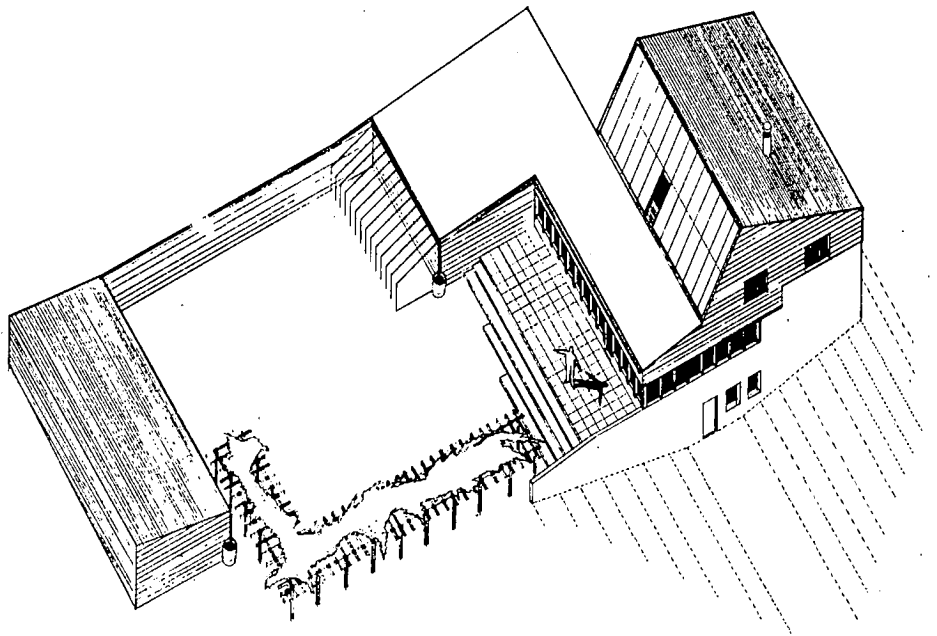


Solar House, Caledon, Ontario

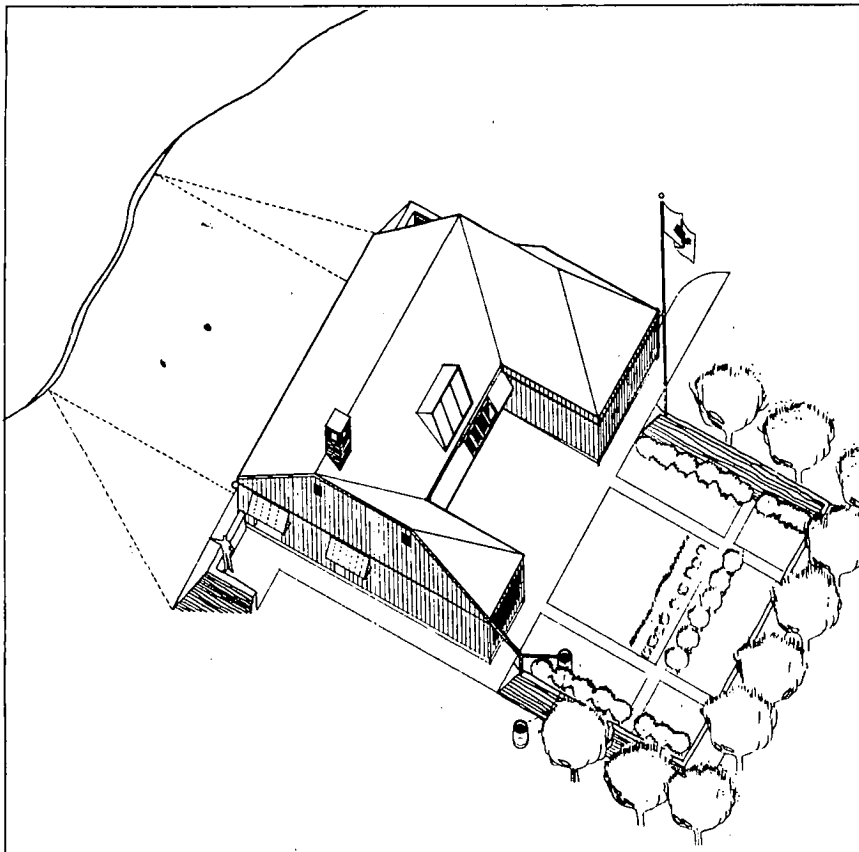
This solar house has 3,500 sq. ft. of heated space served by solar collectors with an effective area of 550 sq. ft. The water-to-air heat exchanger provides 100 per cent heating in average winter conditions. A duct heater and two fireplaces act as backup heat sources. The energy storage tank is 20' x 33' x 11' deep. The white roof reflects solar radiation.

Energy conservation features include controlled ventilation, the air that leaves the house heating incoming air. R values for walls and ceiling are 28 and 39 respectively. Windows to the north are minimum, and all windows have insulating shutters. The fireplaces are made to be heat-reclaiming; doors are insulated and the vestibules prevent loss of inside heat. The house has a minimum surface-to-volume ratio. Construction will be completed in May, 1977.

Mechanical engineer for the project is Frank Hooper; K and R Engineering are structural engineers.



Energy-conserving House, Napanee, Ontario



The design of this house accommodates many energy-conserving devices. Domestic hot water is heated by three solar collector panels. The 3500 sq. ft. of space is heated by wood and oil forced warm air furnace. Vestibules and insulated doors prevent loss of warm air and infiltration of cold and the windows have insulating glass and insulating storms, as well as insulated curtains hung from a no-draft valance.

The kitchen vent is ductless, with an outside vent to be used in summer. The bathroom and the clothes dryer are exhausted into the greenhouse. Outside combustion air is led directly to the furnace and fireplaces; the latter are heat-reclaiming and connected to the furnace fan. Warm white fluorescent lighting is used throughout. The basement is exterior-insulated for heat storage. The house has the minimum surface area per unit volume, and R values of 25 for walls, 38 for ceiling.

The mechanical engineer for this project is Karl Linton. Construction will be completed in the autumn of 1977.