

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- .1 Extent of acoustical ceiling work is shown on drawings and indicated by provisions of this section.
- .2 Applications of acoustical ceiling specified in this section include the following:
  - .1 Acoustical ceiling tiles
  - .2 Metal suspension systems

1.02 SYSTEM DESCRIPTION

- .1 Panels: Suspended ceiling system consisting of acoustical panels, ceiling suspension system.

1.03 DELIVERY AND STORAGE OF MATERIALS

- .1 All materials shall be delivered in their original unopened packages and stored in an enclosed shelter providing protection from damage and exposure to the elements.
- .2 Storage time of materials at the job site should be as short as possible, and environmental conditions should be as near as possible to those specified for occupancy (see no.1.04 below). Excess humidity during storage can cause expansion of material and possible warp, sag, or poor fit after installation. Chemical changes in the mat and/or coatings can be aggravated by excess humidity and cause discoloration during storage, even in unopened cartons. Cartons should be removed from pallets and stringers to prevent distortion of material. Long-term (6-12 months) storage under uncontrolled environmental conditions should be avoided.
- .3 Damaged or deteriorated materials should be removed from the premises. Immediately before installation, to stabilize tile and panels, store them at a location where temperature and humidity conditions duplicate those ambient during installation and anticipated for occupancy.

1.04 ENVIRONMENTAL CONDITIONS

- .1 Installation of acoustical panels shall not begin until building is enclosed, permanent heating and cooling equipment is in operation, and residual moisture from plaster, concrete, or terrazzo work has dissipated.
- .2 Do not use ceiling panels in extreme or continuous high humidity, or areas exposed directly to weather or water. Ceiling panels are sized and designed for use within the standard occupancy range of temperature and humidity, 65-85 degrees F (18-29 degrees C), no more than 75% RH (relative humidity). Humidity can greatly affect product dimensional stability and sag resistance. Sag can become noticeable during periods of high humidity

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lasting only a few hours.

- .3 Allow time for dimensional changes in ceiling panels stored at a temperature/humidity conditions well outside of those recommended for service. With increases in temperature/humidity, these products expand (up to 1/64 in./ft (4.3mm/m) at 85 degrees F (29 degrees C)/90% RH) and may not fit into a fixed grid. Conversely, with decreases, these products will be undersize, but expand to normal when standard ambient conditions return.
- .4 For some patterns, if perimeter panels must be cut smaller, the abutting edge must be field-rabbitted or the wall angle must be lowered 3/16" (4.8mm).

**1.05 QUALITY ASSURANCE**

- .1 Subcontractor qualifications: Installer shall have successful experience in the installation of suspended ceiling systems on projects with requirements similar to requirements specified.
- .2 Requirements of regulatory agencies; Codes and regulations of authorities having jurisdiction.
- .3 Source quality control;
  - .1 Test reports: Manufacturer will provide test certification for minimum requirements as tested with applicable industry standards and/or to meet performance standards specified by various agencies.
  - .2 Changes from system: System performance following any substitution of materials or change in assembly design must be certified by the manufacturer.

**1.06 REFERENCES**

- .1 ASTM C635 and C636: Manufacturing and installation of Suspended Ceilings.
- .2 Underwriters Laboratories, Inc.: Fire Resistance Directory, Design L202 and L206.
- .3 ASTM E119 : Fire Tests of Building Construction and Materials.
- .4 ASTM C423: Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- .5 CISCA Ceiling Systems Installation Handbook.

**1.07 SUBMITTALS**

- .1 Samples: Submit representative sample of color and finish of all exposed materials.
- .2 Shop drawings:

- .1 Ceiling plans: Indicate layout arrangement of ceiling design, dimensions and locations of related integrated lighting and air distribution components.
- .2 Installation drawings: Detail complete installation including suspension system, installation of related lighting and air distribution components, access requirements, sound absorption requirements, and fire rating requirements when applicable.
- .3 Manufacturer=s data: Submit manufacturer=s catalog cuts or standard drawings showing details of system with product conditions clearly identified and manufacturer=s recommended installation instructions.
- .4 Maintenance materials: Submit one percent of amount of ceiling components installed.

**1.08 PROJECT CONDITIONS**

- .1 Environmental requirements for interior installation: Building shall be enclosed with windows and exterior doors in place and glazed, and roof watertight before installation of ceiling system and related ceiling components. Climate condition range of 60-85 degrees F (16-29 degrees C).
- .2 Coordination with other work:
  - .1 Mechanical work: Ductwork above ceiling shall be complete, and permanent heating and cooling systems operating to climate conditions prior to installation of ceiling components.
  - .2 Electrical work: Installation of conduit above ceiling shall be complete before installation of ceiling components.
  - .3 Fire protection work: Fire protection lines and/or equipment occurring above ceiling shall be completed and tested before ceiling components are installed.
- .3 Protection: Protect completed work above ceiling system from damage during installation of ceiling components.

**PART 2 - PRODUCTS**

**2.01 ACOUSTICAL TILES**

- .1 Acceptable manufacturers: Provide products as indicated on the architectural Room Finishes Plans. Where specific manufacturers are not indicated on the Plans, provide products from the following:

National Gypsum Company  
United States Gypsum

Celotex Corporation  
ConWeb Corporation  
Baldwin-Ehret-Hill, Inc.  
Owens-Corning Fiberglass  
Armstrong  
Johns-Manville

**2.02 METAL SUSPENSION SYSTEMS, GENERAL**

- .1 Standard for Metal Suspension Systems: Provide metal suspension systems of type, structural classification and finish indicated which comply with applicable ASTM C 635 requirements.
- .2 Finishes and Colors: Provide manufacturer's standard finish for type of system indicated, unless otherwise required. For exposed suspension members and accessories with painted finish, provide color indicated or, if not otherwise indicated, as selected by Architect from manufacturer's full range of standard colors.
  - .1 High Humidity Finish: Comply with ASTM C 635 requirements for "Coating Classification for Severe Environment Performance" where high humidity finishes are indicated.
- .3 Edge Moldings and Trim: Metal or extruded plastic of types and profiles indicated or, if not indicated, provide manufacturer's standard molding for edges and penetrations of ceiling which fits with type of edge detail and suspension system indicated. Refer to electrical fixtures to coordinate edge of ceiling.
  - .1 For lay-in panels with reveal edge details, provide stepped edge molding which forms reveal of same depth and width as that formed between edge of panel and flange at exposed suspension member.
- .4 Manufacturer: Subject to compliance with requirements, provide suspension systems of one of the following:
  - .1 Manufacturers of Steel Exposed Suspension Systems:
    - .1 Same as acoustical unit manufacturer.
    - .2 Chicago Metallic Corp.
    - .3 Donn Corp.
    - .4 National Rolling Mills, Inc.
    - .5 Roper Eastern.
  - .2 Manufacturers of Exposed Double Web Aluminum Suspension Systems:
    - .1 Chicago Metallic Corp.
    - .2 Donn Corp.
    - .3 National Rolling Mills, Inc.

PART 3 - EXECUTION

3.01 INSPECTION

- .1 Examine areas to receive ceiling panels for conditions that will adversely affect installation. Provide written report of discrepancies.
- .2 Do not start work until unsatisfactory conditions are corrected.
- .3 Work to be concealed: Verify work above ceilings complete and installed in manner that will not affect layout and installation of ceiling panels.
- .4 Beginning of installation shall signify acceptance of conditions in areas to receive ceiling panels.
- .5 Fire-rating requirements: Construction above fire-rated assembly shall meet requirements of UL Design specified in Part 2:Products.

3.02 PREPARATION

- .1 Field dimensions: Installer must verify actual field dimensions prior to installation.

3.03 INSTALLATION

- .1 Standard reference: Install in accordance with ASTM C636 CISCA installation standards, UL fire-rating classification, and any other applicable national or local code requirements.
- .2 Manufacturer=s reference: Install in accordance with manufacturer=s current publications.
- .3 Install ceiling in accordance to approved shop drawings.

3.04 CLEANING

- .1 Maintenance: Panels can be cleaned with a soft brush or vacuum.

END OF SECTION 09120