



## Assessing Wood-Based Sheathing

Wood-based sheathing is commonly used under many exterior claddings, such as Portland cement plaster (stucco). Covering wet wood-based sheathing, plywood or Oriented Strand Board (OSB), is not recommended.

### STRESS:

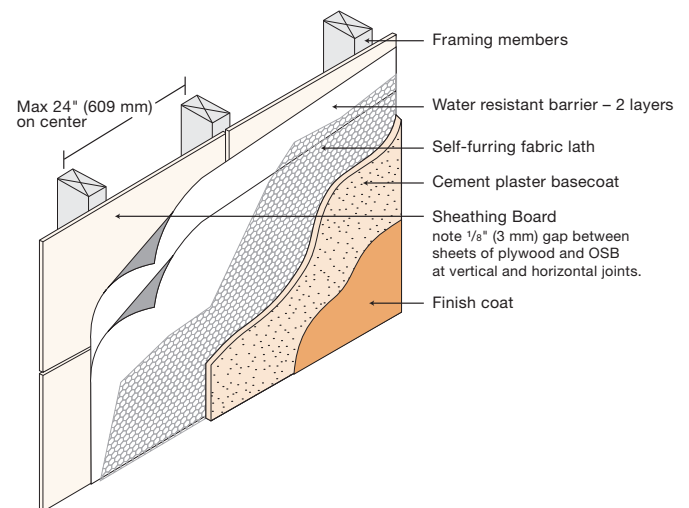
Wood products shrink and swell when exposed to moisture or humidity. The amount of dimensional change is estimated at 1% of the width or thickness of lumber for every 5% change in moisture content. This expansion and contraction of wood-based products can place stress on cement plaster stucco. This stress can crack plaster. Even a minor amount of movement can cause cement plaster that is not fully cured (green) to crack.

### MOISTURE:

The Canadian Wood Council states that wood is considered “dry” if it has a moisture content of 19% or less. This type of lumber is grade marked S-DRY for surface dry, or dry at the time of manufacture. Some lumber is marked KD for Kiln-Dried.

The average **fiber saturation point** for wood is typically 28%. At this percentage, water begins to fill all the fiber cells. Decay can generally only get started when the moisture content is above the fiber saturation point for a prolonged period of time.

### Sheathed Construction Wood Framing



### INSPECTION:

- All wood-based sheathing should be sound, properly attached to framing members and installed per APA recommendations.
- A moisture content below 19% prior to applying 2 layers of a water-resistant barrier.
- Wood-based panels should be installed with 1/8 inch gaps at edges and ends to allow for expansion of the panel to minimize cracking in cement stucco (per APA recommendations).
- Fasteners should be set flush prior to applying the water-resistant barrier(s).

*The Canadian Wood Council, Moisture in Wood Frame Buildings  
APA The Engineered Wood Association.*

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