<table>
<thead>
<tr>
<th>Pattern No. A116</th>
<th>Pattern No. C062</th>
<th>Pattern No. C375</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Perforations (shown at 50% size)</td>
<td>Standard Perforations (shown at 50% size)</td>
<td>Standard Perforations (shown at 50% size)</td>
</tr>
<tr>
<td>Six of the most popular perforation patterns shown here. The following patterns also available: A062, A116, A250, A500, C116, C188, C250A and D375. See USG perforation selector IC425 for full-size illustrations of all patterns.</td>
<td>Round—15/128&quot; perforations .25&quot; o.c., 17% open area</td>
<td>Round—1/16&quot; perforations .351&quot; o.c., 2% open area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Round—375&quot; perforations 1-1/8&quot; o.c., 9% open area</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pattern No. C500</th>
<th>Pattern No. D250</th>
<th>Pattern No. D500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Round—1/2&quot; perforations 1-1/2&quot; o.c., 9% open area</td>
<td>Square—1/4&quot; perforations 3/4&quot; o.c., 11% open area</td>
<td>Square—1/2&quot; perforations 1-1/2&quot; o.c., 17% open area</td>
</tr>
</tbody>
</table>
Step 3
Select Perimeter Profile

Step 4
Finish and Specify
Your Design

- Complete the Selector Worksheet on pages 16 and 17.
- Prepare an electronic drawing (.dwg or .dxf file) of your overall ceiling layout and Libretto shape(s).
- Contact your local USG representative to discuss any questions about your design or call 800 USG.4YOU to locate a representative near you.
### Selector Worksheet

**Shape and Size**

- [ ] Crescent
- [ ] Serpentine
- [ ] Polygon
- [ ] Torus
- [ ] Other

Total sq. ft. area _______________

**Perforation**

- [ ] Contoured

Contoured perforation patterns conform to the shape of the ceiling. Perforation patterns flow smoothly across panel joints without interruption. Using our proprietary perforation technology, our experienced staff can provide an aesthetically pleasing pattern with minimal specifications. Select the following:

A. Punch shape and size:

- **Shape**
  - [ ] Round
  - [ ] Square

- **Size**
  - [ ] 1/8”
  - [ ] 1/4”
  - [ ] 3/8”
  - [ ] 1/2”
  - [ ] 3/4”
  - [ ] 1”

B. Minimum distance between holes (minimum 1/16” between hole edges).

C. Minimum distance between rows (if different from B).

D. Border dimension to frame the island (3/8” min.).

#### Round Perforations

![Round Perforations Diagram]

#### Square Perforations

![Square Perforations Diagram]

- [ ] Custom Graphic
  - Provide a full-scale electronic drawing (.dxf or .dwg file) illustrating your idea.
  - Our staff can help refine your concept to ensure that it fits within LIBRETTO design guidelines.
  - **Note:** Custom graphic perforation patterns require a minimum 3/4” break across panel joints.

- [ ] Standard
  - Each panel will have a minimum 3/8” unperforated border; the exact border dimension may be specified or it may be developed by our staff to assure that the pattern is centered on each panel. Standard perforation is recommended for rectangular islands only.
  - [ ] A062
  - [ ] A116
  - [ ] A188
  - [ ] A250
  - [ ] A500
  - [ ] C062
  - [ ] C116
  - [ ] C188
  - [ ] C250A
  - [ ] C375
  - [ ] C500
  - [ ] D250
  - [ ] D375
  - [ ] D500

- [ ] Smooth
  - No perforation

---

**LIBRETTO Gridless Metal Ceiling System**
**Acoustibond Backer**

- □ Black
- □ White
- □ None

Available with Flat White and Silver Satin panels only.

**Perimeter Profile**

Available profiles:

- □ 4”
- □ 6”
- □ 8”

**Note:** Minimum 12” plenum depth and 8” clearance above top edge required for proper installation.

**Colors**

- □ Silver Satin [002]
- □ Flat White [050]

□ Custom color based on industry standard colors or to match customer sample. Provide paint manufacturer’s name and color number or a 3” x 5” color sample.

**Notes:**
1. Metallic colors not available.
2. Standard Acoustibond backer not available with custom color. Check for availability and restrictions.

**Utilities**

**Factory cutouts**

Available on request. Provide an electronic drawing (.dwg or .dxf file) indicating exact sizes and positions.

**Integrated Fixtures**

Please provide an electronic drawing (.dwg or .dxf file) showing all fixtures such as lighting, sprinkling and HVAC so we can ensure that these items will not intersect a panel joint or interfere with the concealed carrier system.

**Accessories**

**Hanger Options**

Choose from 12-gauge galvanized wire for concealed applications or decorative solutions for exposed applications including 18-gauge stainless steel wire or multi-stranded aircraft cable. See installation guide IC453 for options and applications.

**Access Ports**

Standard LIBRETTO ceilings are installed progressively and are not accessible. If required, our staff can assist in designing special panels with access ports to meet your accessibility needs. Provide an electronic drawing (.dwg or .dxf file) indicating point(s) where access is needed.
**Application Details**

**Wall Termination**
- trim screw-attached to wall as bracing
- perimeter profile
- hanger wire
- panel hanger clip
- carrier channel

**Section Plan**
- A 19
- B 19
- C 19
**Perimeter Profile – Perpendicular to Carrier**

- Structure
- 8" min.
- 3" to 12" hanger wire
- 4" o.c. max.
- Panel hanger clip
- Channel splice extension
- Profile attachment clip
- LIBRETTO panel

**Perimeter Profile – Parallel with Carrier**

- Structure
- 8" min.
- 8" to 12" hanger wire
- Panel hanger clip
- Carrier channel
- Profile attachment clip
- LIBRETTO panel

**Typical Assembly**

- Panel hanger clip
- Suspension wire
- Channel splice
- Suspension channel
- LIBRETTO panel
## Application Details

### Utility Integration

<table>
<thead>
<tr>
<th>Optional Access Panel</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIBRETTO removable access panel</td>
</tr>
<tr>
<td>LIBRETTO panel</td>
</tr>
</tbody>
</table>

**Note:** Accessibility on special request. Point access only. Indicate required access point(s) on reflected ceiling plan.

### Recession Light Fixtures

<table>
<thead>
<tr>
<th>Sprinkler Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>fixture independently supported</td>
</tr>
<tr>
<td>light fixture (by others)</td>
</tr>
<tr>
<td>carrier channel</td>
</tr>
<tr>
<td>panel hanger clip</td>
</tr>
<tr>
<td>light-fixture mounting bracket (by others)</td>
</tr>
<tr>
<td>water supply feed pipe</td>
</tr>
<tr>
<td>suspension channel</td>
</tr>
<tr>
<td>sprinkler support-clip assembly</td>
</tr>
<tr>
<td>face of sprinkler fitting</td>
</tr>
<tr>
<td>panel hanger clip</td>
</tr>
<tr>
<td>cover-plate retainer assembly</td>
</tr>
<tr>
<td>deflector (dropped position)</td>
</tr>
<tr>
<td>LIBRETTO panel</td>
</tr>
</tbody>
</table>

### Signage

| Exit light fixture (by others) |
| light-fixture mounting bracket (by others) |
| carrier channel |
| panel hanger clip |
| EXIT |
| LIBRETTO panel |
## System Components

<table>
<thead>
<tr>
<th>Libretto Panel – Solid</th>
<th>Libretto panel – Perforated, with Acoustibond Backer</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Solid Panel" /></td>
<td><img src="image" alt="Perforated Panel" /></td>
</tr>
</tbody>
</table>

- black or white Acoustibond backer (optional)

<table>
<thead>
<tr>
<th>Carrier Channel – Straight</th>
<th>Carrier Channel – Curved</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Straight Channel" /></td>
<td><img src="image" alt="Curved Channel" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Channel Splice/Extension</th>
<th>Panel Hanger Clip</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Channel Splice" /></td>
<td><img src="image" alt="Panel Hanger" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Perimeter Profile – Straight</th>
<th>Perimeter Profile – Custom-Curved</th>
<th>Perimeter Profile – Pre-Mitered Corner</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Perimeter Profile" /></td>
<td><img src="image" alt="Custom-Curved Profile" /></td>
<td><img src="image" alt="Pre-Mitered Corner Profile" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Profile Splice</th>
<th>Profile Attachment Clip</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Profile Splice" /></td>
<td><img src="image" alt="Profile Attachment Clip" /></td>
</tr>
</tbody>
</table>
A LIBRETTO ceiling may be lighted in a variety of ways, creating effects that can showcase the unique qualities of the ceiling itself, highlight architectural details of the space, or play a central role in your design theme. Following is an overview of general lighting options. For specific concepts developed by an independent lighting design consultancy, see USG design guide IC533.

**Backlighting**

Fluorescent fixtures with no reflector provide non-directional illumination in space. Use of fixtures with a reflector directs light downward and reduces upward spill light.

**Linear Fluorescent Fixtures**
Backlighting

Where ACOUSTIBOND backer is not selected, the perforation pattern can be projected on walls and floors of the space. White ACOUSTIBOND backer will diffuse light to create an even glow. (See photo on brochure cover.)

**Directional Fixtures**

directional sources for longer distance lighting, actual fixture placement, beam spread & lamp choice to be determined upon pending design parameters.
Backlighting

Programmable LEDs add an additional level of interest by allowing the opportunity to project the perforation pattern with changing colors.

Programmable Color LEDs
**Uplighting**

Low-voltage track lighting can be attached to the Libretto ceiling surface for dramatic uplighting. Pendant-style indirect fluorescent fixtures create a more uniform effect.

**Track and Pendant Lighting**

- Low voltage decorative lighting to enhance bottom surface of Libretto ceiling and surrounding environment.
- Flexible track/rail suspended through perforations, rail can follow ceiling contours if desired.
Accent Lighting

Highlight specific features within a space, and provide effective task lighting in seating areas and workstations.

Rail-Mounted Low-Voltage Fixtures

- Low-voltage lighting for accenting artwork, reception counter, corporate logo, seating, etc.
- Flexible track/rail suspended through perforations. Rail can follow ceiling contours if desired.
# Application Guide

## Specifications

### Part 1

#### General

#### 1.1 Summary

**A.** Description of Work: Work of this Section includes, but is not limited to, the following:
1. Metal ceiling panels.
2. Metal suspension systems.
3. Trim and accessories.

#### 1.2 Related work specified elsewhere

**A.** See Section ___________ – HVAC
**B.** See Section ___________ – Lighting
**C.** See Section 095100(09150) – Acoustical Ceilings

#### 1.3 Submittals

**A.** Product Data: Submit manufacturer’s specifications and installation instructions with project conditions and materials clearly identified or detailed for each required system.

#### 1.4 References

**A.** ASTM C636: Recommended Practice for Installation of Metal Suspension System for Acoustical Tile and Lay-in Panels.
**B.** CISCA Ceiling Systems Installation Handbook

#### 1.5 Quality assurance

**A.** Reference Standards
1. SSMA ICBO ER-4943P Steel Stud Manufacturers Association Product Technical Information
2. ASTM C636, Recommended Practice for Installation of Metal Suspension Systems.
3. CISCA Ceiling Systems Installation Handbook

**B.** Submittals
1. Samples: Submit representative sample of color and finish for all exposed materials.
2. Shop Drawings:
   - a. Reflected ceiling plans: Submit ceiling suspension system layout indicating dimensions, lighting fixture locations, and related mechanical components.
   - b. Assembly Drawings: Indicate installation details, accessory attachments and installation of related mechanical system components.
3. Manufacturer’s Data:
   - a. System Details: Submit manufacturer’s catalogue cuts or standard drawing showing details of system with project conditions clearly identified and manufacturer’s recommended installation instructions.

#### 1.6 Delivery, Storage And Handling

**A.** Delivery:
1. Deliver Material to site promptly without undue exposure to weather.
2. Deliver in manufacturer’s unopened containers or bundles, fully identified with name, brand, type and grade.

**B.** Inspection:
1. Promptly inspect delivered materials, file freight claims for damage during shipment, and order replacement materials as required. Any damaged materials shall be promptly removed from the job site.

**C.** Storage:
1. Store above ground in dry, ventilated space.
2. Protect materials from soiling, rusting and damage.

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

#### 1.7 Project Conditions

**A.** Environmental Requirements
1. Do not install system or any parts until space is enclosed and weatherproof, wet-work is complete and dry, for occupancy.
## Application Guide

### Specifications

#### Part 2: Materials

<table>
<thead>
<tr>
<th>1.8 Coordination With other work</th>
<th>1.1 Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. General:</strong></td>
<td>**A. <strong>Libretto metal ceiling panels:</strong></td>
</tr>
<tr>
<td>1. Coordinate with other work including mechanical and electrical work and other trades. Installation of conduit and ductwork above the metal ceiling system shall be complete before installation of the metal ceiling system.</td>
<td>1. Manufactured by USG Interiors, Chicago, IL, USA, in compliance with applicable ASTM &amp; Industry Standards. Designed to be installed with Libretto Suspension System.</td>
</tr>
<tr>
<td><strong>B. Protection:</strong></td>
<td>2. Panel finishes shall be painted in color/finish* Refer to page 17 for finish availability.</td>
</tr>
<tr>
<td>1. 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.</td>
<td>3. Perforation patterns.</td>
</tr>
<tr>
<td><strong>b.</strong> For custom graphic: Perforation plan shall be a custom design in accordance with architectural plans [Delete if not used]. *Refer to page 12 for available hole shapes and sizes.</td>
<td></td>
</tr>
<tr>
<td><strong>c.</strong> For standard pattern: Perforation pattern shall be USG standard [pattern] with [width] panel border [Delete if not used]. *Refer to page 14 for Standard Perforation patterns.</td>
<td></td>
</tr>
<tr>
<td><strong>4.</strong> Panels shall have factory-applied [black] [white] acoustical backer. USG Acoustibond or equivalent.</td>
<td></td>
</tr>
<tr>
<td><strong>B. Libretto carrier system:</strong></td>
<td><strong>B. Libretto carrier system:</strong></td>
</tr>
<tr>
<td>1. Manufactured by USG (United States Gypsum Company, USG Interiors), Chicago, IL, USA, in compliance with applicable Industry Standards.</td>
<td>1. Manufactured by USG (United States Gypsum Company, USG Interiors), Chicago, IL, USA, in compliance with applicable Industry Standards.</td>
</tr>
<tr>
<td>2. 1-1/2 inch cold-rolled U-channel, 16-gauge, commercial-quality, hot-dipped galvanized. All parts factory-curved and factory-cut to final dimensions as required for installation.</td>
<td>2. 1-1/2 inch cold-rolled U-channel, 16-gauge, commercial-quality, hot-dipped galvanized. All parts factory-curved and factory-cut to final dimensions as required for installation.</td>
</tr>
<tr>
<td>3. Carrier channels: Channel splices, channel extensions, and panel hangers of commercial-quality cold-rolled steel, exposed surfaces hot-dipped galvanized.</td>
<td>3. Carrier channels: Channel splices, channel extensions, and panel hangers of commercial-quality cold-rolled steel, exposed surfaces hot-dipped galvanized.</td>
</tr>
<tr>
<td><strong>C. Accessories: [Delete this section when not used]</strong></td>
<td><strong>C. Accessories: [Delete this section when not used]</strong></td>
</tr>
<tr>
<td><strong>a.</strong> Panels with cutouts: For incandescent lights, sprinklers, or speakers in accordance with architectural plans.</td>
<td><strong>a.</strong> Panels with cutouts: For incandescent lights, sprinklers, or speakers in accordance with architectural plans.</td>
</tr>
<tr>
<td><strong>b.</strong> Panels with access ports in accordance with architectural plans.</td>
<td><strong>b.</strong> Panels with access ports in accordance with architectural plans.</td>
</tr>
<tr>
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<td>2. Custom-engineered, roll-formed trim channels of commercial-quality steel. All parts factory-curved and factory-cut to final dimensions as required for installation.</td>
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<td>5. Profile attachment clips of commercial-quality cold-rolled steel, exposed surfaces hot-dipped galvanized.</td>
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</tbody>
</table>
### Part 3: Execution

#### 3.1 General
- B. CISCA Ceilings Systems Handbook.

#### 3.2 Inspection
- A. Examine areas to receive ceiling panels for conditions that will adversely affect installation. Provide written report of discrepancies.
- B. Do not start work until unsatisfactory conditions are corrected.
- C. Work to be concealed: Verify work above ceiling is complete and installed in manner that will not affect layout and installation of ceiling panels.
- D. Beginning of installation shall signify acceptance of conditions in areas to receive ceiling panels.

#### 3.3 Preparation
- A. Field dimensions must be verified prior to installation.

#### 3.4 Installation
- A. Standard reference: Install ceiling panels and suspension system, including necessary hangers, grillage, and other supporting hardware in accordance with ASTM C636, CISCA Ceiling Systems Handbook, any applicable code requirement, and manufacturer recommendations.
- B. Hanger Wires:
  1. Spacing: Space hanger wires on the suspension channels not more than 48 inches o.c.
  2. Limitations: Attach hanger wires directly to the structure, as required to support the imposed loads. Do not support wires from mechanical and/or electrical equipment, piping or other equipment occurring above ceiling.
- C. LIBRETTO carrier system
  1. Hang suspension channels by hanger wires in accordance with shop drawings.
  2. Connect sections of suspension channels by applying channel splices with self-drilling sheet metal screws.
  3. Apply channel extensions to the ends of the suspension channels with self-drilling sheet-metal screws.
- D. LIBRETTO panels:
  1. Install panels progressively in accordance with shop drawings.
  2. Suspend panels from panel hanger clips.
  3. Interlock adjacent panels along the factory formed standing seam edges per manufacturer’s recommendations.
- E. LIBRETTO perimeter profile
  1. Apply profile attachment clips to the ends of LIBRETTO panels per manufacturer’s recommendations.
  2. Profile attachment clips shall be spaced between 18 to 36 inches on center.
  3. Install profile components progressively in accordance with shop drawings and manufacturer’s recommendations.
  4. Connect sections of perimeter profile by snapping together with trim splices per manufacturer’s recommendations.

#### 3.5 Cleaning
- A. Perform any necessary cleaning maintenance with non-solvent-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 touch-up is not permitted.
- D. Repainting of components shall be with a high-quality solvent-based enamel paint and applied as recommended by paint manufacturer.
- E. Removal of debris: Remove all debris resulting from work of this section.
Head First

Libretto
Gridless Metal Ceiling System

SIDE VIEW

INSTALLATION PLANS

Contents:
- Bill of Materials
- Suspension Plan
- Panel Plan
- Trim Plan
- Typical Details

KA Architects
Color: 002 Silver Satin
Style: Intelliperf, Acoustibond Backer
Trim Size: 6"
Smooth, flowing planes
Product Information
See usg.com for the most up-to-date product information.

Note
All products described here may not be available in all geographic markets. Consult your local sales office or representative for information.

Trademarks
The following trademarks used herein are owned by USG Interiors, Inc. or a related company: Acoustibond, Libretto.

Patents
Patents pending.

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.

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.