



**USG CEILINGS™ BRAND
TRUE™ WOOD**
Technical Installation Guide

APRIL 2014

Choose Your System

True™ Wood Lay-In panels work just like traditional acoustical panels. Available in many wood finishes and four perforation patterns.

True™ Wood Accessible Reveal panels install on a traditional suspension system and provide a clean uninterrupted wood ceiling with complete access to the plenum. Available in many wood finishes and four perforation patterns.

True™ Wood Linear is available in a variety of finishes and install directly to USG drywall grid system, making the system great for large open spaces.

Understand Your System

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For More information

Technical Service
800 USG.4YOU

Web Site
usg.com



SYSTEM OVERVIEW

<p>True Wood Systems</p>	<p>True Wood Lay-In panels work just like traditional acoustical panels. Available in many wood species and four perforation patterns.</p> <p>True Wood Accessible Reveal panels install on a traditional suspension system and provide a clean uninterrupted wood ceiling with complete access to the plenum. Available in many wood species and four perforation patterns.</p> <p>True Wood Linear is available in a variety of finishes and install directly to USG drywall grid system, making the system great for large open spaces.</p>
<p>Sizes</p>	<p>True Wood Lay-In panels and Accessible Reveal panels come in 2' x 2' and 2' x 4' sizes as a standard.</p> <p>True Wood Linear comes in a nominal 4" x 96" and 6" x 96" plank sizes and install with a 3/4 inch gap.</p>
<p>Suspension System</p>	<p>True Wood Lay-In is available for both 15/16" DX™, 9/16" Centricee™ and 9/16" Finline™ suspension systems. All Lay-In tiles have a 5/16" Shadowline™ or Finline edge standard. Panels may be field-cut at wall and columns but otherwise should be used in full modules.</p> <p>True Wood Accessible Reveal tiles installs on to 15/16" DX grid only, the reveal created by the abutting tiles leaves a 3/8" gap that conceals the suspension system. Accessible Reveal tile should be used in full modules but previsions can be made to accommodate field-cut conditions</p> <p>True Wood Linear is fastened directly to drywall suspension system and special considerations have to be taken for access and field-cut conditions.</p>
<p>Perimeter Details</p>	<p>Optional Compasso™ trim may be used with True Wood Lay-In and Accessible Reveal ceilings for a finished appearance at exposed edges. See brochure IC400 in the USG Specialty Ceilings Binder for more information.</p> <p>True Wood perimeter trim can be used with all True Wood systems to ensure a panel species and perimeter trim wood species match.</p>
<p>Acoustical Performance</p>	<p>Perforated Lay-In and Accessible Reveal panels with a Acoustibond sound backer achieve .60 NRC when installed in an enclosed plenum (18" depth min.). Available fiberglass backing provides even greater acoustical performance.</p>
<p>Project Conditions</p>	<p>Installation shall be done only when the temperature and humidity closely approximate the interior conditions that will exist when the building is occupied. The heating and cooling systems shall be operating before, during, and after installation, with the humidity of interior spaces maintained between 25% and 55%.</p> <p>Building environmental conditions should be maintained in accordance with ASHRAE Standard 62.1, 2013.</p> <p>It is important that plenums have proper ventilation, especially in high moisture areas. There shall be no excessive build up of heat in the ceiling areas.</p> <p>Prior to the start of installation, all exterior windows and doors are to be in place, glazed, and weather-stripped. The roof is to be watertight, and all wet trades' work is to be completed, and thoroughly dry.</p>



SYSTEM OVERVIEW

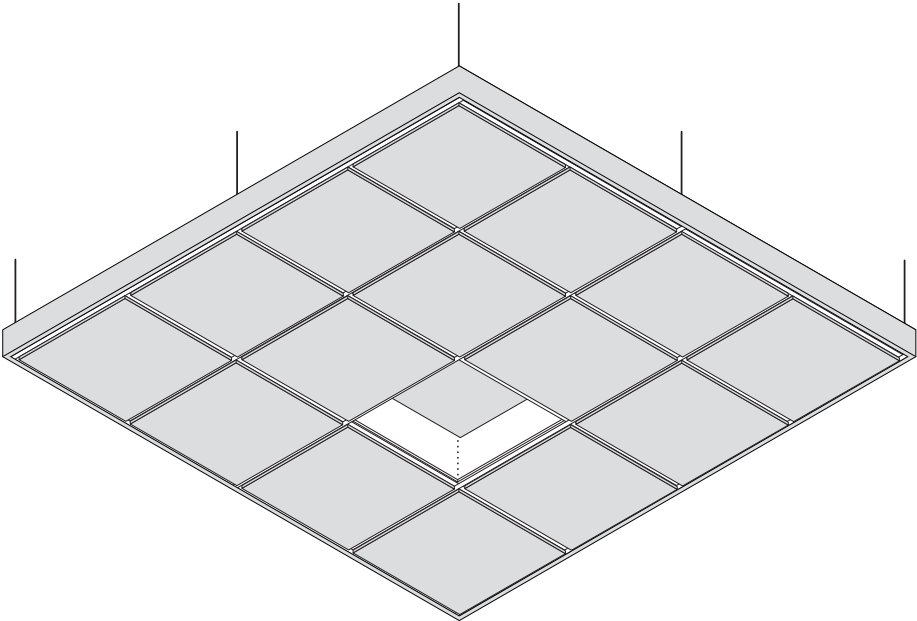
<p>Project Conditions cont.</p>	<p>Refer to CISCA Wood Ceilings Technical Guidelines for best practices on installing wood ceilings.</p> <p>Mechanical, electrical and other utility service installations above the ceiling plane shall have been completed. No materials should rest against, or wrap around, the ceiling suspension components or connecting hangers.</p>
<p>Delivery, Storage and Handling</p>	<p>True Wood shall be delivered to the project site in original, unopened packages. True Wood shall be stored flat and level in a fully enclosed space. The Ceiling Panels shall be stored off the floor. Care in handling must be exercised to avoid damage.</p>
<p>Cutting Panels</p>	<p>True Wood panels should be cut face up. Eye protection should be worn.</p> <p>True Wood may be cut with a variety of tools including table saws, circular saws, jig saws, and hole saws. Please follow the safety instructions issued by the power tool manufacturer.</p> <p>A miter saw or table saw are the best choices for maintaining a clean, straight cut. For portable circular saws (Skilsaws) use either 24 or 40 tooth carbide blades to cut True Wood.</p> <p>For making holes for can lights, a hole saw is recommended. A jigsaw can also be used. Use fine tooth blades that are specified for cutting veneers.</p>
<p>Scratch Repair</p>	<p>A repair kit (foam brush and stain) is included with each True Wood order. This kit can be used after installation is complete and should be left with the building owner.</p>
<p>Material List</p>	<ul style="list-style-type: none"> - #8 1/2" wood lath screws - 1 1/4" fine threaded drywall screws - Large spring clamps - Miter saw - Table saw or circular saw - Jig saw - Hole saw and drill - Nail set - Hole punch - 1 1/4" trim nails - MAC2 clips - Can of black spray paint
<p>True Wood Products are FSC Certified</p>	<p>FSC stands for the Forest Stewardship Council. FSC certification is a voluntary, market-based tool for forest conservation. Consumer demand for FSC-certified products encourages more responsible forest management. FSC tracks products from forest to job site. Products that are responsibly harvested and/or from verified recycled sources are identified with the FSC logo.</p>



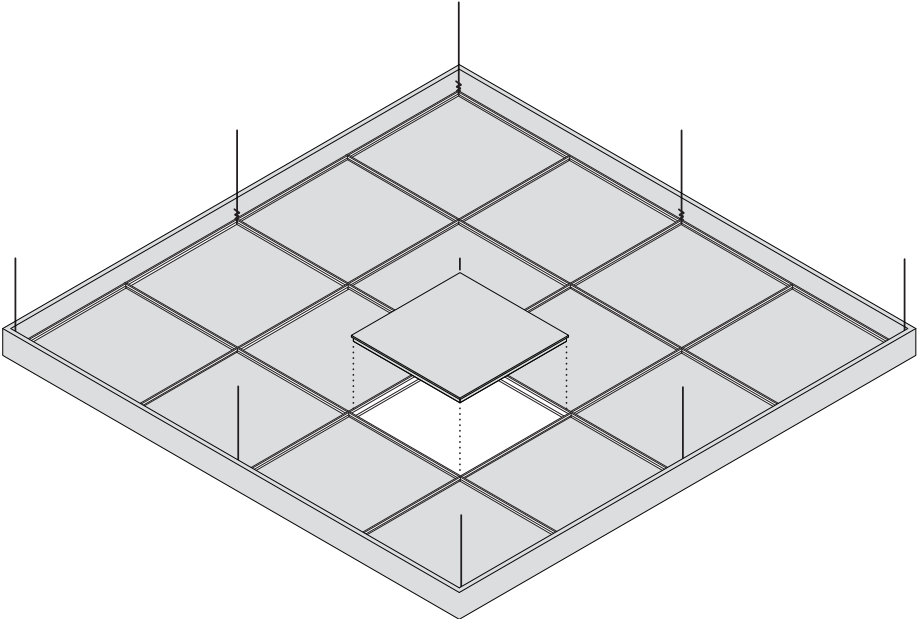
SYSTEM OVERVIEW

Lay-in Panels

View from Below



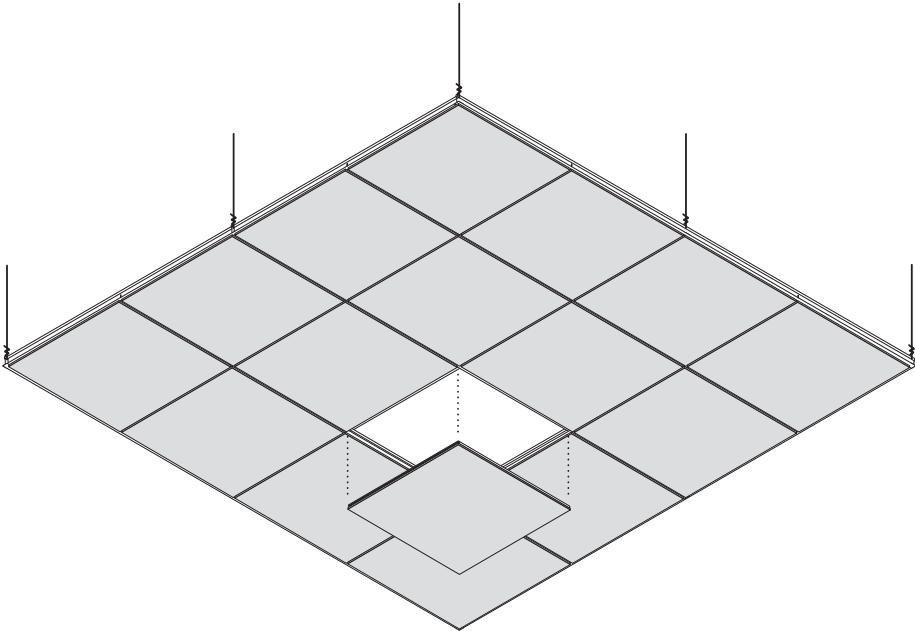
View from Above



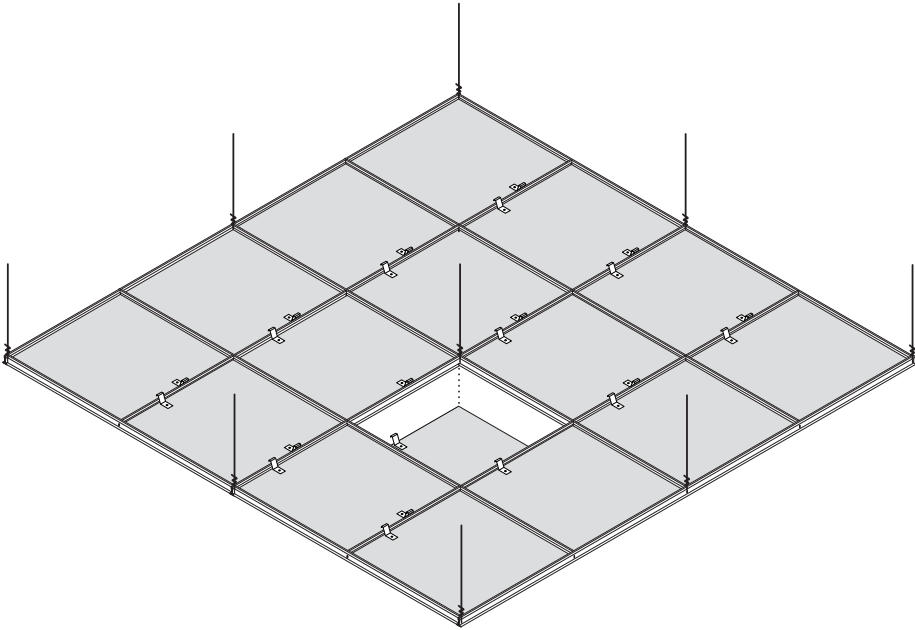
SYSTEM OVERVIEW

Accessible Reveal

View from Below



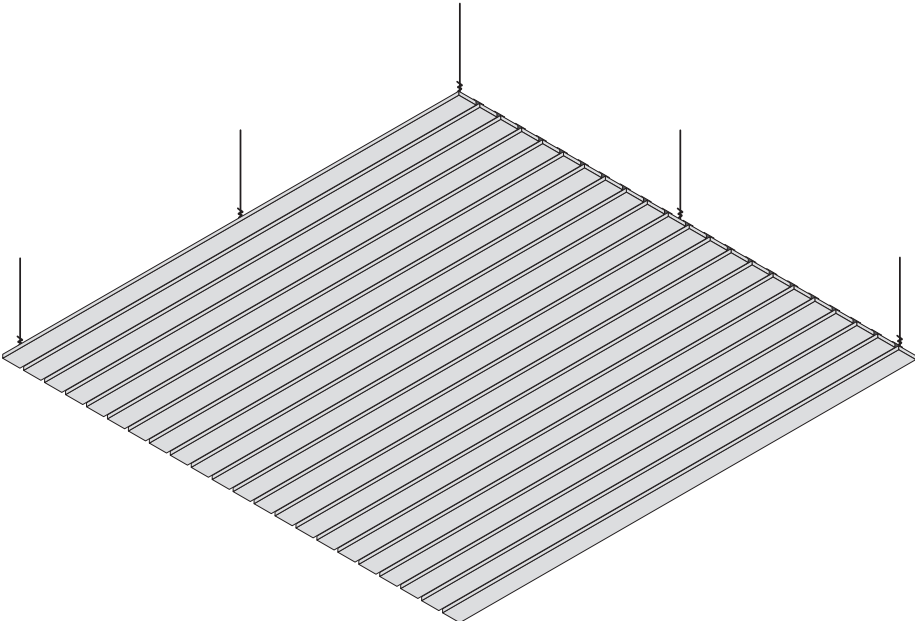
View from Above



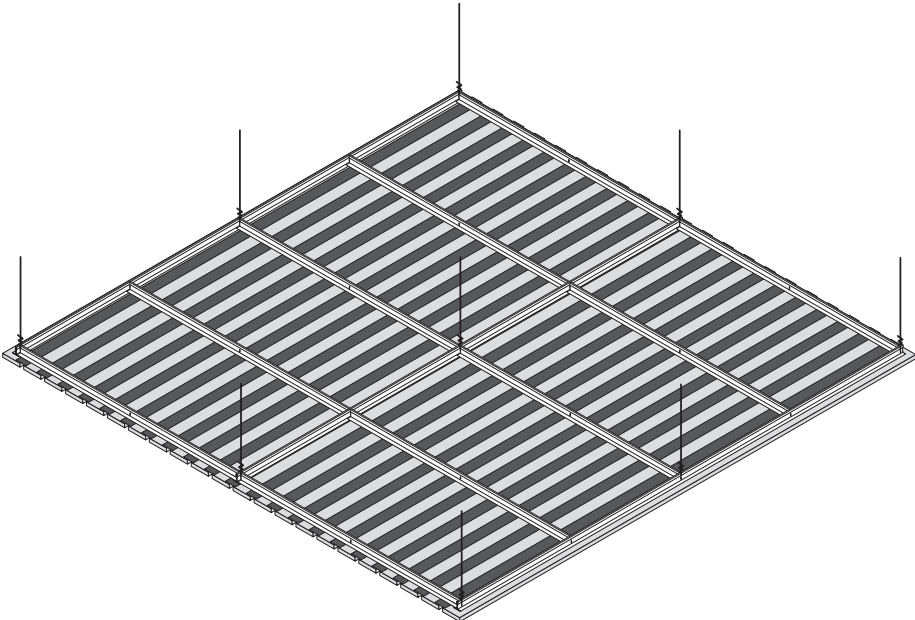
SYSTEM OVERVIEW

Linear

View from Below

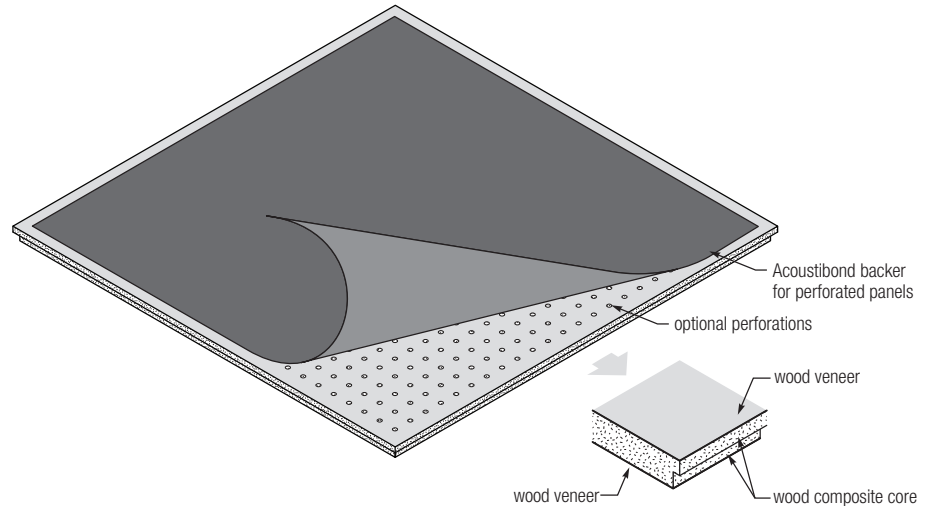


View from Above



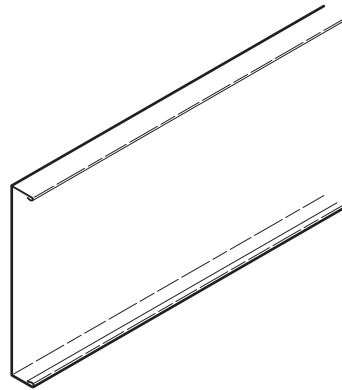
Linear

View from Below

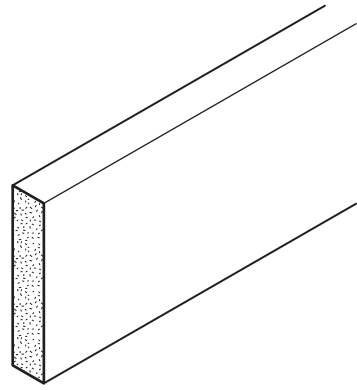


Trim

Compasso

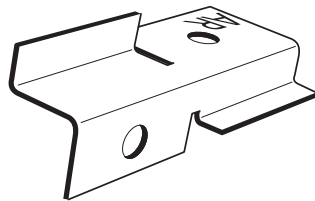


True Wood Trim





Accessories

WDPC1, Perimeter Attachment Clip

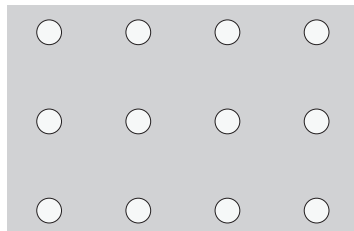


LAY-IN PANELS

Components

Panel Options	Size	2' x 2' 2' x 4'	
	Edge Detail	FL 	SL 

Perforations (see page 21)

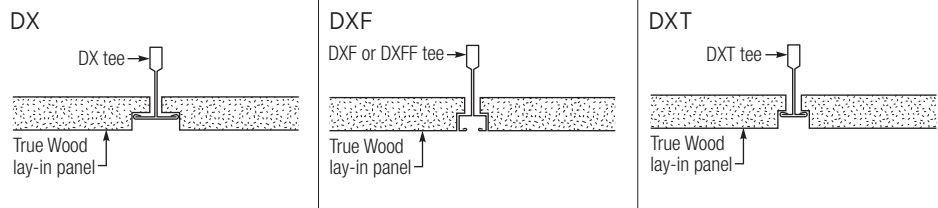


Acoustical Performance

Perforated Lay-In panels come standard with a black, factory-applied Acoustibond backer for enhanced sound performance. The Acoustibond backer is included on all perforated panels unless otherwise specified. This backer is also available in white. For even greater acoustical performance, fiberglass backing is available.

Perforation	Open Area	NRC
W100	10%	.60
W200	3%	.30
W300	20%	.70
W400	5%	.40

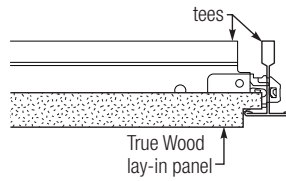
Suspension Systems



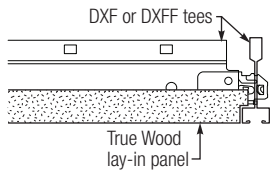
Perimeter Details

Non-Wall or Floating Condition

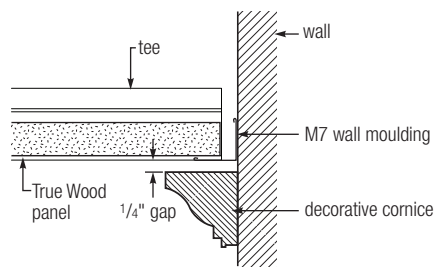
DX



DXF

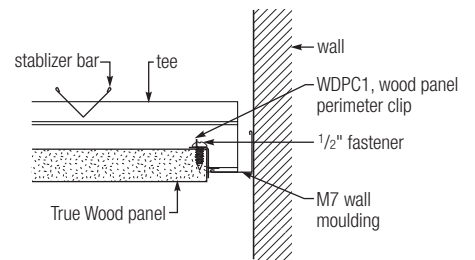


Wall Moulding Detail



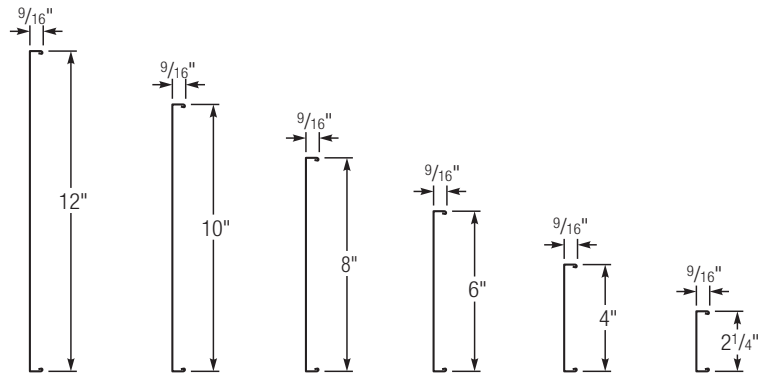
Wall or Column Condition

DX or DXT



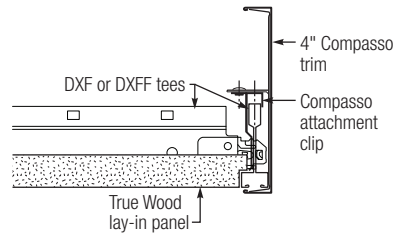
Trim Details

Optional Compasso edge trim in 2-1/4", 4", 6", 8", 10" and 12" heights may be added for a finished appearance at exposed edges.

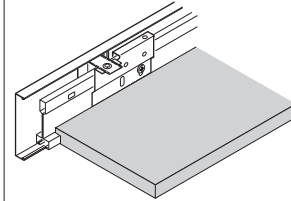


Parallel (On Module)

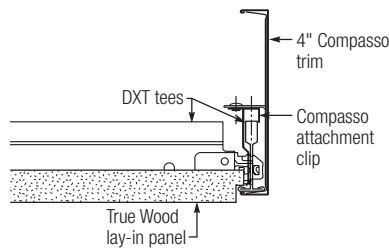
DXF



DXF (Isometric)

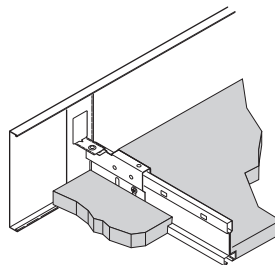


DXF



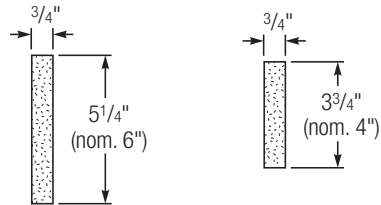
Perpendicular (Off Module)

DXF

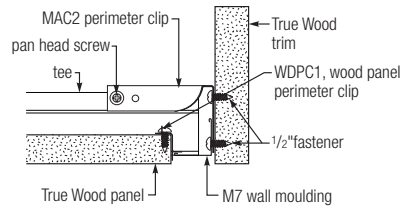


Trim Details

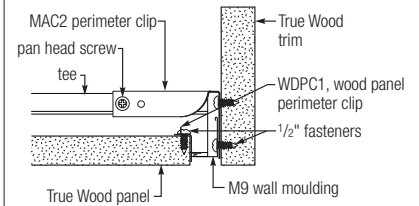
Optional True Wood Trim



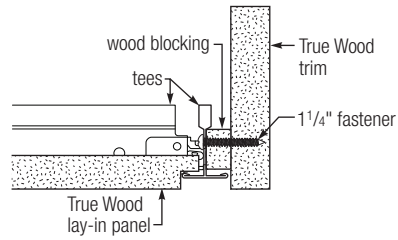
(Off Module) Off Module, M7 Wall Molding



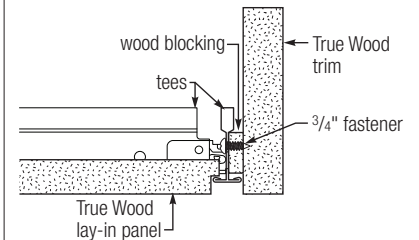
(Off Module) Off Module, M9 Wall Molding



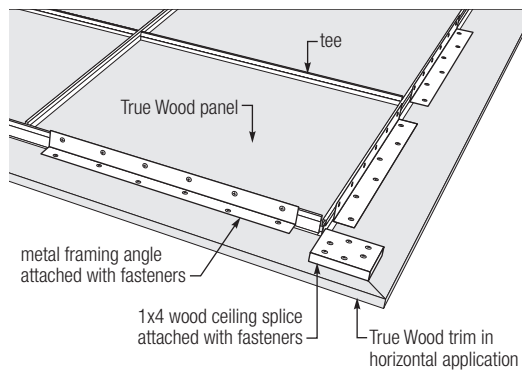
(On Module) DX



(On Module) DXT



Horizontal Trim

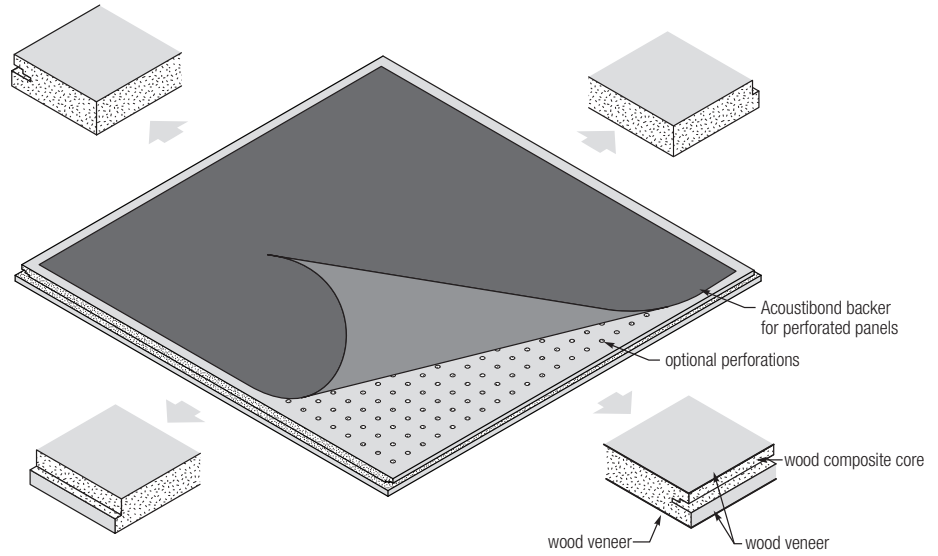


ACCESSIBLE REVEAL PANELS

Components

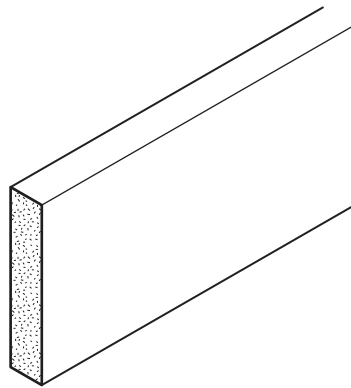
Panel

Panel Construction



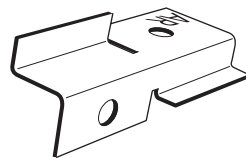
Trim

True Wood Trim

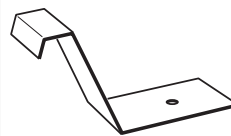


Accessories

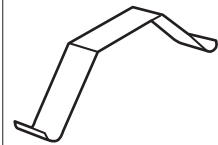
WDPC1, Perimeter Attachment Clip



WDRC, Retention Clip




C8 Wall Clip

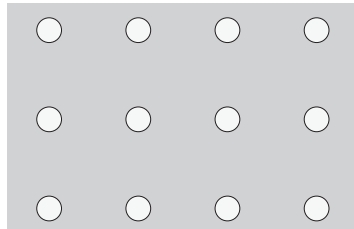


ACCESSIBLE REVEAL PANELS

Components

Panel Options	Size	2' x 2' 2' x 4'
	Edge Detail	AR 

Perforations (see page 21)



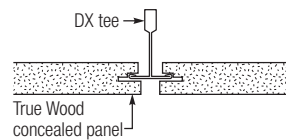
Acoustical Performance

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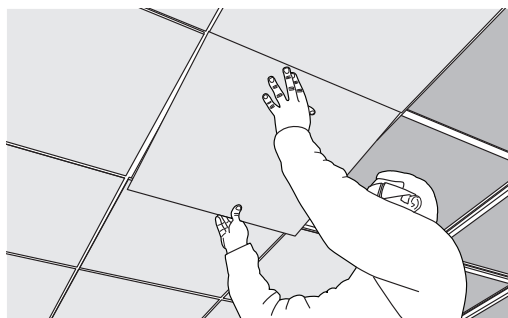
Perforation	Open Area	NRC
W100	10%	.60
W200	3%	.30
W300	20%	.70
W400	5%	.40

Suspension Systems

DX



Panel Installation

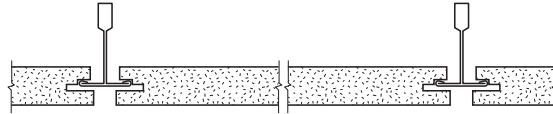


ACCESSIBLE REVEAL PANELS

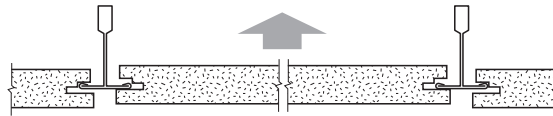
Components

Panel Installation

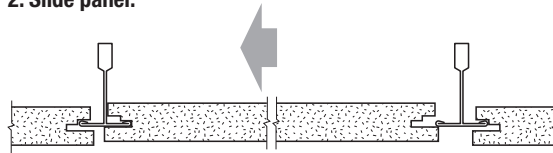
How to remove True Wood concealed panel.



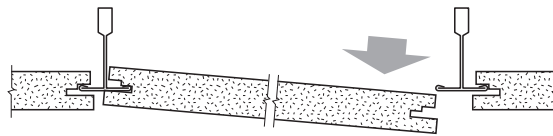
1. Lift panel.



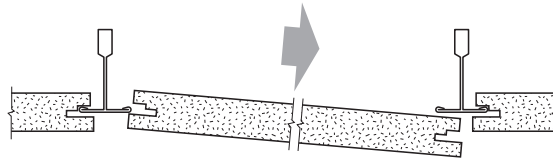
2. Slide panel.



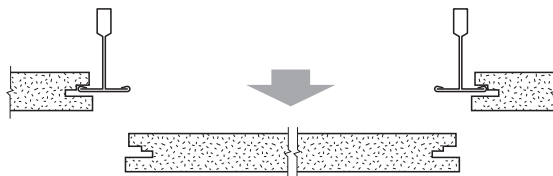
3. Lower end.



4. Slide off grid.



5. Lower panel



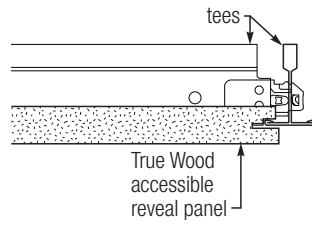
ACCESSIBLE REVEAL PANELS

Applications

Perimeter Details

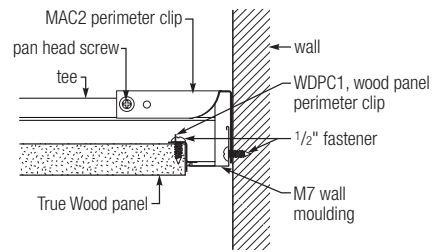
Non-Wall or Floating Condition

DX

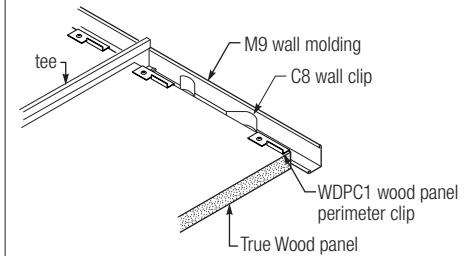
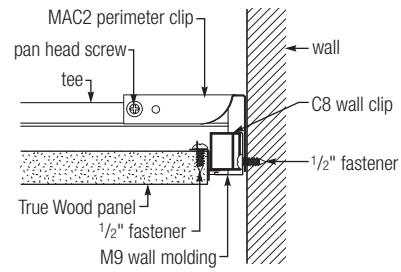


Wall or Column Condition

ALT.



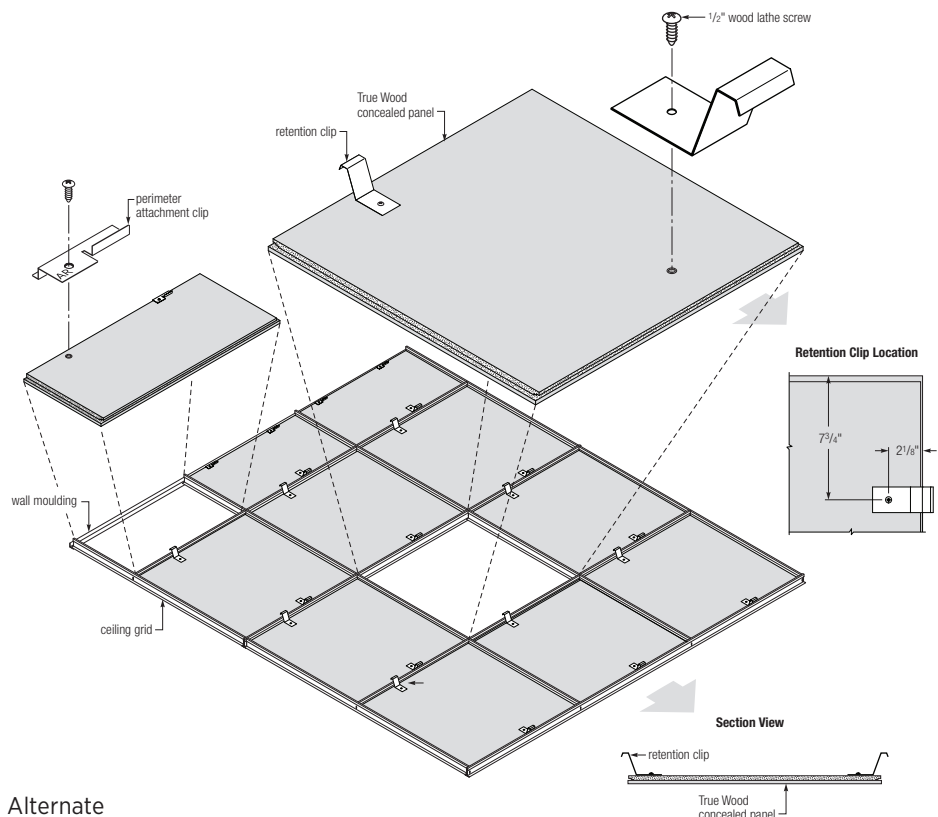
Wall Clip



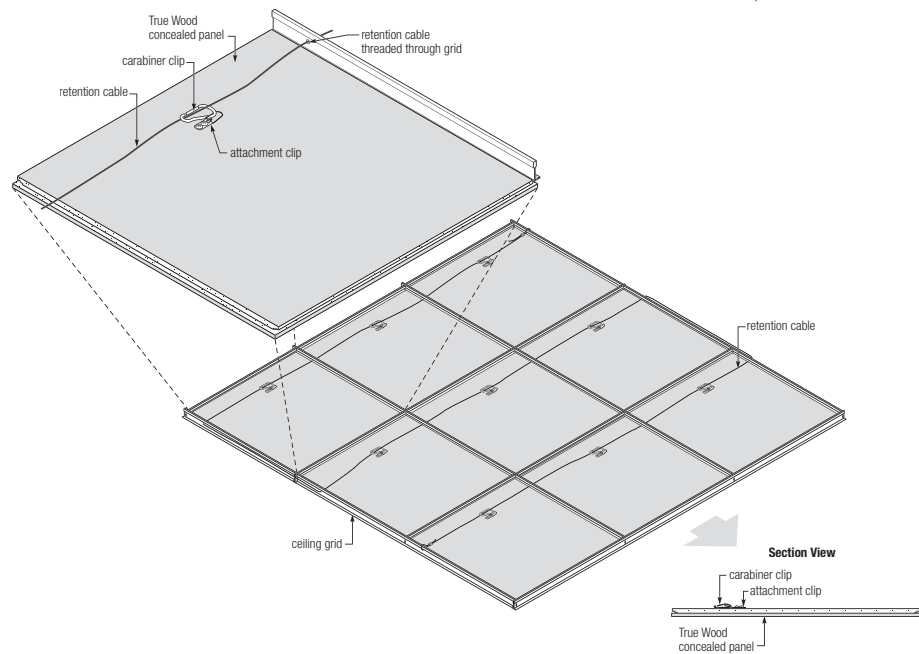
ACCESSIBLE REVEAL PANELS

Applications

Retention Clips (Required)



Alternate

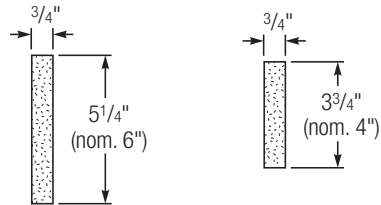


ACCESSIBLE REVEAL PANELS

Applications

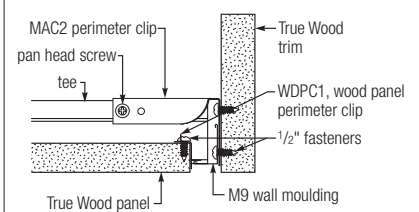
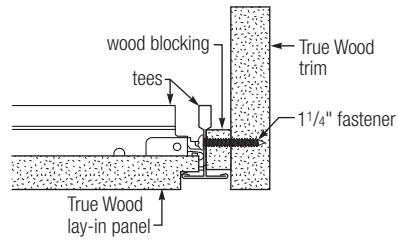
Trim Details

Optional True Wood Trim



(On/Off
Module)

DX



Lay-out and site preparation

The True Wood linear planks come finished on four sides with veneer and stain (if applicable). The two short ends or butt ends are not finished and proper care must be taken to assure these ends are either hidden or treated in the field to match the exposed face.

The True Wood linear plank system installs on USG's Donn Brand Drywall Suspension system and the typical layout for this system is Main Tees (DGLW26) installed four feet on center hung every four feet along the main and cross tees installed every four feet between the mains. For the True Wood linear system the linear planks are screw attached to the cross tees and run parallel to the main tees.

The True Wood linear planks are installed in a progressive fashion with the aesthetic felt towards the direction of the install. The spacing of the planks can be from zero to 7/8" of an inch, great care should be taken to maintain the same spacing and blocks or gauges should be used.

Some portion of the grid may be exposed, these areas should be treated in the field with 'flat black' paint that is suitable for galvanized material and the environment of the installation.

Plank Installation

The True Wood linear planks are screw attached with 1/2 Wood Lathe screws from the back of the ceiling through the flange of the cross tee and into the plank. It is critical that the attachment of the planks be secure and that the fasteners are not 'overdriven', in some cases it may be necessary to pre-punch the grid flange to assure connection integrity.

Using spring clamps to position the plank in place and assure its spacing and alignment.

Splice Plates: Place butt joints over framing members, otherwise framing angle or wood can be used as a splice plate. Plan on using at least four 1/2" wood lath screws, 2 on each side of the splice. True Wood can be used with a biscuit joiner as well to join butt ends.

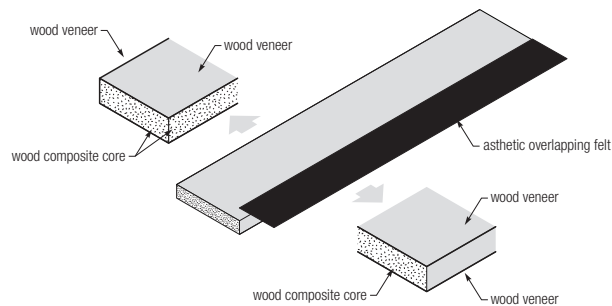
Cutting butt ends at a 22-degree angle lessens the chance of seeing the exposed edge of the panel line.

Finishing and Touch Up

Touch up kits can be supplied by USG but similar material can be obtained from a local retailer that carries wood finishing products. A sample should be tested for match and consistency.

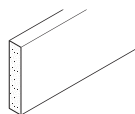
Panel

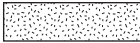
Panel Construction



Trim

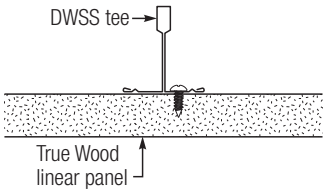
True Wood Trim



Panel Options	Size	3-3/4" x 96" 5-1/4" x 96"
	Edge Detail	SQ 

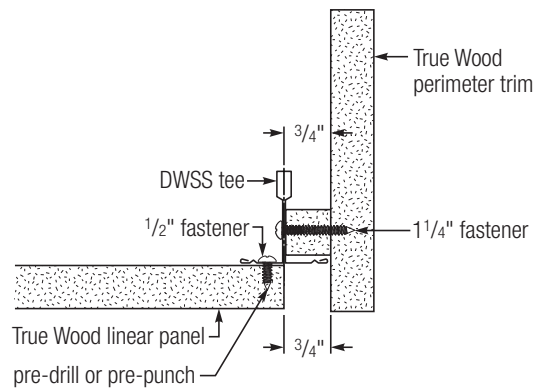
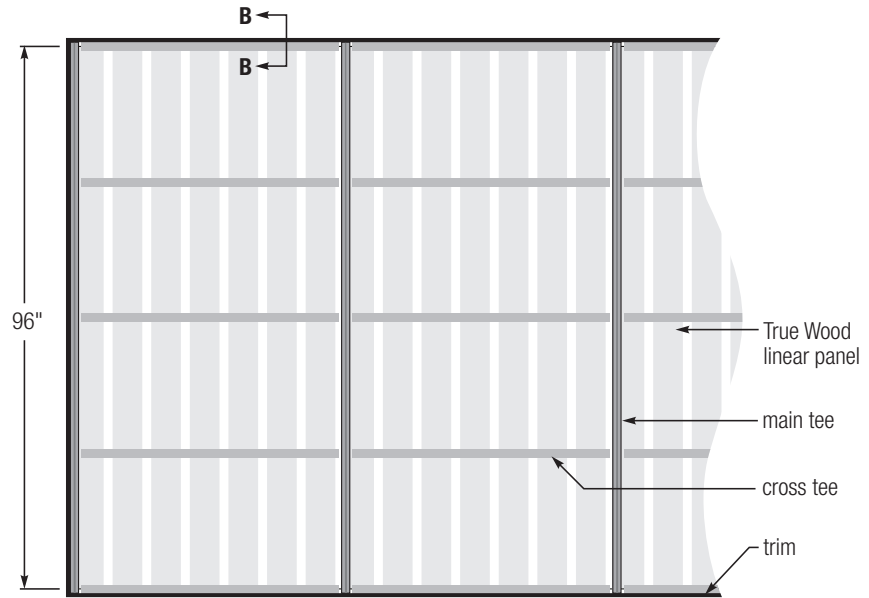
Suspension Systems

DWSS



Perimeter Details

Non-Wall or Floating Condition with Trim

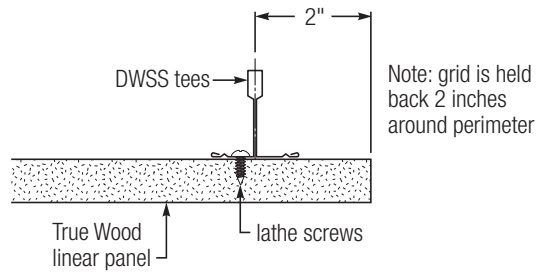
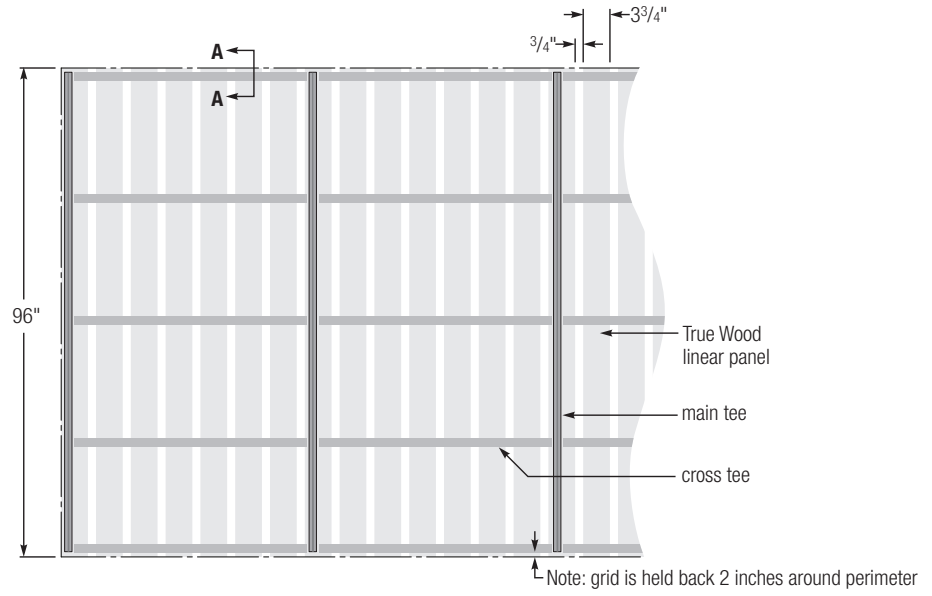


Note: Pre-attach wood blocks first



Perimeter Details

Non-Wall or Floating Condition without Trim

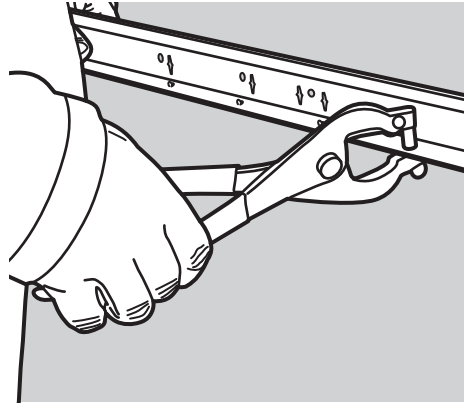


Note: Pre-attach wood blocks first

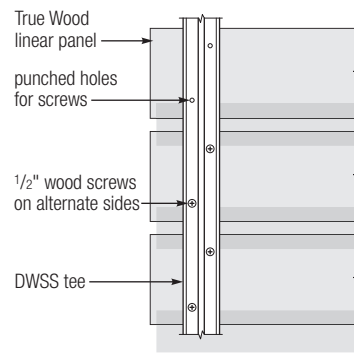


Perimeter Details

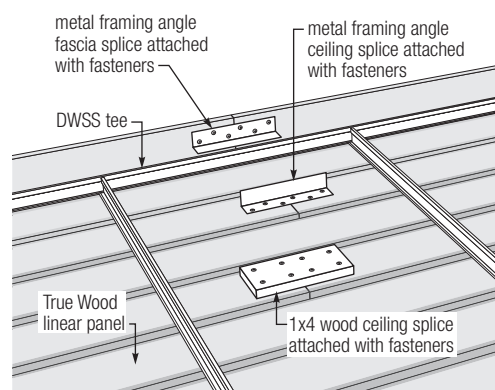
Pre-punch grid



Alternate Screws

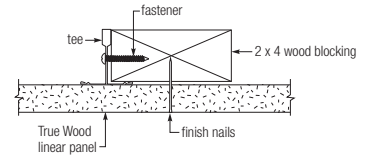
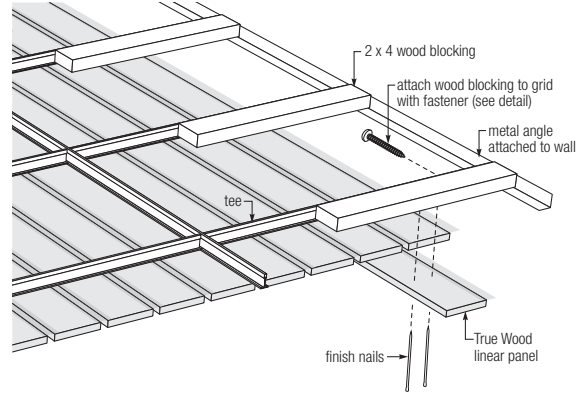


Splice Options



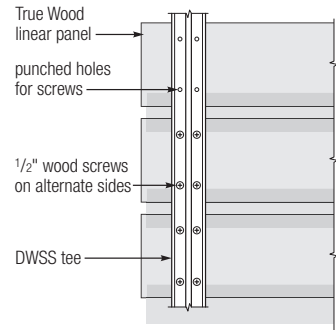
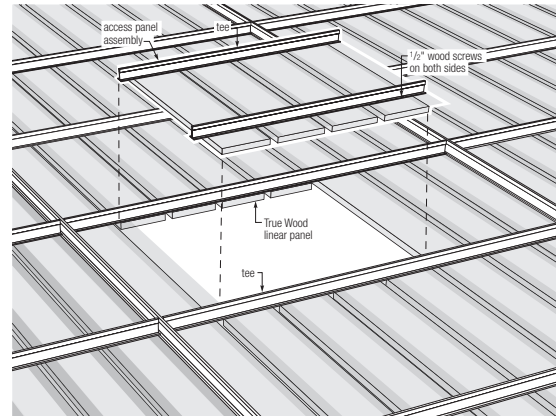
Perimeter Details

Wall Termination

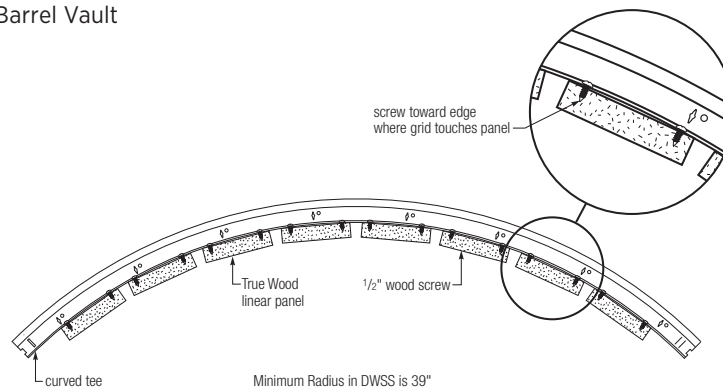


Note: approximately last 3 linear panels attached to wood blocking with wood finishing nails

Access Door



Barrel Vault

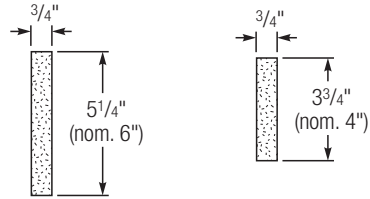


Minimum Radius in DWSS is 39"

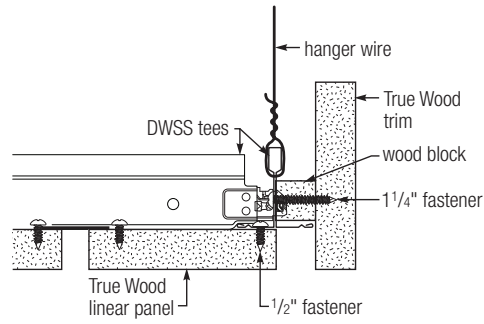


Trim Details

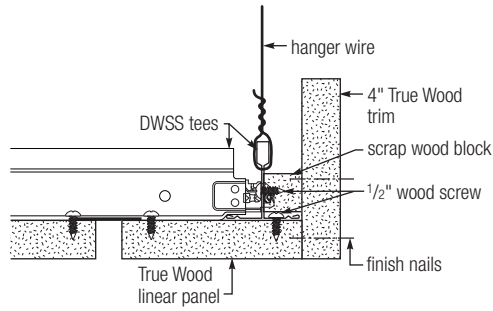
Optional True Wood Trim



Trim with Reveal

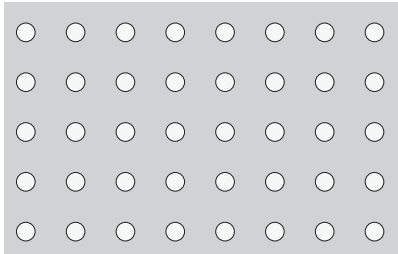


Trim without Reveal



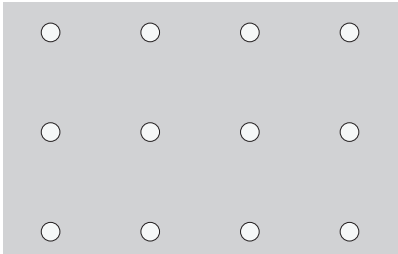
**Round Holes
(Patterns shown at 40%)**

Optional True Wood Trim



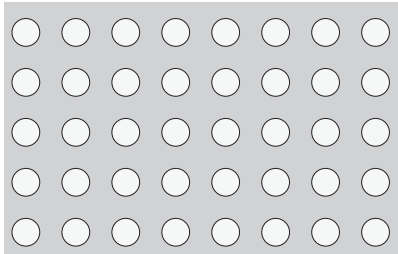
Round—6mm perforations 16mm o.c., 10% open area

Pattern W200



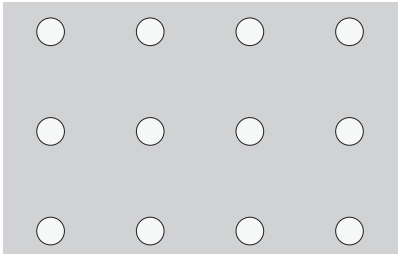
Round—6mm perforations 32mm o.c., 3% open area

Pattern W300



Round—8mm perforations 16mm o.c., 20% open area

Pattern W400



Round—8mm perforations 32mm o.c., 5% open area



Printed and/or online color swatches are only reproductions of actual standards and will vary in appearance due to differences in monitor and printer output. These representations should not be used to finalize color selection(s).

Plain-Sawn

Beech
Book-Matched, 20-Sheen Clear



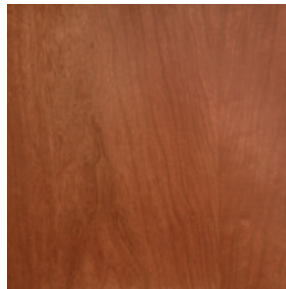
Maple
Book-Matched, 20-Sheen Clear



Light Cherry
Book-Matched, 20-Sheen Clear



Dark Cherry
Book-Matched, 20-Sheen Clear



Walnut
Book-Matched, 20-Sheen Clear

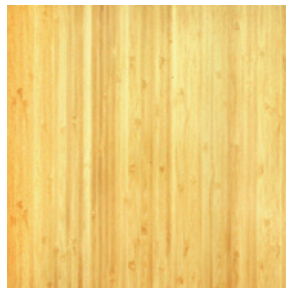


Red Oak
Book-Matched, 20-Sheen Clear



Vertical Grain

Light Bamboo
Narrow Band, Natural



Dark Bamboo
Narrow Band, Amber



APPLICATION GUIDE

Specifications

1.01 Related Documents	<p>A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.</p>
1.02 References	<p>A. ASTM C635, Standard Specifications for Metal Suspension Systems B. ASTM C636, Recommended Practice for Installation of Metal Suspension System C. ATSM E84, Standard Test Method for Surface Burning Characteristics of Building Materials D. CISCA Ceiling Systems Installation Handbook. E. CISCA Wood Ceilings Technical Guidelines</p>
1.03 Summary	<p>A. Section Includes:</p> <ol style="list-style-type: none"> 1. Acoustical ceilings panels 2. Exposed grid suspension system. 3. Wire hangers, fasteners, main runners, cross tees, and wall angle moldings. <p>B. Related Sections include the following:</p> <ol style="list-style-type: none"> 1. Section 01 41 13 (01450) - Codes 2. Section 01 45 33 (01450) - Code-required Special Inspections and Procedures 3. Section 09 20 00 (09250) - Plaster and Gypsum Board 4. Divisions 23 (15) - HVAC 5. Division 26 (16) Sections - Electrical Work
1.04 Submittals	<p>A. Samples: Submit panel finish and suspension system main and cross tees for acceptance</p> <p>B. Shop drawings:</p> <ol style="list-style-type: none"> 1. Reflected ceiling plans: Submit ceiling suspension system layout indicating dimensions, lighting fixture locations, and related mechanical components. 2. Assembly drawings: Indicate installation details, accessory attachments and installation of related lighting fixtures and related mechanical system components. 3. Samples: Minimum 4 inch x 6 inch samples of specified acoustical panel; 8 inch long samples of exposed wall molding and suspension system, including main runner and 4 foot cross tees. <p>C. Manufacturer's data:</p> <ol style="list-style-type: none"> 1. System details: Submit manufacturer's catalog cuts, literature, or standard drawings showing details of system with project conditions clearly identified and manufacturer's recommended installation instructions. <p>D. Maintenance materials: Provide _____ % of amount of main tees, cross tees, and panels.</p>
1.05 Delivery, Storage, and Handling	<p>A. Delivery of materials: Deliver materials in original unopened packages, clearly labeled with manufacturer's name, item description, specification number, type, and class as applicable.</p>



APPLICATION GUIDE

Specifications

<p>1.05 Delivery, Storage, and Handling cont.</p>	<p>B. Inspection: Promptly inspect delivered materials, file freight claims for damage during shipment, and order replacement materials as required. Any damaged materials shall be promptly removed from the job site.</p> <p>C. Storage: Store in manner that will prevent warpage, water damage, or damage of any kind. Prevent interference to/by other trades and any other adverse job conditions due to storage locations or methods.</p> <p>D. Handling: Handle in such a manner as to ensure against racking, distortion, or physical damage of any kind.</p>
<p>1.06 Quality Assurance</p>	<p>A. Subcontractor qualifications: Installer shall have not less than three years of successful experience in the installation of ceiling suspension systems on projects with requirements similar to requirements specified.</p> <p>B. Requirements of regulatory agencies: Codes and regulations of authorities having jurisdiction.</p> <p>C. Delete paragraph below if not required. If retaining, indicate location, size, and other details of mockups on Drawings or by inserts. Revise wording if only one mockup is required.</p> <p>D. Source quality control: Manufacturer will provide test certification for ceiling system as required to meet industry performance standards specified by various agencies.</p> <p>E. Delete below if work of this Section is not extensive or complex enough to justify a preinstallation conference. If retaining, coordinate with Division 1 Section "Project Meetings."</p> <p>F. Pre-installation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Meetings."</p>
<p>1.07 Project Conditions</p>	<p>A. Building conditions: Building shall be enclosed with all windows and exterior doors in place and glazed, and the roof watertight before installation of suspension system.</p> <p>B. Interior temperature/humidity in building: Climatic conditions in areas to receive ceiling suspension systems shall range from 60°F (16°C) to 85°F (29°C) and relative humidity of not more than 55% shall be maintained before installation of components.</p>
<p>1.08 Extra Materials</p>	<p>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.</p> <p>a. Ceiling Panels: Furnish quantity of full-size units equal to _____ % of amount installed.</p>
<p>2.01 Products and Manufacturers</p>	<p>A. True Wood ceiling panels:</p> <p>a. PART 1 - True Wood ceiling panels will be made with a [veneer species] face veneer, [veneer cut] [veneer match], applied to a 3/4" thick core material. The edge treatment on the True Wood panels shall be the [selected style]. The standard True Wood ceiling panel shall be 3/4" thick and [selected size] (nominal). Wood is a natural product that will undergo changes with variations in the environment. Therefore, all dimension tolerances shall be ± 1/8".</p>



**2.01
Products and Manufacturers
cont.**

- B. Accessories:
- a. Wall molding: [M9:15/16"x9/16"x12', M7:7/8"x7/8"x12']—long angle shape of prepainted steel.
 - b. Wood panel retention clip :WDRC
 - c. Wood panel perimeter clip:WDPC1
 - d. Edge trim: Optional; Compäso [selected size]

**2.03
Metal Suspension Systems**

- C. Donn Brand Suspension Systems—Commercial quality, cold-rolled steel, hot-dipped galvanized steel body. Materials Exposed surfaces color: coordinate with color of selected ceiling panels.
- a. [Donn Brand DX 15/16" suspension System]
 - i. Main Tee : DX/DXL26, 12 ft x 1.64 in Heavy Duty Fire-Rated
 - ii. Cross Tee: DX/DXL424, 4 ft x 1-1/2 in
 - iii. Cross Tee: DX/DXL216, 2 ft x 1 in (for 2' x 2' only)
 - b. [Donn Brand Fineline DXF/DXLF Ceiling Suspension System]
 - i. Main Tee: DXFH2924, 12 ft Main Tee Notch 24 in on center
 - ii. Cross Tee: DXF429, 4 ft Cross Tee (2' x 4' only)
 - iii. Cross Tee: DXF429N, 4 ft Cross Tee Notched mid-point (2' x 2' only)
 - iv. Cross Tee: DXF229, 2 ft Cross Tee (2' x 2' only)
 - c. [Donn Brand Centricitee DXT/DXLT Ceiling Suspension System]
 - i. Main Tee: DXT26, 12 ft x 1.64 in Heavy Duty
 - ii. Cross Tee: DXT424, 4 ft x 1-1/2
 - iii. Cross Tee: DXT222, 2 ft x 1-1/2 (2' x 2' only)
- D. Suspension system: designed to support ceiling assembly as indicated on project drawing with maximum deflection of 1/360.

**3.01
Examination**

- A. Examine substrates and structural framing to which ceiling systems attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage, and other conditions affecting performance of ceiling systems.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Work to be concealed: Verify work above ceiling system is complete and installed in manner that will not affect layout and installation of system components.

**3.02
Preparation**

- A. Coordination: Furnish layouts for cast-in-place anchors, clips, and other ceiling anchors whose installation is specified in other Sections.
- B. Measure each ceiling area and establish layout of 3-dimensional ceiling systems. Comply with layout shown on reflected ceiling plans.
- C. Field dimensions: Installer must verify actual field dimensions prior to installation.



3.03 Installation

A. Ceiling Framing:

1. Standard reference: Install grid members in accordance with ASTM C636, CISCA installation standards, and other applicable references.
2. Manufacturer's reference: Install in accordance with manufacturer's current printed recommendations.
3. Drawing reference: Install in accordance with approved shop drawings and locate ceiling in accordance with main tee dimensions relative to elevations.
4. Hanger Wire Installation: Secure hanger wires to upper structural elements and space hangers so that each hanger wire supports a maximum of 16 sq. ft.
5. Space main tee members a maximum span of 48" on center. Space cross tees to achieve a 2' x 2' grid for 2' x 2' panels or 4' x 4' grid for 4' x 4' panels.

B. Ceiling Panels

1. Preparation: Remove dirt and debris from surrounding area. Comply with manufacturer's written instructions.
2. Install ceiling panels in accordance with approved shop drawings

3.04 Cleaning

- A. Suspension system: Remove infill material and perform any necessary cleaning maintenance with non-solvent based commercial cleaner.
- B. Touch up all minor scratches and spots, as acceptable, or replace damaged sections when touch up is not permitted.
- C. Painting: Repainting of suspension members shall be with a high-quality solvent base paint and applied as recommended by paint manufacturer.
- D. Removal of debris: Remove all debris resulting from work of this section.
- E. Clean exposed surfaces of ceiling systems. Comply with manufacturer's written instructions for cleaning and touchup of minor finish damage. Remove and replace ceiling system components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage, including dented and deformed members.