



## Wood Construction as an Economical Option

Wood is an economical construction material – you just have to understand it. Recognizing the characteristics of wood could be the difference between a successful, lasting, lower cost building – and complications. Steven Schaefer Associates understands how wood behaves and moves.

Shrinkage occurs with wood, it's unavoidable. What is avoidable is the extent and impact it has on the building. If your project team can design the structure to minimize the potential shrinkage and identify conditions where differential movement could happen (window locations, floors and plumbing stacks), you can then detail the building to account for the anticipated shrinkage. Use best practices that include details to reduce wood shrinkage, provide flexibility in vertical plumbing chases, and carefully consider window details with brick veneer. And remember to document estimated shrinkage on construction documents, which is a building code requirement.

Wood, like other materials, will expand and contract with changes in moisture. Warping and splitting of the wood is possible, as is differential movement at windows with veneers and vertical plumbing stacks with horizontal tees. Floor sheathing can swell up to 25% of its thickness during construction, but you can reduce sheathing swells with specified methods and materials. Engineered wood is also something to consider – most have very low moisture content; therefore, the potential for shrinkage is also lower.

Wood is often the most economical construction type for hotels, multi-story residential structures and commercial structures. But building with wood can be risky – make sure your design team has a reputable knowledge of wood and know how it behaves. We do!

Project examples include:



The Banks Phase 1A

- Hybrid of steel (first and second story) and three stories of wood frame
- Multi-family residential with retail

Vue 180 (not yet constructed)

- Four-story wood frame
- Ninety-three unit high end apartments
- One-and-a-half-story 172-space parking garage below apartments



Jordan Park Condominiums

- Four-story wood frame over single story parking
- Twenty-six units

St. Clare Commons (not yet constructed)

- Three-story wood frame
- 125,000 square feet
- Skilled nursing and assisted/senior living facilities

Want to know more?  
[Contact us](#) today for information on our AIA-registered presentation *Understanding and Detailing for Wood Shrinkage*.

