**Guide Specification**

**TYPE: LINEA REFLECTOR PANEL**

**PROJECT:** **<Insert>**

09 51 00 – ACOUSTICAL CEILINGS

09 54 26 – WOOD CEILINGS

09 84 16 – FIXED SOUND-REFLECTIVE PANELS

**PART 1 – GENERAL**

* 1. **SUMMARY**
1. Section Includes:
2. Sound-reflecting, Custom-fabricated, Flat and Curved Wood Veneer and Laminate Ceiling Panels.
3. Trim and Accessories for Ceiling Installation
4. Suspension Hardware and Anchors
	1. **RELATED WORK IN OTHER SECTIONS:**
5. Division 1 – “General Conditions” for substitution requests, submittals, etc.
6. Division 9 – “Acoustic Ceilings.”
7. Division 13 – “Integrated Assemblies.”
8. Division 15 – “Mechanical” for work to be coordinated with ceiling.
9. Division 16 – “Electrical” for light fixture coordination.
10. Division 17 – “Audio, Data, Telecommunications”
	1. **REFERENCES**
11. Local Building Code – Current Edition
12. ASTM C423-22 – Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
13. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials.
14. CAN/ULC S102.2 – Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies
15. CISCA – Ceiling Systems Handbook, current edition.
	1. **QUALITY ASSURANCE**
16. Manufacturer Qualifications: Manufacturers other than those listed in Paragraph 2.1 are required to submit for approval prior to bidding per Section One.
17. Installer Qualifications: Engage an experienced Installer, approved by wood ceiling manufacturer, who has completed panel ceilings similar in species, design, and extent to that indicated for this Project and with a record of successful in-service performance.
18. Inspection: All work must pass inspection and approval of architect, as well as the local codes and regulations or authorities having jurisdiction.
19. Single-Source Responsibility for Wood Ceiling and Wall System: Obtain each type of Wood Ceiling and Wall Panels from a single fabricator, with in-house Shop Drawing capabilities, in-house assembly and finishing capabilities, and with resources to provide products of consistent quality in appearance and physical properties without delaying the project.
20. Single-Source Responsibility for Suspension System: Obtain each type of suspension system from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying project.
21. Pre-Installation Conference: Conduct conference at Project site to comply with requirements of Division 1 Section "Project Meetings."
	1. **SUBMITTALS**
22. General: Submit each item in this Section according to the Conditions of the Contract and Division 1 Specification Sections.
23. Product Data: For each type of product specified.
24. Samples: For verification of each type of exposed finish required, prepared on samples of size indicated below. Where finishes involve normal color and texture variations, include sample sets showing the range of variations expected

1. 12” x 12” samples of each panel type, pattern, and color.

* 1. **SHOP DRAWINGS & COORDINATION WITH OTHER TRADES**
1. Shop Drawings: Provide Shop Drawings/Coordination Drawings for all ceilings, which should include RCP and product details. Coordinate layout and installation of wood panels and suspension system components with other construction elements that penetrate ceilings, walls or is supported by them, including light fixtures, HVAC equipment, fire-suppression system components, partition assemblies and all perimeter conditions.
	1. **PROJECT CONDITIONS**
2. Space Enclosure and Environmental Limitations: Do not install wood panel until spaces are enclosed and weatherproof, wet-work in spaces is completed and dry, work above ceilings is complete, and ambient temperature and humidity conditions are being maintained at the levels indicated for Project when occupied for its intended use.
	1. **DELIVERY, STORAGE, AND HANDLING**
3. Delivery & Unloading: Coordinate crate sizes, weights, unloading options, and delivery schedule with manufacturer prior to fabrication. Deliver wood panels and suspension system components to Project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other mistreatment.
4. Acclimatization: Before installing wood panels, permit them to reach room temperature and a stabilized moisture content (at least 72 hours) per AWI standards.
5. Handling: Handle Wood Ceiling and Wall Panels carefully to avoid chipping edges or damaging units in any way.
6. Protection:
7. Personnel: Follow good safety and industrial hygiene practices during handling and installing of all products and systems, with personnel to take necessary precautions and wear appropriate protective equipment as needed. Read related literature for important information on products before installation. Contractor to be solely responsible for all personal safety issues during and subsequent to installation; architect, specifier, owner, and manufacturer will rely on contractor’s performance in such regard.
8. Existing completed work: Protect completed work above suspension system from damage during installation of suspension system components.
	1. **EXTRA MATERIAL/WARRANTIES**
9. Extra Materials: Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with labels clearly describing contents.
10. Wood Wall and Ceiling Panels: Furnish quantity of full-size units equal to 2.0 percent of amount installed.
11. Suspension System Components: Furnish quantity of each component equal to 2.0 percent of amount installed.
12. Warranties: Provide owner with a (1) year warranty for material and workmanship on all installed products.
13. Manufacturers: All materials, wood panels and grid, shall be warranted for (1) one year for material and workmanship.
14. Installer: All work shall be warranted for (1) year from final acceptance of completed work

**PART 2 – PRODUCTS**

* 1. **SOUND-REFLECTING CEILING PANELS**
1. General: The following manufacturer is basis of design:
2. LINEA Ceiling & Wall Systems

2320 Peardonville Road, Abbotsford, BC, Canada, V2T 6J8

Ph. 1-604-776-2265 / Website: www.LineaCeilings.com / Email: Sales@LineaCeilings.com

1. Or equal, as prior approved by architect.
2. Substitutions: Not permitted
	1. **PRODUCT TYPE**
3. Product: LINEA REFLECTOR PANEL – Non-Perforated
4. LINEA Ceiling & Wall Systems. (www.LineaCeilings.com):
5. Face: <Insert Wood Specie and Grain> / <Insert PLAM description>
6. Core: 3/4" MDF
7. Edge: <If Flat - Square with Matching Veneer> / <If curved - Square, Panel Edges shall be painted or stained to a finish similar to the exposed face>
8. Panel Size: <48”x 96”> / <48” x 120”> / <Custom per drawings>
9. Curve: <Flat> / <Concave> / <Convex> / <Serpentine> / <Custom per drawings>
10. Radius: <12’> / <Custom per drawings>
11. Style: Non-Perforated <Custom – Insert Description>
12. Face Texture: Smooth <LINEA Textured>
13. Color: Natural <Stain, Tint, or Painted to match architect sample>
14. Finish: Low VOC Clear, <Matte, Satin, or Semi-Gloss> Sheen
15. Fire Rating: Class A <Class C>
16. Structural Ribs: 3/4" x 3”; Factory Attached to match Curve
17. Install Method: Modular suspension to support structure (by others)
18. Product: LINEA REFLECTOR PANEL – MicroPerforated
19. LINEA Ceiling & Wall Systems. (www.LineaCeilings.com):
20. Veneer: <Insert Wood Specie and Grain>
21. Core: 3/4" MDF
22. Edge: <If Flat - Square with Matching Veneer> / <If curved - Square, Panel Edges shall be painted or stained to a finish similar to the exposed face>
23. Panel Size: <48”x 96”> / <48” x 120”> / <Custom per drawings>
24. Curve: <Flat> / <Concave> / <Convex> / <Serpentine> / <Custom per drawings>
25. Radius: <12’> / <Custom per drawings>
26. Style: MicroPerforated
27. Face Texture: Smooth <LINEA Textured>
28. Color: Natural <Stain, Tint, or Painted to match architect sample>
29. Finish: Low VOC Clear, <Matte, Satin, or Semi-Gloss> Sheen
30. Fire Rating: Class A <Class C>
31. Acoustic Backer: SoundTex, Factory Attached
32. Structural Ribs: 3/4" x 3”; Factory Attached to match Curve
33. Install Method: Modular suspension to support structure (by others)
	1. **ACCESSORIES**
34. Attachment hardware for ceiling panels as specified by manufacturer for installation
35. Acoustic Batt Insulation: Specified in Section <insert section> <1”> <2”> thick. Supplied and installed by Contractor. <insert if applicable>
36. Vertical Trim: <Factory Integrated> <Supplied Loose> 3/4” x <3”> <4”> <6”> <Custom> x <96”> <120> <Custom>. Vertical Trim finish to match finish of ceiling panels
37. Touch-up Finish: Type and color to match wood panels <insert if applicable>
38. Pre-finished veneer edge banding to match wood panels<insert if applicable>
	1. **FINISH**
39. Factory Finishing: Panel shall be factory-finished with manufacturer’s standard lacquer products per color selection by architect.
40. Due to the nature of real wood (variation in grain, texture and color) the finished product may range from light to dark affecting the look of the panels.

**PART 3 – EXECUTION**

* 1. **EXAMINATON**
	2. Site Verification of Conditions: Examine installation area for compliance with all manufacturers’ project environmental requirements and ensure uninstalled products have been stored, handled and acclimatized properly prior to commencing installation. Inspect all substrates for completion and quality of work to ensure that surfaces are level, plumb, clean, dry and completely cured from water or solvent evaporation. Do not commence installation if the structural capacity of the substrate is questionable or inadequate.
	3. Coordination with Other Trades: Coordinate with all other trades to ensure that wet work including concrete, terrazzo, plastering, painting, etc. in the installation area is complete, cured and dry prior to installation. Coordinate with all other trades to verify that components associated with mechanical, electrical, lighting, data, telecommunication, audio, video, fire suppression and other building systems are installed behind or above designated installation areas prior to commencing installation. Coordinate the exact size, location and sequencing of building system components that penetrate the ceiling/wall panels.
	4. **PREPARATION**
	5. Coordination: Furnish layouts for cast-in-place anchors, clips, and other ceiling anchors whose installation is specified in other Sections.
	6. Layout: Measure each ceiling area and establish the layout of Wood Ceiling Panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders and conform to the layout shown on reflected ceiling plans in accordance with wood ceiling manufacturer’s approved Shop Drawings.
	7. **INSTALLATION**
	8. Attachments: Suspend ceiling hangers from building's structural members per manufacturer’s instructions and in compliance with all local codes and regulations.
	9. Installation of LINEA REFLECTOR PANEL: Install Wood Ceiling Panels in accordance with manufacturer’s installation instructions and in compliance with all local codes and regulations.
	10. Install panels as shown and detailed in the architectural drawings and according to manufacturer’s guidelines and industry standards.
	11. Install panels with a minimum 1/4” gap between any adjacent units both vertically and horizontally. The gaps are there to help conceal alignment differences that present due to the natural movement of wood and assembled wood products.
	12. **CONSTRUCTION**
	13. Interface with Other Work: Support all light fixtures, HVAC air inlet/outlet devices, speakers, signage, sprinkler heads/piping, etc. independently from panels. Contractor shall not use panels to support the weight of any other building element or component.
	14. **ADJUSTING**
	15. Adjust panels after installation so that surfaces are aligned, flush, and level with gaps between units consistent in width and straight.
	16. **CLEANING**
	17. General: Clean exposed wood surfaces of wood ceiling panels. Comply with manufacturer’s instructions for cleaning and touchup of minor finish damage. Remove and replace wood ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage
	18. **INSPECTION**
	19. When LINEA Ceiling & Wall Systems wood ceiling panels have been completely installed, the owner and/or the owner’s representative shall inspect all finished surfaces of the wood ceiling system to validate that the work has been completed in compliance with these specifications. Any defect in meeting installation specifications shall be corrected by the installation contractor at no additional cost to the owner and/or LINEA Ceiling & Wall Systems.

**END OF SECTION**