

Building Safety during Economic Downturns:

A Fiscal Rationale for Continued Code Enforcement

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Building safety is *always* imperative—not only during prosperous economic times. Each and every day, whether we are in a bull or a bear market, people spend the vast majority of their time indoors, within the built environment. It is expected, even taken for granted, that buildings in which people learn, work, play and sleep will keep them safe. During economically challenging times, building safety is no less important, and all of the building community—architects, engineers, designers, building officials and contractors—all must remain vigilant in ensuring a safely built environment for all.

During every economic condition, there are a multitude of hazards associated with the occupancy of buildings: fire, snowstorms, windstorms, earthquakes, etc. All of us would acknowledge that we are aware of such hazards, but they are not something we usually think about. When entering a building, do we actively seek other exits to know where to go if a fire blocks our path? Do we think about whether or not the man in the apartment next door forgot something on the stove or fell asleep with a lit cigarette? Do we consider whether the building is strong enough to withstand the next wind gust? Few of us consider these “what-ifs” in our daily lives.

In the building safety profession, we often say: “building safety is no accident.” It takes many professionals, all actively thinking about these

questions, to ensure that by the time a building is approved for occupancy, the occupants will be as safe as possible. Accidents will happen. Natural disasters will happen. But when they do, will you be safe in whatever building you happen to be located in at the time?

Building safety is often determined by the knowledge and effectiveness of the local building safety department. The staff's understanding of and expertise in applying the provisions of building codes, as well as the community's commitment to ensuring the department is adequately funded, are paramount in achieving building safety. This paper will discuss the hidden costs and liabilities of inadequate building safety measures as well as the options for continued provision of careful code enforcement in a weak economy.

Building Code Effectiveness

Where building codes have been effectively implemented and a disaster occurs, it is a success when damages are calculated in the number of dollars lost versus the number of human lives.

Unfortunately, in third world countries without building codes, and even in this country when building codes are not adequately enforced, disasters are too often measured by the number of innocent human lives lost. For example:

- The 2003 Station nightclub fire in Rhode Island—
100 people dead; a result of improper interior surface coverings

- The 1981 Hyatt Regency Crown Center atrium walkway collapse in Kansas City, Missouri—
114 people dead, 200+ injured; a result of an engineering flaw in a plan revision
- The 1999 apartment building collapse in Italy—
66 people dead; a result of the use of inappropriate foundation materials
- The May 2008 earthquake in Eastern Sichuan, China—
over 87,000 people dead
- The November 1980 MGM Grand Fire in Las Vegas, NV—
85 people dead, a result of improper electrical installation, surface coverings, penetration protections and other factors
- A 2001 deck collapse in Tacoma, WA—
1 PLU student dead; a result of improper flashing
- A 2004 deck collapse in University Place, WA—
1 person dead, 7 injured; a result of improper attachment (performed by a contractor)

Conversely, when codes are effectively implemented, inevitable disasters are more commonly measured in the number of dollars in damage:

- The 6.8 magnitude Nisqually earthquake in 2001—
damage was estimated to be over a billion dollars (Only one non-injury but stress-related death is attributed to the Nisqually Quake.)

- August 2008, Silverdale WA, a fire in the newly constructed Vintage at Silverdale Senior Apartments—
water damage totaling a few thousand dollars

We've included situations like the fire at the Vintage at Silverdale apartments in a list of otherwise horrific events to highlight the differences when building codes are effectively implemented. The Vintage at Silverdale is a five-story, wood-framed project consisting of 240 recently constructed active senior apartment units. In accordance with the U.S. Fire Administration (USFA), "Although fire and building inspections, codes, and trained staff mitigate the fire risk in these [long-term care] facilities somewhat, unique fire risks do exist." Unfortunately, fires in this type of occupancy are common, and most large multi-family dwelling complexes will likely experience one or more fires. A grim statistic: the USFA identifies that older adults are 2.5 times more likely to die in fires than the overall population.

When projects are built in accordance with current building codes, and all fire-resistive separations are appropriately protected and maintained, fires are typically confined to a small area and occupants are afforded an opportunity to safely exit — so everyone makes it out alive. If this project had been constructed without regard to fire-safety principles, or without the knowledge and expertise of how to effectively implement the building code fire-safety requirements, would it have made the "Top 10" list of deadliest fires? Would the result have been similar to the MGM Grand, or the Station nightclub fires? This apartment fire was barely a blip in the daily news, which is the point exactly. With building code compliance, success is silent.

Of course, there are many building risks besides fire. Every day people are injured because they fall on stairways without correct geometry or adequate guards or handrails. Is the human health safety that plumbing, mechanical and ventilation codes enhance considered? Are people with disabilities considered, not just those in wheelchairs, but also those with sight, hearing or other sensory impairments? What about protecting building occupants from the devastating effects of floods, strong wind, accumulating snow and earthquakes? It is the entire family of building, plumbing, mechanical, fuel gas, energy and ventilation codes that silently protects human life.

No person in a civilized society should be at risk of losing his or her life as a result of a building code compliance failure. Citizens need and deserve a strong building department in which staff and management fully understand the hazards and possess an intimate knowledge of the adopted codes and how they work together to protect human life. They deserve a department whose mission is to protect and preserve their lives and the lives of their families. Without this, occupants of the built environment are unknowingly placed at greater risk.

Economic Impacts

Without a healthy focus on the importance of building safety, a community can suffer significant economic liability. But in a weak economy, it's easy to see how this happens.

During fiscally difficult times, building safety too often takes a backseat. This tendency to compromise starts early in the lifecycle of a building project. To be more competitive in a tough market, architects and engineers frequently reduce their rates. Do reduced fees equate with reduced time considering code and design ramifications? Is the same amount of care given to detail so contractors fully understand the design professional's desire for safety?

Building owners, too, struggle to make projects profitable. They explore options to lower building costs, possibly through building designs with fewer redundant safety systems and building materials used at the maximum limit of their strengths. How frequently are the low-bidders awarded the contracts?

Contractors facing reduced workloads and reduced revenue are more likely to be looking for other ways to conserve resources. Does reduced revenue equate with using less expensive product options or lesser-trained, less-skilled labor?

Local building permitting departments, typically funded by building permit and plan review fees, are facing dramatically reduced revenue as fewer construction projects are coming through their doors. Does reduced plan review revenue equate to less customer service and a decrease in the level of expertise available to review plans for code compliance?

Local building department personnel, left to compete with more visible public service agencies (such as police and fire departments) for elusive

general fund dollars, may be laid off. Do fewer inspectors, burdened with increasing workloads, mean reduced time and resources to ensure that buildings are safely constructed and compliant with adopted codes?

All these decisions can undermine human life safety in the built environment at a time that it can be least afforded because it has a snowball effect on the finances of so many members of the community. There is a long-term potential for increased liability to the designers, architects, engineers, contractors, and building owners as well as to the community jurisdictions. Local building owners face increased insurance premiums if a community's Building Code Effectiveness Grading Schedule (BCEGS) rating is worsened as a result of lesser enforcement expertise. Communities face increased potential liability under the "failure to enforce" exceptions to the public duty doctrine as seen in *Campbell v. Bellevue*, (85 Wn.2d 1, 534 P.2d 1360(1975)) or *Waite v. Whatcom County*, (54 Wn. App.682, 775 P.2d 967 (1989)). Local jurisdictions under a state mandate to implement an effective building code compliance program also face increased costs if they are challenged over their effective implementation of a program in accordance with the statutes or if building permit revenue is used as a source of funds to support other local programs as happened in *Skeers v. Bellingham* in 2001 (unpublished) and most recently in *BIA of Clark County v. Clark County WA* in December of 2008 (unpublished).

Additionally, the economic impacts that follow building failures are so much greater than just the value of the lost buildings. For example, John R. Hall Jr. of the National Fire Protection Association (NFPA) identifies that in 2005, the total cost of fire in the U.S. was estimated to be \$267-294 billion;

of which, only \$12.7 billion represents direct or indirect property losses. The remainder is the estimated economic impact to communities as a result of related costs, such as business interruption and other damage to local commerce, the cost of career fire departments, the value of volunteer firefighter services, building costs for fire protection, insurance coverages, and the estimated monetary equivalent of deaths and injuries (with an acknowledgement that no amount of money can compensate for the loss of a loved one). Such costs and liabilities can all wreak havoc on an unsuspecting community's finances, particularly if a disaster occurs, with losses measured in the number of human lives. A single event could cripple local businesses and a jurisdiction's very existence.

How Do We Solve This?

With every economic condition and each new circumstance come new challenges—and new opportunities. There are solutions available to building owners and communities that embrace the importance of building safety and value the silence of success.

A potential solution for a community is to simply “bite the bullet,” recognize the importance of an effective building safety department—their duty to the public they represent, and ensure the availability of appropriate resources. A community must be willing to provide adequate funding to fully staff, train and support a skilled labor force that can accommodate the ebbs and flows of the work. Though relatively expensive, a community can successfully set aside reserves and plan additional revenues to implement an effective,

customer service-oriented, quality-driven building safety department whose focus is to protect and promote human safety in the built environment.

An option available to individual building owners is to contract with a third-party, independent inspection agency to ensure that the building is constructed in accordance with the engineer's design and all codes and standards. This is a great solution for specific projects, but it too is relatively expensive and doesn't assure the community that building safety has been adequately considered for every building.

Another option available to communities includes outsourcing some or all building department services to an independent building department service provider. Local jurisdictions that seek partnerships with private building department service providers not only increase the level of customer service available to their constituents, but also increase revenue and decrease fixed costs. By providing services to multiple jurisdictions, contract service providers gain efficiencies through better utilization of staff and resources and reduced redundant management and information technology systems. Additionally, there can be considerable savings in the hard costs of vehicles and capital facilities. This effectively reduces the cost of efficient, skilled program implementation to each jurisdiction served. Such solutions allow a community the opportunity to retain revenue to recover their costs of administration, yet protect them such that program expenditures will never exceed revenues.

Difficult economic times are not a time for skimping on building safety; they are instead a time requiring innovative solutions. While all segments of the

construction industry are experiencing a critical decline in work and revenue, the work that is being performed should not cause increased risk to the people who will ultimately occupy such buildings—people like you and your children and your parents. Times of economic distress are short-lived, while the buildings people occupy, when built correctly, will successfully protect many generations to come, through good times and bad.

When success is achieved in building safety, there are no giant banners, parades, screaming sirens or flashing lights. There is no media coverage of a building that does not fail, no news story on the multitude of people who are not injured. Success is the story you never hear. Success is silent!

For more information on outsourced building department services, please visit www.safebuilt.com or call Scott Martin at 970-292-2206. SAFEbuilt is a leader in the building and safety services industry and has been redefining the delivery of building department services for more than 15 years. The name SAFEbuilt describes the organization's purpose—to provide a safe-built environment for partner communities that simultaneously delivering economic benefits and reducing risk and liability. SAFEbuilt does this by providing full-service building department programs, building code plan reviews, complete project support and building code inspections.

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