

SECTION 06 42 16
LINEAWOOD ACOUSTIC
ARCHITECTURAL PLANKS
Three-Part CSI Master Specification

Basis of Design	Lineawood Acoustic Architectural Panels
Manufacturer	American Architectural Products Group (AAPG)
Applications	Interior wall and ceiling surfacing
CSI Section	06 42 16 - Wood Paneling
Specification Status	Editable master specification; coordinate bracketed options with project requirements

EDITOR NOTE: This proprietary master specification is based on the Lineawood brochure and acoustic laboratory report SY20-18. Confirm final product configuration, substrate, mounting depth, acoustic backing, fire-test classification, edge treatment, fasteners, environmental limitations, and available colors with AAPG before issuing for construction. Acoustic ratings apply only to the tested assemblies and mounting conditions.

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes: Factory-fabricated Lineawood acoustic architectural slatted panels for interior walls and ceilings, including panels, acoustic fabric, attachment components, trims, accessories, sound-absorptive backing where indicated, and related installation materials.
- B. Related Requirements:
 - 1. Section 06 10 00 - Rough Carpentry: Wood blocking and furring.
 - 2. Section 09 21 16 - Gypsum Board Assemblies: Substrates behind architectural panels.
 - 3. Section 09 91 00 - Painting: Field finishing of adjacent construction.
 - 4. Division 26 - Electrical: Coordination of devices, lighting, and penetrations.

1.2 REFERENCES

- A. ISO 354:2003 - Acoustics - Measurement of Sound Absorption in a Reverberation Room.
- B. EN ISO 11654:1997 - Acoustics - Sound Absorbers for Use in Buildings - Rating of Sound Absorption.
- C. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials, where required by authorities having jurisdiction.
- D. ISO 16000 series / Finnish Emission Classification M1, where documented for the supplied assembly.

1.3 ADMINISTRATIVE REQUIREMENTS

- A. Preinstallation Conference: Conduct at Project site before installation. Review substrates, blocking, environmental conditions, layout, penetrations, terminations, lighting coordination, fasteners, and protection.
- B. Coordination: Coordinate panel module, joint locations, access panels, electrical devices, mechanical grilles, sprinklers, and other penetrations before fabrication.

1.4 SUBMITTALS

- A. Product Data: Manufacturer literature describing acoustic panel construction, dimensions, finish, acoustic openings, fabric backing, accessories, installation, cleaning, and limitations.
- B. Shop Drawings: Show plans, elevations, reflected ceiling plans, panel orientation, module, joint layout, attachment, perimeter conditions, inside and outside corners, penetrations, transitions, cavity depth, acoustic insulation, and mounting configuration.
- C. Samples:
 - 1. Finish Samples: Minimum 8 by 10 inches, showing specified real-oak veneer finish, slat profile, and black reveal condition.
 - 2. Profile Sample: Full-width panel section, minimum 12 inches long, showing slats, spacing, perforated base, acoustic fabric, edge, and attachment condition.
- D. Certificates and Test Reports: Submit acoustic test report SY20-18, available emissions documentation, and surface-burning documentation for the project-specific assembly.
- E. Closeout Submittals: Cleaning and maintenance instructions; warranty documentation; record of approved finish and product codes.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Manufacturer regularly engaged in production of architectural acoustic panel and panel systems of similar type and complexity.
- B. Installer Qualifications: Experienced installer approved by manufacturer and having completed not fewer than three projects of comparable scope.
- C. Mockup: Construct minimum 8-foot-wide by 8-foot-high wall mockup or equivalent ceiling mockup, including one corner, one termination, one penetration, specified acoustic backing, cavity depth, and attachment method. Approved mockup establishes minimum standard and may remain as part of Work if undisturbed.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in unopened manufacturer packaging, identified with product, finish, lot, and project information.
- B. Store flat, dry, fully supported, and protected from moisture, sunlight, dirt, and damage. Do not store directly on concrete.
- C. Handle panels to prevent chipping, scratching, bowing, damage to veneer faces, acoustic openings, and acoustic fabric.

1.7 FIELD CONDITIONS

- A. Environmental Conditions: Do not install until building is enclosed, wet work is complete and dry, and permanent HVAC maintains service conditions.
- B. Acclimatization: Condition materials in installation area for not less than 48 hours, or longer if required by manufacturer.
- C. Field Measurements: Verify dimensions before fabrication where work is dependent on field conditions.

1.8 WARRANTY

- A. Manufacturer Warranty: Provide manufacturer standard written warranty covering defects in materials and manufacture for [one] year from Substantial Completion.

PART 2 - PRODUCTS**2.1 MANUFACTURER**

- A. Basis-of-Design Manufacturer: American Architectural Products Group, 248 James Street, Venice, Florida 34285; telephone 844-307-9571; email info@aapgco.com; website www.aapgco.com.
- B. Specified Product: Lineawood Acoustic Architectural Panels. Provide the specified product manufactured and supplied by American Architectural Products Group; no substitutions or proposed equals are permitted.
- C. Substitutions: Not permitted. Requests for substitutions, comparable products, alternates, or proposed equals will not be considered.
- D. Distributor: Anita Hlister; email anita.hlister@koroseal.com; telephone 813-802-8211.
- E. Division 01 substitution procedures do not apply to this Section. Product naming is proprietary and establishes the only acceptable manufacturer and product.

2.2 ACOUSTIC ARCHITECTURAL PANEL SYSTEM

- A. System Description: Factory-fabricated linear slatted acoustic panel assembly comprising real-oak-veneered profiled slats, perforated MDF base, black acoustic fabric, precision spacing, and coordinated attachment for continuous wall or ceiling installation.
- B. Nominal Panel Size: 118 inches long by 8.5 inches wide by 0.79 inch thick (3000 by 217 by 20 mm). All dimensions are nominal.
- C. Slat Configuration:
 - 1. Standard: Five slats, each approximately 1.42 inches (36 mm) wide.
 - 2. Wide: Not applicable to the tested acoustic configuration unless specifically documented by manufacturer.
 - 3. Spacing: Approximately 0.31 inch (8 mm) black reveal between slats.
 - 4. Profile: Slat exposed edges gently rounded and planed at approximately 45 degrees to create a three-dimensional linear appearance and assist sound diffusion.
- D. Core and Base: High-quality MDF base, veneered with real oak and factory machined with 40 acoustic openings approximately 7.09 by 0.79 inches (180 by 20 mm), representing approximately 21 percent open area.
- E. Decorative Surface: Real oak veneer permanently bonded to exposed slat faces and base as required for complete finished appearance.
- F. Acoustic Fabric: Premium black acoustic fabric factory applied to both sides of the perforated base.
- G. Finish Selection: [Oak] [White Oak] [Mocha] [Black].
- H. Product Codes: LP1-B-O-05, LP1-B-W-05, LP1-B-M-05, or LP1-B-B-05, as selected.
- I. Joints: Precision tongue-and-groove joints on all sides.
- J. Panel Weight: Approximately 14.33 lb (6.5 kg) per panel.
- K. Adhesive: Manufacturer standard water-soluble adhesive compatible with MDF, veneer, and acoustic fabric.
- L. Finish: UV-cured varnish for Oak and White Oak; water-based lacquer for Mocha and Black.
- M. Emissions: Finnish Emission Classification M1 certified, subject to current manufacturer documentation.

2.3 ACOUSTIC PERFORMANCE

- A. Test Standards: Sound absorption coefficient measured in accordance with ISO 354:2003. Weighted sound absorption coefficient and absorption class determined in accordance with EN ISO 11654:1997.
- B. Laboratory: Turku University of Applied Sciences, Laboratory of Acoustics; Report SY20-18, dated February 19, 2020.
- C. Tested Specimen: Slatted acoustic panels, nominal 118 by 8.5 inches (3000 by 217 mm), with five approximately 1.38-inch (35 mm) wood slats, approximately 0.28-inch (7 mm) gaps, 40 rear openings, and total test area of 113 sq. ft. (10.5 sq. m).

- D. Minimum Specified Performance: Provide tested assembly achieving weighted sound absorption coefficient not less than α_w 0.65 and Sound Absorption Class C when installed with either 2-inch (50 mm) mineral wool or 2-inch mineral wool plus 6-inch (150 mm) air gap, as represented by Report SY20-18.
- E. Alternative Mounting Performance: When indicated, provide assembly performance matching one of the tested configurations listed below. Acoustic performance shall not be extrapolated to untested mounting conditions.

Tested Mounting Configuration	Air Gap	Mineral Wool	Acoustic Rating
Panel + mineral wool + air gap	6 in. (150 mm)	2 in. (50 mm)	α_w 0.65; Class C
Panel + air gap	8 in. (200 mm)	None	α_w 0.55; Class D
Panel + mineral wool	None	2 in. (50 mm)	α_w 0.65; Class C
Panel + air gap	2 in. (50 mm)	None	α_w 0.60; Class C

- F. Frequency-Band Performance: For the α_w 0.65 / Class C assembly with 2-inch (50 mm) mineral wool, one-third-octave absorption coefficients ranged from 0.29 at 100 Hz to a peak of 0.80 at 250 Hz, with octave-band practical absorption coefficients α_p of 0.50 at 125 Hz, 0.70 at 250 Hz, 0.75 at 500 Hz, 0.65 at 1000 Hz, 0.55 at 2000 Hz, and 0.60 at 4000 Hz.
- G. Acoustic Limitation: Test results are valid only for the tested specimens and mounting configurations. Changes in cavity depth, insulation, substrate, perimeter sealing, penetrations, or installed area may change performance.

2.4 FABRICATION

- A. Fabricate panels square, straight, and free of warp, delamination, chips, scratches, visible adhesive, blocked acoustic openings, and damaged fabric.
- B. Sequence veneer pattern and tone for visually balanced installation. Maintain consistent slat spacing and reveal alignment.
- C. Machine acoustic openings, cutouts, and edge conditions accurately. Reinforce cutouts where required. Do not obstruct factory acoustic openings or damage acoustic fabric. Do not field cut factory-finished edges where exposed unless approved by manufacturer.
- D. Provide factory-finished components to greatest extent practicable. Protect acoustic fabric and seal field-cut MDF edges where required by manufacturer.

2.5 ACCESSORIES

- A. Fasteners: Manufacturer-recommended corrosion-resistant screws, crown staples, clips, or concealed fasteners suitable for substrate and application. Exposed fasteners, where permitted, shall be black and positioned within reveals without obstructing acoustic openings.
- B. Furring and Blocking: Kiln-dried wood, plywood, or metal furring sized and spaced to support panels and loads and to provide the indicated acoustic cavity depth.
- C. Trims: Manufacturer standard or custom matching/contrasting perimeter, corner, reveal, and transition trims.
- D. Acoustic Backing: Black acoustically transparent fabric and [2-inch (50 mm) mineral wool] [6-inch (150 mm) air gap] [8-inch (200 mm) air gap] [2-inch (50 mm) air gap], as required for the specified tested assembly.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, blocking, dimensions, tolerances, moisture conditions, penetrations, acoustic cavity depth, backing materials, and adjacent construction before installation.
- B. Verify substrates are plumb, level, true, dry, clean, and capable of supporting installed system without deflection.
- C. Do not begin installation until unsatisfactory conditions have been corrected. Beginning installation constitutes acceptance of substrates.

3.2 PREPARATION

- A. Establish control lines and verify layout to avoid narrow cuts at visible boundaries.
- B. Install blocking and furring at spacing required by manufacturer and coordinated with panel joints, edges, fixtures, penetrations, and specified acoustic cavity depth.
- C. Coordinate concealed services before covering substrates.

3.3 INSTALLATION

- A. Install in accordance with approved shop drawings, manufacturer written instructions, and the mounting configuration required to achieve specified acoustic performance.
- B. Orientation: Install panels [vertically] [horizontally] [as indicated]. Maintain continuous, straight slat and reveal alignment across joints and adjacent surfaces.

- C. Fastening: Secure through tongue, reveal, clip, or other manufacturer-approved location. Conceal fasteners to maximum extent. Do not damage veneer faces, acoustic fabric, or obstruct acoustic openings.
- D. Walls: Install from established datum, maintaining plumb joints and consistent reveals. Provide blocking at terminations and attachments.
- E. Ceilings: Install to structural or engineered support system. Maintain specified acoustic cavity and insulation. Do not support panels from suspended gypsum board or ceiling grid unless specifically engineered and approved.
- F. Openings: Cut accurately for outlets, devices, lights, sprinklers, grilles, access panels, and other penetrations. Avoid acoustic openings where practicable and protect acoustic fabric from tearing. Provide neat clearances and trims.
- G. Perimeters and Corners: Provide uniform reveals or trims. Scribe neatly to adjacent construction. Do not install damaged or chipped pieces in exposed locations.
- H. Expansion and Movement: Provide clearances and control joints required by manufacturer and coordinate with building movement joints. Do not bridge structural expansion joints.
- I. Surface and Acoustic Fabric Protection: Protect veneer faces, acoustic openings, and acoustic fabric during installation and adjacent work.

3.4 FIELD QUALITY CONTROL

- A. Inspect completed installation for alignment, fastening, surface damage, acoustic backing continuity, cavity depth, joint uniformity, and adherence to approved mockup.
- B. Replace panels that are warped, delaminated, chipped, scratched, stained, improperly aligned, have damaged acoustic fabric, blocked acoustic openings, or are otherwise unacceptable.

3.5 CLEANING

- A. Clean veneer surfaces with manufacturer-approved nonabrasive products. Remove adhesive, markings, and construction residue without damaging finish or acoustic fabric.
- B. Do not use abrasive pads, strong solvents, compressed air, or cleaners not approved by manufacturer.

3.6 PROTECTION

- A. Protect completed installation from impact, moisture, dust, staining, and damage by subsequent construction activities.
- B. Repair or replace damaged work before Substantial Completion.

END OF SECTION