

WOOD AND DURABILITY

WOOD BUILDINGS ARE DURABLE

Between 2000-2003, newly-demolished buildings were surveyed in Minneapolis-St. Paul. The survey revealed wood buildings have longer lifespans than steel or concrete structures.



DECADES, EVEN CENTURIES, OF RELIABLE SERVICE

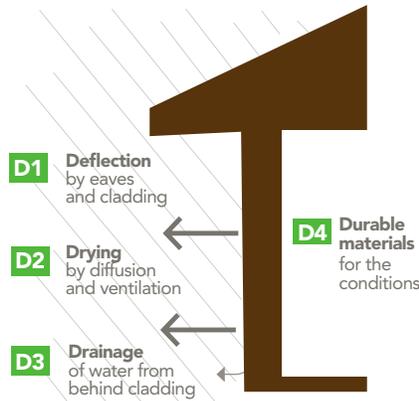


When buildings are designed with local climate impacts in mind, wood buildings can last for centuries.

A wooden pagoda in Ying County, Shaxi province, China has been standing strong since

1056

DESIGN PROTECTION AND THE BUILDING ENVELOPE



1 DEFLECTION

Overhangs, cladding and sealants combine to "deflect" wind-driven rain.

2 DRAINAGE

Wind-driven rain penetrates beyond cladding and sealants, but is "drained" and returned to the exterior.

3 DRYING

Minimal wind-driven rain—and other residual moisture retained within wall assembly—is "dried" by vapor diffusion and air movement.

4 DURABLE MATERIALS

Durable sill plate of treated wood material is capable of retaining small amounts of moisture until drying occurs.

IT'S ALL ABOUT DESIGN

Good design ensures that wood materials last and weather well in various climates, without unforeseen cost for maintenance or repair.



WOOD BUILDINGS ARE ADAPTABLE



When a building needs changes, wooden structures are easily modified. Reclaimed wood retains both sequestered carbon and its value as a building material.

This enables architects to also assume the role of curators, not just creators of the built environment.

RESEARCH & RESOURCES

Stay informed with the latest research and resources on durability:

- Think Wood Research Library
- CEU: Designing for Durability
- Guideline on Durability in Buildings: CSA S478-95
- Buildings and constructed assets: Service Life Planning ISO 15686-5:2008
- American Wood Council: Design of Wood
- Frame Structures for Permanence WoodWorks: Wood-Frame Schools—
- Durability Techniques for Interior High Traffic and Moisture Areas

Find these links and learn more about how wood construction creates buildings that endure.

Visit ThinkWood.com/durability

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Photo: Butler Brothers Building | Preservation Alliance of Minnesota

SOURCES: Survey on Actual Service Lives for North American Buildings (O'Connor et. al., 2005) | Designing for Durable Wood Construction: The 4 Ds (Hazleden & Morris, 1999)