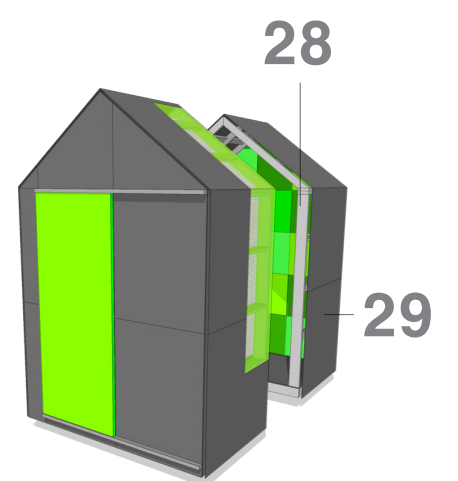
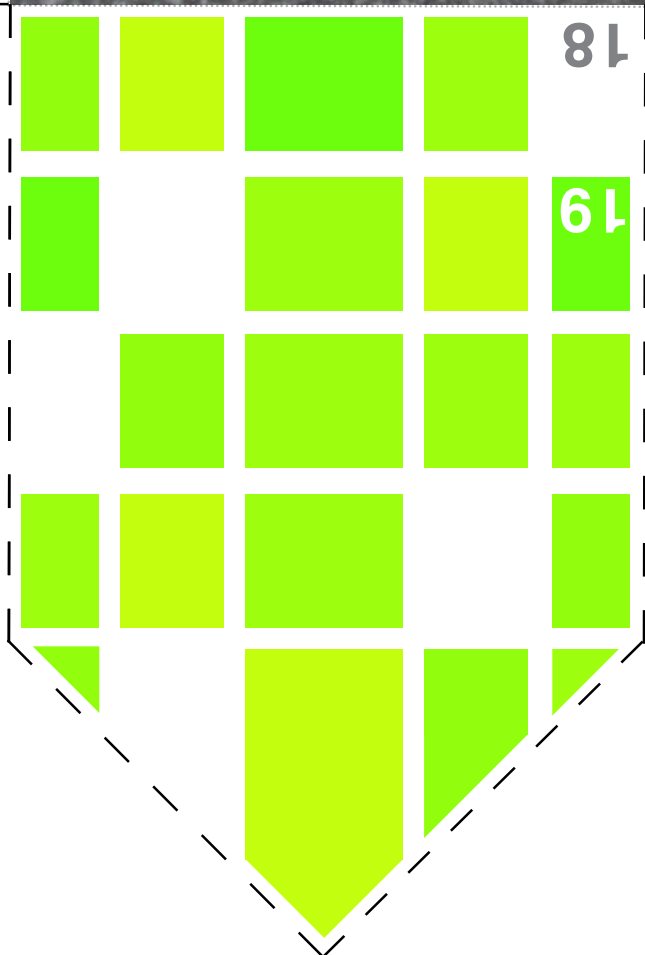
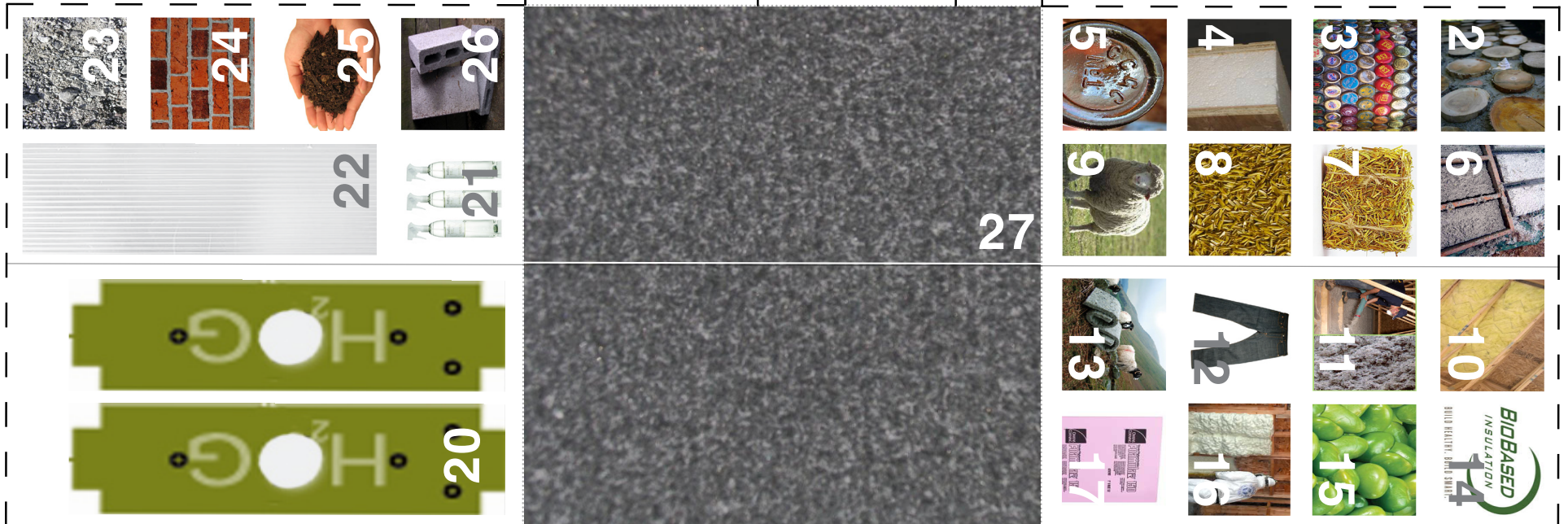
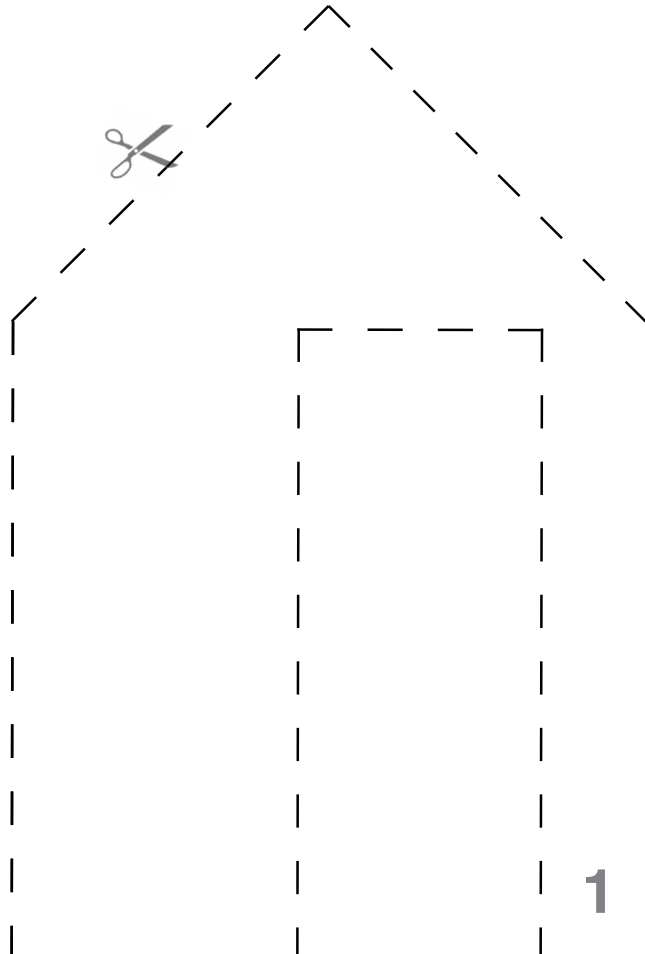


the **green haus**
a sustainable residential model



www.greensburgcubed.org





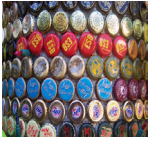
1 structurally insulated panels

SIPs are formed by two sheets of oriented strand board (OSB) filled with polyurethane foam
6 1/2 " thick R value = 48 www.thermocoremo.com



2 cordwood construction

the practice of stacking and mortaring wood to create a structural wall that needs no further finishing or maintenance over time



3 bottle caps

when installed in s glazing cube acts as a space heater collecting heat from solar gain and trapping it for later use



4 SIPs

structurally insulated panel assembly
R value = 4 per inch



5 bottle window

stacking and mortaring glass bottles is an easy way to create a window. Bottle windows upcycle glass, which is often thrown away and expensive to recycle



10 fiberglass

used in normative 2x6 stud framing for higher performance values
R value = 19



11 GreenFiber Cocoon Insulation

provides a better barrier against air infiltration, filling gaps and voids, consisting of 85% recycled content
www.greenfiber.com



12 Bonded Logic : UltraTouch Denim

post industrial recycled denim and cotton fibers. prevents damage from mold, fungus and pests.
R value = 3.71 per inch www.bondedlogic.com



13 ThermaFiber wool

reduced energy use and greenhouse gas emissions
75% recycled content www.thermafiber.com
R values = 3.7 to 4.2 per inch



18 Harmony® interior latex paint

environmentally preferred interior paint. Low-odor allowing you to immediately move into your newly painted spaces. It contains no VOC's (volatile organic compounds)



21 Method

eco-friendly household cleaning products
www.methodhome.com



20 Rain Water H₂OGs

adds thermal mass with rainwater collection and storage
1800mmx500mmx220mm + 183 Litres capacity
www.rainwaterhog.co.uk



23 gravel

field stones collected locally have a low embodied energy and can be used to store solar gain



24 brick

Although brick has a relatively low R-value, its mass can provide thermal storage to temper a living space and store solar gains



27 Mohawk _ green select carpet

mockingbird recycled and environmentally sensitive and eco_friendly carpet
www.carpetone.com



28 Forest Stewardship Council (FSC)

all lumber harvested sustainably and fsc approved
www.fscus.org

the green haus product and material key



6 paper crete

a fairly new material made from paper fiber mixed with portland cement or clay
R value = 2 1/2 per inch



7 straw

an agricultural byproduct, when packed tightly into bales and covered with plaster is very insulating does not off-gas toxic chemicals R value = 3 per inch



8 rice hulls

have potential as a building material. They are light weight, naturally mold resistant R value = 3 per inch



9 wool

Sheep wool is a natural, sustainable, renewable, recyclable material that does not endanger the health of people or the environment. The GreenHaus sample features raw wool from KSU sheep
R value = 3.5 per inch.



14 BioBased Closed Cell

soy-based polyurethane spray-in-place foam insulation closed cell used in commercial applications
R value = 4 per inch www.biobased.net



15 BioBased Open Cell

soy-based polyurethane spray-in-place foam insulation open cell used in residential applications
R value = 6 per inch www.biobased.net



16 Icynene

100% water-blown foam insulation. Minimizes air leakage for increased energy efficiency
R value = 3.6 per inch www.icynene.com



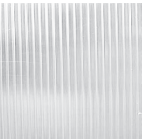
17 Pink Extruded Polystyrene

Petroleum based, extruded polystyrene insulation, like the Owens Corning and Dow
R value = 5 per inch



19 Duration Home® interior paint

specially formulated to be low in odor, resist mildew and have lower levels of smog-producing pollutants
www.sherwin-williams.com



22 polycarbonate

blocks ultra-violet (UV) rays, lightweight, durable, can be filled with aero_gel for increased insulation



25 soil

earth berms, rammed earth, sod are used for thermal storage of heat



26 concrete

cement, water, sand and gravel. Concrete block is steam-cured for 1-2 days, which gives it a relatively low embodied energy



29 GROW hybrid energy- delivery device

flexible photovoltaic panels generate solar + wind power utilizes recycled and reclaimed materials wherever possible and insures that at the end of GROW's lifespan, sustainable methods of recycling and reclamation will minimize its environmental footprint.
SMIT- Sustainably Minded Interactive Technology, LLC

natural insulations

commercial insulations

paints

thermal mass