

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. The Contractor, Subcontractors, and/or suppliers providing goods or services referenced in or related to this Section shall also be bound by the Documents identified in Division 01 Section "Summary", Paragraph 1.01A, entitled "Related Documents."

1.02 SUMMARY

- A. Section includes shop-fabricated, panel units tested for acoustical performance, including:
 - 1. Sound-absorbing wall panels.
 - 2. Fabric-wrapped wall panels.
- B. Related Sections:
 - 1. Division 01 Section "Sustainable Design Requirements."
 - 2. Division 10 Section "Wall Protection" for impact resistant wall panels.

1.03 DEFINITIONS

- A. NRC: Noise reduction coefficient.
- B. SAA: Sound absorption average.

1.04 ACTION SUBMITTALS

- A. Product Data: For each type of panel edge, core material, and mounting indicated.
- B. CTHPB Documentation Submittals: Comply with Division 01 Section "Sustainable Design Requirements" and provide the following in addition to other action submittals:
 - 1. Product Data for Credit 5d: For adhesives and sealants, documentation including printed statement of VOC content.
 - 2. Product Data for Credit d8: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
 - 3. Product Certificates for Credit d10: For products and materials required to comply with requirements for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.

- C. Shop Drawings: For sound-absorbing units.
 - 1. Include mounting devices and details; details at panel head, base, joints, and corners; and details at ceiling, floor base, and wall intersections. Indicate panel edge and core materials.

- D. Samples for Verification: For the following products, prepared on Samples of size indicated below:
 - 1. Core Material: 12-inch- square Sample at corner.
 - 2. Mounting Devices: Full-size Samples.
 - 3. Assembled Panels: Approximately 36 by 36 inches, including joints and mounting methods.

1.05 INFORMATIONAL SUBMITTALS

- A. Coordination Drawings: Elevations and other details, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
 - 1. Items penetrating or covered by sound-absorbing units including the following:
 - a. Lighting fixtures.
 - b. Air outlets and inlets.
 - c. Speakers.
 - d. Alarms.
 - e. Access panels.

- B. Product Certificates: For each type of sound-absorbing unit, from manufacturer.

- C. Warranty: Sample of special warranty.

1.06 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For sound-absorbing units to include in maintenance manuals. Include fabric manufacturers' written cleaning and stain-removal recommendations.

1.07 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials from same production run that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Mounting Devices: Full-size units equal to 5 percent of amount installed, but no fewer than five devices, including unopened adhesives.

1.08 QUALITY ASSURANCE

- A. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials, fabrication, and installation.

1. Build mockup of typical wall area for each panel type as directed by Construction Manager.
2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.

B. Preinstallation Conference: Conduct conference at Project site.

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Comply with sound-absorbing unit manufacturers' written instructions for minimum and maximum temperature and humidity requirements for shipment, storage, and handling.
- B. Deliver materials and units in unopened bundles and store in a temperature-controlled dry place with adequate air circulation.

1.10 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install sound-absorbing units until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work at and above ceilings is complete, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- B. Lighting: Do not install sound-absorbing units until a permanent level of lighting is provided on surfaces to receive the units.
- C. Air-Quality Limitations: Protect sound-absorbing units from exposure to airborne odors, such as tobacco smoke, and install units under conditions free from odor contamination of ambient air.
- D. Field Measurements: Verify locations of sound-absorbing wall units and actual dimensions of openings and penetrations by field measurements before fabrication.

1.11 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of sound-absorbing units that fail in materials or workmanship within specified warranty period.
 1. Failures include, but are not limited to, the following:
 - a. Acoustical performance.
 - b. Fabric sagging, distorting, or releasing from panel edge.
 - c. Warping of core.
 2. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Source Limitations: Obtain each type of sound-absorbing wall unit from a single source from single manufacturer.

2.02 PERFORMANCE REQUIREMENTS

- A. Fire-Test-Response Characteristics: Provide sound-absorbing units meeting the following requirements as determined by testing identical products by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:
1. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - a. Flame-Spread Index: 25 or less.
 - b. Smoke-Developed Index: 450 or less.
 2. Fire Growth Contribution: Comply with acceptance criteria of local code and authorities having jurisdiction when tested according to NFPA 286.

2.03 SOUND-ABSORBING WALL UNITS

- A. Sound-Absorbing Wall Panel: Manufacturer's standard panel construction.
1. Basis of Design Product (**AWP-1A, AWP-1B, AWP-C, AWP-D, AWP-E, AWP-G**): Subject to compliance with requirements, provide **Acoufelt; Solids** or one of the following:
 - a. Kirei.
 - b. MDC Interior Solutions; Zintra.
 2. Panel Size: As indicated on Drawings.
 3. Nominal Thickness: 24 mm.
 4. Color: As indicated on Material List.
 5. Mounting: Adhesive.
 6. Core: Manufacturer's standard.
 7. Edge Profile: Square.
- B. Sound-Absorbing Wall Panel: Manufacturer's standard panel construction.
1. Basis of Design Product (**AWP-1Fa, 1Fb**): Subject to compliance with requirements, provide **Acoufelt; Shapes – Solids** or one of the following:
 - a. Momentum; Petal Solid Color.
 - b. MDC Interior Solutions; Zintra; Plain Tiles, Pattern: Hourglass
 2. Pattern: Scale.
 3. Panel Size: 24 by 18 inches.
 4. Nominal Thickness: 24 mm.

5. Color: As selected by Architect from manufacturer's full range.
6. Mounting: Adhesive.
7. Core: Manufacturer's standard.
8. Edge Profile: Square.

C. Sound-Absorbing Wall Panel: Manufacturer's standard panel construction.

1. Basis-of-Design Product (**AWP-2**): Subject to compliance with requirements, provide **Armstrong; Tectum Wall Panels** or comparable product by one of the following:
 - a. BAUX; Traullit Acoustic Panels.
 - b. Heradesign; Superfine.
2. Mounting: Type A direct mount.
3. Core: Cementitious-fiber board consisting of aspen wood fibers bonded with inorganic hydraulic cement.
4. Edge Construction: Manufacturer's standard chemically hardened core with no frame.
5. Edge Profile: Chamfered (beveled).
6. Corner Detail in Elevation: Square with continuous edge profile indicated.
7. Acoustical Performance: Sound absorption NRC of 0.55 according to ASTM C 423 for Type A mounting according to ASTM E 795.
8. Nominal Overall Panel Thickness: 1-1/2 inches.
9. Panel Sizes: As indicated on Drawings.
10. Color: Factory finished in color as selected by Architect from manufacturer's full range.
 - a. Field finish exposed fasteners to match panel color.
11. ~~Mounting Type: Z-clips.~~

2.04 FABRICATION

- A. General: Use manufacturer's standard construction except as otherwise indicated; with dimensionally stable core; and with rigid edges to reinforce panel perimeter against warpage and damage.
- B. Sound-Absorption Performance: Provide acoustical wall panels with minimum NRCs indicated, as determined by testing per ASTM C 423 for mounting type specified.
- C. Acoustical Wall Panels: Panel construction consisting of facing material adhered to face, edges and back border of dimensionally stable core; with rigid edges to reinforce panel perimeter against warpage and damage.
 1. Glass-Fiber Board: Resin harden areas of core for attachment of mounting devices.
- D. Fabric Facing: Stretched straight, on the grain, tight, square, and free from puckers, ripples, wrinkles, sags, blisters, seams, adhesive, or other foreign matter. Applied with visible surfaces fully covered.
 1. Where square corners are indicated, tailor corners.
 2. Where fabrics with directional or repeating patterns or directional weave are indicated, mark fabric top and attach fabric in same direction so pattern or weave matches in adjacent panels.

- E. Dimensional Tolerances of Finished Units: Plus or minus 1/16 inch for the following:
1. Thickness.
 2. Edge straightness.
 3. Overall length and width.
 4. Squareness from corner to corner.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine fabricated units, substrates, areas, and conditions, for compliance with requirements, installation tolerances, and other conditions affecting performance of sound-absorbing units.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Install sound-absorbing units in locations indicated with vertical surfaces and edges plumb, top edges level and in alignment with other units, faces flush, and scribed to fit adjoining work accurately at borders and at penetrations.
- B. Comply with sound-absorbing unit manufacturer's written instructions for installation of units using type of mounting devices indicated. Mount units securely to supporting substrate.
- C. Install acoustical wall panels in locations indicated with vertical surfaces and edges plumb, top edges level and in alignment with other panels, faces flush, and scribed to fit adjoining work accurately at borders and at penetrations.
 1. Cut units to be at least 50 percent of unit width, with facing material extended over cut edge to match uncut edge. Scribe acoustical wall panels to fit adjacent work. Butt joints tightly.

3.03 INSTALLATION TOLERANCES

- A. Variation from Plumb and Level: Plus or minus 1/16 inch.
- B. Variation from Level or Slope: Plus or minus 1/16 inch.
- C. Variation of Panel Joints from Hairline: Not more than 1/16 inch wide.

3.04 CLEANING

- A. Clip loose threads; remove pills and extraneous materials.
- B. Clean panels on completion of installation to remove dust and other foreign materials according to manufacturer's written instructions.

3.05 PROTECTION

- A. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, to ensure that acoustical wall panels are without damage or deterioration at time of Substantial Completion.
- B. Replace acoustical wall panels that cannot be cleaned and repaired, in a manner approved by Architect, before time of Substantial Completion.

END OF SECTION