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The floor is R-40. The foundation layers from bottom to top:

- Electrical, plumbing, sewer and water, and radon mitigation rough-ins
- Gravel sub-base
- 60 mil virgin polyethylene vapor barrier, seams and edges taped
- 2 perpendicular layers of 4" EPS, equaling 8" total, sealed at all joints
- In-floor heating system
- 4" concrete slab









ROOF ASSEMBLY

The roof system is about R-100:

- 1/2" drywall
- 1.5" electrical chase
- 1/2" OSB, taped
- 30" deep energy heel roof trusses, filled with dense-packed cellulose
- 5/8" plywood sheathing
- 30# felt
- Ice and water barrier
- 1"x4" cross strapping, to create an air space (which created a ladder for the roofers)
- Standing seam metal roof















WALLASSEMBLY

The 14.5" thick wall system is R-45:

- 1/2" drywall
- Smart air barrier and vapor retarder (allowing any trapped moisture to evaporate back into the house)
- 1.5" interior electrical service chase filled with mineral wool
- 2x6 stud framing, filled with 5.5" dense-packed cellulose
- 3/4" plywood sheathing, caulked and taped
- 4" EPS foam attached with 6" screws, foamed and taped
- Weather barrier, taped
- 1.5" rain screen attached with 8" structural screws
- Cedar clapboards and machine cut shingles





















