



SECTION 09 51 13 – ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes acoustical panels and exposed suspension systems for ceilings.

1.2 ACTION SUBMITTALS

- A. Product Data: For each product indicated.
- B. Coordination Drawings: Drawn to scale and coordinating penetrations and ceiling-mounted items. Show the following:
 - 1. Ceiling suspension assembly members.
 - 2. Method of attaching hangers and lateral bracing to building structure.
 - 3. Ceiling-mounted items including lighting fixtures, diffusers, grilles, speakers, sprinklers, access panels, and special moldings.
- C. Samples: For each acoustical panel, for each exposed suspension system member, and for each color and texture required.

1.3 INFORMATIONAL SUBMITTALS

- A. Product test reports.
- B. Research/evaluation reports:

NOTE: Indicate LARR numbers on the drawings as a condition of plan check approval.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance data.

1.5 QUALITY ASSURANCE

- A. Acoustical Testing Agency Qualifications: An independent testing laboratory or an NVLAP-accredited laboratory.
- B. Fire-Test-Response Characteristics:
 - 1. Fire-Resistance Ratings: Where indicated, provide acoustical panel ceilings identical to those of assemblies tested for fire resistance per ASTM E119 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction. Ratings are indicated



by design designations from UL's "Fire Resistance Directory" or from the listings of another testing and inspecting agency.

2. Surface-Burning Characteristics: Acoustical panels complying with ASTM E1264 for Class A materials, when tested per ASTM E84.
- C. Seismic Standard: Comply with the following:
1. Los Angeles Department of Building and Safety Document requirements.

NOTE: Refer to LADBS document number P/BC 2008-40: Recommended Standards for Suspended Ceiling Assemblies. This document provides guidelines for designing and installing a suspended ceiling assembly and provides standard support configurations for typical conditions. This document can be found online at www.ladbs.org.

- D. Mockups: Build mockups to verify selections made under sample Submittals and to demonstrate aesthetic effects and qualities of materials and execution.
1. Approved mockups are not to become part of the completed Work.

NOTE: The ceiling installing shall not be installed until the installation mock-up has been approved by LAWA.

1.6 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. In other Part 2 articles where titles below introduce lists, the following requirements apply for product selection:
1. Products: Subject to compliance with LAWA selection criteria and requirements,

2.2 GENERAL

- A. Acoustical Panel Standard: Comply with ASTM E1264.
1. Recycled Content: Provide acoustical panels with recycled content such that post-consumer recycled content plus one-half of pre-consumer recycled content constitutes a minimum of 70 percent by weight.
- B. Low-Emitting Materials: Acoustical tile ceilings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the



Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

- C. Metal Suspension System Standard: Comply with ASTM C635.
 - 1. Recycled Content: Provide products made from steel sheet with average recycled content such that post-consumer recycled content plus one-half of pre-consumer recycled content is not less than 25 percent.
- D. Attachment Devices: Size for five times the design load indicated in ASTM C635, Table 1, "Direct Hung," unless otherwise indicated.
 - 1. Power-Actuated Fasteners in Concrete: Fastener system of type suitable for application indicated, fabricated from corrosion-resistant materials, with clips or other accessory devices for attaching hangers of type indicated, and with capability to sustain, without failure, a load equal to 10 times that imposed by ceiling construction, as determined by testing per ASTM E1190, conducted by a qualified testing and inspecting agency.

NOTE: The use of powder actuated fasteners is by **SPECIAL APPROVAL ONLY**. Prior to the use of these fasteners, the Contractor shall develop and present to LAWA, their procedures and protocol for using such equipment at LAX.

- E. Wire Hangers, Braces, and Ties: Zinc-coated carbon-steel wire; ASTM A641/A641M, Class 1 zinc coating, soft temper.
 - 1. Size: Select wire diameter so its stress at three times hanger design load (ASTM C635, Table 1, "Direct Hung") will be less than yield stress of wire, but provide not less than 0.106 inch diameter wire.
- F. Rod Hangers: ASTM A510, mild carbon steel.
 - 1. Diameter: 1/4 inch.
 - 2. Protective Coating: ASTM A153/A153M, hot-dip galvanized.
- G. Seismic struts and seismic clips.
- H. Carrying Channels: Cold-rolled, commercial-steel sheet with a base metal thickness of 0.0538 inch, a minimum 1/2 inch wide flange, and in depth indicated.
- I. Metal Edge Moldings and Trim: Type and profile indicated or, if not indicated, manufacturer's standard moldings for edges and penetrations that fit acoustical panel edge details and suspension systems indicated; formed from sheet metal of same material, finish, and color as that used for exposed flanges of suspension system runners.

2.3 ACOUSTICAL PANELS

- A. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Armstrong World Industries, Inc.
 - 2. USG Corporation



2.4 METAL SUSPENSION SYSTEM

- A. Products: Subject to compliance with requirements, provide one of the following:
 - 1. Chicago Metallic Corporation

2.5 ACOUSTICAL SEALANT

- A. Acoustical Sealant for Exposed and Concealed Joints: Manufacturer's standard non-sag, paintable, non-staining latex sealant, that complies with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers," complying with ASTM C834 and effective in reducing airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E90. Provide STC test report for fire resistive materials per ASTM E90. For Non-Fire Rated Acoustical and Smoke Partitions, use mold/mildew resistant sealant per ASTM G21 Standard. Sealants or sprays tested in compliance with ASTM E90, ASTM C 919, and ISO 11600.6.

2.6 INSTALLATION

- A. Per manufacturer's instructions and applicable codes.

END OF SECTION 09 51 13