

Wood Foundation Cost Study in the U.S. Gulf Coast Region

This study will examine the costs of construction associated in the U.S. Gulf Coast region with three foundation types—raised wood on foundation walls or piers, raised slab, and slab-on-grade foundations.

Background

Foundation design for residential buildings involves assessing many factors of functionality, aesthetics, and cost. In the U.S. Gulf Coast region, modifications to base flood elevations which dictate clearance height between finished first floor and grade, may require builders to re-evaluate standard foundation designs and costs.

Objective

The overall objective of this study is to provide detailed information on all costs and labor requirements to build foundation/floor systems for single-family houses in the Gulf Coast region of the United States. Specific objectives are to 1) measure costs and labor for raised floor, raised slab, and slab-on-grade foundation/floor systems and 2) evaluate differences in costs and labor between each type of foundation/floor system.

Approach

The Southern Pine Council's Raised Floor System—Design and Construction Guide, and FEMA's Recommended Residential Construction for the Gulf Coast: Building on Strong and Safe Foundations will be used

as the basis for designs considered for this study. Labor time spent by the trade contractors on the project from footing excavation through finish of the first deck or top of slab will be observed and recorded. The NAHB

Research Center will co-ordinate with builders' accounting staffs to capture costs from invoices rendered for activities associated with footing, foundation, and first deck or slab. Quantity counts will be verified by the site timekeeper as well as from invoices. Access to the subcontractor's scopes of work for the activities up to and including installation of first floor or slab will also be part of the study.



Raised wood floor on foundation walls.

A time and cost study will be conducted for three of each type of foundation to ensure that the capture of information is illustrative of typical conditions. Labor hours and supporting costs with quantity breakdowns will eliminate any bias in the study that is due to variation in regional rates.

Expected Outcomes

Results will provide builders and homebuyers with information that will be helpful in making better informed decisions about the types of foundation/floor systems available in the region. Results should improve wood utilization and performance in wood-frame housing in the U.S. Gulf Coast region.

Timeline

Studies will start in October 2007. Final report expected in July 2008.

Cooperators

USDA Forest Service, Forest Products Laboratory
NAHB Research Center
U.S. Dept. of Housing and Urban Development's
PATH Program

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