

The Bates home is the Golden Anniversary, a direct gain and Trombe wall passive solar model home offered by Peterson Construction of Lincoln. This model has 1950 sq ft of floor space with an optional loft that can be located over the strategically placed garage. Located on the north side of the house, the garage functions as a buffer to protect the house against cold north winds.

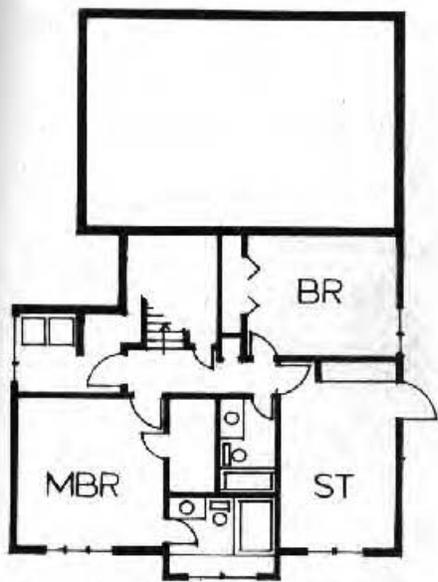
This solar home has nearly 300 sq ft of vertical south glass. The Trombe wall, located in the great room, contains a fireplace. A ceiling fan near the ceiling peak is used to help circulate air and reduce air stratification. The bedrooms in the Golden Anniversary are located on the lower level where the rooms have ceilings of conventional height. These rooms are warmer than rooms with vaulted ceilings because heat tends to stratify in the rooms with vaulted ceilings in passive solar buildings.

Combustion air for the furnace is ducted from the outside. The incoming combustion air is preheated by being drawn through a ground tube, the intake opening of which is cleverly disguised under a wooden seat (opposite right) located near the main entrance to the house.

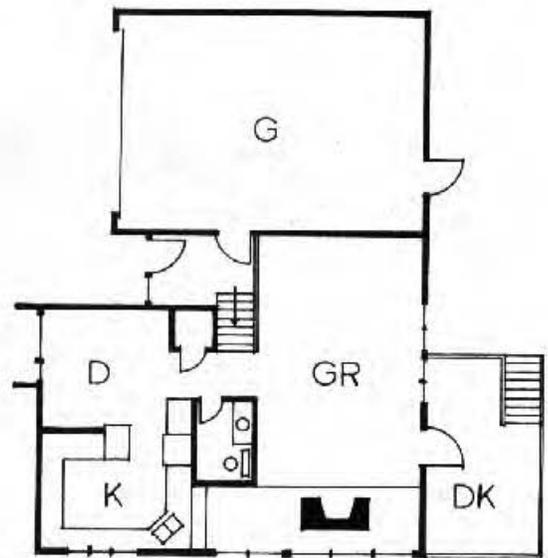
The owner has indicated that thermal performance of the building could be improved if movable insulation were to be installed on the windows in the bathroom located on the lower level off the master bedroom; without night insulation, the bathroom can become quite cold.

Energy efficiency finished second to aesthetics in the choice of window coverings for the south facing glass in the great room. The interior decorator unfortunately chose a vertical blind (opposite left) with a mirrored surface that has a negligible insulation value.

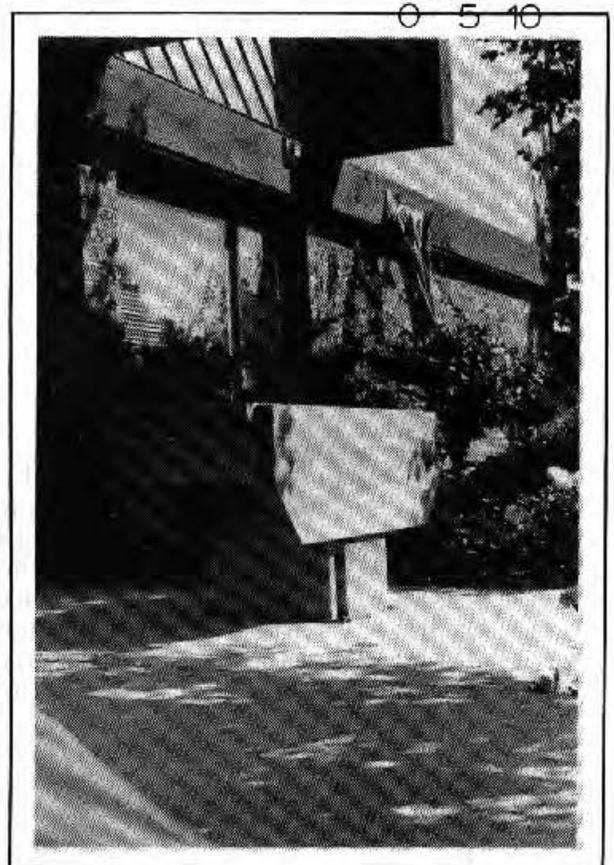
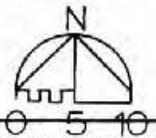
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