

## Virgo House

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The site is a sloped lot that faces due west with wonderful views of the entire San Francisco Bay Area with unimpeded southern solar exposure. Access to the site was at the low end of the site. The slope itself was approximately the same slope of a staircase. When that fact was discovered, the idea unfolded that the house should be terraced into the slope and become part of the hill. The final design is a house with 4 landscaped terraces that is integrated with the natural landscape and the hill. Spectacular views of San Francisco are available to all rooms and terraces.

The house is composed of one circulation spine, three wings, and four terraces, all stepping up the slope. The circulation spine is the main stair that runs east-to-west; beginning down-slope at the garage and extending up the slope. This spine runs along the northern edge of the property and serves as the connector between the three wings and the four terraces. The first wing is the main living area which contains the living room, dining room, kitchen and family room and has access to the first terrace. The second wing contains three bedrooms with access to the second landscaped terrace that is also the landscaped roof over the first wing. The third wing is the master-bedroom wing with access to the landscaped terrace which is also the landscape roof over the second wing. The fourth terrace that is an extension of the hillside that extends over the master-

bedroom wing and is planted with the indigenous grasses and low shrubbery found on the site.

The circulation spine has many functions. The first function is to contain the stairs that connect all levels. The second function is to act as a passive solar system by gathering the solar energy and then distributing that heat throughout the house. During the winter when heat is desired, the sunlight can enter the south-facing windows on the spine since the sun is low in the sky. During the summer when heat is not wanted, the trellis shades the windows since the sun is high in the sky. In addition, large deep planters allow deciduous vines to grow up on the trellises. These vines have leaves during the summer when the shade is desired and lose their leaves during winter when the sun is desired. Once warmed by the sun, the interior air rises up the spine to the top of the stair where the warm air is sucked into a mechanical system and distributed to the rest of the house. When the house requires cooling, doors and windows can be opened on all levels and the spine will serve as natural ventilation chimney for all wings. The prevailing westerly ocean breeze which begins in mid-afternoon can push the warm air up and out. The final function for the spine is providing a south-facing roof-top location for a linear array of photo-voltaic panels.

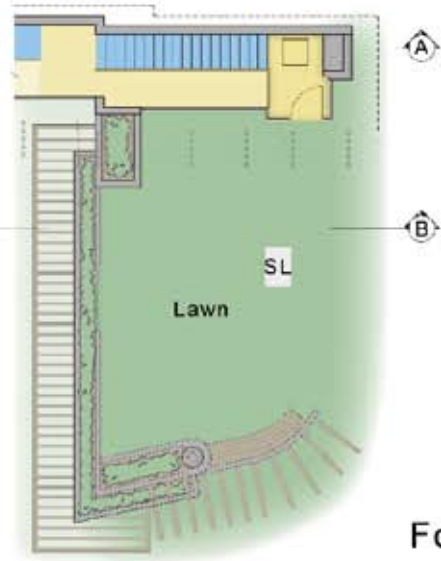
Additional features:











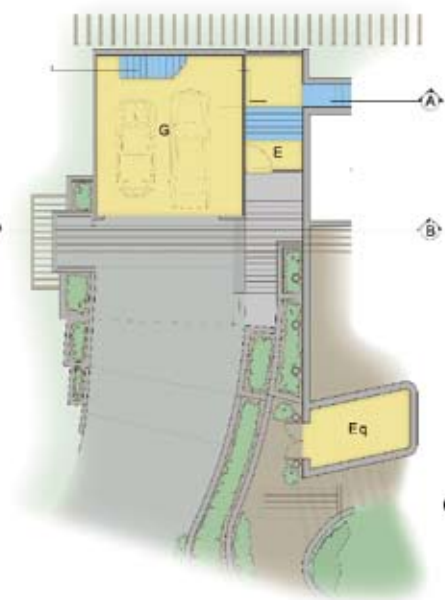
Fourth Floor



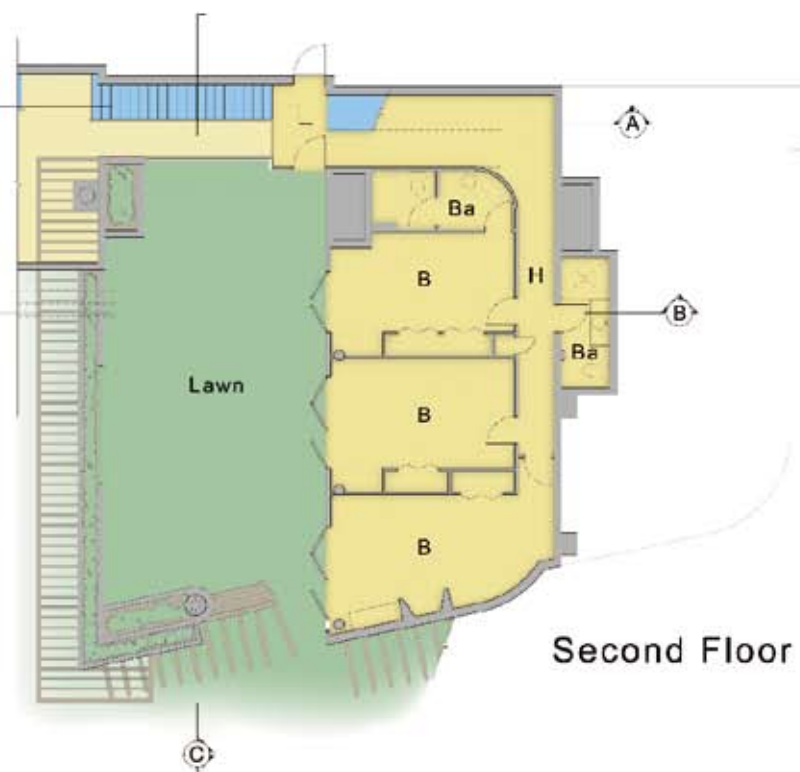
Main Level



Third Floor



Garage/Entry Level

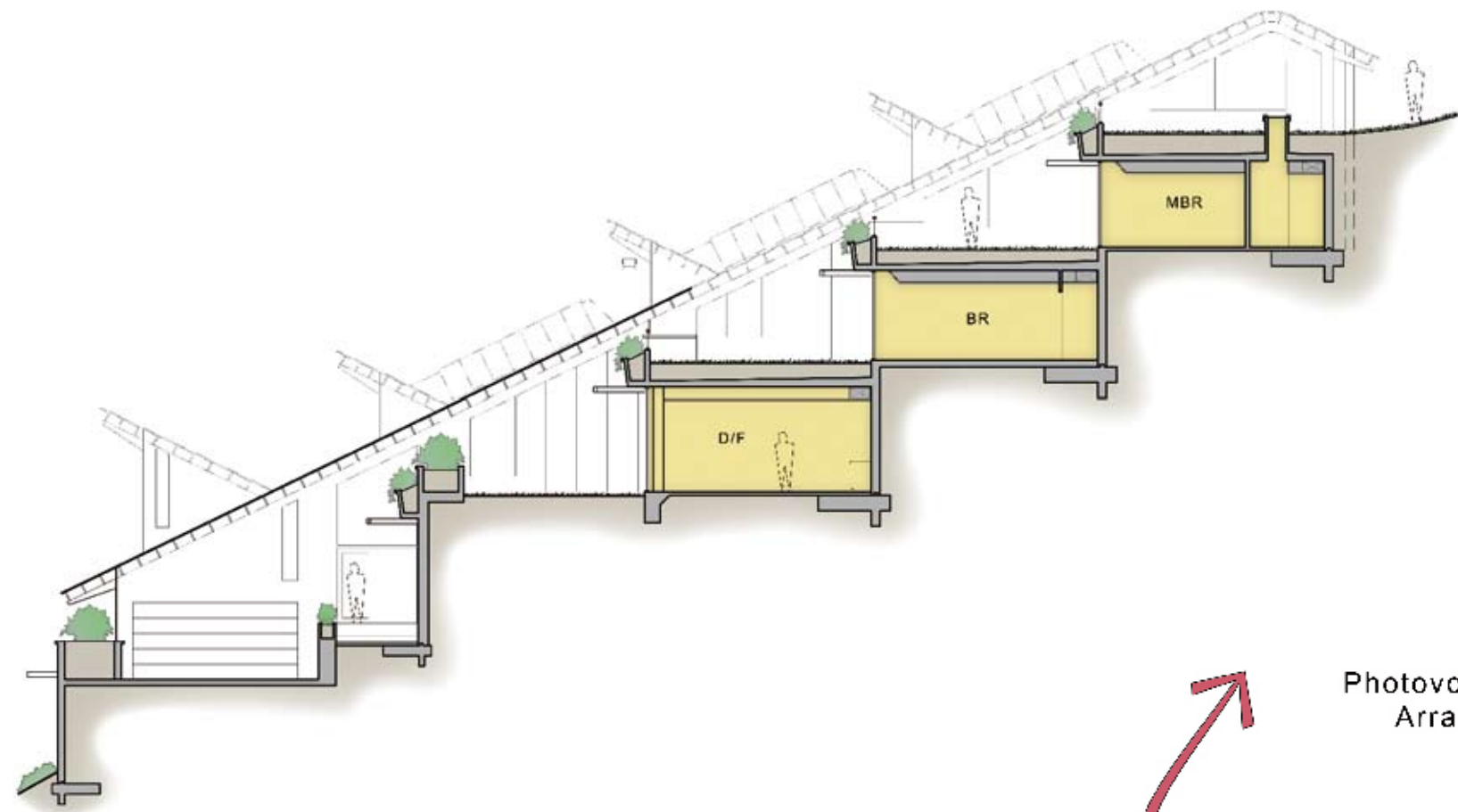


Second Floor

- Key
- B Bedroom
  - Ba Bathroom
  - Cl Closet
  - D Dining
  - E Elevator
  - Eq Pool Equipment Room
  - F Family Room
  - H Hall
  - K Kitchen
  - La Laundry
  - L Living Room
  - MBa Master Bath
  - MB Master Bedroom
  - M Mechanical Room
  - N Nook
  - P Powder Room
  - SL Skylight
  - S Studio







1. The terraces have deep soil to allow grasses and small shrubbery to grow without significant watering, and also provide thick insulation layer for the rooms below.
2. Since most of the house is built into the earth, most of the energy loss will be through high-performance windows and not thru the retaining walls due to the insulating effects of earth.
3. A cistern located under the garage collects rain-water from the roof and any

4. Exposed concrete walls and floors provide thermal mass to minimize large temperature swings.
5. Wood pellet stoves provide additional heating if desired.
6. The spa will be heated by solar hot-water panels.

