

US Resiliency Council



Building Sustainable Communities Through Resilient Design

Copyright 2025 US Resiliency Council

The demand for resilience in high hazards areas is growing rapidly



Insurance and lending in high hazard markets

- \$41.5 trillion in building exposure and \$42.2 billion in average annual losses in counties with moderate to very high natural catastrophe risk. (source FEMA)



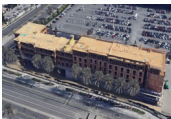
Integration into ESG frameworks

- 90% of S&P 500 companies publish ESG reports. (source McKinsey and Co.)



Commercial office construction

- “Without mitigation actions, climate risks could reduce annual [real estate investment portfolio] returns toward the end of the decade by as much as 40%.” (source McKinsey and Co.)



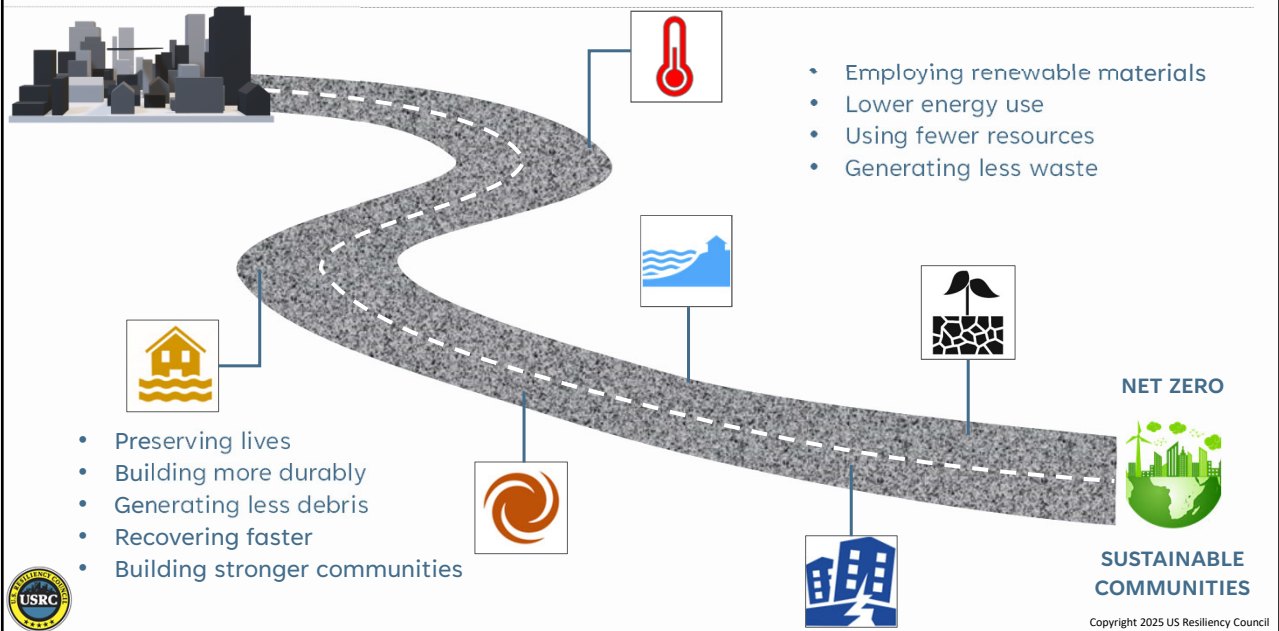
Multifamily residential construction

- Four of the largest metro areas with high to very high Nat Cat risk are in the bottom 20% of housing affordability, and are home to 43.3 million people. (source US Census and National Association of Realtors)



Copyright 2025 US Resiliency Council

Green and resilient design: two paths to sustainability



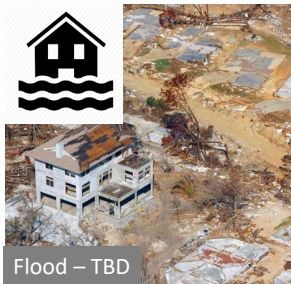
US Resiliency Council performance metrics

USRC BUILDING RATING SYSTEM	SAFETY	DAMAGE	RECOVERY	 +0-2% Cost Code minimum
	★★★★★	Blocking exit paths unlikely	Minimal Damage (<5%)	
★★★★	Serious injuries unlikely	Moderate Damage (<10%)	Within days to weeks	
★★★	Loss of life unlikely	Significant Damage (<20%)	Within weeks to months	
★★	Isolated loss of life	Substantial Damage (<40%)	Within months to a year	
★	Loss of life likely	Severe Damage (40%+)	More than a year	

CODE BASED DESIGN
RESILIENCE BASED DESIGN

USRC Logo | Copyright 2025 US Resiliency Council

Rating systems in development



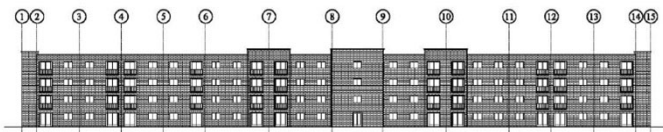
	Exceed common code requirements	Meet common code requirements	Utilities and transportation	Federally funded
National Benefit-Cost Ratio Per Peak <small>*B/C/R numbers in this study have been rounded</small>	4:1	11:1	4:1	6:1
Overall Hazard Benefit-Cost Ratio	4:1	11:1	4:1	6:1
Riverine Flood	5:1	6:1	8:1	7:1
Hurricane Surge	7:1	Not applicable	Not applicable	Too few grants
Wind	5:1	10:1	7:1	5:1
Earthquake	4:1	12:1	3:1	3:1
Wildland-Urban Interface Fire	4:1	Not applicable	Not applicable	3:1



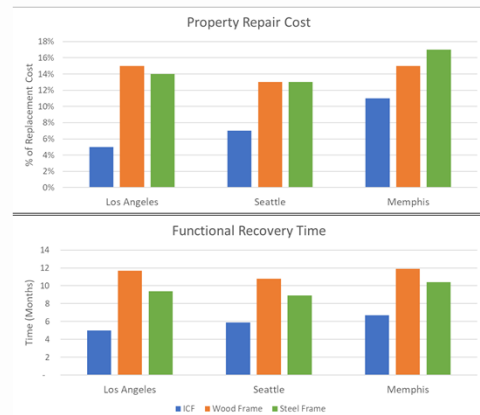
Copyright 2025 US Resiliency Council

The USRC has conducted important resilience research

Multifamily Apartment Performance Comparison



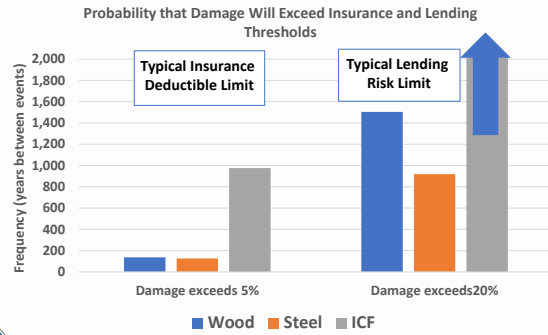
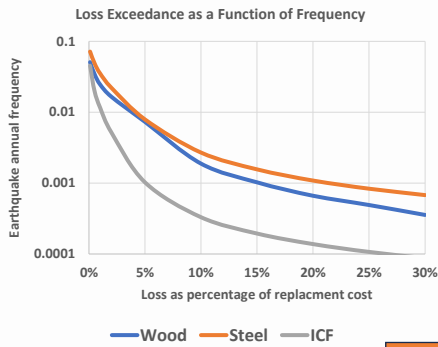
- Evaluate seismic performance for a four-story apartment building using three structural configurations: **insulated concrete forms, CLT wood framing, and steel framing.**
- Evaluate the expected property damage and recovery time for a code level earthquake in three cities.





Copyright 2025 US Resiliency Council



Translating science into quantitative financial measures

Multifamily Apartment Performance Comparison



Wood 

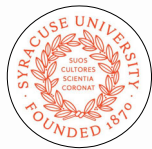
Steel 

ICF  



Copyright 2025 US Resiliency Council

USRC seeks partnerships



Research



Incentives



Distribution



Copyright 2025 US Resiliency Council

The US Resiliency Council



A 501(c)3 organization



Engineering in the service
of equity, the environment
and the economy

Copyright 2025 US Resiliency Council