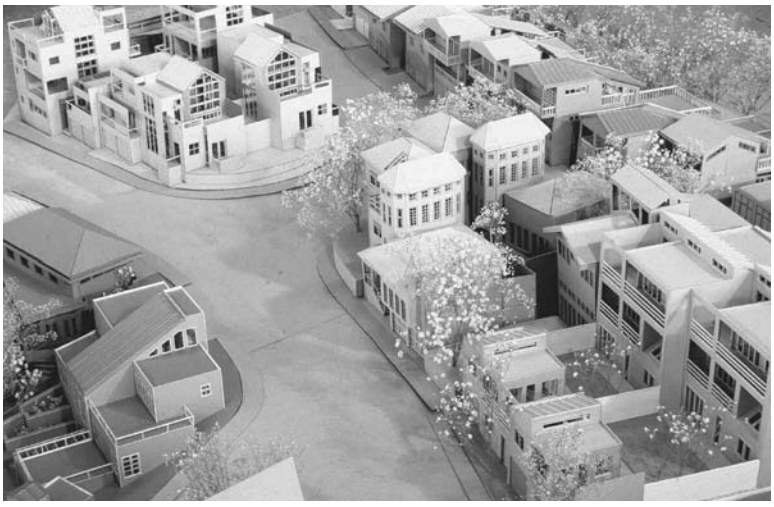

Project One. Low density hillside housing with a density range of 7 to 18 du/ac (17 to 44 du/ha): (Top) View from the southwest along the north–south ridge; (Bottom) A close view of housing on the west-facing slope.

Project One

The first project is located on the north–south ridge of a low hill. The program calls for increasing density in an older neighborhood of single-family houses (5 to 7 du/ac; 12 to 17 du/ha). By putting more than one house on an existing lot, projects achieve a density range of 7 to 18 du/ac (17 to 44 du/ha). Individual houses are in

the two- to four-bedroom range or about 1350 to 2500 sq ft (125 to 232 sq m).

The solar envelopes guarantee 6 hours of sunshine on a winter day and 10 hours in summer for outdoor recreation and for gardening. Shadowing is allowed at any time below 8 feet (2.4 m) at front and rear property lines but is unlimited at side property lines and on all public rights-of-way.

House designs show great architectural variety. Partly this results from different site conditions, sloping or flat, that affect the solar envelopes. But even within a parcel, relatively high values of S:V provide especially rich possibilities to explore architectural responses to sunlight. Designs generally have more windows on the south to capture the winter sun and fewer on the north, partly to avoid heat loss and also for privacy from next-door neighbors. South-facing clerestories allow the penetration of winter sun down stairways to enliven otherwise darker, lower floors.

Project Two

A second project, planned under identical rules, is located nearby on the eastern slope of the same hill. Here, because the hill flattens, solar envelopes can rise, providing more volume than in the first project. This nearly doubles the density of the first project to 14 to 28 du/ac (34 to 69 du/ha).

House designs on the steeper part of the site show characteristics similar to those seen earlier on the west side of the hill. The solar envelope clearly accentuates the downward tilt of the natural topography. Clerestories over stairwells capture south sun for daylighting and especially for winter heating.

In contrast, houses on a flatter portion of the site become taller where the solar envelope is less restrictive of their shapes. Three-story row houses line up along a very deep lot with small, private gardens and entry along one edge. A very tall, south-facing clere-