Session 1C
Freedom to Design: How Much Freedom is There in Today’s Fire Protection Engineering Environment?

Mr. Baldassarra will explore the issue posed in the title of the presentation, looking back at the practice of fire protection engineering to a time frame of about forty years ago, and the evolution of code requirements from then to the “minimum” requirements of the code today. National fire loss rates have improved, a direct result of the challenges identified in the “America Burning” report of 1973. Yet, we keep adding more and more requirements to our building regulations and it is fair to ask, “Have we reached a point of diminishing returns?”

Mr. Baldassarra will compare the model codes of the 1970s to those in use today, asking the relevant questions: Have we made progress? and, At what cost? He will also identify some of the forces behind these changes. Several examples will be cited in a thought-provoking manner, along with suggestions about how practicing fire protection engineers can get involved in the code development process. Don’t we have more important changes we can be making, changes that actually move the needle on the fire safety scale, as opposed to changes that move the bank balances of the special interest groups?

Mr. Baldassarra will examine the code changes from 40 years ago and compare that with the most recent changes in the model code process. Finally, he will examine the structure behind the current code development system and proposes some changes to bring more science into the process.

Presentation Outline

Mr. Baldassarra will conduct a review status of the codes and standards which govern much of the practice of fire protection engineers in the US, how they have evolved and their effect upon design freedom as the regulatory environment has dramatically increased.

By examining the model code development process 40 years ago and comparing it to the most recent code development process, Mr. Baldassarra will present a hypothesis that we have reached a status of diminishing returns with our codes and standards and, therefore, it is incumbent upon all involved in the process to be more sensitive to the costs we are imposing on our society. Several vivid examples will be presented in which the cost-benefit ratio is questionable at best.

A traditional system of analysis will be resurrected for consideration by those involved in the code development process, along with recommendations for structural improvements to the process.

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Carl Baldassarra is a Principal at Wiss, Janney Elstner and Associates in Northbrook, Illinois, and leads the firm’s fire protection practice. He has a BS degree in fire protection engineering, a Master’s degree in business, and is a licensed engineer in several states.

Mr. Baldassarra leads project teams involving fire protection/life safety analysis, code consultation, fire protection system design, loss investigation, and litigation support. He is also very active in a number of ICC and NFPA codes and standards-making technical committees. He was chair of the International Code Council’s Code Technology Committee, responsible for many of the major changes which have been adopted into the IBC over the last ten years. He is also a Co-Chair of IBC’s Ad Hoc Committee on Tall Wood Buildings responsible for the new language that was adopted for the 2021 edition of the IBC.

Prior to joining WJE, Mr. Baldassarra was Executive Vice President at RJA and President of Schirmer Engineering Corporation. A 40-year veteran of the fire protection engineering profession, he is well-versed in systems design, code compliance, performance-based design, fire investigation and project management. Carl has also been active in the Society of Fire Protection Engineers, the international organization representing practicing fire protection engineers globally, serving on its Board of Directors and as its President in 2014. Carl served as Vice Chair on the Executive Committee of the Chicago Committee on High-Rise Buildings 2012-2014.

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