

This section includes a suspended steel grid system, with optional seismic installation. Systems are usually non-fire rated. This section includes proprietary and descriptive type specifications. Edit to avoid conflicting requirements. Acoustic ceiling panels specified in another section.

Part 1 General

1.1 SECTION INCLUDES

- A. Steel suspended grid assembly, and perimeter trim.

1.2 RELATED SECTIONS

List sections that specify installation of products directly associated with this section; indicate specific items. In above ceiling mechanical and electrical work, the placement of anchors can be a problem if not addressed before installation of ceiling suspension assembly. Coordination between the work of mechanical and electrical sections and the text of this article, requires special consideration.

- A. Section 06 11 00 - Wood Blocking: Blocking and shims attached to substrate to support attached ceiling to a level plane.
- B. Section [_____ - _____]: Placement of special anchors or inserts for supporting ceiling grid system.
- C. Section 07 92 00 - Joint Sealants: Acoustic sealant for perimeter edge seal.
- D. Section 08 31 13 - Access Doors and Frames: Access panels.
- E. Section 09 51 00 - Acoustic Ceiling Panels: Acoustic units required for ceiling.

The following related work may be listed by Division rather than specific sections, due to the fact that the mechanical and electrical consultants are not necessarily "in-house" and may be using other numbers. If section numbers are unknown, specify by Divisions.

- F. Section [21 13 00] [_____] - Sprinkler Systems: Sprinkler heads in ceiling system.
- G. Section [23 37 00] [_____] - Air Outlets and Inlets: Air diffusion devices in ceiling system.
- H. Section [26 51 00] [_____] - Interior Luminaires: Light fixtures in ceiling system.
- I. Section [27 51 00] [_____] - Public Address and Music System: Speakers in ceiling system.
- J. Section [28 31 00] [_____] - Fire Alarm Systems: Fire alarm components in ceiling system.

1.3 REFERENCES

List reference standards that are included within the text of this section. Edit the following as required for project conditions.

- A. ASTM C 635/C 635M-12: Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.

- B. ASTM E119-12a: Standard Test Methods for Fire Tests of Building Construction and Materials.
- C. ASTM E 580/580M-11b: Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions.
- D. ASTM E1264-08e1: Standard Classification for Acoustical Ceiling Products.
- E. CISCA (Ceilings & Interior Systems Contractors Association):
 - 1. Ceiling Systems Handbook.
 - 2. Acoustic Ceilings: Use and Practice.
- F. EN 13501-1:2010: Fire classification of construction products and building elements - Part 1: Classification using data from reaction to fire tests.
- G. EN 13501-2:2007+A1:2009: Fire classification of construction products and building elements - Part 2: Classification using data from fire resistance tests, excluding ventilation services.
- H. EN 13964:2004 + A1:2007: Suspended ceilings - Requirements and test methods.
- I. USFDA (United States Food and Drug Administration).

1.4 SUBMITTALS FOR REVIEW

Do not request submittals if drawings sufficiently describe the products of this section or if proprietary specifying techniques are used. Include a requirement for shop drawings only when special project conditions exist or when reflected ceiling plans are not provided on the working drawings.

- A. Section 01 33 00: Submission procedures.
- B. Shop Drawings: Indicate grid layout and related dimensioning, junctions with other work, interrelation of mechanical and electrical items related to system and [_____].
- C. Product Data: Provide data on grid system components and accessories.

Include the following paragraph for submission of physical samples for selection of finish, colour, surface texture, etc.

- D. Grid Samples: Submit [two] [____] samples each, [200] [____] mm ([8] [____] inches) long, of grid system [top hanger,] [main runner,] [cross tee,] [wall molding,] and [_____].

1.5 SUBMITTALS FOR INFORMATION

The following submittals are informational; responsive action by the Consultant is not required.

- A. Section 01 33 00: Submission procedures.
- B. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention, and [_____].

- C. Sustainable Design:
 - 1. Section 01 35 18: LEED documentation procedures.
 - 2. Provide required LEED documentation for Product [recycled content] [regional materials].
 - 3. Manufacturer's Certificate: Certify that Products meet or exceed [specified requirements] [_____].

1.6 QUALITY ASSURANCE

- A. Conform to CISCA requirements.
- B. Grid Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum [three (3)] [_____] years [documented] experience.
- C. Grid Installer: Company specializing in installing the Products specified in this section, authorized or certified in writing by the product manufacturer.

1.7 REGULATORY REQUIREMENTS

Use this article when a special code, regulation, or constructed assembly applies to the project; delete this article if none apply. Coordinate Regulatory Requirements with the assembly ratings required.

- A. Conform to applicable code for fire rated assembly.
- B. Conform to local building code seismic requirements. Conform to Seismic Zone [0] [1] [2] requirements.

1.8 PROJECT CONDITIONS

- A. Section 01 32 13: Work scheduling.
- B. Sequence work to ensure ceilings are not installed:
 - 1. until building is enclosed,
 - 2. sufficient heat is provided,
 - 3. dust generating activities have terminated, and
 - 4. overhead work is completed, tested, and approved.

1.9 DELIVERY, STORAGE AND HANDLING

- A. Section 01 66 00 for storage and handling of materials.
- B. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Store cartons laid flat, protected from exposure to sun, high temperatures and humidity conditions as recommended by the manufacturer.

1.10 EXTRA MATERIALS

- A. Section 01 78 46: Extra materials.

- B. Provide the following to the Owner:
 - 1. [____] m ([____] feet) of extra suspension main and cross runners.
 - 2. a quantity of [5] [____] percent of all trim and accessories provided for the Work.

1.11 WARRANTY

- A. Warranty: Refer to Section [01 78 00.] [_____.]
- B. Limited Warranty: Twenty Five (25) years from product manufacturing defects.

Part 2 Products

2.1 MATERIALS

In the following paragraph, list the manufacturers acceptable for this project. Edit the subsequent descriptive specifications to identify project requirements and to eliminate any conflict with specified manufacturer's products.

- A. Manufacturers:
 - 1. Acoustic Ceiling Products, LLC., PO Box 1581, Appleton, WI, 54912-1581; Phone - Toll Free: 800-434-3750; Fax - Toll Free 800-434-3751; e-mail to: techsupport@acpideas.com; Web site: <http://www.acpideas.com>.
 - 2. Substitutions: [Refer to Section 01 62 00.] [Not permitted.]
- B. Grid Material:
 - 1. Material: Steel, galvanized.
- C. Grid Components:
 - 1. Manufacturer's Grid Style: "Classic X".
 - a. Main: 24 mm (15/16 inch), 2440 mm (96 inch).
 - b. Cross Tees: 24 mm (15/16 inch), 610 mm (24 inch) or 1220 mm (48 inch) long nominal.
 - c. Wall Bracket: 24 mm (15/16 inch), 2440 mm (96 inch) long.
 - 2. Grid Nominal Size: [610 x 610 mm (24 x 24 inches).] [610 x 1220 mm (24 x 48 inches).]
 - 3. Corrosion resistance: Class B, as tested to EN 13964.
 - 4. Surface burning: Class A, tested to ASTM E119.
 - 5. Duty Class: ASTM C635, Intermediate Duty.
 - 6. Bottom of Runner Face Width: 24 mm (15/16 inch).
 - 7. Grid Accessories: Steel hanger wire, minimum 2 mm (12 gauge) thick.
- D. Grid Finish: Coil coated, white color.

Part 3 Execution

3.1 EXAMINATION

- A. Section 01 71 00: Verification of existing conditions before starting work.
- B. Verify that layout of grid will not interfere with other work.

3.2 INSTALLATION

- A. Install assembly in accordance with manufacturer's instructions and as supplemented in this section.

Include the first paragraph below if a reflected ceiling plan is not included with the drawings; or the subsequent paragraph if a reflected ceiling plan is included.

- B. Lay out assembly to a balanced grid design with edge units no less than 50 percent of acoustic unit size.
- C. Install grid members to substrate.
- D. Mount assembly independent of walls, columns, ducts, pipes and conduit.
- E. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- F. Install after major above ceiling work is complete. Coordinate the location of hangers with other work.
- G. Perimeter Molding:
 - 1. Install edge molding at intersection of ceiling and vertical surfaces into bead of acoustic sealant, that is not visible after installation.
 - 2. Use single piece longest practical lengths.
 - 3. Miter corners.

Include the following paragraph only if ceiling is required to be seismic resistant.

- H. Seismic Installation: Install system to ASTM E580/E580M.

3.3 ERECTION TOLERANCES

Do not assume that there are industry standards for tolerances. Specify tolerances below as appropriate to the nature or character of the project. Verify that such tolerances are realistic and realizable.

- A. Section 01 73 00: Tolerances.

Coordinate this article with the suspension system members selected and the performance statements indicated.

- B. Maximum Variation from Flat and Level Surface: [3 mm in 3 m (1/8 inch in 10 ft)]
[[_____] mm in 3 m ([_____] inch in 10 ft)].

- C. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: [2]
[_____] degrees.

3.4 SCHEDULE

Provide a schedule when various ceiling locations, ceiling assembly types, acoustic unit designs, or other variables require listing for clarity. The following are examples to illustrate a scheduled item:

- A. Public Areas: 600 x 1200 mm (24 x 48 inch), white color.
B. Dining Areas: 600 x 600 mm (24 x 24 inch), White color.

END OF SECTION