1. Section 095400
Specialty Ceilings - USG
	1. PART 1  GENERAL
		1. SECTION INCLUDES
			1. Suspended channel accents.
		2. RELATED REQUIREMENTS
2. *The paragraph below is optional text*
	* + 1. Section 016116 - Volatile Organic Compound (VOC) Content Restrictions.
3. *The paragraph below is optional text*
	* + 1. Section 031000 - Concrete Forming and Accessories:  Placement of special anchors or inserts for suspension system.
4. *The paragraph below is optional text*
	* + 1. Section 033000 - Cast-in-Place Concrete:  Placement of special anchors or inserts for suspension system.
5. *The paragraph below is optional text*
	* + 1. Section 053100 - Steel Decking:  Placement of special anchors or inserts for suspension system.
6. *The paragraph below is optional text*
	* + 1. Section 072100 - Thermal Insulation.
			2. Section 095100 - Acoustical Ceilings - USG:  Metal suspension systems.
		1. REFERENCE STANDARDS
			1. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
			2. ASTM A580/A580M - Standard Specification for Stainless Steel Wire; 2023.
			3. ASTM A492 - Standard Specification for Stainless Steel Rope Wire; 1995 (Reapproved 2019).
			4. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2023.
			5. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate; 2021a.
			6. ASTM C635/C635M - Standard Specification for Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2022.
			7. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019.
			8. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
			9. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2022.
			10. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2023.
		2. ADMINISTRATIVE REQUIREMENTS
			1. Coordination:  Coordinate work of this section with installation of mechanical and electrical components and with other construction activities affected by work of this section.
			2. Preinstallation Meeting:  Convene one week before starting work of this section.
			3. Sequence work to ensure ceilings are not installed until building is enclosed, dust generating activities have terminated, and overhead work is completed.
		3. SUBMITTALS
			1. See Section 013000 - Administrative Requirements for submittal procedures.
			2. Shop Drawings:  Indicate grid layout and related dimensioning, attachment of specialty ceiling panels to grid, accessory attachments, junctions with other ceiling finishes, and mechanical and electrical items installed in the ceiling.
			3. Product Data:  Provide data on specialty ceiling components and suspension system components.
			4. Samples:  Two full size samples illustrating material and finish of specialty ceiling components.
			5. Samples:  Two samples each, **[\_\_\_\_] inches ([\_\_\_\_]** mm) long, of suspension system main runner, cross runner, and perimeter molding.
			6. Test Reports:  Certified test data from an independent test agency verifying that panels meet specified requirements for fire, acoustical, and seismic performance.
			7. Manufacturer's Installation Instructions:  Indicate special procedures and perimeter conditions requiring special attention.
			8. Designer's qualification statement.
			9. Manufacturer's qualification statement.
			10. Installer's qualification statement.
			11. Maintenance Materials:  Furnish the following for Owner's use in maintenance of project.
				1. See Section 016000 - Product Requirements for additional provisions.
				2. Specialty Ceiling System Components:  Provide a quantity equal to 2 percent of total product installed.
		4. QUALITY ASSURANCE
			1. Designer Qualifications for Seismic Design:  Under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed at the State in which the Project is located.
			2. Manufacturer Qualifications:  Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
			3. Installer Qualifications:  Company specializing in performing the work of this section.
				1. Minimum \_\_\_\_\_\_\_\_\_\_ years documented experience.
				2. Approved by ceiling manufacturer.
		5. MOCK-UP
			1. Provide **[\_\_\_\_] feet ([\_\_\_\_]** m) by **[\_\_\_\_] feet ([\_\_\_\_]** m) mock-up including ceiling panels, suspension members, trim, and installation accessories.
			2. See Section 014000 - Quality Requirements for additional requirements.
			3. Locate where directed.
			4. Mock-up may remain as part of the work.
		6. DELIVERY, STORAGE, AND HANDLING
			1. Deliver specialty ceiling components to project site in original, unopened packages.
			2. Store in fully enclosed space, flat, level and off the floor.
		7. FIELD CONDITIONS
			1. Do not install specialty ceiling system until wet construction work is complete and permanent heat and air conditioning is installed and operating.
	1. PART 2  PRODUCTS
		1. COMPONENT Products
			1. Moldings and Trim:
				1. Edge Trim Molding Expansion Joints and Splices:  **[ and finish as metal panels] [ thickness] [ unless otherwise indicated on drawings] [\_\_\_\_] [Manufacturer's standard edge trim] [Same material]**.
				2. Perimeter (Wall) Moldings:  Same metal and finish as grid.

Size:  As required for installation conditions**[ and specified Seismic Design Category] [ and[\_\_\_\_] [None - N/A]**.

1. *The paragraph below is optional text*

Angle Moldings:  L-shaped, for mounting at same elevation as face of grid.

1. *The paragraph below is optional text*

Shadow Moldings:  Shaped to create a perimeter reveal.

1. *The paragraph below is optional text*

Channel Moldings:  U-shaped, for hold-down type installations.

1. *The paragraph below is optional text*

Gaskets For Perimeter Moldings:  Closed-cell foam, factory-applied to molding.

Acoustical Sealant For Perimeter Moldings:  Non-hardening, non-skinning, for use in conjunction with suspended ceiling system.

* + - * 1. Metal Transition Trim:  Steel or extruded aluminum; provide attachment clips, splice plates and preformed corner pieces for complete trim system:

Trim Height:  **[\_\_\_\_\_] inches ([\_\_\_\_\_] mm)] [10 inches (254 mm)] [2 inches (51 mm)] [2-1/4 inches (57 mm)] [3 inches (76 mm)] [4 inches (102 mm)] [5 inches (127 mm)] [6 inches (152 mm)] [8 inches (203 mm)]**.

Finish:  **[\_\_\_\_] [Baked enamel] [Powder-coated]**.

Color:  **[Coordinating Blanco Mat® 4245] [Custom] [Flat Black 205] [Flat White 050] [Powder White 3767] [Primer White] [Silver Satin 002] [White]**.

Products:

1. *The paragraph below is optional text*

USG Corporation; Compasso Elite Transitions - Acoustical to Acoustical:  www.usg.com/ceilings/#sle.

1. *The paragraph below is optional text*

USG Corporation; Compasso Elite Transitions - Acoustical to Drywall:  www.usg.com/ceilings/#sle.

1. *The paragraph below is optional text*

USG Corporation; Compasso Elite Drywall:  www.usg.com/ceilings/#sle.

Substitutions:  Not permitted.

* + - * 1. Metal Perimeter Trim for "Cloud" Suspension Systems:  Steel; provide fascia splice plates and preformed corner clips for complete trim system.

Trim Height:  **[\_\_\_\_\_] inches ([\_\_\_\_\_] mm)] [10 inches (254 mm)] [12 inches (305 mm)] [2 inches (51 mm)] [2-1/4 inches (57 mm)] [3 inches (76 mm)] [4 inches (102 mm)] [6 inches (152 mm)] [8 inches (203 mm)]**.

Trim Width:  **[\_\_\_\_\_] inches ([\_\_\_\_\_] mm)] [6 inches (152 mm)]**.

Finish:  Baked enamel.

Color:  **[\_\_\_\_] [Coordinating Blanco Mat® 4245] [Custom] [Flat Black 205] [Flat White 050] [Match panels] [Powder White 3767] [Silver Satin 002] [White]**.

Products:

USG Corporation; Compasso Suspension Trim - Slim:  www.usg.com/ceilings/#sle.

1. *The paragraph below is optional text*

USG Corporation; Compasso Suspension Trim - Elite:  www.usg.com/ceilings/#sle.

1. *The paragraph below is optional text*

USG Corporation; Compasso Suspension Trim - Elite with Island Accent Lighting:  www.usg.com/ceilings/#sle.

Substitutions:  Not permitted.

* + 1. Accessories
1. *The paragraph below is optional text*
	* + 1. Compasso Elite clip.
	1. PART 3  EXECUTION
		1. EXAMINATION
			1. Verify existing conditions before starting work.
			2. Verify that layout of hangers will not interfere with other work.
			3. Verify that field measurements are as indicated on shop drawings.
			4. Do not begin installation until after interior wet work is dry.
			5. Start of installation constitutes acceptance of project conditions.
		2. Preparation
			1. Coordinate the location of hangers with other work.
2. *The paragraph below is optional text*
	* + 1. Provide hanger clips during steel deck erection.  Provide additional hangers and inserts as required.
			2. Install after major above-ceiling work is complete.
			3. Layout ceiling components in pattern according to reflected ceiling plan and as shown on shop drawings.
		1. INSTALLATION - Suspension System
			1. Install suspension system in accordance with ASTM C636/C636M and manufacturer's instructions and as supplemented in this section.
			2. Install hangers and inserts coordinated with overhead work.  Provide additional hangers and supports as required.
			3. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
			4. Locate system on room axis according to reflected ceiling plan.
			5. Suspension System, Non-Seismic:  Hang suspension system independent of walls, columns, ducts, pipes and conduit.  Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
3. *The paragraph below is optional text*
	* + 1. Seismic Suspension System, Seismic Design Category C:  Hang suspension system independent of walls, columns, ducts, pipes and conduit.  Maintain a 3/8 inch (9 mm) clearance between grid ends and wall.
4. *The paragraph below is optional text*
	* + 1. Seismic Suspension System, Seismic Design Categories D, E, F:  Hang suspension system with grid ends attached to the perimeter molding on two adjacent walls; on opposite walls, maintain a 3/4 inch (19 mm) clearance between grid ends and wall.
			2. Where ducts. facility services, or equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
			3. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
			4. Support fixture loads using supplementary hangers located within 6 inches (152 mm) of each corner, or support components independently.
			5. Do not eccentrically load system or induce rotation of runners.
			6. Edge Moldings:  Install at intersection of ceiling and vertical surfaces and penetrations, using components of maximum length, set level. Provide edge moldings at junction with other ceiling finishes. Miter corners. Provide preformed edge closures to match bullnosed cornered partitions.
				1. Use longest practical lengths.
				2. Assemble corners according to manufacturer's instructions corners to backer angles according to manufacturer's instructions.
		1. INSTALLATION - SPECIALTY CEILING Units
			1. Install in accordance with manufacturer's instructions.
			2. Fit components in place, free from damaged edges or other defects detrimental to appearance and function.
			3. Cut to fit irregular grid and perimeter moldings.
				1. Shape and finish field-cut edges as recommended by manufacturer to match profile of factory edges and finish.
			4. Fit edge trim neatly against abutting surfaces.
			5. Install specialty units level, in uniform curvilinear plane, and free from twist, warp, and dents.
			6. Hang specialty units from suspension grid by engaging torsion springs into main tees.
			7. Where round obstructions occur, provide preformed closures to match perimeter molding.
			8. Bend hold-down tabs onto each panel to retain panels tight to grid system; comply with fire rating requirements, and where required by manufacturer.
		2. INSTALLATION OF TRANSITION TRIM
			1. After the grids are installed, for each grid end that meets the transition trim, insert one tee attachment clip into the lower and upper bosses and secure the set screw. Leave enough tension for adjustment.
			2. At drywall suspension systems install gypsum panels after the transition trim is installed.
			3. Secure a tee attachment clip to each grid member that will connect to the transition trim. Install one framing screw into the center of the slotted screw hole. Leave enough tension so the attachment clip can be adjusted if needed. Follow manufacturer's instructions when aligning the attachment clip.
			4. Install the splice plates by sliding them into the bosses at the end of each transition trim joint. Loosely tighten the set screws and align the system square and true.
			5. 10-Inch Trim:
				1. Support segments by attaching diagonal braces to the installation clips using fasteners recommenced by manufacturer. Attach one end of the brace to back of trim segment and the other to the tee. Ensure that the clip remains at 90 degrees to the ceiling plane. Repeat this procedure at 2-foot increments along the entire perimeter of the grid.
				2. Attach trim segments to the grid.
		3. INSTALLATION OF PERIMETER "CLOUD" TRIM
			1. General:
				1. Examine the reflected ceiling layout and carefully plan the layout of the trim on the ceiling grid.
				2. Lay trim segments on top of the grid in the desired pattern and temporarily secure them in place.
				3. Temporarily splice the segments together.
				4. Assemble trim system, arranging the trim into smooth curves.
				5. Mark and cut the suspension grid.
				6. Install an attachment clip to each cut end of the grid. Attach the clip to trim section segment.
				7. Join trim and permanently splice the segments together.
			2. 10-Inch, and 12-Inch Trim:
				1. Support segments by attaching diagonal braces to the installation clips using fasteners recommenced by manufacturer. Attach one end of the brace to back of trim segment and the other to the tee. Ensure that the clip remains at 90 degrees to the ceiling plane. Repeat this procedure at 2-foot increments along the entire perimeter of the grid.
				2. Attach trim segments to the grid.
			3. Corners:
				1. Outside Corners: Slide a permanent splice plate into each side of the preformed outside corner. Attach one side of the outside corner to a trim segment. Connect a trim segment to the other side of the corner and secure with appropriate splice plate.
				2. Inside Corners: Follow manufacturer's instructions for installation of pre-formed and welded corners or for field-assembled corners from separate premitered pieces.
		4. TOLERANCES
			1. Maximum Variation from Indicated Planes:  1/8 inch in 10 feet (3 mm in 3 m).
			2. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads:  2 degrees.
		5. Cleaning
			1. Clean and touch up minor finish damage.  Remove and replace components that cannot be successfully cleaned and repaired.
	1. END OF SECTION