

34994 Sky Ranch Road, Carmel Valley ~ Custom Home Details

Energy Efficient:

- All exterior walls are 2x6 studs with one inch stucco over 1/2 inch sheer panel. All interior wall surfaces are 5/8 inch sheetrock with plaster finish. Heat retention in winter is excellent. In the summer venting through screened windows and skylights at night followed by their closing in the morning leaves the house very comfortable during the warm days.
- Five large solar panels heat both domestic water as well as providing the heat for radiant floors in the kitchen and den. 300 gallons of storage enable the propane water heater to be shut down most of the year. 2012 Electric Bills: October \$68.70, November \$41.49, December \$53.30.
- Ceiling fans in all bedrooms and living room are effective for cooling in summer. In winter the living room fans push warm air down and throughout the house.
- Roof is framed to have a 1 1/2 inch raceway above the insulated rafter bays. When the roof gets hot in the summer air is drawn into vents at the exterior walls then travels up the raceways to the ridges where it exhausts. This constant flow removes roof heat before it radiates into the house.
- All windows are double pane glass, argon gas filled, and low-e.
- Most windows have double cellular blinds-the state of the art in insulating window treatments. They open fully to allow for maximum solar gain and unobstructed views.
- The home is sited to face exactly south which maximizes solar gain through the heavily windowed south walls. The northern exposure of the house is relatively windowless and protected by the insulated garage and shop areas.
- Thermal mass in the form of a 10 inch thick concrete and stone wall in the living room absorbs solar radiation entering through the clerestory windows.
- A large wood stove with blower both convectively heats the air and radiates heat into the thermal mass surrounding the stove.
- 220 volt outlet next to parking area for dedicated electric car charging.
- Artificial lighting is generally unnecessary during daylight hours due to window placement.
- All exterior access routes employ air locks or double doors to facilitate interior temperature control.
- On cold, sunny day's heat can be harvested from the Solarium.

Healthful Living:

- The interior of the house is largely paint free. Walls are plaster finished, ceilings are raw cedar.
- Space heating is primarily through radiant floors, solar gain, and baseboard heaters. This strategy eliminates blowing dust and noise associated with forced air systems.
- No pesticides or rodent-killing chemicals have ever been used on the property. Only traps have been used to kill gophers.
- Breakfast/Kitchen area is bathed in morning sunshine.
- The Solarium, allows for a winter vegetable garden.

Convenience:

- The U-shaped kitchen was designed for optimal efficiency in food preparation.
- The upstairs laundry room gives easy access from bedrooms where the majority of laundry is produced.
- Master bedroom is isolated from other bedrooms for privacy.
- Separate staircase from upstairs to garage shortens travel distance when needed.
- Deck is constructed of zero maintenance material.
- Roof shingles are cement and roof eaves are completely enclosed for fire prevention.
- Downstairs guest quarters enjoys private exit.

Environment:

- Runoff from the roof is largely channeled into pipes that converge allowing the rain water to be collected and stored for garden use. The tank has not been installed.
- The large driveway surface area is constructed of concrete rather than asphalt which eliminate the leaching of petroleum distillates into the environment.
- Many native and drought tolerant plants grow in the garden areas.