

How Wildfire-Resilient Construction Can Shape Los Angeles' Future

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I've lived in Los Angeles for most of my life, and like many Angelenos, I've seen firsthand the devastation wildfires can bring to our communities. But nothing prepared me for the impact of the recent Eaton Fire in Altadena and the Palisades Fire along the coast, two destructive blazes in the 2025 wildfire season.

Both fires displaced thousands of residents and left behind an unimaginable toll, burning homes, businesses, and critical infrastructure. The Eaton Fire struck close to home. Bluebeam's global headquarters is in Pasadena, just south of Altadena, and several of my colleagues lost their homes or were forced to evacuate.

Seeing the destruction firsthand reinforced what many in the construction industry already knew: Rebuilding after wildfires isn't just about replacing what was lost. It's about rethinking how we build, ensuring that homes, businesses, and infrastructure are better prepared for future disasters.

As a software company providing solutions for customers in architecture, engineering, and construction (AEC), we have a responsibility to create fire-resilient structures and communities that can withstand the next inevitable wildfire.

THE GROWING THREAT: WILDFIRES AND CONSTRUCTION RISKS

California's wildfire crisis is no longer confined to a specific season. With climate change accelerating extreme weather patterns, prolonged droughts, and hotter temperatures have



created ideal conditions for wildfires year-round. At the same time, urban expansion continues to push development into fire-prone areas, putting more properties and lives at risk.

For midsized general contractors, these changes present serious challenges. The rising cost of materials, evolving fire codes, and the increasing complexity of wildfire-resistant construction require a new approach to rebuilding.

Fire-resistant materials, while critical for long-term resilience, tend to be more expensive than traditional alternatives. Stricter regulations demand additional expertise and compliance measures, adding layers of complexity to the construction process. Labor shortages and supply chain disruptions further complicate efforts to quickly and efficiently rebuild after disasters.

Despite these obstacles, wildfire recovery also presents an opportunity for contractors to lead the way in resilient construction. By embracing new materials, fire-conscious design, and emerging technology, construction firms can play a pivotal role in shaping a safer, more sustainable Los Angeles.

KEY STRATEGIES FOR WILDFIRE-RESILIENT CONSTRUCTION

Fire-Resistant Materials

The materials used in construction significantly impact a structure's ability to withstand wildfires. In fire-prone areas, choosing noncombustible roofing and siding is essential. Metal roofing and fiber cement siding offer far greater fire resistance than traditional asphalt shingles or untreated wood. Fire-rated windows and doors, particularly those with double-glazed, tempered glass, help prevent heat-induced breakage and interior ignition.

Beyond individual materials, flame-retardant treatments can enhance the fire resistance of wood and steel structures. These coatings provide an extra layer of protection by slowing the spread of flames and reducing the likelihood of structural failure.

Landscaping decisions also matter. Homeowners and builders should prioritize defensible space by clearing flammable vegetation at least 30 feet from structures and planting drought-resistant, low-flammability plants to minimize fuel for fires.

Designing for Fire Defensibility

In addition to fire-resistant materials, contractors must consider how buildings are designed and positioned within the landscape. Creating defensible spaces — buffer zones that help slow the spread of wildfires — has become a critical component of fire-conscious site planning. Roofs made from tile or metal, coupled with sealed eaves and fire-resistant vent covers, can prevent embers from igniting a structure.

Modular construction is emerging as an effective strategy for wildfire rebuilding. Prefabricated fire-resistant modules allow for faster, more controlled construction while incorporating the latest in fire-resistant technology.

Additionally, site orientation plays a key role in fire safety. Strategic placement of buildings — considering wind patterns,

access to emergency routes, and surrounding vegetation — can greatly improve a property's resilience.

For large-scale developments, integrating greenbelts and firebreaks into urban planning can serve as a natural defense against fast-moving fires. In high-risk areas, new zoning regulations are discouraging development in fire-prone regions while encouraging compact, well-defended community layouts.

Leveraging Construction Technology

Technology is transforming wildfire recovery efforts, providing faster, more efficient ways to assess damage and rebuild resilient communities. Advanced simulation tools help architects and engineers evaluate fire-resistant materials and structural designs, ensuring that new construction is optimized for safety and durability in fire-prone areas.

Drones have become essential in post-disaster recovery, rapidly surveying affected areas and delivering high-resolution imagery that aids in damage assessments. These insights allow contractors to make informed decisions quickly, accelerating rebuilding timelines while improving accuracy.

Digital collaboration platforms are also streamlining recovery efforts by enabling real-time coordination between contractors, engineers, and project managers. In disaster zones, where time is critical, seamless communication and document sharing help mitigate delays and keep large-scale projects on track.

NAVIGATING ECONOMIC AND REGULATORY CHALLENGES

The financial and regulatory landscape for post-wildfire construction is evolving quickly. California has introduced new incentives and funding programs aimed at encouraging fire-resistant construction. State and federal grants are available to homeowners and builders who incorporate fire-resistant materials and designs, helping offset some of the added costs.

Insurance companies are also shifting their approach. Properties built to higher wildfire resilience standards are increasingly eligible for lower insurance premiums. For contractors, staying ahead of evolving fire codes is critical. Many jurisdictions are adopting stricter building codes, requiring enhanced fire protection measures in new construction and major renovations.

Sustainability is another key consideration. Many


rebuilding projects now integrate Leadership in Energy and Environmental Design (LEED) certification or net-zero design principles, ensuring that fire-resistant construction aligns with broader environmental goals. Contractors who adopt these forward-thinking strategies will be well-positioned to meet both regulatory requirements and market demands.

LOOKING AHEAD: A MORE RESILIENT FUTURE FOR LOS ANGELES

As Los Angeles begins the long process of rebuilding after the Eaton and Palisades fires, the construction industry must recognize that this is not just about restoration. It is an opportunity to build stronger, safer, and more resilient communities.

Fire-resistant materials and innovative design strategies will need to become the standard, not the exception. Contractors must embrace new technologies and sustainable construction practices to ensure that future buildings are not only compliant with updated fire codes but also truly resilient against the growing threat of wildfires.

Wildfires are a challenge that will continue to shape the construction industry in California and beyond. But through smarter design, better materials, and the integration of advanced technology, the industry can help ensure that the next time a fire sweeps through Los Angeles, the devastation will be far less severe.

Rebuilding after wildfires is not just about recovery – it is about preparing for the future. And for midsized contractors, that future presents both challenges and significant opportunities to lead the way in resilient, forward-thinking construction. 



About the Author

Don Jacob is the chief innovation officer at [Bluebeam](#), overseeing the development of digital solutions that enhance efficiency, collaboration, and innovation in the construction industry. With extensive experience in software engineering and product development, he plays a key role in shaping technology that streamlines project workflows and improves productivity for builders worldwide.

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