2-11-25

WSJ Print Edition

image

Building A Better (Fireproof) House

BY BRIAN MCGILL AND MAUREEN LINKE

As the dust and smoke settles, residents in the Los Angeles area, where more than 12,000 homes were destroyed in one of the most destructive fires in California's history, will be faced with a decision: to rebuild or move on. The state has seen a surge in major wildfires, with 15 of the 20 most destructive blazes on record occurring within the past decade.

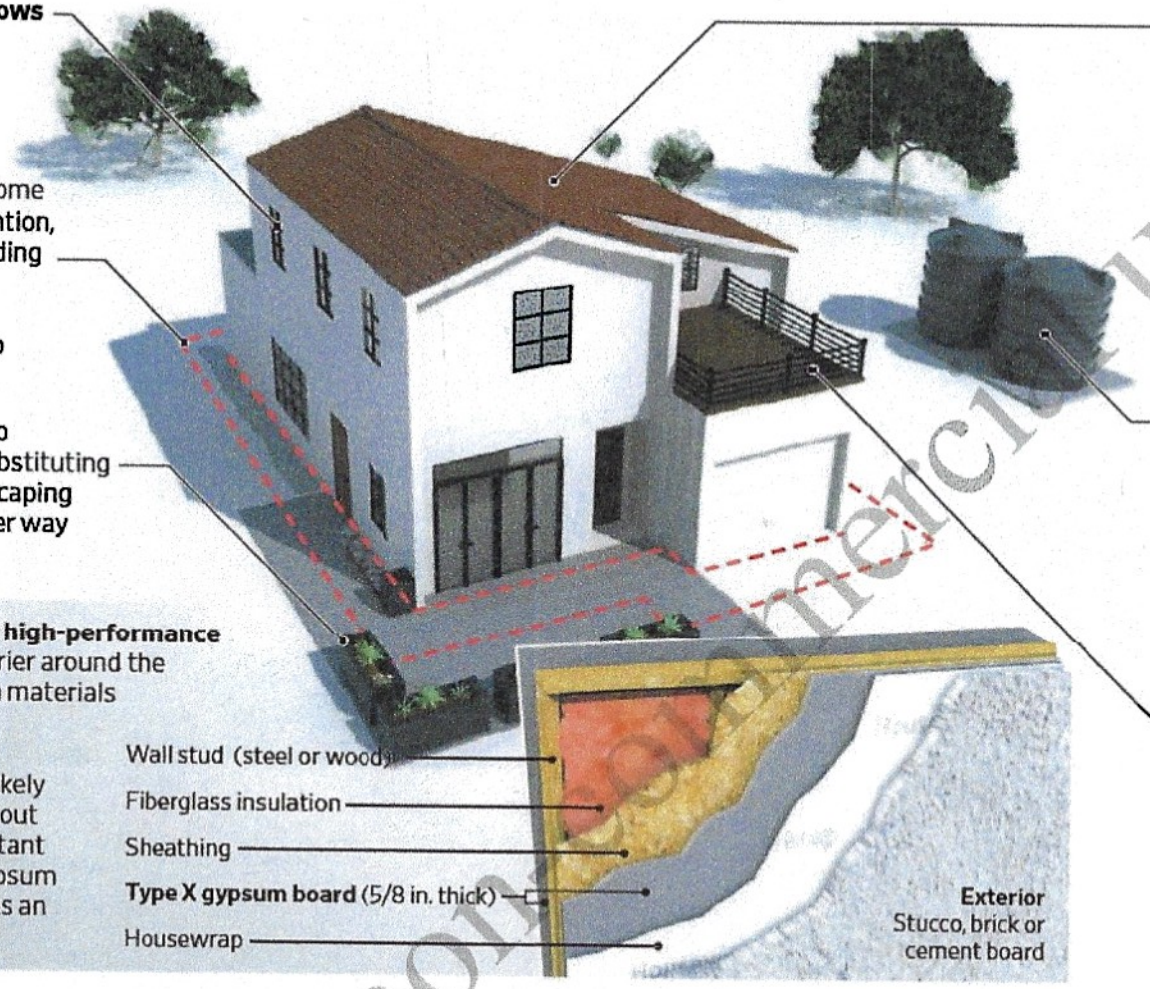
The growth of densely populated neighborhoods with older homes constructed in proximity to unmanaged vegetation has compounded the climate risk. These effects are expected to worsen, according to experts, and Califor-nians are searching for an swers on how to protect their homes from future destruction. A Santa Monica-based architect, Greg Chasen, shared an image on X of a now-famous home he designed that survived the Pali--sades Fire. These are some of the design elements he attributed to its survival, making it one of the few homes in the neighborhood to withstand the flames.

Officials estimate it will take just over 18 months to remove all debris left from the wildfires. On average, the rebuilding process can take two to three years.

Heat-resistant, dual-pane windows made with tempered glass can withstand high temperatures, making them less likely to break and allow embers in.

A five-foot buffer around your home can be a critical step in fire prevention, reducing the risk of flames spreading from burning landscaping to the overall structure. Chasen recommends a sterile perimeter with no vegetation or fire-safe plants

Concrete planters are also able to withstand high temperatures. Substituting stones instead of mulch for landscaping outside of the perimeter is another way to mitigate risk.



Wildfire-resistant siding like a high-performance stucco that acts as an extra barrier around the walls are preferred construction materials according to Chasen.

Thermal, treated wood is less likely to allow a fire to spread throughout a home and is ideal for fire-resistant siding. An additional layer of Gypsum board behind the siding serves as an another layer of protection.

The roof is another vulnerable area of the home because of its large surface area. While a metal roof is ideal, Spanish clay tiles are able to withstand high temperatures and resist ignition in the event of a fire. Because sparks often fly horizontally, Chasen recommends an unvented attic and not installing wooden eaves that protrude from the roof.

A 50,000-gallon tank of water with pumps powered by a solar, battery and liquid-gas system would keep running in the event of a power shortage. Some California homeowners on a town water supply have elected to install personal fire hydrants.

Decks are also susceptible to heat and flames. A fire-resistant deck made of ipe wood or a type of Class A fire-treated wood can provide the same level of protection as concrete. The deck should also be kept free of objects that could catch fire.