

RECYCLING OPTIONS MAKE ZERO WOOD CONSTRUCTION WASTE POSSIBLE IN HOME BUILDING

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Abstract: Construction waste represents a significant portion of landfill waste, estimated as 17% of the total waste stream. Estimates on the amount of waste generated by the construction of a typical 2000 square foot single family home were 8000 lbs. of construction waste including 1600lbs of solid-sawn wood, 1400 lbs of engineered wood products (EWP). Much of the solid-sawn lumber and EWP could be reused or recycled in different applications. Through a partnership with **Green Valley Builders** (Blacksburg, VA and a NAHB member), an **EarthCraft House** certified builder, the authors have studied their wood construction waste and developed recycling options. The **EarthCraft House** and other certification systems such as the **National Green Building Standard ICC-700** and **LEED for Homes** encourage and reward recycling. Wood products studied included solid-sawn lumber, oriented strand board, particleboard, LVL, and preservative treated wood. Wood products were collected for each house during the construction process. The materials were measured, weighed and sorted according to material type and size. Uses of the materials included finger-jointing to produce non-structural stud material or sill plates, web material in open web floor trusses, temporary stair treads and risers, shelving, pallet parts, and finger jointed panels for reuse as sheathing. Smaller pieces would go to grinding and converted to mulch and fuel. The result is that zero wood waste is possible. Data for 15 homes, a short description of the development, the recycling options and how these activities are rewarded with points by the green building systems will be presented.

Why Relevant: As part of many **green building systems** there are requirements and point incentives to recycle building materials waste from home construction. This is the right thing to do, but it is also very new to the housing industry. Ours is a controlled, third party research study to describe the wood waste by product type and determine recycling and reuse options. Options include solid-wood products and mulch from grinding. Builders using **EarthCraft House** and other certification system can apply our results at their job sites.