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- Codes are a set of rules and regulations intended to ensure a quality built environment.
- Each individual state and local governmental jurisdiction in the 54 US jurisdictions (which includes the 50 states, DC, Guam, Puerto Rico & Virgin Island) is required to adopt a “Building Code” for use within their jurisdiction.



**Benedetto Tiseo, FAIA**, Architect Benedetto (Ben) Tiseo, FAIA, NCARB, has had his own architecture practice since 1980 and has been an Adjunct Professor at Lawrence Technological University teaching architecture at his alma mater since 1980 as well.

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## Building Codes

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The safety of a building’s habitants has been on society’s agenda for a long time, so building codes should not be new to any of us in the Design and Construction Industry. Yet how we in the industry view building codes is another matter. In my career as an architect I have learned that the best way to solve a problem is to first understand the issue. So let’s begin at the beginning.

The first known building code was created in 2200 B.C. authored by King Hammurabi, King of Babylonia. This was a reaction to years of poor construction in Babylonia that not only resulted in collapsed structures but also in some cases caused the death of the inhabitants. The rules were simple and harsh in most cases. For example, if an owner was killed in a house that a contractor built – that contractor would be put to death. If the collapse resulted in an arm being severed – the arm of the builder would be cut off. It literally was an eye of an eye.

The first US building code was promulgated in 1875 as The National Building Code in an effort to decrease fire risk, a direct result of the Great Fire in Chicago in 1871.

In 2000, the first edition of the current national Family of Codes was published by the International Code Council (ICC): International Building Code, International Residential Code, International Fire Code, International Plumbing Code, International Mechanical Code, International Energy Code, National Electric Code etc. The current editions are the 2015 standards, published as revisions every three years. The ICC is a not-for-profit organization and has no legal standing in any jurisdictions; it simply publishes the Codes for adoption by Governmental Agencies around the world. They basically make their living through the sale of the codes.

Each individual state and local governmental jurisdiction in the 54 US jurisdictions (which includes the 50 states, DC, Guam, Puerto Rico & Virgin Island) is required to adopt a “Building Code” for use within their jurisdiction. Some states like Michigan have a state law that requires all governmental units use the ICC family of codes without modification or exception. Yet other areas such as Chicago or Dana County in Florida have their own Building Codes.

We have enjoyed the benefit of a single set of codes in Michigan for 15 years, but I recall times when it was more like the “wild west.” Some communities would have their own special code requirements thereby causing confusion for both design professionals and contractors during design and construction phases. It seems odd now to think that once you could not design and build the same building in one community without making required changes when it might be built a mere four miles down the road in an adjacent community. Yet that was how it was for many years. relevant section in the code to justify any change.



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Another benefit of a statewide code is that interpretations are now consistent throughout the state. Inspectors and building officials cannot make arbitrary demands inconsistent with these codes in their community since they now are required to site the relevant section in the code to justify any change.

Codes are a set of rules and regulations intended to ensure a quality built environment. However, they are not intended to build the absolute safest building. They are instead intended to build a safe and economical building based on acceptable probabilities of failure or occurrences (i.e. 100 year snow fall). But codes and regulations are not intended to make our lives more difficult, as some of the uninformed believe.

Understanding the history and reasoning behind the major code sections is always helpful. First, the code is performance based and not prescriptive based. As an example, the code might require a 1-hour fire rated partition around a stairwell. This fire rated wall is obviously to give the occupants enough time to exit their space in a safe “shaft” and get outside to safety from a burning building regardless of what floor they may be on.

The same is true for structural requirements. For example, in the 2009 Building Code edition the wind design load was 90 MPH for most of the interior US. However, in the 2012 edition it was increased to 115 MPH, a 28% increase, which was a direct result of 2005 Hurricane Katrina in which over 1,200 people died.

Similarly, our Codes do not dictate what materials must be used - only that an independent testing laboratory has tested various assemblies and certified that they have “passed” the specific ASTM tests.

We would all agree that today’s cars are much safer then they were 50 years ago and I contend that our buildings are also much safer as a result of modern Building Codes. They are truly crafted to protect the public’s Health, Safety and Welfare.