

8

Mistakes Designing Mountain Homes

& how to keep them
out of your next
house



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1 COMPLEXITY

Nothing increases construction costs more than an unnecessarily complicated design, blowing your budget.

WHAT TO DO: Have Architect keep the design simple. Fewer corners, no tricky roof intersections, less floor plan partitions (less compartmentalization), simpler details.



2 ENERGY NON-COMPLIANCE

Some builders are not completely familiar with the latest edition of the IECC (Int' Energy Conservation Code). E.G.: most builders install interior wood boards directly over the interior side of exterior wall studs & under attic trusses. This allows infiltration (outside air inside) because wood planks are not an air barrier. This means you waste \$ on monthly energy bills. You can have interior wood finishes, but you first need to have an air barrier installed to prevent energy loss.

WHAT TO DO: Have Architect's design improve on energy code & point out critical items (like air barriers).

3 DIMENSIONAL FUNCTIONALITY

Even in multi-million \$ homes, we've seen critical distances violated so as to make certain spaces non-functional. For instance: in kitchens, we see where there is only 3' or 4' between counters. You really need 5' to 6' (certainly no less than 4'-6") because when appliance doors are open & cabinet drawers pulled, there's no room to walk. So if you want family & friends to enjoy home gathering places with you:

WHAT TO DO: Architect's drawings to show equipment doors open so you can see if there's adequate space.



4 STEEP GROUND

Many people buy land because it has a great view. Unfortunately, in the mountains, this is often due to land sloping steeply down at the house site. So what? Because it often costs an EXTRA \$150,000 (or more) to build foundations on that sloping ground. Why: because it's hard work & takes a lot of concrete, which is expensive.

WHAT TO DO: Have Architect help you find a flatter house site that still has a great view.



Attic steel strapping in a HOME ARCHITECTS® mountain home project.

5 NAILS VERSUS STRAPPING

Many homes are built using toenailed connections rather than using steel straps. Especially at roof structural members to the bearing walls. Big Mistake. Code Officials commented after Hurricane Andrew that part of the reason homes blew apart was due to lack of hurricane straps. Those are strips of galvanized steel about 1-1/4" wide that are nailed up and over each roof member, and down both sides down the top wall plate and down the studs or under the top of the wall plate, along with other steel reinforcing. Toenails (diagonal nails) pull out under high wind suction; they aren't strong enough.

WHAT TO DO: Have Architect detail stronger connections.

6 INADEQUATE VIEW RESPONSE

Very few mountain homes take full advantage of the glorious views in scenic regions. Why: lack of knowledge about what to do. We see small windows & doors, improper wind force design, lack of beauty & too much solid wall facing wonderful views.

WHAT TO DO: Have experienced mountain Architect specify & design large glass areas facing mountain views. This will, of course, involve integral abilities to detail wind resistance features so all that glass (& surrounding structure) remains in place during heavy storms.



One of HOME ARCHITECTS® living room window walls.

7 FOUNDATION EROSION

Most people do not understand the connection between rain, mold & foundation erosion. How could those be connected? And so they don't install gutters, downspouts or other drainage features. And then mold gets into the house, footings settle, slide & crack walls, floors & other parts of the house, destroying your investment.

WHAT TO DO: Architect's plans & specs should indicate gutters, downspouts & underground drainage down & away from house.

8 UNIMAGINABLE HORROR

Your house sliding down a mountain. It happens. How? When a certain minimum thickness of proper soil doesn't exist between the ground surface & bedrock, heavy mountain rain can super saturate the soil, then the huge weight of the house pushes down on the mud, on top of sloping bedrock. Then the house takes a sleigh ride. People from flat land don't know this.

WHAT TO DO: Your Architect & Structural Engineer can provide details showing foundations "pinned" to bedrock, only where appropriate.