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Initial Approval
August, 2017

Re-Approved
August, 2018

See all **Pei ES** Listings at: www.p-e-i.com

Report Owner

USG Interiors, LLC
550 West Adams Street
Chicago, Illinois 60661

Approved Manufacturing Locations

USG Interiors, LLC Plant # 603 2575 East Loomis Rd. Stockton, CA 95205	USG Interiors, LLC Plant # 605 1000 Donn Dr. Cartersville, GA 30120	USG Interiors, LLC Plant # 601 1000 Crocker Rd. Westlake, OH 44145	CGC Interiors, Inc. Plant # 091 735 Fourth Line Rd. Oakville, Ontario, Canada L6L 5B7
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Product

USG Celebration™ Snap-In Metal Ceiling Panel Systems

Evaluation Report Information

usg4you@usg.com
USG Support: 800.USG4YOU

General Details

This report is an evaluation of **USG Celebration Snap-In Metal Ceiling Panel Systems**. The systems are manufactured by **USG Interiors, LLC**. The plant locations shown above have an approved Quality Control Manual for the manufacture of the grid system parts only. **USG Interiors, LLC** has a Product Evaluation Service Agreement with **Pei Evaluation Service®** and a Follow-up Inspection Service Agreement with **Progressive Engineering Inc.** The plant locations above will be audited Quarterly by **Pei**.

This report contains compliance, performance, and related information for the products covered. The information has been collected and confirmed by **Pei Evaluation Service® (Pei ES)**, by means of inspecting **USG Interiors** manufacturing processes, **USG** documentation and third party documentation. The purpose is to present all information needed, in a single report, to enable building code officials to quickly and easily approve the construction assembly in question.

Product Description

Interior USG Celebration Snap-In Metal Ceiling Panel Systems are aluminum panels with a painted or anodized finish and are supported by FINELINE DXF Intermediate Duty or Heavy Duty suspension systems. Intermediate Duty and Heavy Duty main tees are classified per ASTM C635. The suspension systems are made from G30 hot-dipped galvanized steel with a minimum yield strength of 30-ksi. Panel sizes are shown in Table 5, and are available with perforation and/or embossing. The clearance for installation and removal of panels is minimal, due to the panels being installed from below and snapped into place and held onto the suspension system through positive attachment.

Exterior USG Celebration Snap-In Metal Ceiling Panel Systems are aluminum panels with a painted or anodized finish and are supported by FINELINE DXFEVH Heavy Duty environmental suspension systems as evaluated in **PER-12055**. Heavy Duty main tees are classified per ASTM C635 and are designed for exterior applications or other environmentally sensitive areas. The suspension systems are made from minimum G90, hot-dipped galvanized steel with a minimum yield strength of 40-ksi. Panel sizes are shown in Table 5, and are available with perforation and/or embossing. The clearance for installation and removal of panels is minimal, due to the panels being installed from below and snapped into place and held onto the suspension system through positive attachment.

General Product Usage and Limitations

1. All construction such as wood or steel framing, beams, joist, stringers and associated connections needed to support the **USG Celebration Snap-In Metal Ceiling Panel Systems** are outside the scope of this **PER**. All construction shall follow applicable codes or be designed by a licensed engineer.
2. A building structure from which the **DONN®** Brand Suspension Systems are suspended, must be capable to withstand the applicable loads required by Chapter 16 of the 2012 and 2015 International Building Code®.
3. The **DONN®** Brand Suspension Systems shall be installed in accordance with manufacturers recommendations and are subject to the conditions of this **PER**.
4. Installation details shall meet or exceed the requirements in the following sections: ASTM C636, ASTM E580, ASCE 7, CISCA Ceiling Systems Installation Handbook, Installation Guide IC462, Exterior Ceiling Installation Guide SC2561 and the application conditions outlined in this **PER**. It is the installers responsibility to obtain the required installation information.
5. Finish is not UV-resistant. All **USG DONN®** Brand Suspension Systems should not be installed where direct exposure to sun or weather will occur. Refer to Exterior Ceiling Installation Guide SC2561 for more information.

Code and Standard Compliance

USG Celebration Snap-In Metal Ceiling Panel Systems comply with the following building code sections and standards:

2012 and 2015 International Residential Code	2012 and 2015 International Building Code	
Section R302.9	Section 803.1.1 Section 1613	Section 808.1 Section 2506.2.1

- Meets the requirements of ASTM C635 and installation requirements of ASTM C636 or ASTM E580 as required in the 2012/2015
- Ceiling panels meet the requirements for Class A in accordance with Section 803.1.1 of the 2012/2015 IBC, when tested in accordance with ASTM E84.
- Installations alternative to ASTM E580 have been approved to meet the requirements for a seismic resistive suspension ceiling when tested to ICC-ES AC156. See Figure 9 and Figure 10 for approved seismic installation alternatives.
- Evaluated to ANSI/UL 263 (ASTM E119) as part of a fire resistance rated assembly. See UL Design No. P254 for more details.
- Evaluated for wind uplift in accordance with UL 580, UL 1897, and Miami Dade County TAS 202/203. See Table 6 or **PER-12055** for additional information and exterior installation options.

Table 1 - Seismic Design Classification

Seismic Design Category A,B	Seismic Design Category C	Seismic Design Category D,E,F
No Requirement	Intermediate Duty	Heavy Duty

Table 2 - Interior USG Celebration Snap-In Metal Ceiling Panel System Performance

9/16" Main Tee	ASTM Class ¹	Rated Load ² (lbs./LF)		
		4' Hanger Spacing	5' Hanger Spacing	6' Hanger Spacing
DXF2924	Intermediate Duty*	12	6.2	3.6
DXF2924HRC				
DXF2948				
DXLF2924				
DXFH2924	Heavy Duty	16	8.9	5.2

Notes:

1. ASTM Class is valid when the ceiling grid is installed in accordance with ASTM C636 and/or ASTM E580. Alternative installation options shown in Figure 9 and Figure 10 have been qualified through shake table testing in accordance with ICC-ES AC156.
2. Rated loads are based upon the minimum of the load at a deflection limit of L/360 and the ultimate bending capacity divided by a safety factor of 2.0. ***Exception:** Intermediate Duty rated loads based upon L/360 deflection only.

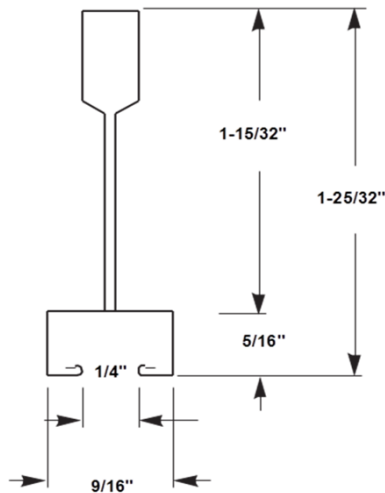


Figure 1 - DXF Interior Profile

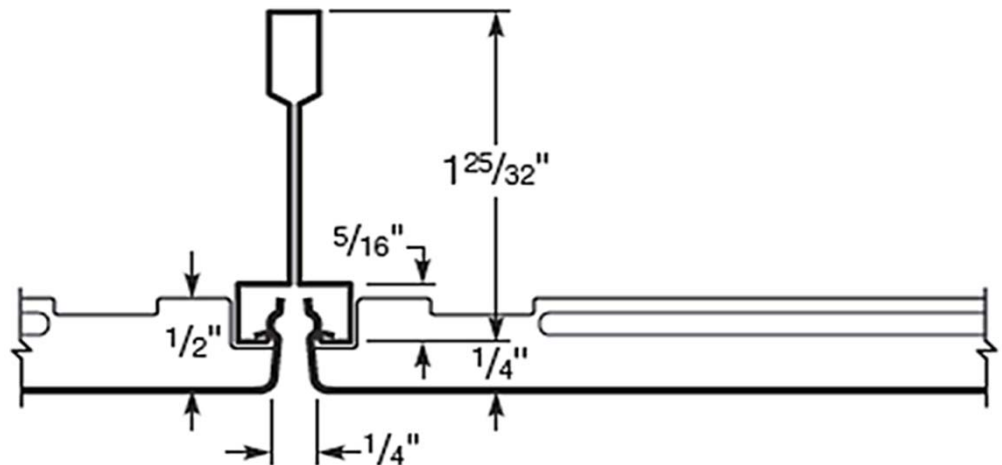


Figure 2 - DXF Interior Assembly

Table 3 - Exterior USG Celebration Snap-In Metal Ceiling Panel System Performance

9/16" Main Tee	ASTM Class ¹	Rated Load ² (lbs./LF)		
		4' Hanger Spacing	5' Hanger Spacing	6' Hanger Spacing
DXFEVH2924	Heavy Duty	16	8.9	5.2
DXFEVH2930				

Notes:

1. ASTM Class is valid when the ceiling grid is installed in accordance with ASTM C636 and/or ASTM E580. Alternative installation options shown in Figure 9 and Figure 10 have been qualified through shake table testing in accordance with ICC-ES AC156.
2. Rated loads are based upon the minimum of the load at a deflection limit of L/360 and the ultimate bending capacity divided by a safety factor of 2.0.

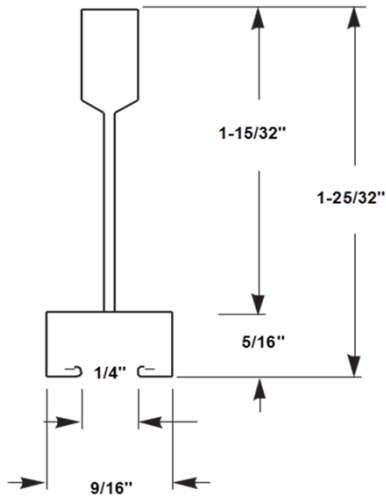


Figure 3 - DXFEV Exterior Profile

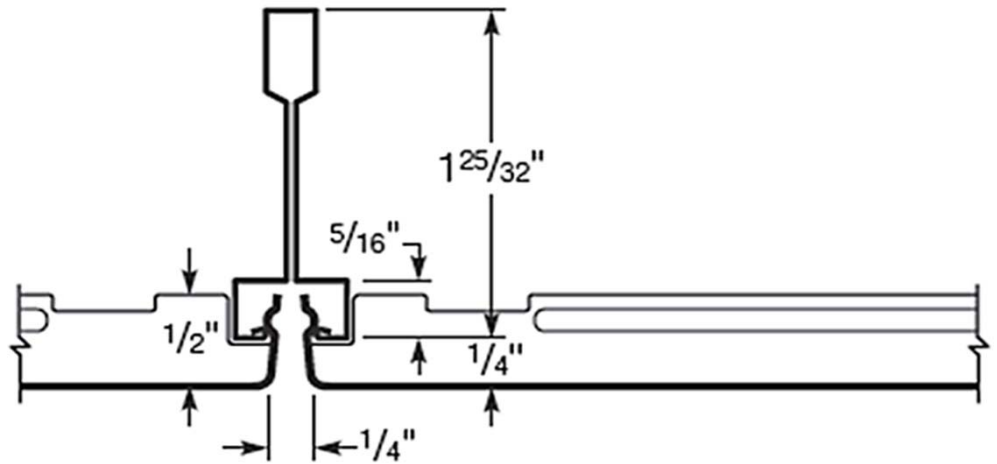


Figure 4 - DXFEV Exterior Assembly

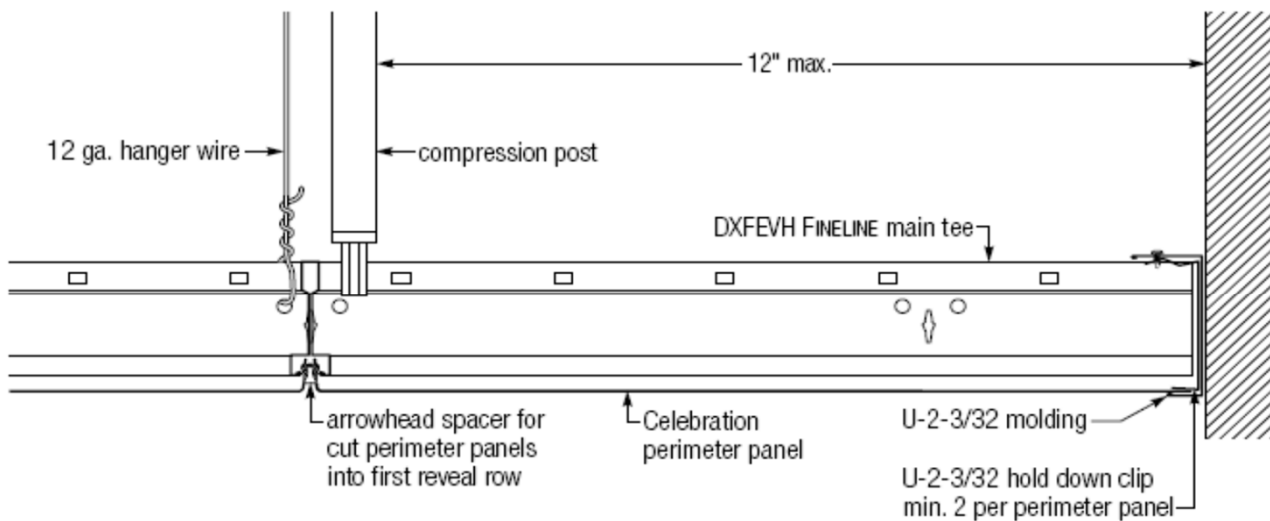


Figure 5 - DXFEVH FINELINE Main Tee Perimeter Detail Assembly

Note: U-2-3/32 Molding is design to receive the perimeter tees and the tee ends are cut back at an angle. Back-blocking is not required. Fastener attachments through the top leg of molding in the bulb is required. See **Celebration** Installation Guide and **USG** Exterior Ceiling Application Guide for more details.

Table 4 - Perimeter Molding and Accessories¹

Perimeter Molding & Accessories	Length	Height	Description
U-2-3/32	12'	2-3/32"	12' x 2-3/32" x 7/8" x 1-1/8" Aluminum U-Molding
U-2-3/32HDC	10"	2-3/32"	10" x 11/32" x 2-3/32" x 3/4" Panel Hold Down Clip
CA1	100' Roll	1/4"	Arrowhead Reveal Spacer

Note:

1. Perimeter molding and accessories are applicable for use with both Interior and Exterior USG Celebration Snap-In Metal Ceiling Panel Systems.

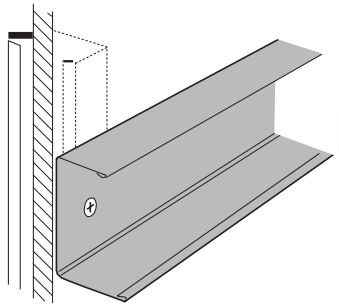


Figure 6 - U-2-3/32 Molding

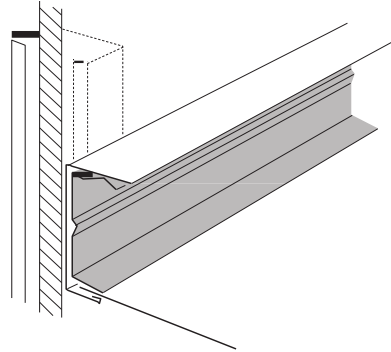


Figure 7 - U-2-3/32 Hold Down Clip

Table 5 - USG Celebration Snap-In Metal Ceiling Panel Typical Sizes^{1,2}

Length (in)	Width (in)				
	12	20	24	30	48
24			X		
30				X	
48	X		X		X
60	X	X		X	
72			X		
96			X		

Notes:

- Typically available panel length and width dimensions are indicated in Table 5 where an "X" is shown in the respective box.
- Custom sizes may be available.

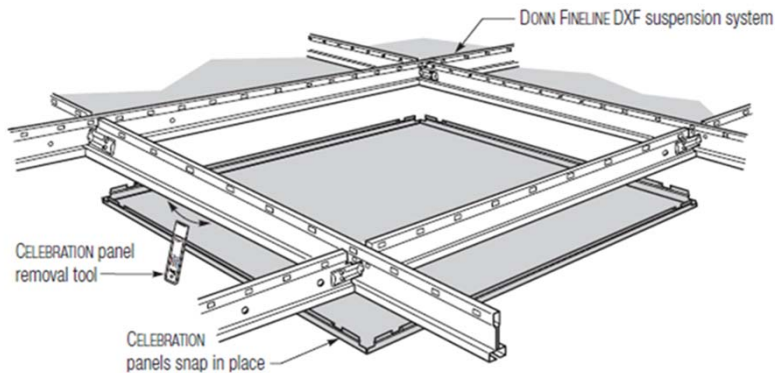


Figure 8 - USG Celebration Snap-In Metal Ceiling Panel System

Table 6 - Exterior USG Celebration Snap-In Metal Ceiling Panel System Wind Loads^{3,4,5}

Main Tee	SPACING			UL Class	Maximum Load Rating ² (psf)	Test Standard
	Main Tee (in)	Cross Tee (in)	Compression Post (in)			
DXFEVH 2924	48"	24"	24"	Class 15	15	UL580
	24"	48"	48"	Class 15	15	Engineering Analysis ¹
	24"	24"	24"	Class 90	90	UL580
	24"	24"	24"	N/A	102	UL1897
	24"	24"	24"	N/A	+80 / -70	TAS 202 & TAS 203
DXFEVH 2930	30"	30"	30"	N/A	68	UL1897
	30"	30"	30"	Class 60	60	UL580

Notes:

1. Value through engineering calculations
2. Positive values represent uplift and negative values represent downward pressure.
3. All available **Celebration** panel sizes meet the performance values shown in Table 6, only if installed per specified grid and compression post layout.
4. **Celebration** panels cannot be installed across a main tee or a four foot cross tee.
5. Refer to the Exterior Ceiling Application Guide (SC 2561) and **PER-12055** for additional information.

Seismic Resistance

USG Celebration Snap-In Metal Ceiling Panel Systems are acceptable for installation in areas of high seismic activity, in both interior and exterior applications. Such systems must be installed per ASTM E580 and applicable local building codes.

USG Celebration Snap-In Metal Ceiling Panel Systems have been tested by means of a shake table, in accordance with AC156, to allow alternative installations using the USG ACM7 Seismic Clip; see Figures 9 and 10. The alternative installation for Seismic Design Category D, E and F, utilizes a 7/8" M7 Wall Angle in conjunction with the ACM7 Seismic Clip, as an alternative to the standard 2" wall angle specified in ASTM E580. In the seismic test for Seismic Design Category D, E and F, the total load of the ceiling system was 4.8 psf. The alternative installation for Seismic Design Category C utilizes a 7/8" M7 Wall Angle in conjunction with the ACM7 Seismic Clip, as an alternative to the wall angle and stabilizer bars.

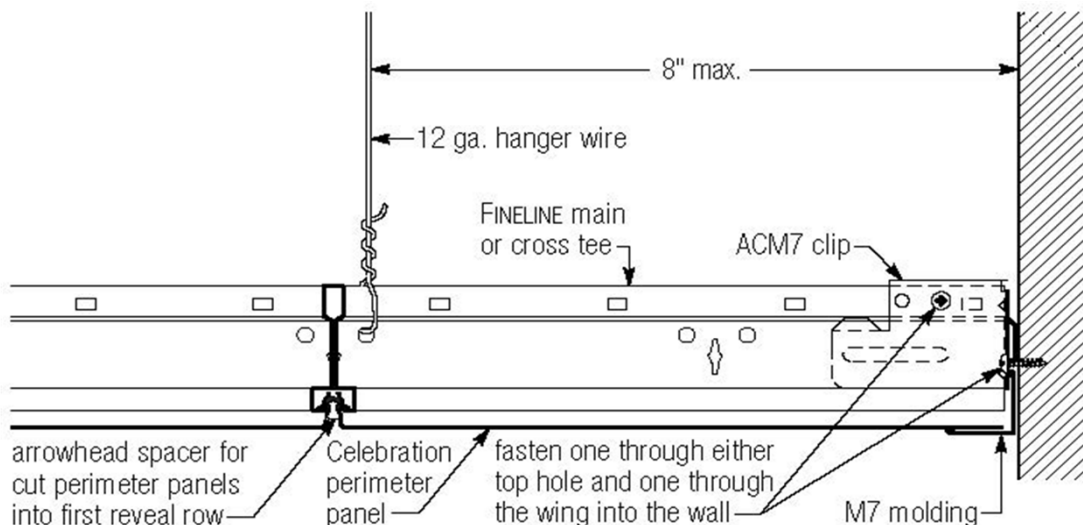


Figure 9 - Use of the ACM7 Seismic Clip Alternative in the Fixed Perimeter Condition

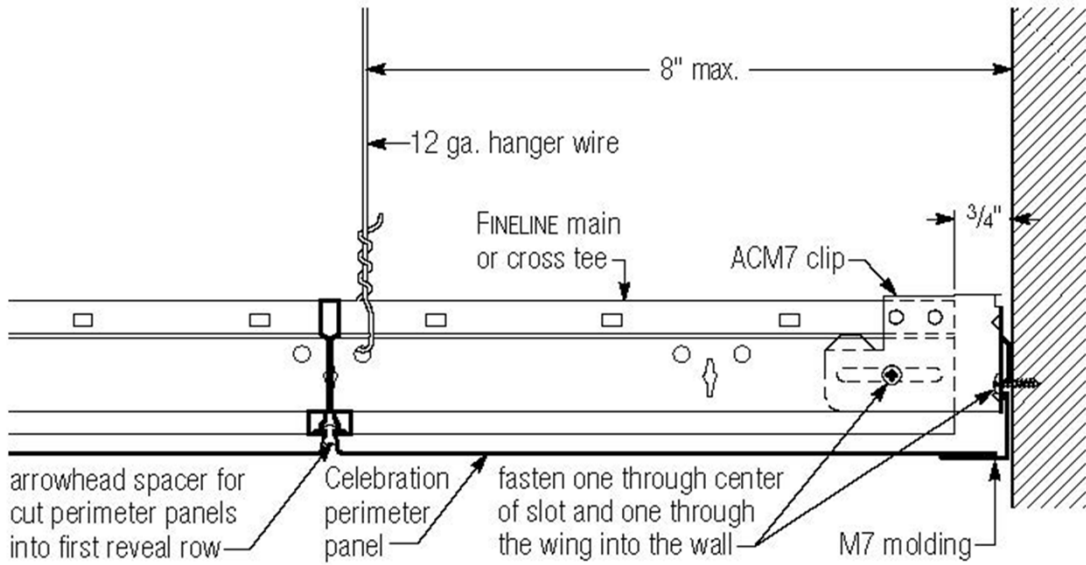


Figure 10 - Use of the ACM7 Seismic Clip Alternative in the Floating Perimeter Condition

Product Labeling

Each shipment of the **USG Celebration Snap-In Metal Ceiling Panel Suspension System** assembly, that is covered by this **Product Evaluation Report**, must have a label attached with at least the following information:

Interior USG Celebration Snap-In Metal Ceiling Panel Suspension System

1. **USG Interior, LLC** Name and Address
2. Product name
3. Plant identifier & date code
4. **Pei ES** Information: See Pei Evaluation Report at p-e-i.com
5. UL Back Stamp Information for Fire Resistance
6. ICC-ES ESR-1222

Exterior USG Celebration Snap-In Metal Ceiling Panel Suspension System

1. **USG Interior, LLC** Name and Address
2. Product name
3. Plant identifier & date code
4. **Pei ES** Information: See Pei Evaluation Report at p-e-i.com
5. UL Back Stamp Information for Fire Resistance
6. Image of Permanent Label on Main Tee for Miami-Dade NOA
7. ICC-ES ESR-1222

Acceptable Evaluation Marks

