



02 IN & OF NATURE

CONCRETE + FIRE:
3D PRINTED CONCRETE HOUSES
TO WITHSTAND WILDFIRES

PESCADERO, CA | 70000 SQFT

Fall 2021 Arch 100C Studio
Instructor: Keith Plymale

Humans are increasingly driven to the boundaries of the wildland-urban interface (WUI), the area where houses are on the edge of wildland vegetation, by skyrocketing costs and population growth. This is also the area where wildfires pose the greatest risk to people due to the proximity of flammable vegetation, and are most difficult to fight.

Fire has always been a natural part of forest life cycles. In recent years, humans have changed fire regimes significantly. Climate change will increase fire frequency in the future, making them bigger, hotter and more frequent.

Collaborating with 13 other students in the studio, we designed a 'utopian' line of 28 houses positioned along Pescadero Creek and Pescadero Road. These houses, built out of flame resistant 3D-printed concrete, can act as both an emergency shelter and empty "shell structures" that can withstand future wildfires, to be re-inhabited again.