

Light Wood Framing *for* Energy Efficiency *and* Economy

Bruce King, PE

Light Wood Framing
for

Energy Efficiency
and

Economy



The Key Ingredient

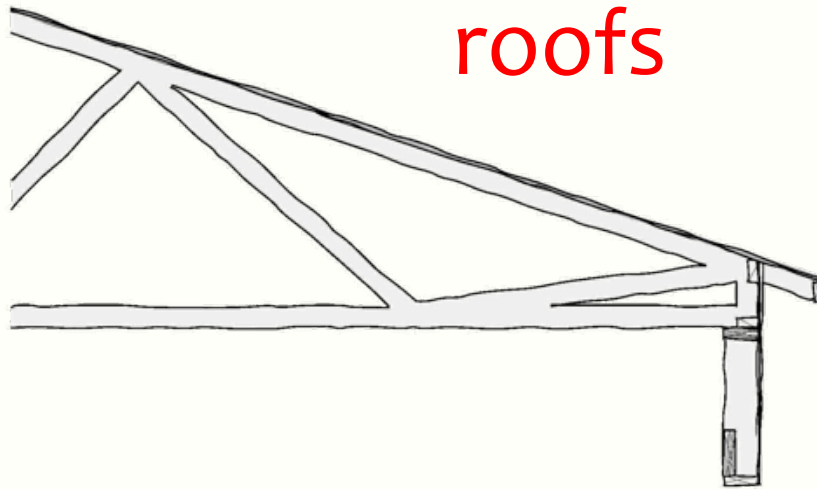


Communicate!

*Make sure every person
involved knows the plan,
especially where it's
“different”*

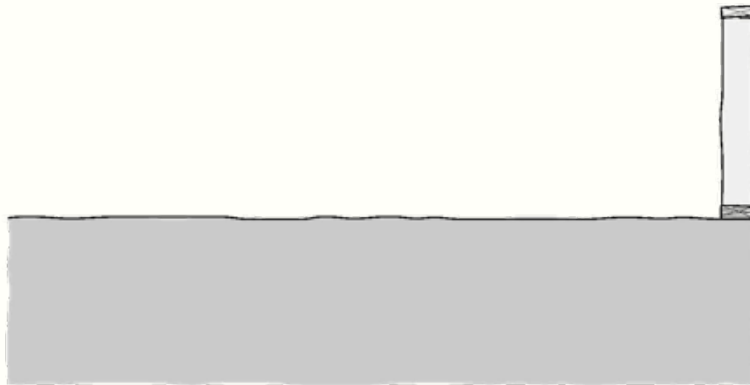
Framing

*Places that matter,
places that don't*



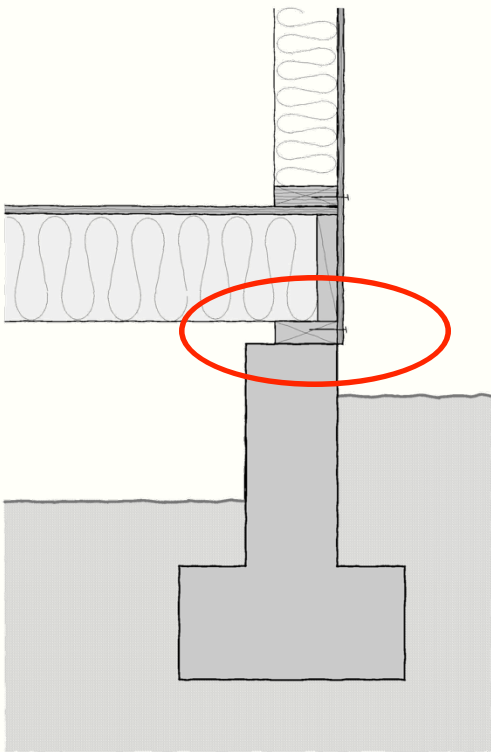
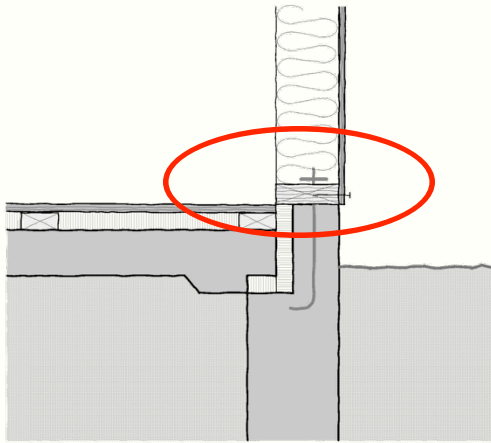
roofs

walls



foundation

foundations *a thousand systems*

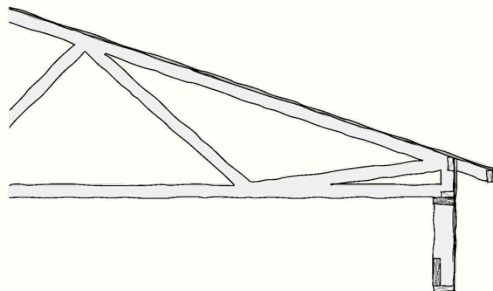


- But always:*
- 1) Insulate – complete the thermal building enclosure
 - 2) Especially slab edges . . . somehow.
 - 3) You don't need pressure-treated wood if using an air-sealing membrane

roofs for energy efficiency *and* economy

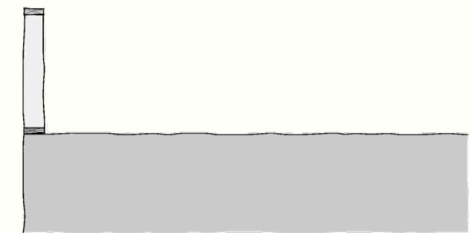
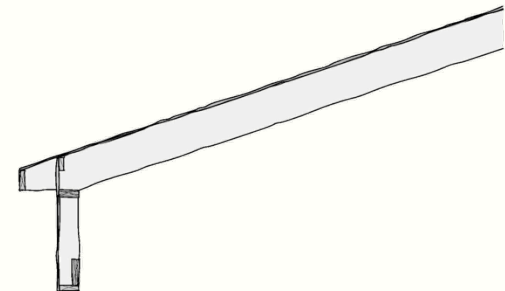
trusses

easy to frame = inexpensive
easy to ventilate and insulate
easy to install and modify



cathedral

harder to frame = expensive
no ventilation = less durable
trickier to insulate cavity



roofs for energy efficiency *and* economy



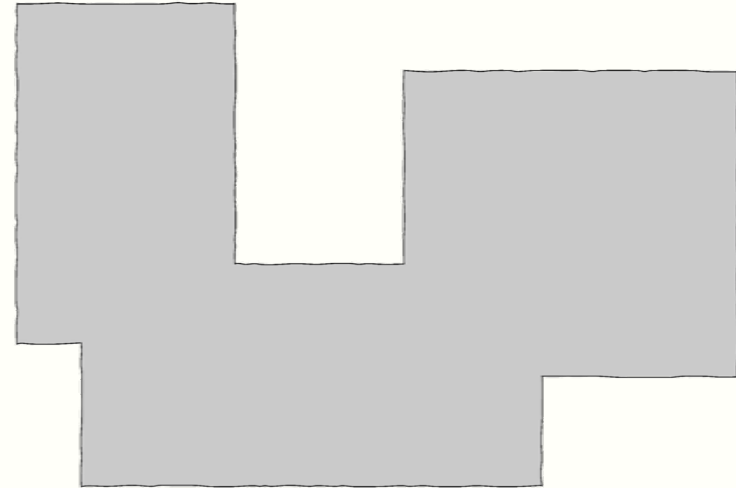
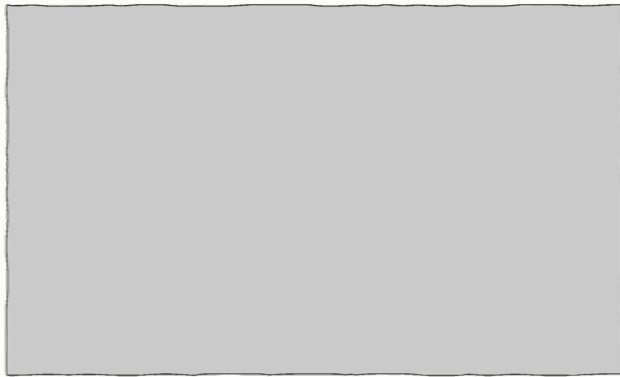
simple = good

**complex =
not so
good**

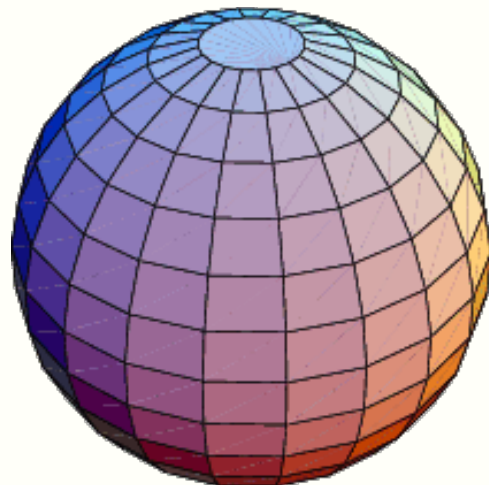


plan layout *for* energy efficiency *and* economy

simple = good



**complex = not
so good**



ideal!



Framing
*Places that matter,
places that don't*

**Why
efficient
framing?**



12.5% Framing Factor

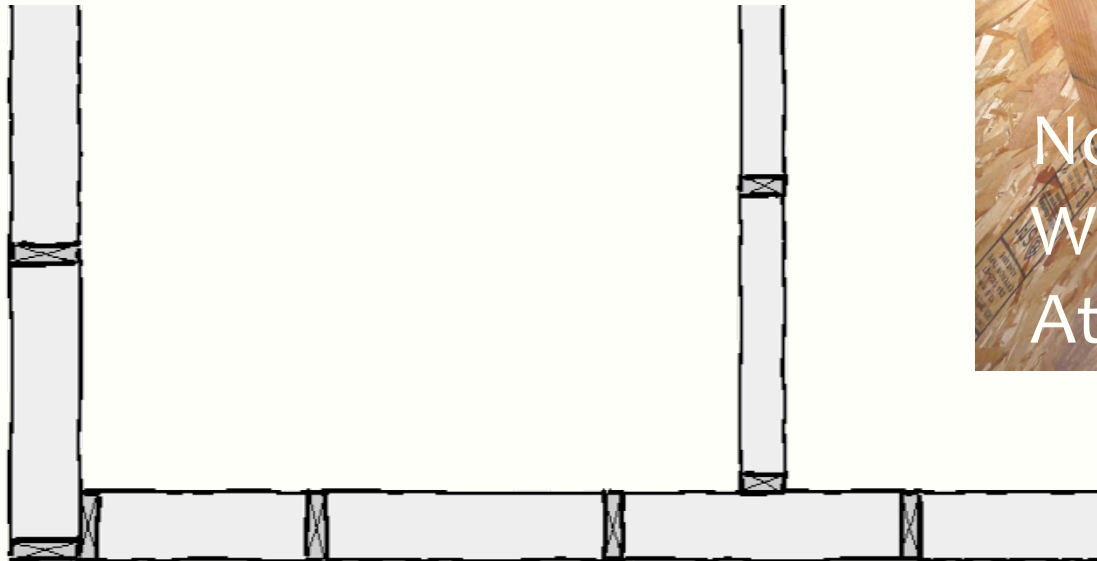
**Why
efficient
framing?**

35.5% Framing Factor
(2014 Sacramento Home)



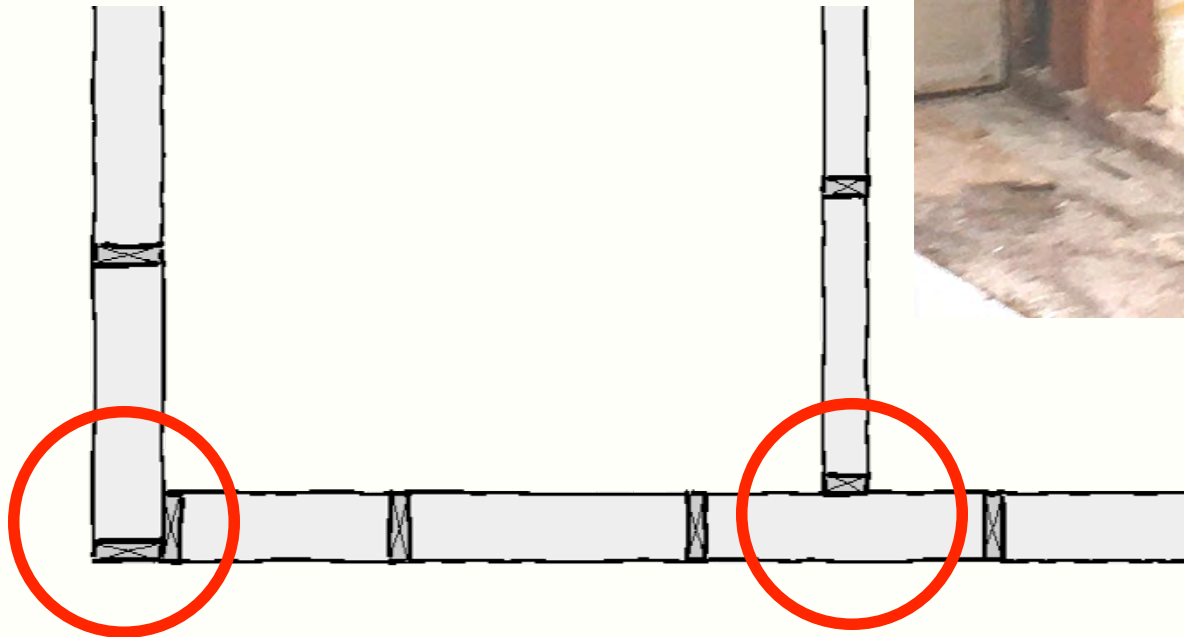
studs *at 24"* on center

- studs must align under supported framing above
- fewer studs for better insulation but weaker wall



studs *at* 24" on center

- studs must align under supported framing above
- fewer studs for better insulation but weaker wall



studs *at* 24" on center

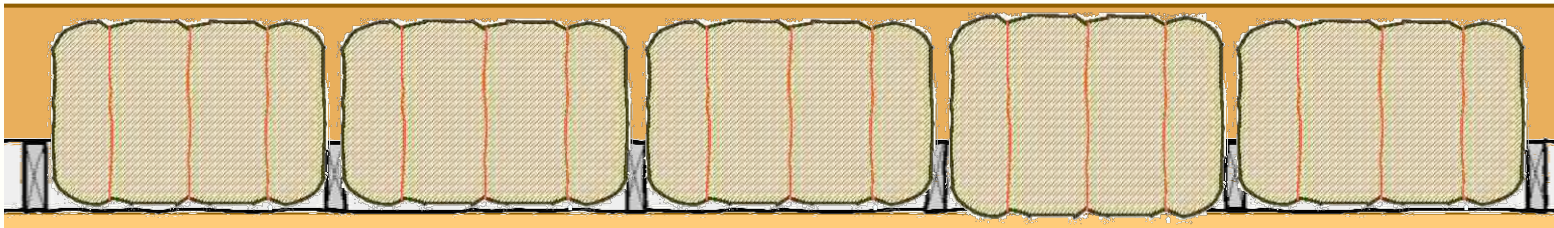
**Drywall clips – no
wood drywall backing**

- Less lumber
- Less labor



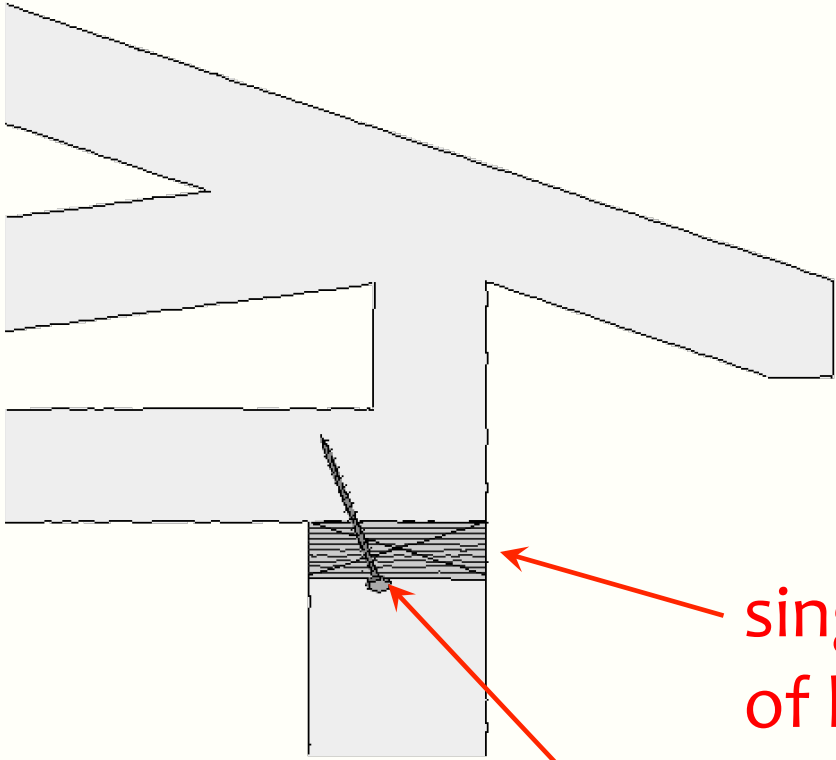
studs *at* 24” on center

**You can use studs at 24”
with a new kind of cellulose insulation . . .**



straw bales

single top plate



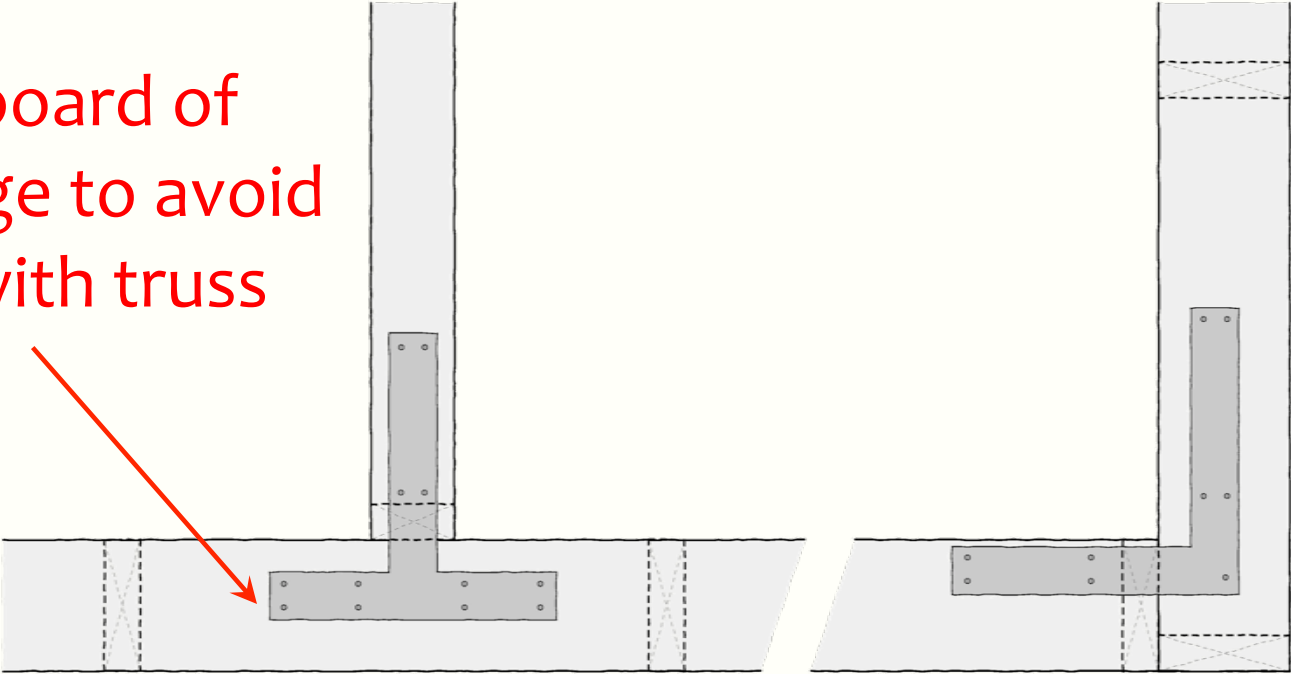
single continuous top plate
of laminated strand lumber

single self-tapping screw
rather than metal ties

single top plate

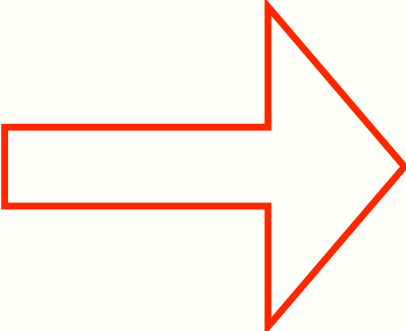
light gauge metal “T” and “L” straps connect plates

Install inboard of outer edge to avoid conflict with truss blocking



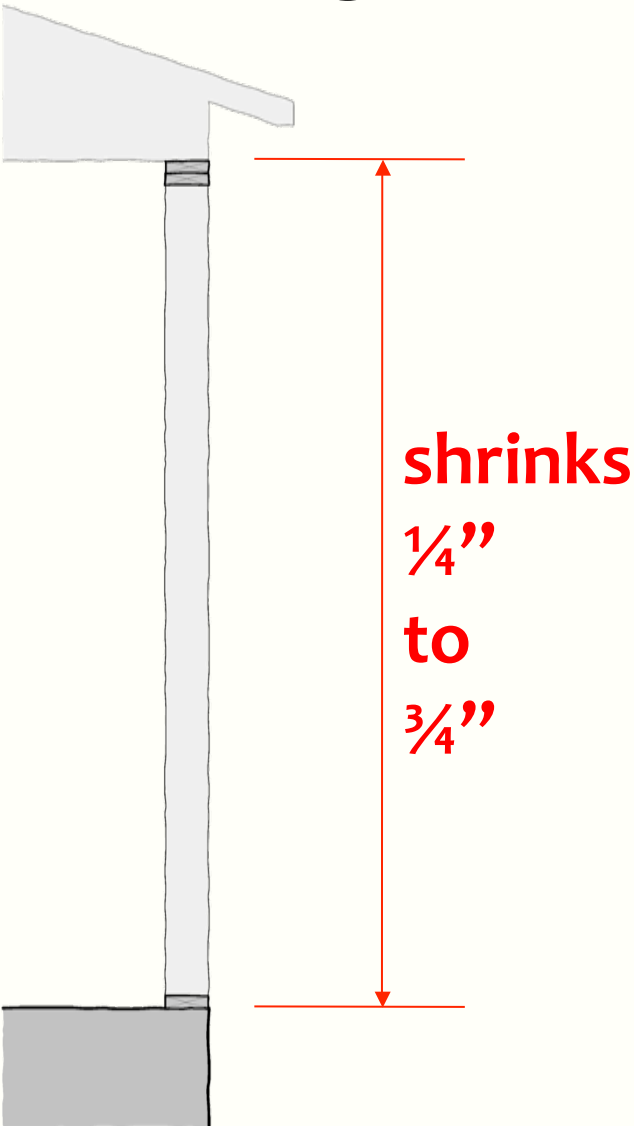
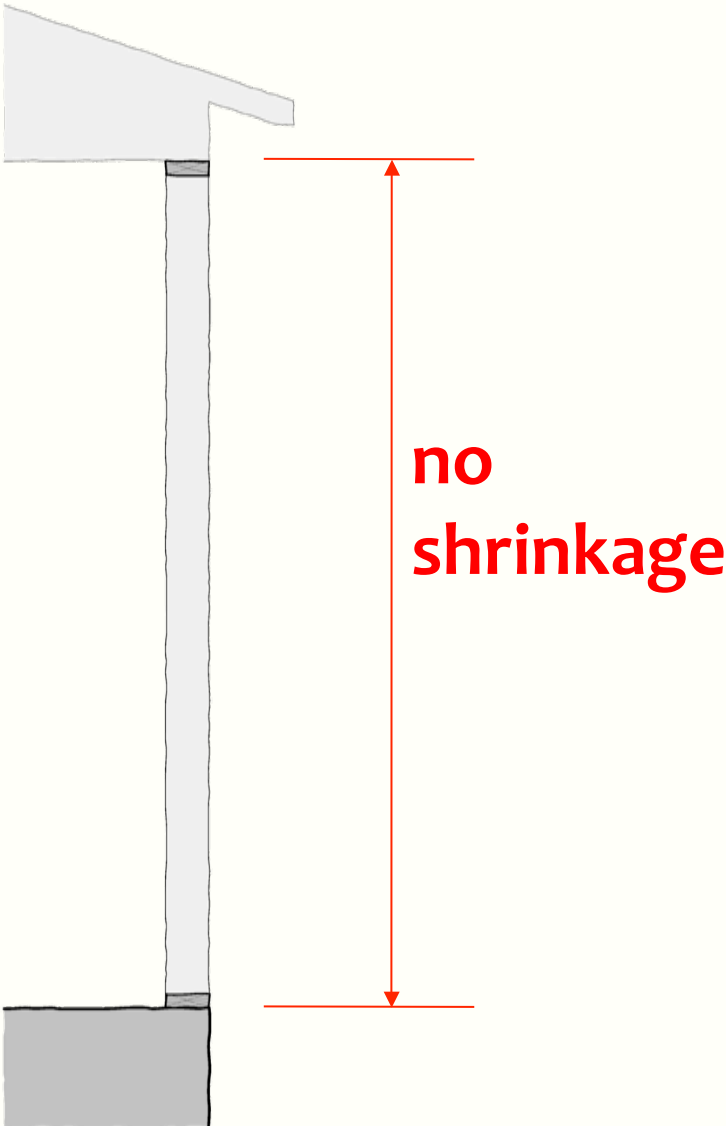
single top plate

this is a
big one



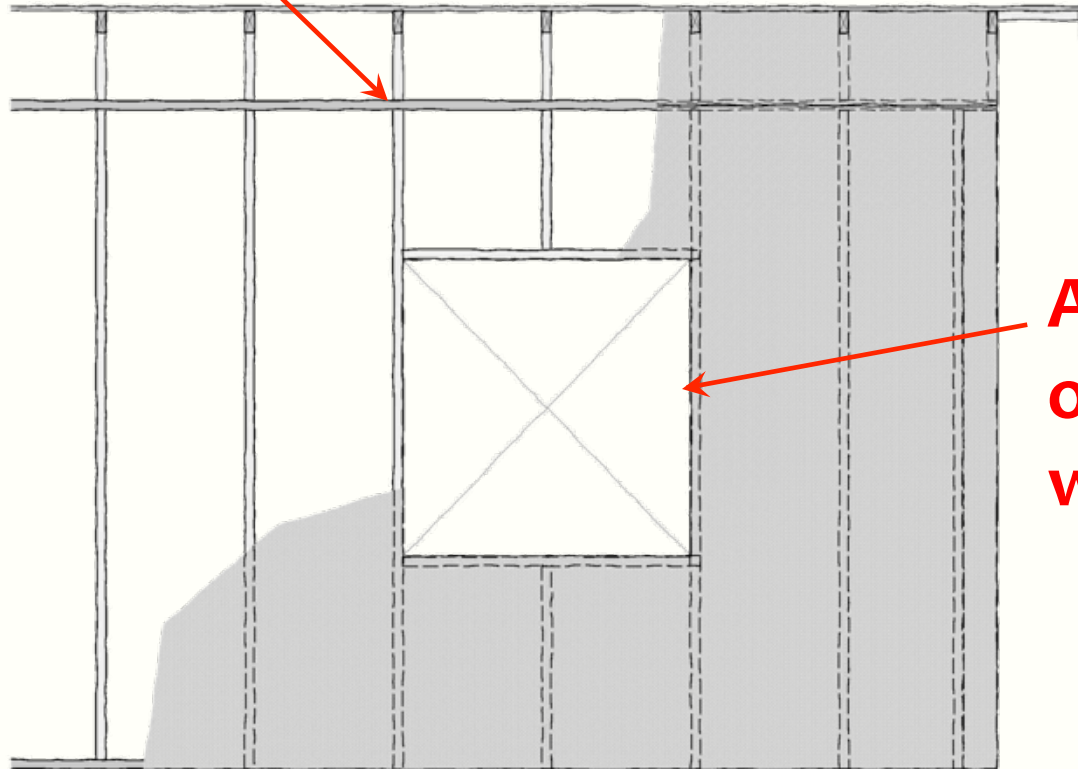
shrinks
1/4"
to
3/4"

single top plate



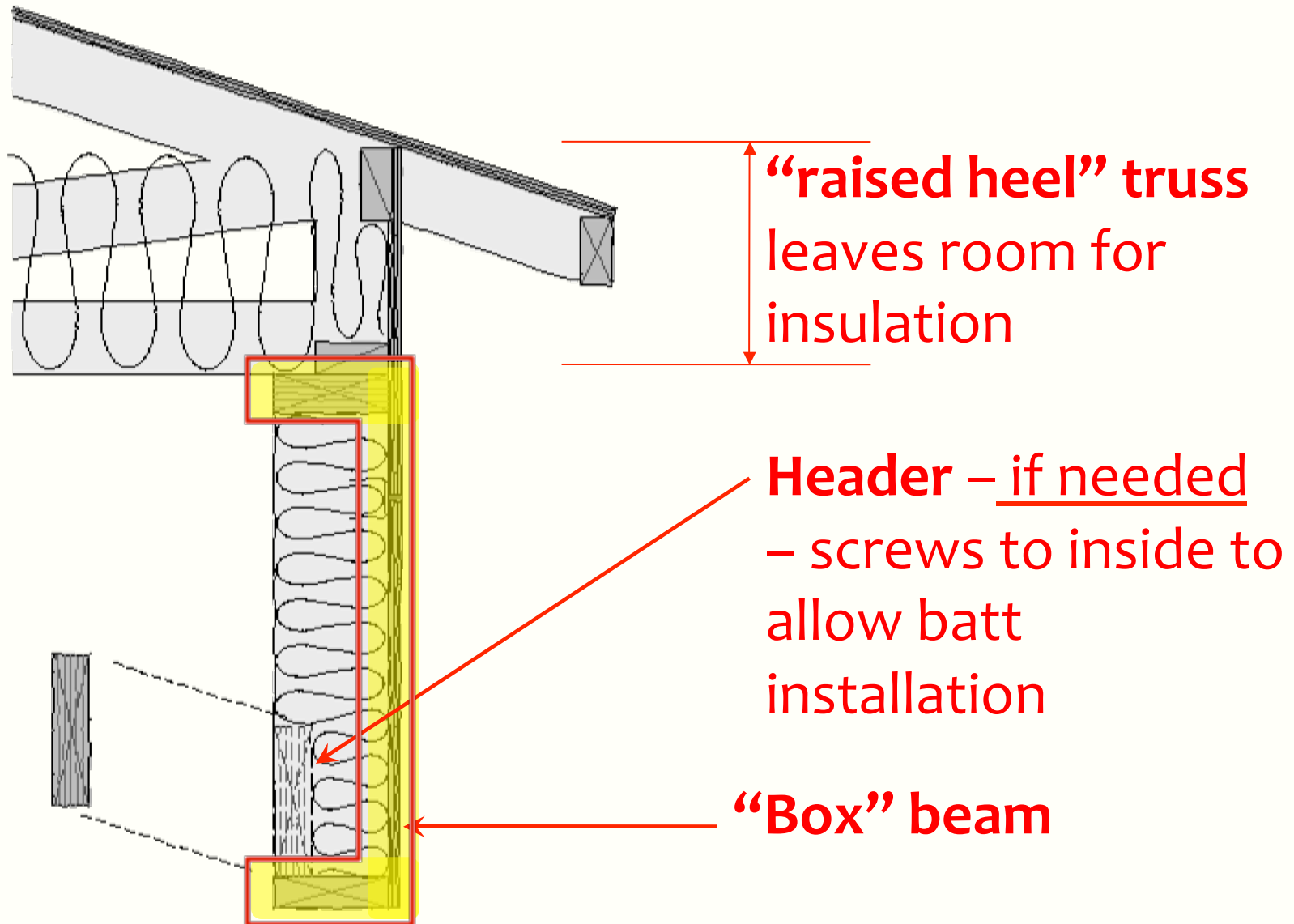
wall openings

Align framing over studs



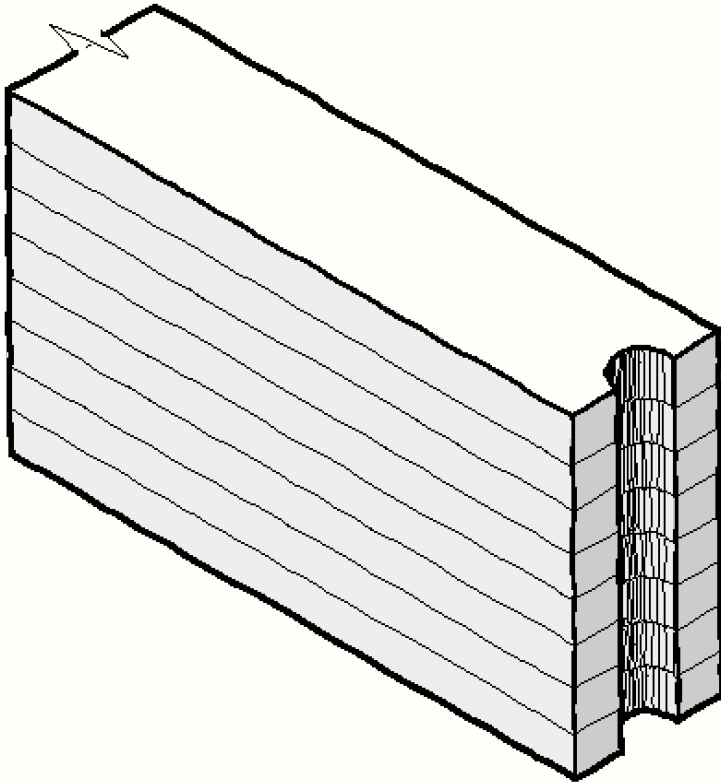
**Align & size
openings
with studs**

headers



George's tips

thanks to George Koertzen / H4H

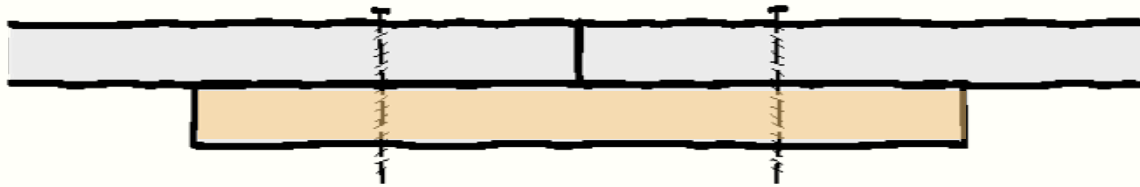


Pre-drilled studs

Cut them while still bundled to save time and force utility lines to base of wall where they don't interfere with batt insulation

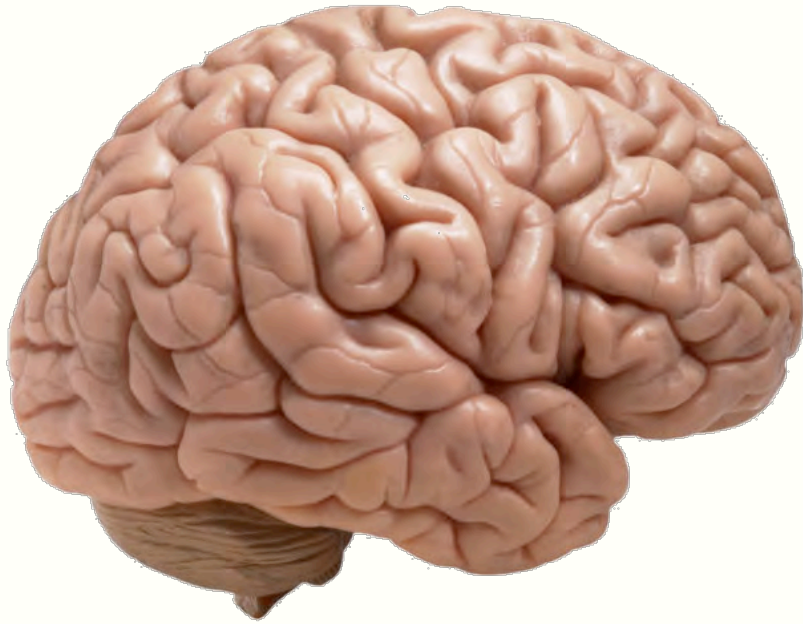
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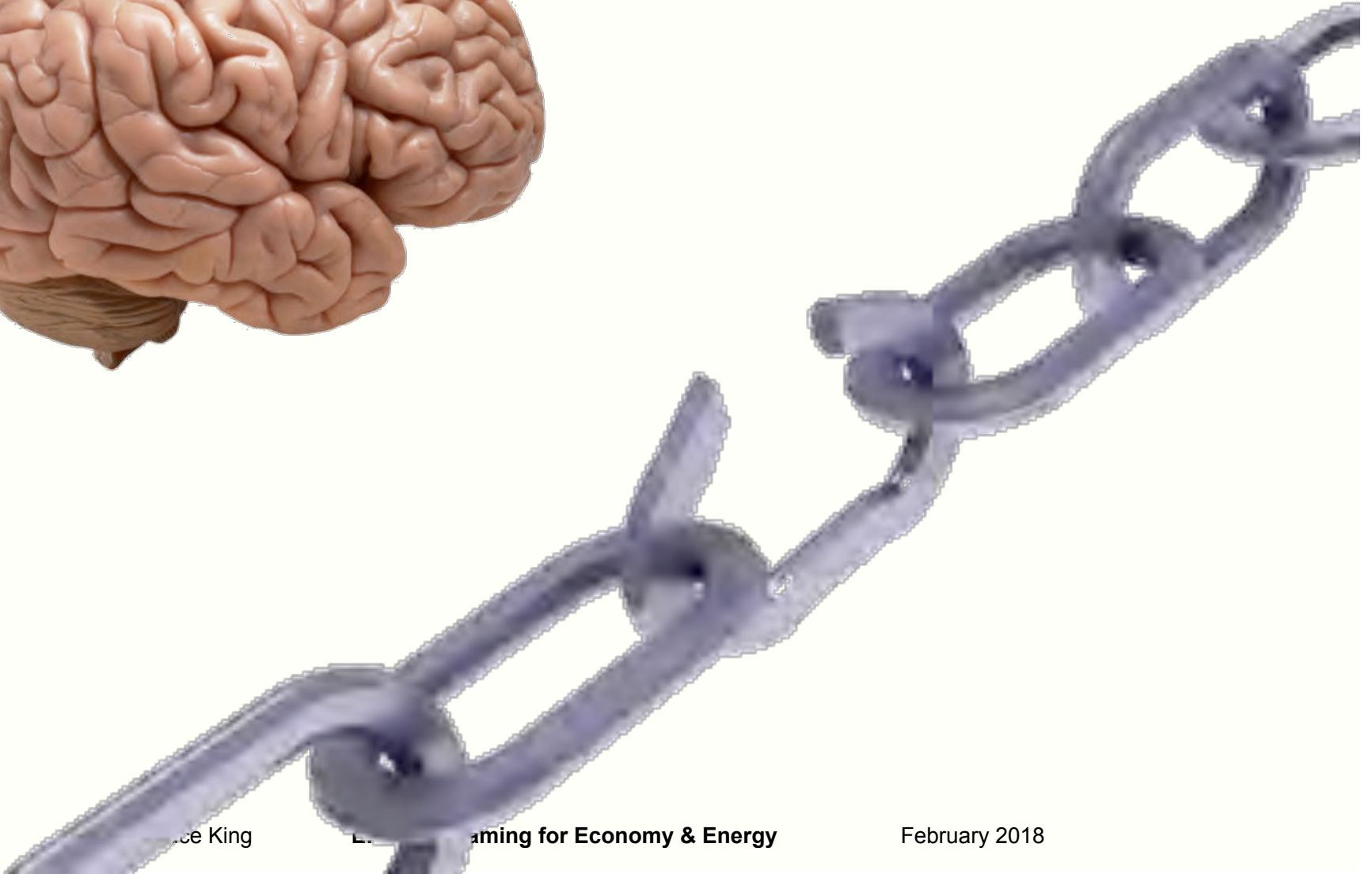


Drywall

You don't need to cut it to fit studs –
splice with scraps & screws where
edges meet between framing



in review



Questions?

