

Susan's House, study for a new typology

The house is in the oldest existing neighborhood in San Antonio, Texas. Lavaca is a historic district and is on the National Register of Historic Places. To build in Lavaca, we were required to follow their historic design guidelines and have the design approved by their design review board. Requirements included a front porch, and specific roof profile, window proportions and materials.

Lavaca was initially a closely organized neighborhood with small houses facing both streets and alleys. It was designed primarily for working class families. Many of the buildings within the district are smaller-sized homes built during the late 1800s and early 1900s. The houses were originally rectangular with gable or hip roofs. Over the years additions were made to the houses changing the configuration of the roofs. We visited a couple of houses; they were very dark in the center, and they didn't have much relationship with the exterior. We studied the typology of the houses in the neighborhood, and we thought that if some of the rooms had their roofs removed (patios), the house would then have much more natural light while at the same time embedding some outdoor spaces in its interior.

The lots in this section of Lavaca are narrow and deep and the traditional typology of the neighborhood results in little opportunity for a relationship between interior and exterior. The resulting arrangement is front yard, house and back yard. Susan's house stretches deep into the lot making space along its length for a series of courtyards and 2 porches, one as required facing the street and one, screened, a flexible room at the center of the house.

The house is located within a short bike ride or walk to downtown. The solid wood entry door, at the front porch, leads into an exterior courtyard space, an outdoor foyer with storage space for bikes. From there a matching solid wood door accesses the interior of the house with courtyards, crossed and diagonal views, and transparencies.

A succession of courtyards, oriented south-east to capture as much light as possible, organize the house with each interior and exterior space similar in scale, proportions, and material. The screened porch

is at the center of the house and the center of activity of the family. The use is flexible, dining room, living room or sleeping room with a nice breeze. The screened porch and the courtyards with trees modify the microclimate and enhance the airflow at the heart of the house. The house is less than 2,000 square feet of interior space with a spare material palette (concrete floors, white walls, metal roof and aluminum windows) where the only material expressed is the pair of solid wood entry doors to signify threshold. With this attitude, the exterior of the house adapts to the context of the neighborhood but creates some unexpected spaces inside.

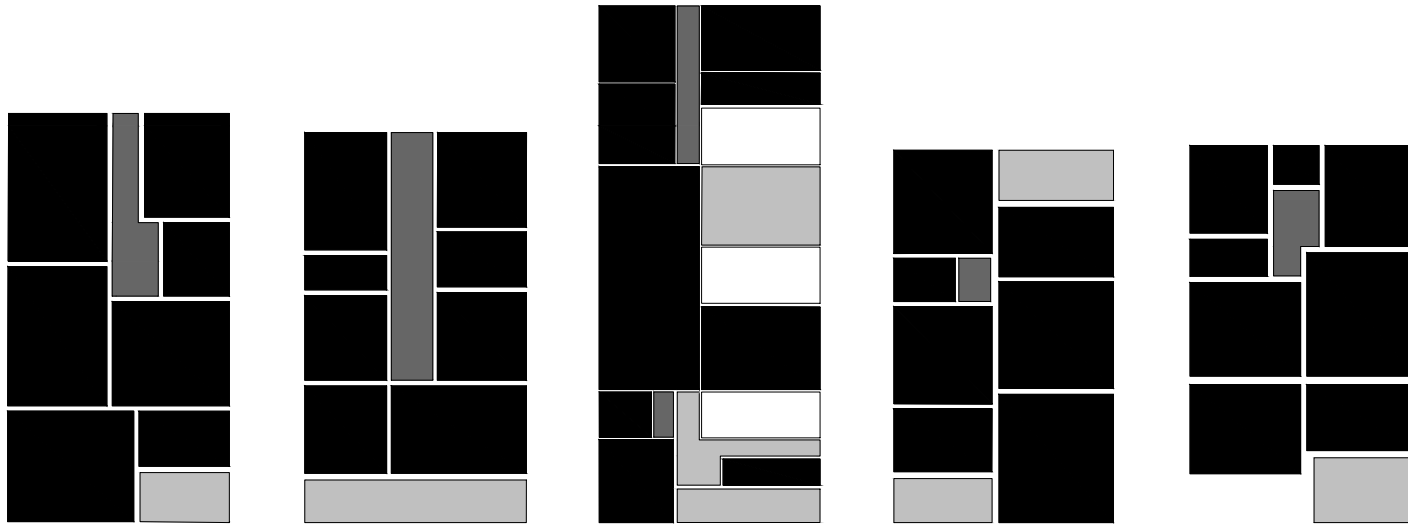
The house design utilizes passive means of staying cool when possible. Solutions that rely on technology were not employed as the budget was modest and the client and architects were interested in more traditional means of achieving a sustainable solution. The house relies on courtyards to aid in maintaining comfort and well-being. Courtyards are a good solution for the climate in San Antonio.

The configuration of the courtyards allows them to perform well. The orientation of the courtyards is southeast allowing natural light to enter in the morning. During the afternoon a larger portion of the courtyards stay in shadow due to the orientation, the trees and the narrow dimension. Late afternoon the sunlight washes the westernmost wall of the courtyard providing indirect daylighting for the house.

The courtyards serve as collectors of cool air. At night the temperature of the roof cools and the cooled air moves down the slope into the courtyards. Large sliding doors and ceiling fans draw the cool air into the heart of the house. The screened porch provides additional space for the air to cool before entering the house.

The courtyards result in a narrower footprint of the interior space which facilitates use of natural light and ventilation.

The gravel in the courtyards hold the humidity in the ground helping both the courtyard microclimate and the plants. The plants shade the courtyard and help lower the ambient temperature. Also, the white stucco and the metal roof reflect incident radiation which lowers ambient temperature around the house.



Lavaca Neighborhood Typologies

Susan's House





















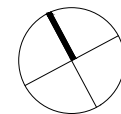
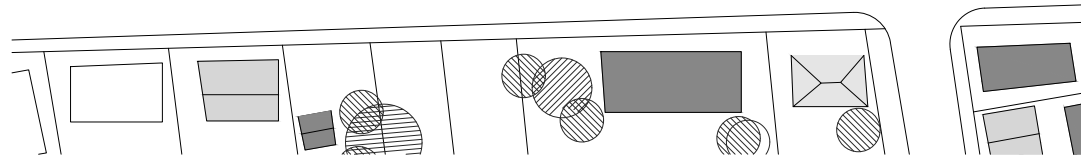
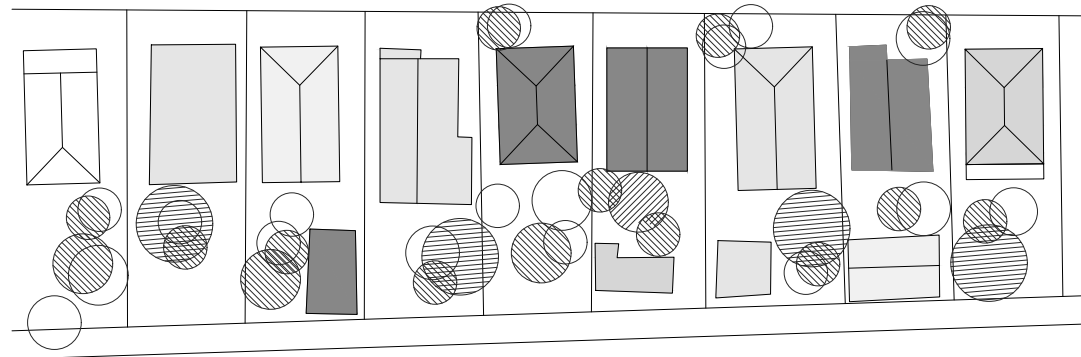
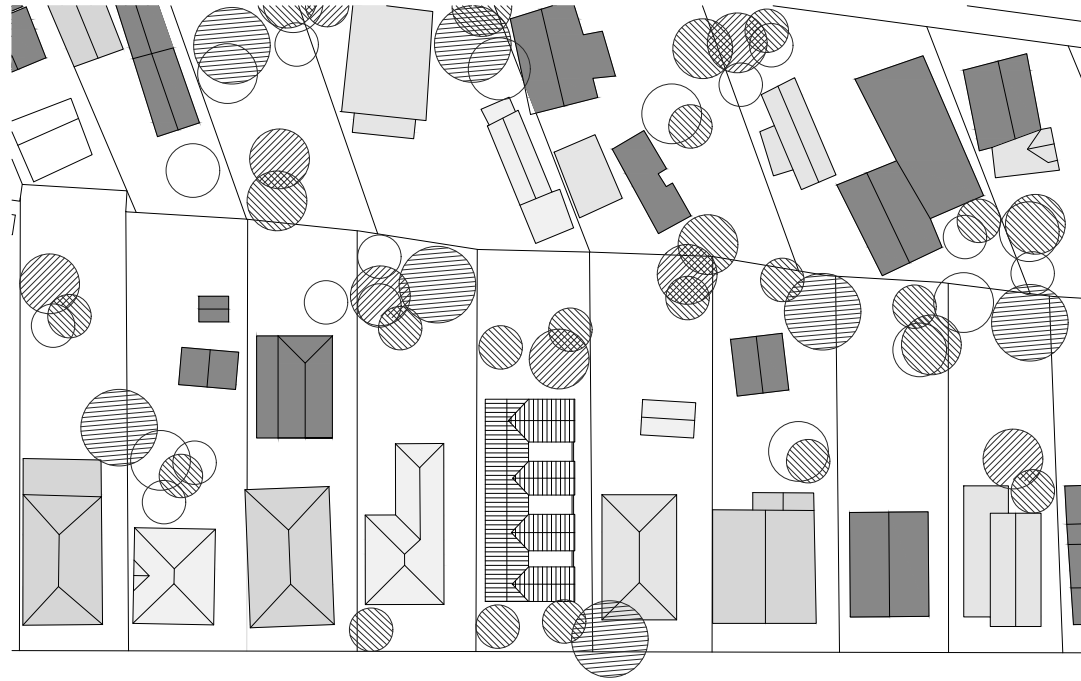


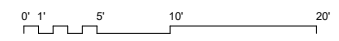
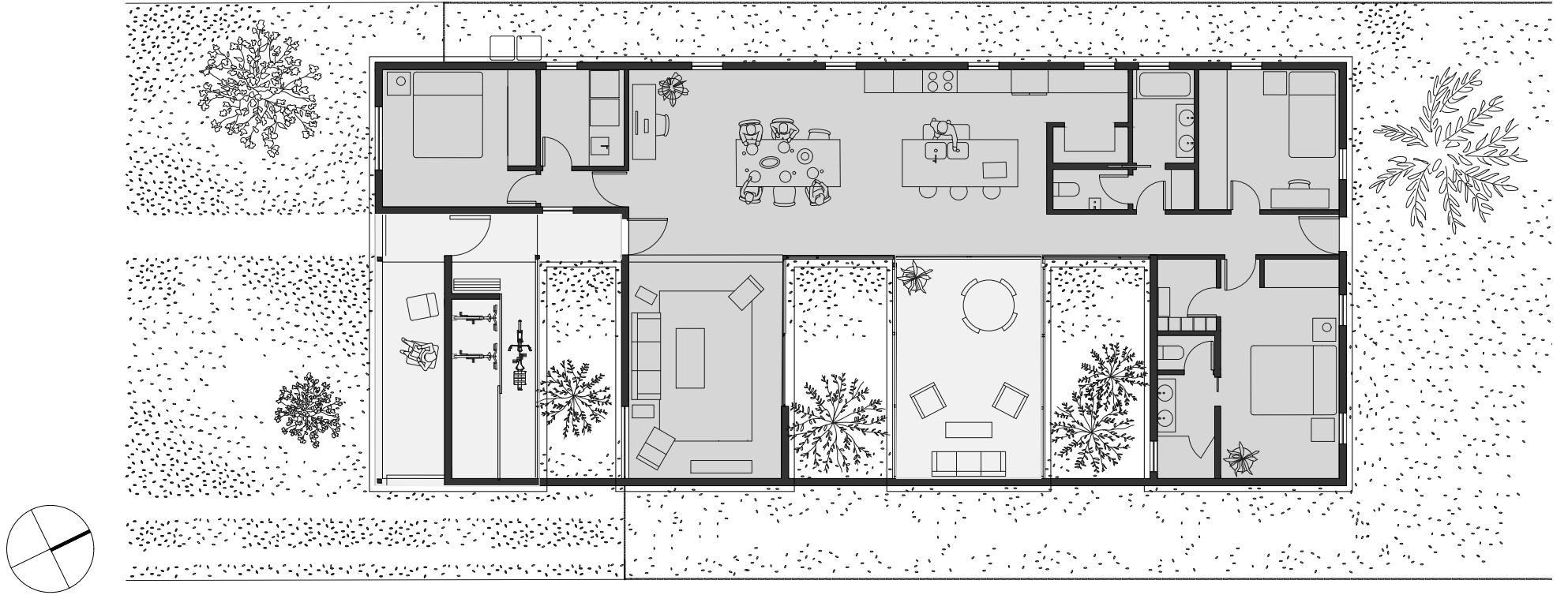


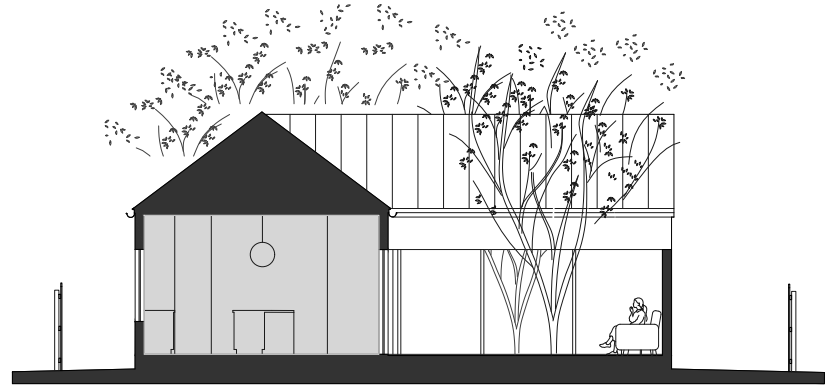
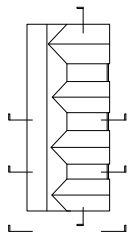
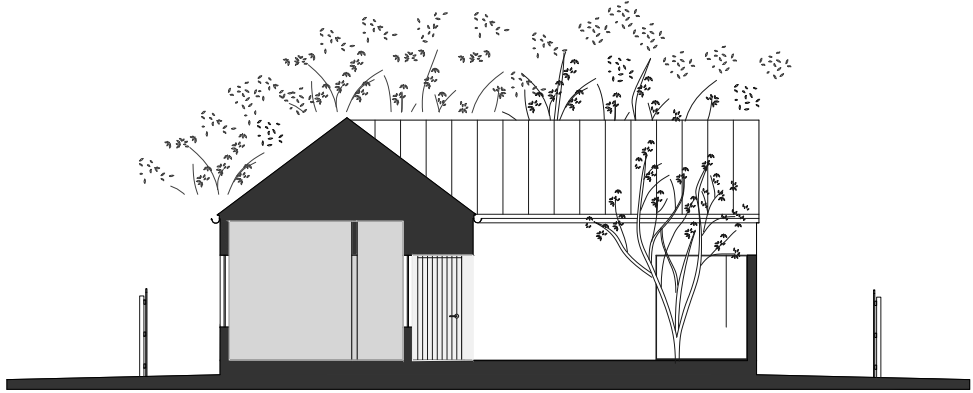
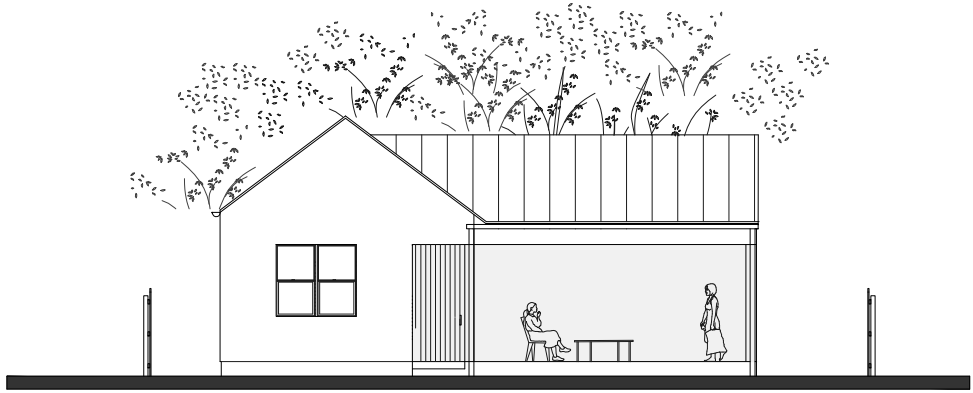












0' 1' 5' 10' 20'