BUILDING WITH UBUNTU-BLOX

(RECYCLED BUILDING BLOCKS)

UBUNTU INFO PART 3

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April 2012

BUILDING WITH UBUNTU-BLOX

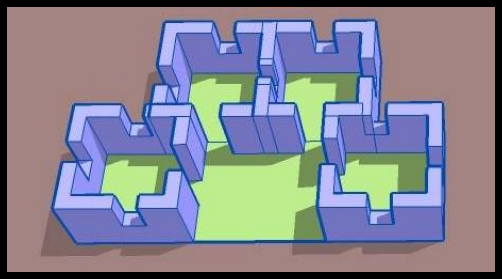
UBUNTU-BLOX INFO PART 3

Ubuntu is an African word with a rich meaning that encompasses cooperation, humanity, and group solidarity for survival in situations with scarce resources. It is a good name for a self-help technology that can turn a problem into a resource.

Inventor and welder Harvey Lacey of Dallas, Texas invisioned the press and system to build with trash in response to the housing crisis after the Haitian earthquakes. Owen Geiger provided advice about how to reinforce the wall. Harvey has been hard at work refining and promoting and teaching ever since.

See other files in the Ubuntu Block Info series also available online soon to learn more about building with Ubuntu blocks.

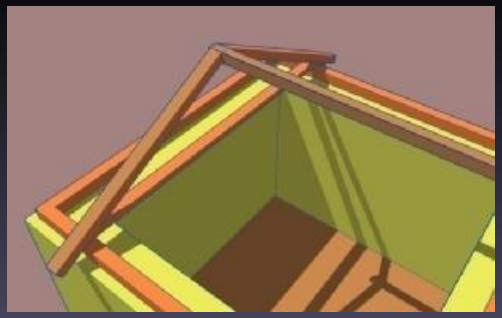
CONTENTS



PLANNING UBUNTU-BLOX BUILDINGS

FOOTING OR BASE WALL

BUILDING UBUNTU UP



FINISHING

CREDITS

PLANNING UBUNTU-BLOX BUILDINGS

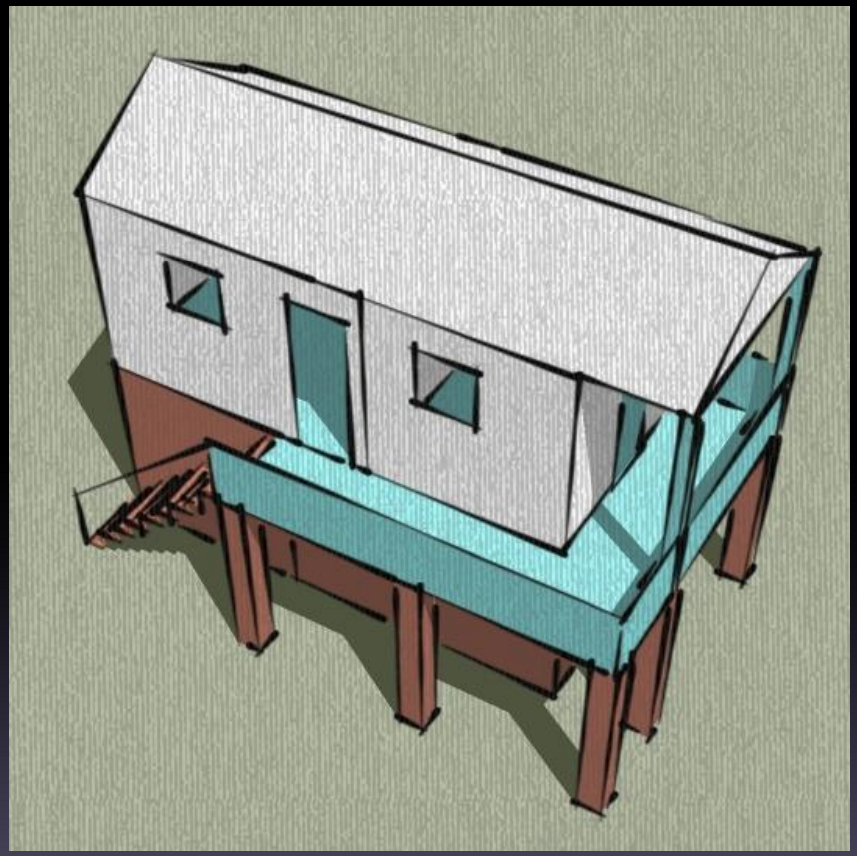
Must have straight walls

so the wires can be ‘tensioned’- tightened to stiffen walls

Single story for safe Ubuntu-blox buildings

Or a second story above a fire-resistant ground floor

IF BEDROOMS OPEN TO OUTSIDE STAIRS*



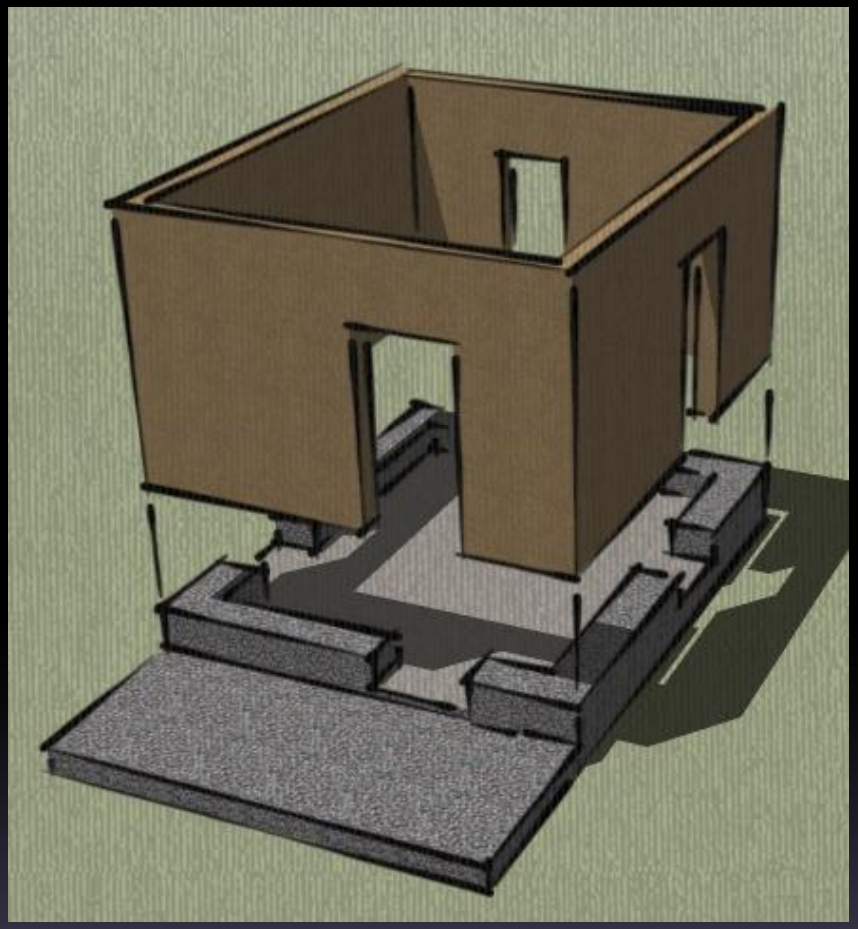
* In a prolonged fire Ubuntu-blox materials might release toxic gases or melt

Build Ubuntu-blox on a non-flammable base wall

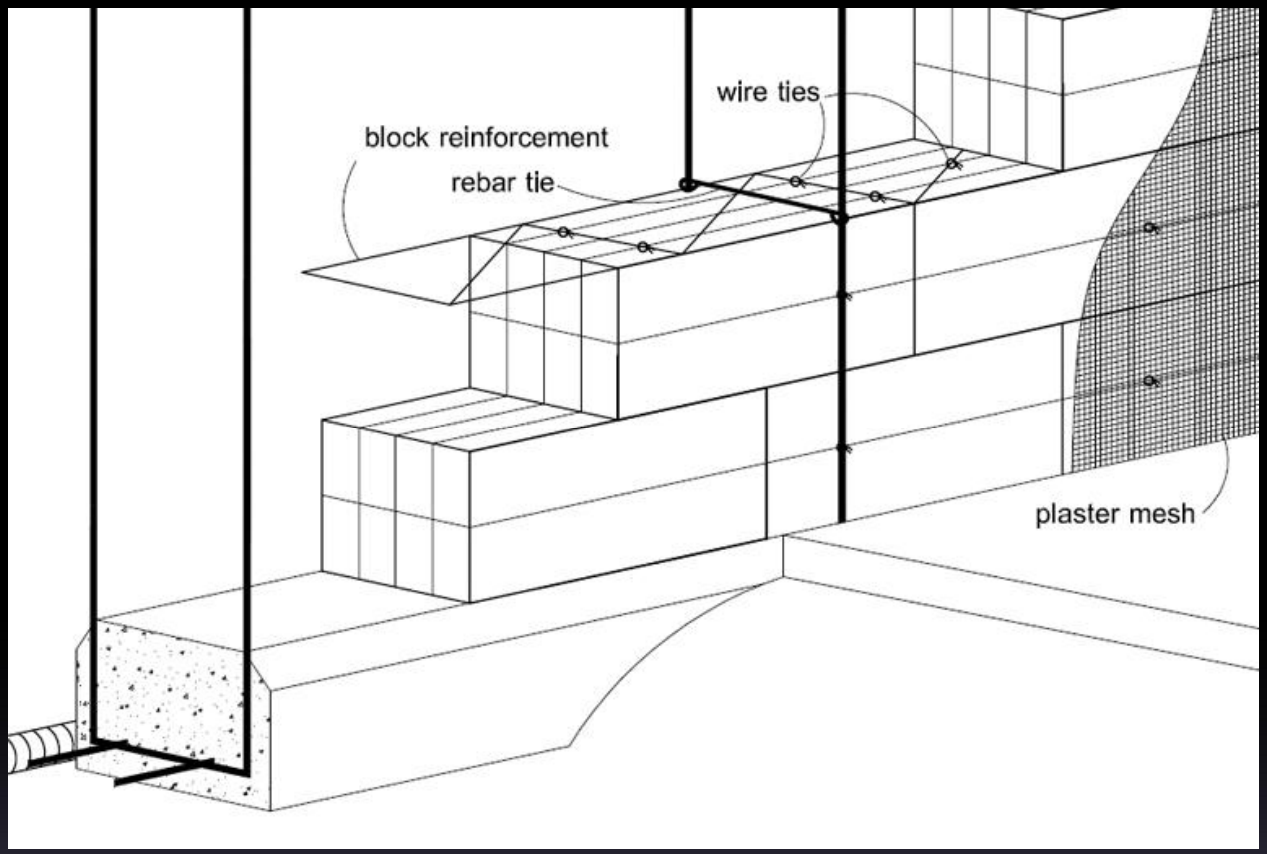
WHERE PEOPLE COOK INSIDE

Heavy base to anchor Ubuntu-blox

against high winds



Exterior pinning stiffens Ubuntu walls



Use rebar, pole, or bamboo

FOOTINGS AND BASE WALLS

Rubble footings work well

With a grade beam to anchor the rebar

Familiar stone or masonry for a base wall

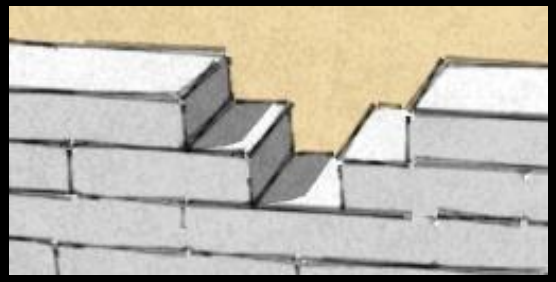
but anchor vertical reinforcement to it or in it

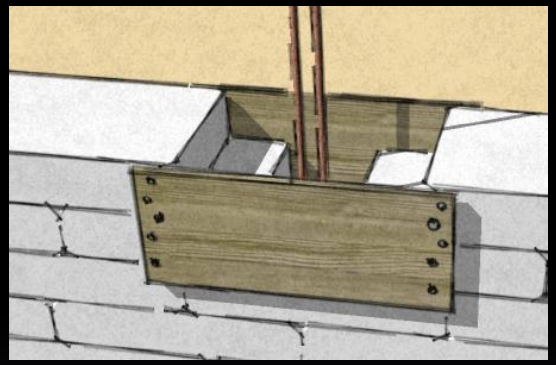
Or use gravel and earth bags

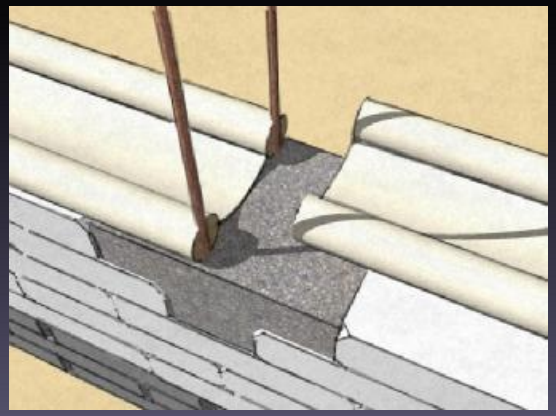
For a cheap non-flammable base wall

(only gravel or stabilized earth fill where exposed to rain, snow, and leaks)

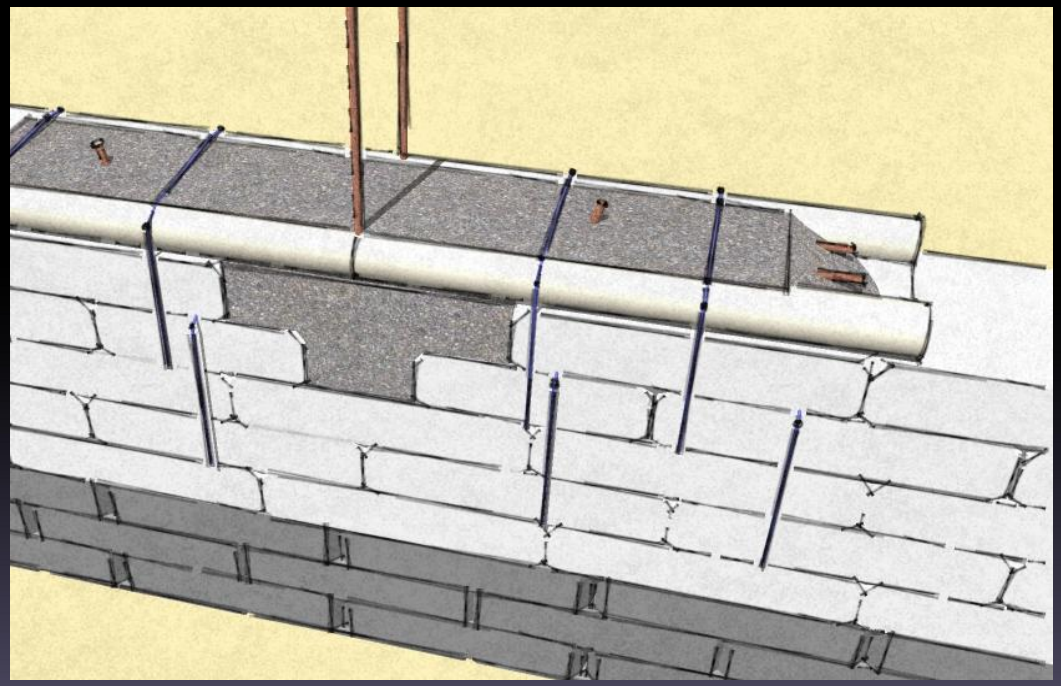
Earthbag anchors for light-weight upper wall







Leave gaps for concrete
Hammer rebar through 2 courses
Fill gaps with concrete
Add form, rebar, pour sill, strap

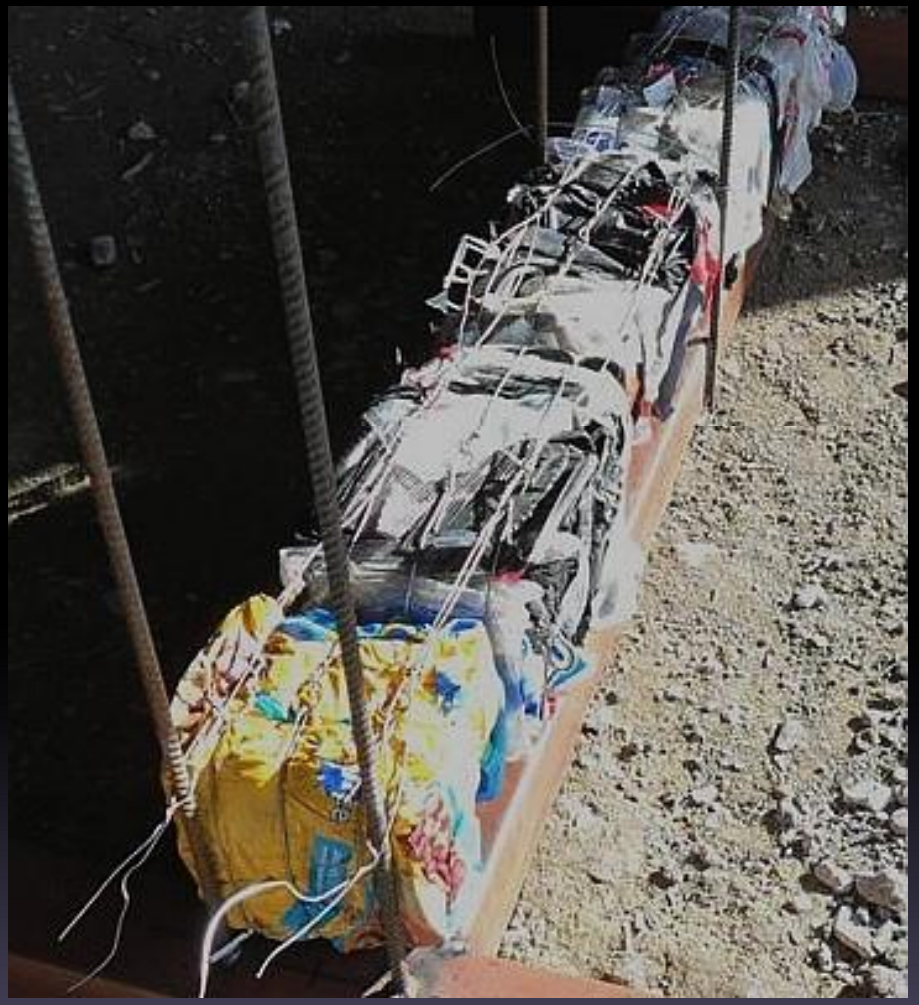


BUILDING UBUNTU UP

Lay blocks with one baling wire side up

Tie each block to two horizontal wires

Tie horizontal wires to rebar at corner or end



Every second course tie verticals together

After 4 courses run horizontal reinforcement

- 3/8 inch rebar
- Or use 11 gauge masonry joint reinforce-ment

Overlap horizontal rebar at corners

Tighten horizontal wires to stiffen building

FINISHING WELL

Anchor frames for doors and windows to rebar

Attach ring beam to vertical rebar

Screw wood ring beam at corners and overlaps

Tie roof rafters to bond beam well

Hurricane straps hold the roof on

Use a light-weight roof for earthquake safety

Plaster mesh strengthens walls for high risk areas

Use plastic fishnet or galvanized chicken wire tied to rebar

For lower risk areas plaster attaches well to recyclable blocks or to non-recyclable blocks bagged in plastic mesh

Always plaster to preserve block strength

Use Ubuntu to build the economy as well as homes

AVAILABLE MATERIALS, EASY TO LEARN

Thanks to the many individuals and organizations that have supported Harvey Lacey's Ubuntu-Blox development and testing:

Geiger Research Institute of Sustainable Building,
SMU Engineering & Humanity Week,
Memnosyne Foundation,
Haiti Communitaire,
IOM

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8- Wikimedia

9 left- Aman Setu School, Pune, India

10 left- Owen Geiger

10 right- Martin Hammer, Builders without Borders, Haiti

11, 12 left, 13 left- Paul Dubois

14- J. Kennedy, Next Aid Child Support Center, South Africa

All other images courtesy of Harvey Lacey and friends

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