

Certification of Resilient Engineering (CoRE)

A Standard to Measure Risk and Build Resilience

The population of the United States continues to expand in areas at risk for disasters. Measuring and improving the resiliency of the nation’s building stock is a worthwhile goal for owners, tenants, the real estate community and government at all levels. Currently, however, there do not exist consistent methods to define and assess resiliency, or to validate the expertise of professionals providing building evaluations. The goal of the US Resiliency Council, a newly formed non-profit entity, is to develop technically defensible metrics to evaluate and communicate the resiliency of individual buildings

Certification of Resilient Engineering (CoRE) Ratings will be generated through the USRC, much like the US Green Building Council® issues LEED® ratings. CoRE Ratings will add differentiation within the real estate marketplace, placing value on improved disaster resilience. Ratings will help governments understand regional risks and develop long-term strategies to improve overall resilience. The CoRE ratings will assess safety, reparability and functionality. The USRC is committed to using the best available technical standards to establish the CoRE Rating system. The initial focus for CoRE will be on commercial and institutional buildings, and multifamily residential buildings of 5 units or more. The USRC will initially develop a rating methodology for earthquake risk, following up with comparable ratings for wind, flood and other natural hazards, and man-made risks such as blast.

USRC Rating	Safety	Reparability	Functionality
*****	Life Safe	Loss <5%	Occupiable Immediately Functional < 72 hours
****	Life Safe	Loss <10%	Occupiable Immediately Functional < 1 month
***	Life Safe	Loss <20%	Occupiable < 1 month Functional < 6 months
Certified	Life Safe	Not estimated	Not estimated
Not Certified	Life Safe Hazard	Not estimated	Not estimated

Rating systems, such as the current PML system for earthquake risk, are subject to forces that can lead to real and/or perceived corruption and manipulation. Similar to the process established by the USGBC®, the USRC will establish an accreditation program for professional engineers who wish to employ the CoRE system to rate buildings. Accreditation will require specific knowledge and training in structural engineering and the performance of buildings under natural and man-made hazards. CoRE Rating certification will also include peer review and validation by the USRC, to ensure that its highest technical standards are maintained.

The USRC is a 501c3 non-profit organization. Its advisory team and Board of Directors will include representatives from the user community as well as structural engineers, tenants, lenders, real estate investors and government officials. A detailed business plan and budget is available from the USRC. The USRC is currently soliciting sponsorship to fund a portion of initial operations that will support technical standards development, marketing efforts, and administrative services. The USRC has a goal of raising \$1,000,000 over four years, with \$200,000 in the first year, from sponsors and early adopters of the CoRE Rating system, and of being self sufficient thereafter. Primary sources of ongoing revenue will be:

- Certification Fees to obtain a Rating
- Accreditation Fees
- Education Fees from workshops, conferences, publications, seminars, and accreditation training
- Corporate Membership Fees