

DETAILS FOR THE NW

4 YEARS, 5 WALLS, 6 PROJECTS

SAM HAGERMAN
Hammer & Hand

Courtland Place

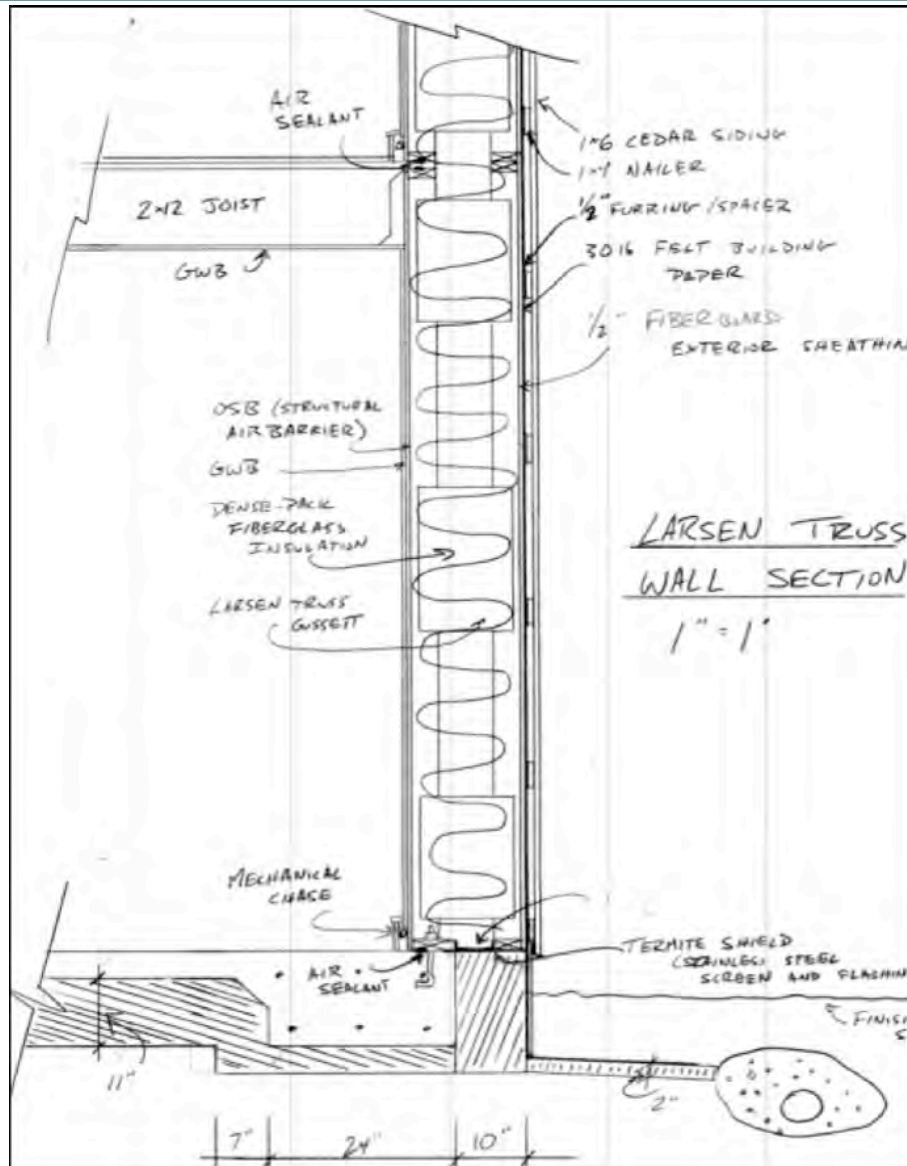


A fun carpenter's puzzle with a minimal budget

Courtland Place

- Small budget
- Readily available materials
- Larsen truss w/ blown-in fiberglass
- Complex carpentry
- Biased toward labor-intensive solutions over high-cost materials

Courtland Place



Courtland Place



Courtland Place



Glasswood Commercial Retrofit

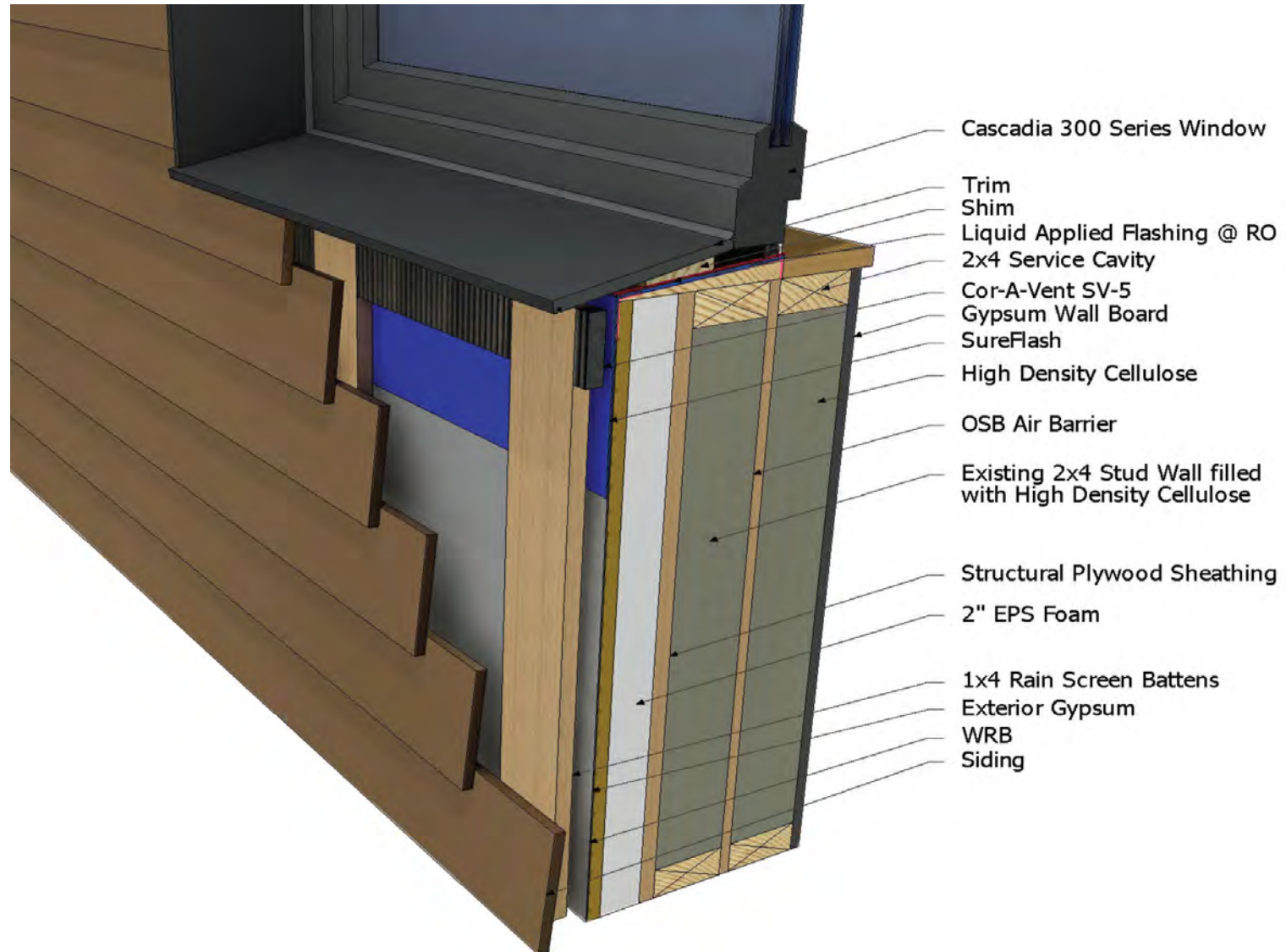


Passive House retrofit of a commercial building

Glasswood Commercial Retrofit

- Reuse and reinforce existing building
- Add secondary interior wall
- Prosoco R-Guard + VaporShield
- OSB with SIGA tape
- 2" EPS exterior insulation
- 7" dense-packed cellulose (original plan was high-density mineral wool)

Glasswood Commercial Retrofit



Glasswood Commercial Retrofit



Glasswood Commercial Retrofit



Karuna House



A high design, high performance showcase

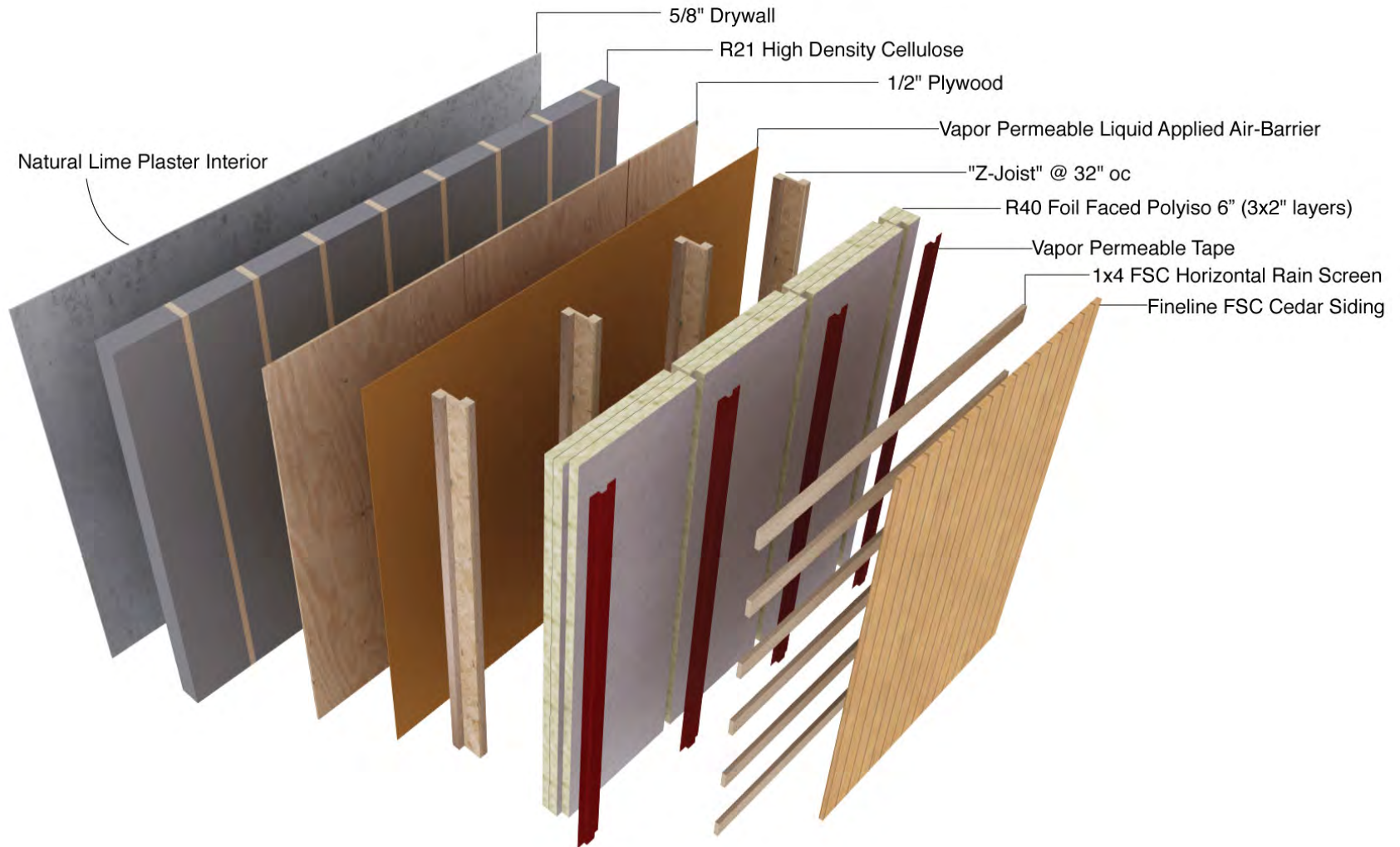
NAPHC 2014

 **HAMMER & HAND**

Karuna House

- 2x6 wall integrated into steel skeleton
- Prosoco R-Guard on ply
- 5.5" dense-packed cellulose
- 6" foil-faced polyiso exterior
- Stucco or FSC® cedar cladding on rainscreen

Karuna House



Karuna House



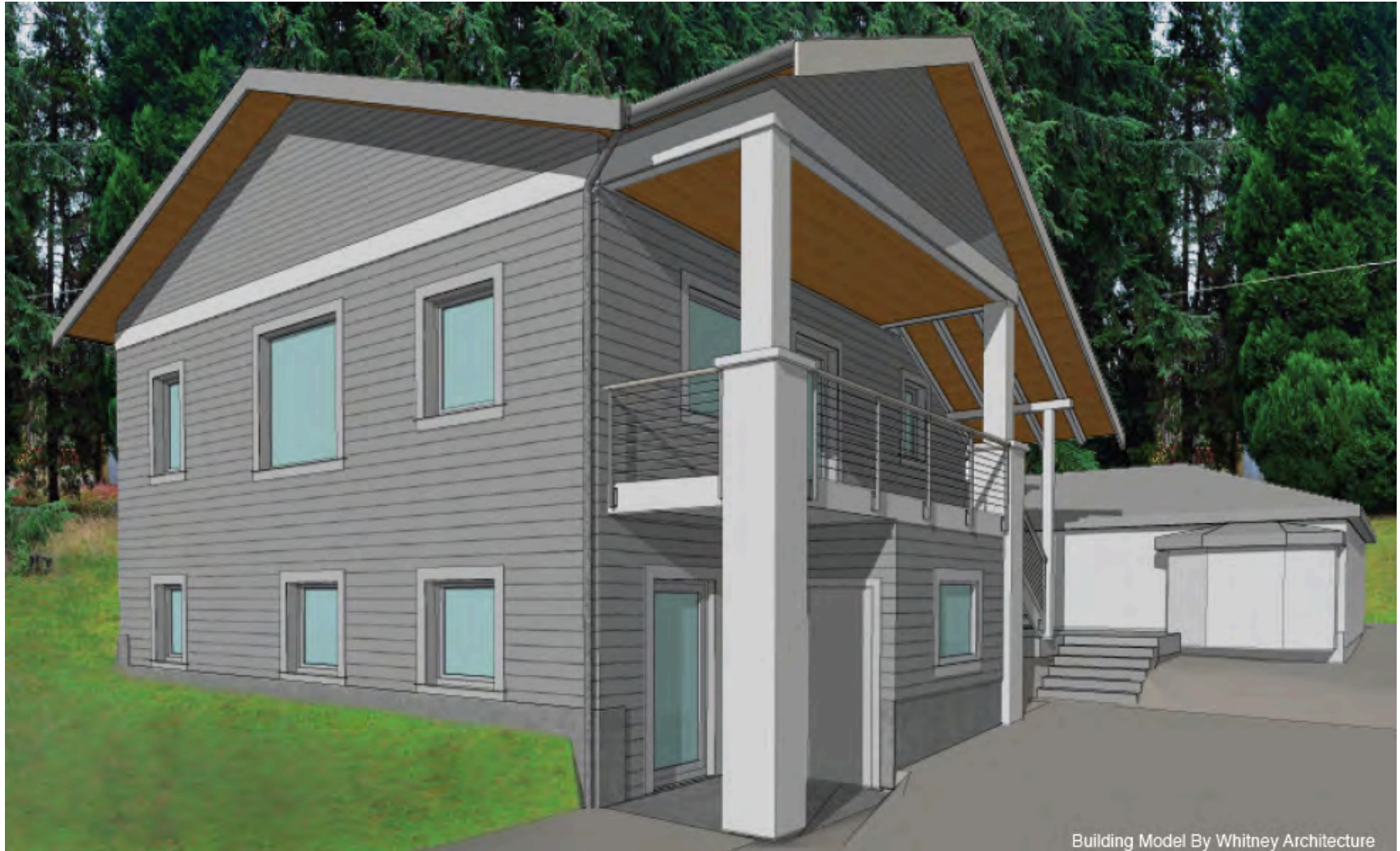
Karuna House



Karuna House



Maple Leaf and Puget

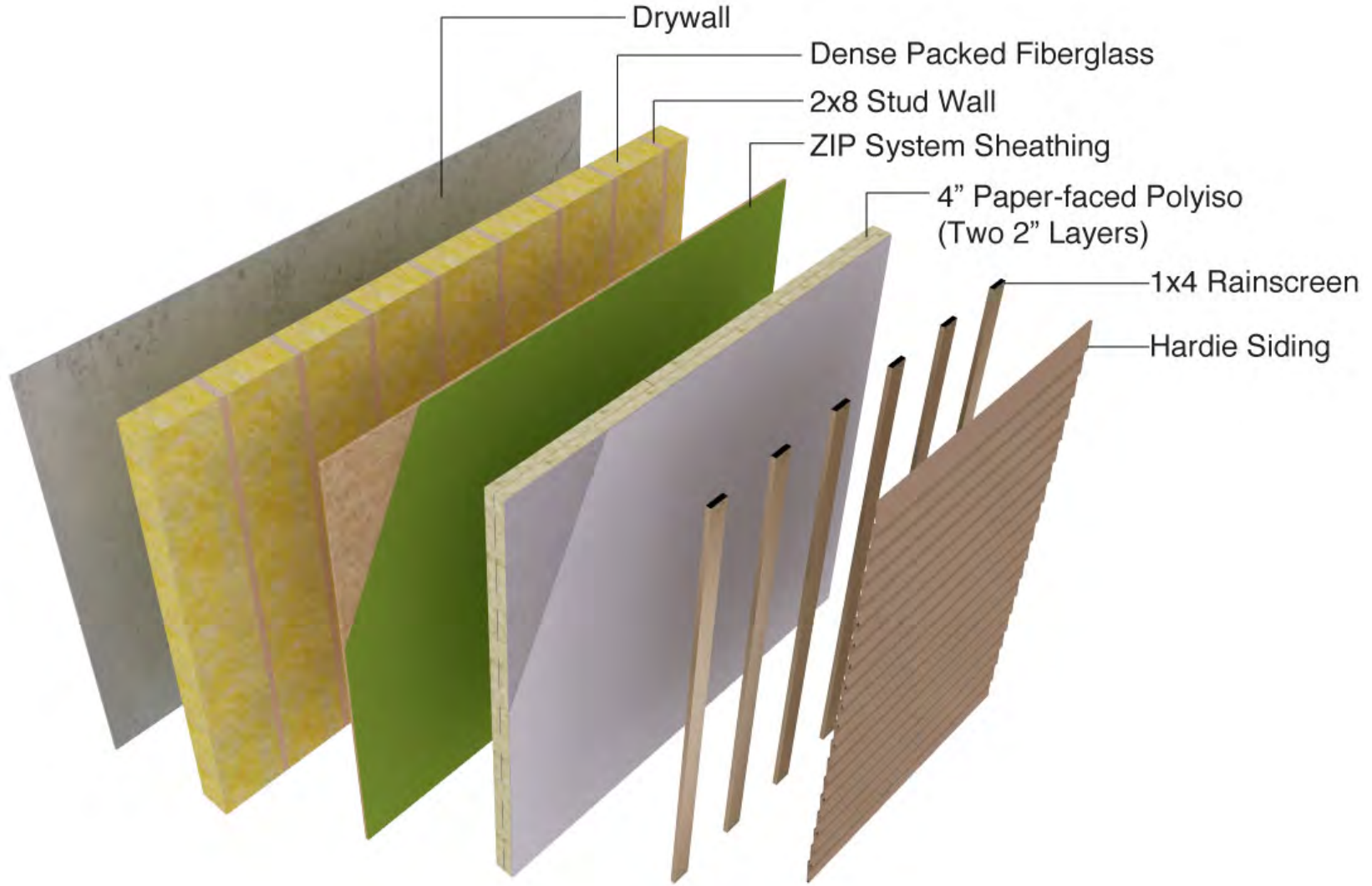


Moving toward standard practice

Maple Leaf & Puget

- Standard materials & established trade practices
- 2x8 wall for thicker wall cavity
- 7.25" dense-packed fiberglass insulation
- Polyiso exterior insulation (4" at Maple Leaf, 3" at Puget)
- Zip sheathing at Maple Leaf, Prosoco R-Guard on ply at Puget
- Moderate cost for exterior insulation and lengthy fasteners for siding
- Time to build closely tracks standard construction

Maple Leaf



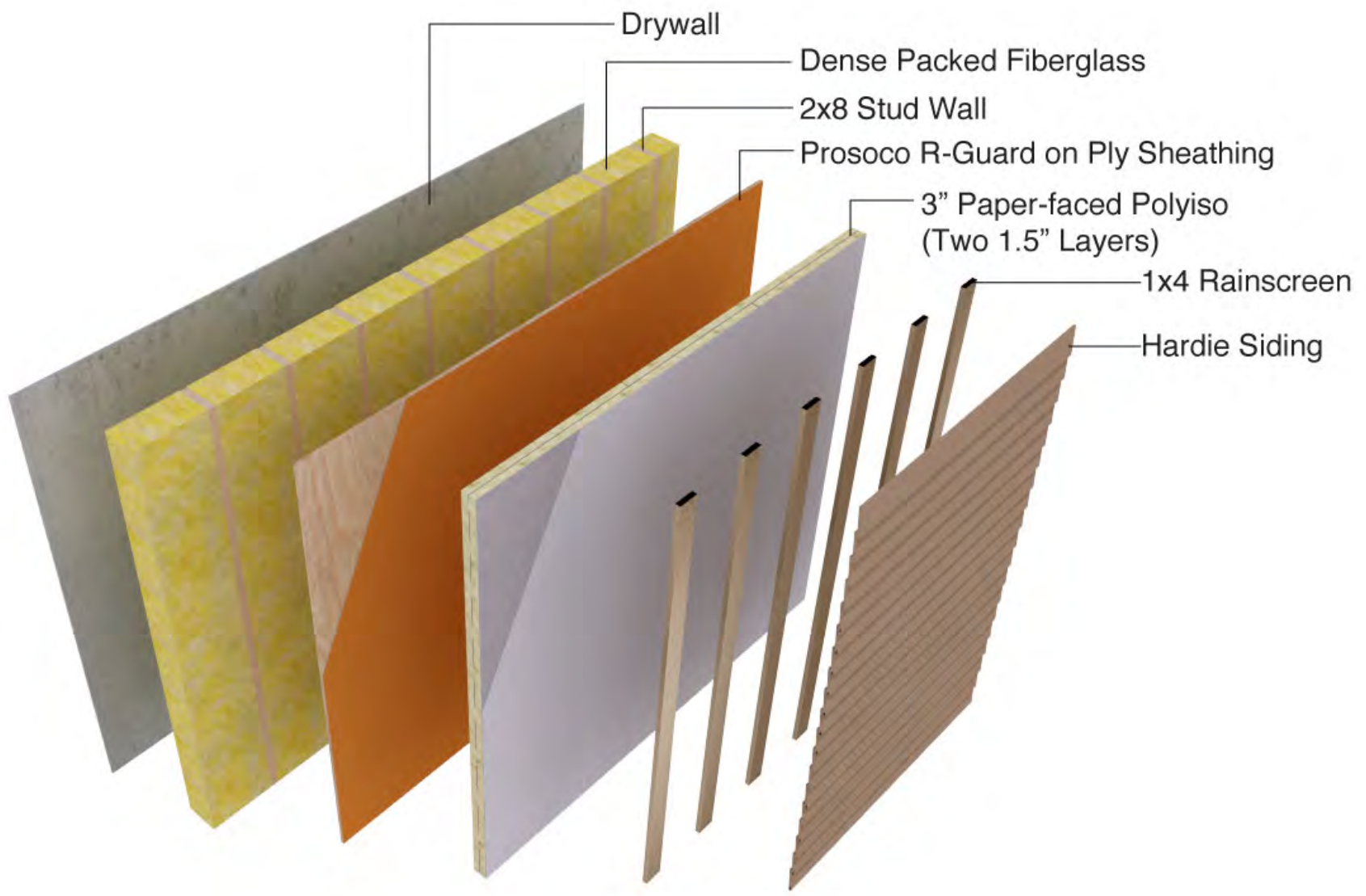
Maple Leaf



Maple Leaf



Puget



Pumpkin Ridge Passive House

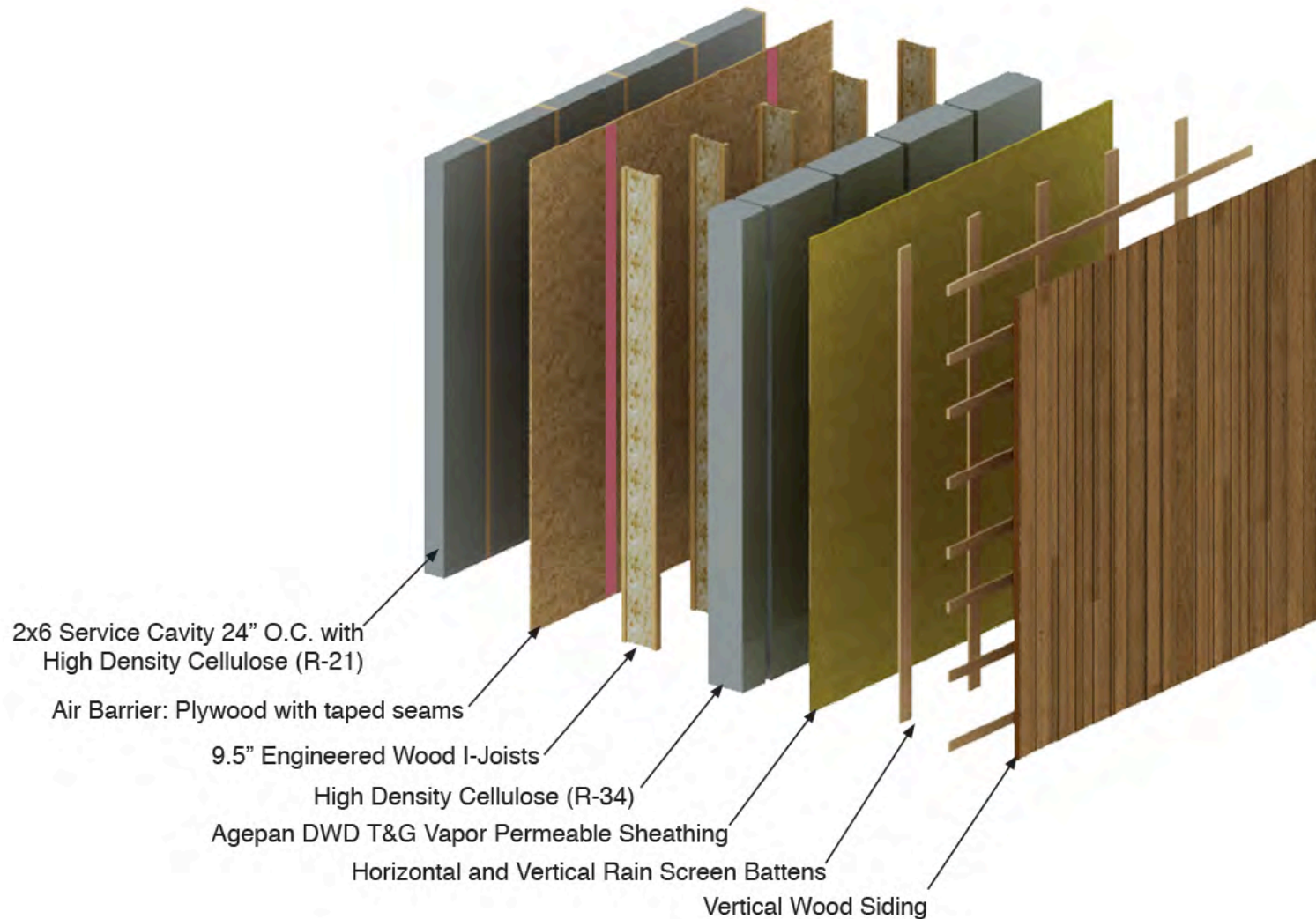


“Let’s do all cellulose!”

Pumpkin Ridge Passive House

- All cellulose insulation - 15" thick
- 2x6 wall framing with Larsen truss using I-joists
- Agepan exterior sheathing layer w/ seams sealed with liquid-applied membrane
- Low cost, offset by ongoing savings on utility bills

Pumpkin Ridge Passive House



Pumpkin Ridge Passive House



Pumpkin Ridge Passive House



Pumpkin Ridge Passive House



Bonus: Madrona Passive House

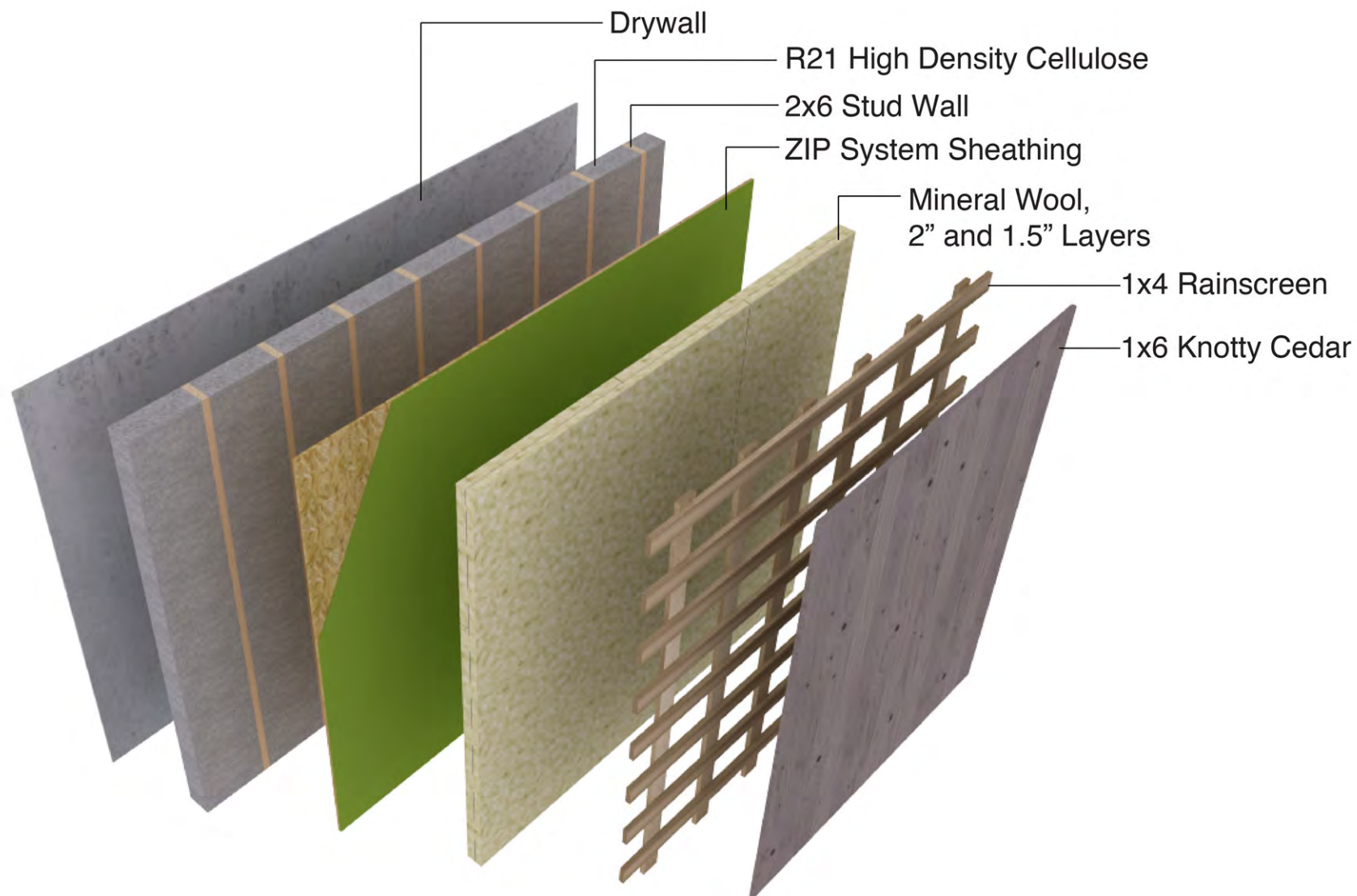


Bring on the mineral wool!

Bonus: Madrona Passive House

- 3.5" mineral wool on exterior
- 2x6 wall with dense-packed cellulose
- Zip sheathing

Bonus: Madrona Passive House



QUESTIONS?

