SECTION 09 51 13 – USG DONN® BRAND DXACE™ ACOUSTICAL SUSPENSION SYSTEM

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| **Product Summary:** |
| * Meets 2014 Guidelines for Health Care Facilities. * 15/16" exposed, fire-rated system with aluminum cap. * Capable of withstanding cleaning and/or disinfecting chemicals as tested in accordance with ASTM D5402. * Suitable for use in food processing areas and meets USDA/FSIS requirements. * Cross-tee override-ends resist twisting and give a professionally finished look. * Proprietary QUICK-RELEASE™ cross tees. * White gasket blends with grid and tile. * ICC-ES evaluated for seismic installations (ICC-ESR-1222). * Custom colors available * **<insert product representative here>** or 800.874.4968 for technical questions |

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| **Note to Specifier:** |
| * This document is not intended to function as a standalone specification. It is intended to assist the specifier in inserting the proper language into the following recommended specification sections:   + 09 51 13 Acoustical Panel Ceilings   + 09 51 23 Acoustical Tile Ceilings   + 09 51 33 Acoustical Metal Pan Ceilings   + 09 54 23 Linear Metal Ceilings * The following IBC 2015 Sections Govern in addition to local code criteria for seismic ceilings:   Chapter 16 STRUCTURAL DESIGN  Chapter 17 SPECIAL INSPECTIONS AND TESTS   * Language for seismic design, required reports and accessories are detailed in the specification section 01 40 00 QUALITY REQUIREMENTS. * For more information regarding seismic design, please reference: <https://www.usg.com/content/usgcom/en/products-solutions/solutions/seismic.html>. |

1. GENERAL

Note to Specifier: If the specification is for a Seismic Application, add the following references to part 1.2B “related requirements”:

* + - * 1. Related Requirements:

ASTM C635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.

ASTM C636 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.

ASTM E84 - Standard Method for Surface Burning Characteristics of Building Materials.

ASTM E580 - Standard Practice for Application of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions.

2015 International Building Code - Section 1613, 1704, 1705, & 1706.

2013 California Building Code, chapters 8, 16, 16A and 25.

ASCE/SEI American Society of Civil Engineers 7-10: Minimum Design Loads for Buildings and Other Structures.

CISCA Ceilings & Interior Systems Construction Association.

Ceiling Systems Handbook

Seismic Construction Handbook

International Code Council ICC-ES Evaluation Report ESR-1222 issued December 2016.

Note to Specifier: If the specification is for a Seismic Application, add the following references to part 1.4 “informational submittals”. In Addition, require NVLAP certified reports to document acoustical performance.

* + - 1. INFORMATIONAL SUBMITTALS
         1. Product Test Reports: Provide test reports for each acoustical ceiling panel, performed by NVLAP certified testing agency.
         2. Evaluation Reports: For each ceiling suspension system, submit ICC-ES 1222 report showing compliance.

1. PRODUCTS

Note to Specifier: For Seismic applications, add the following criteria to “performance requirements”.

* + - 1. SEISMIC PERFORMANCE REQUIREMENTS
         1. Seismic Performance: Suspended grids and ceiling panels shall be installed in accordance to ASTM C636, ASTM E580 (including approved alternate methods).
         2. Ceiling design shall comply with ASCE/SEI American Society of Civil Engineers 7-10: Minimum Design Loads for Buildings and Other Structures

Note to Specifier: For DXACE Grid, insert the following language below.

2.5 METAL SUSPENSION SYSTEM FOR ACOUSTICAL CEILING PANEL

* + - * 1. Cold Rolled Steel Suspension System, UL Classified, Heavy Duty as defined by ASTM C635; Double-web design; 15/16” (24 mm) exposed flange with pre-painted aluminum cap; with flange mounted closed-cell foam gaskets. Cross tee: roll-formed into double-web design with rectangular bulb; 15/16” (24 mm) exposed flange with pre-painted aluminum cap. **<INSERT DESIGNATION HERE>**:

Basis of Design: Subject to compliance with project requirements, the design is based on the following: USG Interiors, LLC, **“USG DONN® Brand DXACE™ 15/16" Acoustical Suspension System”.**

Structural Classification:heavy duty.

Tee Profile: Wide Face 15/16” (24 mm).

Tee Height: **[1 ½” (38 mm)] [1.64” (42 mm)].**

Grid Module: [As noted on drawings].

Fire Rating: [Class A] [Firecode].

Color: standard flat white 050]**.**

Recycled Content: greater than 50%.

Note to Specifier: Retain paragraph below if the ceiling suspension is a seismic application, adjust structural classification above in #2 to match seismic criteria below:

Seismic Criteria:

Reference Seismic standards per ASTM E580 and CISCA guidelines.

Seismic Design Category as defined by the IBC (International Building Code): **[not applicable] [A-C] [D-F**].

* + - * 1. Accessories.

Wall molding: Inside Corner: Field-mitered joints at wall molding. Prefabricated corner cap; formed to 90° angle; hemmed edge; size and finish to match wall molding. Outside Corner: Prefabricated corner cap; formed to 90° angle; hemmed edge; size and finish to match wall molding.

Angle shape; 7/8” (22mm) thick mounting flange by 7/8” (22mm) thick face flange; hemmed edges; exposed surface pre-finished to match suspension system components, closed cell foam gasket at ceiling tile bearing edge. Available Product: M7ACE.

Note to Specifier: For Seismic category D E F applications use the paragraph below:

Angle shape; 2 in. mounting flange by 1 in. vertical flange; hemmed edges; exposed surface pre-finished to match suspension system components. Available Product: **[M20] [M20SM] [M20SM-2].**

Channel Wall molding: Inside Corner: Field-mitered joints at wall molding. Prefabricated corner cap; formed to 90° angle; hemmed edge; size and finish to match wall molding. Outside Corner: Prefabricated corner cap; formed to 90° angle; hemmed edge; size and finish to match wall molding.

Channel shape; 1” (25.4mm) mounting flange, 1 11/16” (43 mm) by 1/2” (12.7 mm) thick face flange; hemmed edges; exposed surface pre-finished to match suspension system components, closed cell foam gasket at ceiling tile bearing edge. Available Product: US28CE.

Hold Down Clips:

Available products: [C-8] [L15].

Note to Specifier: For Alternate Seismic Solutions for categories C & D-F use the paragraph below:

Seismic Attachment Clip: Used to attach tees ends to perimeter angle for seismic design C D E F categories.

Available products: ACM7.

Molding Attachment Clip: 2 in. thick x 1/2 in. thick x 1-5/8 in. Used to attach cross tees and main tees to walls/ wall molding.

Molding Attachment Clip: 9/16 in. thick for SQ panels or FL panels, Available products: MAC2

Note to Specifier: For Seismic category D E F applications use the paragraphs below:

Seismic Separation joint accessories: Tee sleeves to accommodate movement: Snap fit sleeve, prefinished to match suspension system components.

Available products: TFS-1.

Four way Seismic Separation joint clip: Connects 4 way intersection: Snap fit sleeve with optional screw/fixing holes.

Available products: DH4.

Compression Posts for bracing of ceiling applications:

Available products: Adjustable 18” to 30” **[VSA 18/30]**, Adjustable 30” to 48” [VSA 30/48], Adjustable 48” to 84” **[VSA 48/84]**, Adjustable 84” to 102” **[VSA 84/102]**, Adjustable 102” to 120” **[VSA 102/120]**, Adjustable 120” to 144” **[VSA 102/144]**.

* + - * 1. Suspension System Attachment devices.

Hanger Wire: Galvanized carbon steel; soft temper; pre-stretched; yield stress load at least three times the design load but not less than 12-gauge.

Spacing and gauge per IBC, UL and CISCA design.

Supplied and installed by ceilings subcontractor.

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