

SECTION 09511

SUSPENDED ACOUSTICAL CEILINGS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Suspended metal grid ceiling system and perimeter trim.
- B. Acoustical ceilings.
- C. Vinyl faced gypsum board ceilings.

1.2 RELATED SECTIONS

- A. Division 15 Sections - Air Distribution devices in ceiling.
- B. Division 16 Sections - Lighting fixtures and other electrical devices in ceiling.

1.3 REFERENCES

- A. ASTM C635 - Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
- B. ASTM C636 - Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
- C. UL - Fire Resistance Directory and Building Material Directory; UL System Rating.

1.4 SYSTEM DESCRIPTION

- A. Suspension system to rigidly secure acoustical ceiling system including integral mechanical and electrical components with maximum deflection of 1/360.

1.5 SUBMITTALS

- A. Product Data: Provide data on metal grid system components and acoustical.
- B. Samples: Submit two samples 8 x 8 inch in size illustrating material and finish of each lay-in panel and wall panel.
- C. Samples: Submit two samples each, 8 inches long, of suspension system main runner, cross runner, and edge trim.
- D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

1.6 QUALIFICATIONS

- A. Grid Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years experience.
- B. Acoustical Unit Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum three years experience.

1.7 REGULATORY REQUIREMENTS

- A. Conform to applicable code for fire rated assembly and combustibility requirements for materials.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Maintain uniform temperature of minimum 60 degrees F, and maximum humidity of 40 percent prior to, during, and after acoustical unit installation.

1.9 SEQUENCING

- A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.
- B. Install acoustical units after interior wet work is dry.

1.10 EXTRA MATERIALS

- A. Provide 24 panels of each lay-in panel type to the Owner for his attic stock.

PART 2 - PRODUCTS

2.1 MANUFACTURERS - SUSPENSION SYSTEM

- A. Chicago Metallic Corp.
- B. Donn Corp.
- C. Eastern Products

2.2 SUSPENSION SYSTEM MATERIALS

- A. Non-fire Rated Grid: ASTM C635, intermediate exposed T; components die cut and interlocking.
- B. Grid Materials: Commercial quality cold rolled steel with galvanized coating.
- C. Exposed Grid Surface Width: 15/16 inch.
- D. Grid Finish: White.

- E. Accessories: Stabilizer bars, clips, splices, edge moldings, and hold down clips required for suspended grid system.
- F. Support Channels and Hangers: Galvanized steel; size and type to suit application, and ceiling system flatness requirement specified.

2.3 MANUFACTURERS - ACOUSTICAL CEILING UNITS

- A. Armstrong World Industries, Inc.
- B. Celotex.
- C. USG Acoustical.

2.4 ACOUSTICAL CEILING UNIT MATERIALS

- A. Available Products: Subject to compliance with requirements, acoustical panels that may be incorporated in the Work include, but are not limited to the following:

- 1. AT-1:
 - a. Size: 24" x 24".
 - b. Thickness: 5/8".
 - c. Composition: Wet-formed mineral fiber 761.
 - d. Edge: Square.
 - e. Color: White
 - f. Product: Equal to Armstrong "Cortega" square lay-in/medium texture.
- 2. AT-2: (@ Toilets)

- 3. Products meeting these specs from Celotex and USG will be accepted.
- B. Available Products: Subject to compliance with requirements, clad panels that may be incorporated in the Work include, but are not limited to the following:
 - 1. Gold Bond Gridstone Gypsum Ceiling Panels as manufactured by National Gypsum Company. Size: 24" x 24" x 1/2", square edge, color to be white.

2.5 ACCESSORIES

- A. Touch-up Paint: Type and color to match acoustical and grid units.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify Site conditions are ready to receive work.
 - B. Verify that layout of hangers will not interfere with other work.
 - C. Beginning of work means acceptance of existing conditions.
- 3.2 INSTALLATION - LAY-IN GRID SUSPENSION SYSTEM
- A. Install suspension system in accordance with ASTM C636, manufacturer's instructions and as supplemented in this section.
 - B. Install system capable of supporting imposed loads to a deflection of 1/360 maximum.
 - C. Locate system in room according to reflected plan.
 - D. Install after major above ceiling work is complete. Coordinate the location of hangers with other work.
 - E. 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. Install first hanger wire on mains within 6" of wall minimum.
 - F. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
 - G. Do not support components on main runners or cross runners if weight causes total load to exceed deflection capability. Support light fixtures and components independently.
 - H. Do not eccentrically load system, or produce rotation of runners.
 - I. Install edge molding at intersection of ceiling and vertical surfaces, using longest practical lengths. Miter corners. Provide edge moldings at junctions with other interruptions.

3.3 INSTALLATION - LAY-IN PANELS

- A. Install units in accordance with manufacturer's instructions.
- B. Fit units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Lay directional patterned units one way with pattern parallel to longest room axis. Fit border trim neatly against abutting surfaces.
- D. Install units after above ceiling work is complete and above ceiling inspection has been performed.
- E. Install units level, in uniform plane, and free from twist, warp and dents.

- F. Cut panels to fit irregular grid and perimeter edge trim.
- G. Install hold-down clips to retain panels tight to grid system within 20 ft of an exterior door.

3.4 ERECTION TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION

