1. Section 095400   
   Metal Interior Wall Paneling - USG
   1. PART 1  GENERAL
      1. SECTION INCLUDES
         1. Specialty Wall panels and systems.
         2. Metal hanging system.
      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; 2018.
        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; 2022.
        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; 2023.
        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; 2022.
     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 panel layout and related dimensioning, attachment of specialty wall panels to grid, accessory attachments, junctions with other wall finishes, and mechanical and electrical items installed in the wall.
        3. Product Data:  Provide data on specialty wall panel components and hanging system components.
        4. Samples:  Two full size samples illustrating material and finish of specialty wall 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 Wall 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 wall manufacturer.
     5. MOCK-UP
        1. Provide [\_\_\_\_] feet ([\_\_\_\_] m) by [\_\_\_\_] feet ([\_\_\_\_] m) mock-up including wall 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 wall 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 wall system until wet construction work is complete and permanent heat and air conditioning is installed and operating.
   1. PART 2  PRODUCTS
      1. Performance Requirements:
7. *The paragraph below is optional text*
   * + 1. Seismic Performance:  Wall systems designed to withstand the effects of earthquake motions determined according to ASCE 7 for Seismic Design Category D, E, or F and complying with the following:
8. *The paragraph below is optional text*
   * + - 1. Local authorities having jurisdiction.
9. *The paragraph below is optional text*
   * + - 1. ICC-ES Evaluation Report No. [\_\_\_\_\_\_\_\_\_\_].
       1. Surface Burning Characteristics:  Flame spread index of 25 or less, smoke developed index of 450 or less, when tested in accordance with ASTM E84.
     1. Acoustical Wall Assemblies
        1. Acoustical Wall Assembly Type [AW-1]:
     2. Acoustical Wall Systems
        1. Wall Panels:
           1. NRC Range:  [\_\_\_\_] to [\_\_\_\_], determined in accordance with ASTM E1264.
           2. Installation System:  Manufacturer's standard surface-mounted system.
           3. Installation System:  Manufacturer's standard frame-mounted backlit system.

Frame: Manufacturer's standard pre-mitered extruded aluminum frame in << 4; 6 >> inch projected width.

Frame Finish:  ]As indicated on drawings] [To be selected from manufacturer's standards] [050 Flat White] [002 Silver Satin] [Custom].

* + - * 1. Modular Wall Panels:  Formed perforated prefinished metal wall panels with integral edge for snap-op installation without visible hardware.

Panel Material:  Aluminum sheet complying with ASTM B209/B209M.

Panel Size:  [As indicated on drawings] [24 by 24 inch (610 by 610 mm)] [24 by 48 inches (610 by 1220 mm)] [24 by 72 inches (610 by 1830 mm)] [or  [\_\_\_\_\_]].

Perforations Pattern:  Standard perforation patern, Parti perforations, and Pixels perforations, as indicated for each wall type.

Wall Panel Finishes:

Monochrome Painted Finish:  Manufacturer's [standard] [custom] color.

Color:  [050 Flat White] [ 002 Silver Statin] [As indicated on drawings] [To be selected from manufacturer's standards] [Custom].

* + - * 1. Perforated Imagery Enhancements:  Images created by a pattern of factory-machined perforations in metal pan panels.

Original Image Type:  [Digital art] [Digital logo] [Digital photograph], [positive] [negative] image.

Original Image Source:  To be provided by Owner.

Executed Image Resolution:  [Low-Res] [Hi-Res] [Med-Res], as defined by manufacturer.

Executed Size:  Image canvas size (panel layout and number of panels) is indicated on drawings.

Panel Canvas: Pixels.

Products:

USG Corporation; Pixels Perforated Imagery:  www.usg.com/ceilings/#sle.

Substitutions:  Not permitted.

* + - * 1. Surface-Mount Accessories:  Backer panels, aluminum edge trim.
        2. Frame-Mounted Backlit Accessories:  [Splice plates] [frame and grid attachment clips] [support brackets] [foam gaskets]
        3. Products:

USG Corporation; Pixels Wall Mounted Panels:  www.usg.com/ceilings/#sle.

Substitutions:  Not permitted.

* + 1. Accessories
       1. Suspension Components:
          1. Metal Suspension Systems - General:  Complying with ASTM C635/C635M; die cut and interlocking components.

Materials:

Steel Grid:  ASTM A653/A653M  G30 coating, unless otherwise indicated.

* + - * 1. Exposed Acoustical Suspension System:  Hot-dipped galvanized steel grid.

Recycled Materials Content:  Classified as containing greater than 50 percent total recycled content.  Available for specific sizes and lengths.

Profile:  Slotted Reveal Tee; 9/16 inch face width, with 1/4 inch (6.35 mm) wide center reveal.

Intersections:  Mitered.

Finish:  [Baked enamel]  [\_\_\_\_\_].

Color:  [As indicated on drawings]  [White] [To be selected from manufacturer's standards]  [\_\_\_\_\_].

Products:

USG Corporation Fineline  DXF Suspension System:  www.usg.com/ceilings/#sle.

Substitutions:  [See Section 016000 – Product Requirements] [Not permitted].

* + - 1. Touch-Up Paint for Exposed Surfaces:  Type and color to match wall units and and trim elements.
    1. Fabrication
       1. Shop fabricate wall components to the greatest extent possible.
  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 support with other work.

1. *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 wall components in pattern according to elevations 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.
2. *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.
3. *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. 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.
     3. Cleaning
        1. Clean and touch up minor finish damage.  Remove and replace components that cannot be successfully cleaned and repaired.
4. END OF SECTION