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The I-Codes Work for the Truss Industry by International Code Council Staff

The International Codes (I-Codes) are available for adoption by local jurisdictions. Find out how I-Codes can benefit the truss industry.

Most manufacturers, designers, quality assurance agencies and others involved in the design, construction, production and installation of trusses would gladly welcome the opportunity to deal with just one set of code requirements that have no regional limitations. That is just one benefit anticipated as cities, counties and states adopt the International Codes (I-Codes) developed by the International Code Council.

The International Code Council, a membership association dedicated to building safety and fire prevention, develops the codes used to construct residential and commercial buildings, including homes and schools. Most U.S. cities, counties and states that adopt codes choose the International Codes developed by the International Code Council. The I-Codes are adopted and enforced in 48 states at the state or local level. Forty-four states and the Department of Defense use the International Building Code (IBC), 33 states use the International Residential Code (IRC) for One- and Two-Family Dwellings, and 32 states use the International Fire Code (IFC).

The coordinated, comprehensive I-Codes provide minimum requirements to protect people in residential, commercial and public buildings, especially in the case of natural disasters such as hurricanes, floods, earthquakes and wildfires. Because I-Codes may be adopted by local jurisdictions throughout the United States, cities from Anchorage to St. Louis, Dallas, Little Rock, Oklahoma City, Omaha, and Toledo can and do adopt and enforce the same family of construction codes. This makes it more consistent and cost effective for the truss industry to serve markets in all states. It also opens job markets and eliminates barriers for local companies wanting to expand operations to other parts of the country.

I-Codes provide a common building regulatory focal point for city, county and state building and fire officials, builders, architects, engineers, and building managers and owners nationwide. A single code and support system enhances economic development and assists the acceptance and use of technology in materials, research, design and construction practices, including trusses.

"It is a win-win solution for the regulated community and consumers," says International Code Council Vice President of Public Policy Sara Yerkes.

Professionals now can be trained and certified on one set of code documents instead of three or more. Materials suppliers and truss manufacturers, designers and installers can meet a single set of regulations. And policy makers can be assured public safety standards will be met regardless of where a truss is made or who made it.

“As these codes become widely used across the country, the industry will have a clearer understanding of what is expected in Overland Park,” says John Nachbar, city manager in Overland Park, KS. “We’re excited about the potential these codes offer to our local economy and the public.”

Indeed, the I-Codes, developed as successor to the three regional construction codes that were the foundation for building regulations in the United States, are a coordinated, comprehensive family.

“The I-Codes are probably the most technically proficient construction codes on the planet, and they’re all compatible with one another,” explains Tim Ryan, CBO, codes administrator for Overland Park.

Not only are the I-Codes more advanced than prior, regional construction codes, they can be implemented without having each local building department fund, write and update individual code documents. Each time an update of an I-Code is issued, local jurisdictions can simply adopt the new documents. This makes it much easier for the truss industry to participate in code development knowing its efforts will apply at the state and local level.

INTERNATIONAL CODE COUNCIL TECHNICAL SUPPORT SERVICES

The International Code Council believes its members, customers and other I-Code users deserve a complete package of support services from education to technical support.

International Code Council produces hundreds of publications to support its I-Codes. Among the most popular are code commentaries. Commentaries are reliable, easy-to-use references that demonstrate and explain the code, tell when and how to apply code requirements, and include the entire code text along with historical and technical background information. Code interpretations, free to all International Code Council members, are one of the most widely requested International Code Council technical support services. International Code Council staff readily provides code interpretations, which for those in the truss industry, can make possible more timely approval of truss designs and avoid construction delays. International Code Council issues more than 100,000 telephone code interpretations annually and 5,000 informal written International Code Council staff opinions with a one-week turnaround. Also available are formal interpretations issued by an International Code Council committee.

International Code Council provides comprehensive plan reviews for engineers, architects and code officials. The end product is a plan review worksheet and a comprehensive report that outlines any code deficiencies in the proposed building plan. Of particular interest to engineers and engineering firms, International Code Council plan reviews usually result in quick approvals when submitted to jurisdictions. That can save the client money and enhance the engineering firm’s reputation in the design and construction industry. The availability of truss designs that can be readily approved ensures that plan reviews are favorable to the trusses specified.

International Code Council technical consulting allows engineering staffs of truss manufacturers to meet face-to-face with their International Code Council technical counterparts to provide

guidance on code compliance before creation of the final plans and specifications.

NEW PRODUCT EVALUATION FOR COE COMPLIANCE

If adopted codes and standards could anticipate new building technologies, new technology would be easily incorporated into codes. Unfortunately, that is not the case. International Code Council Evaluation Service (International Code Council-ES) provides a process for acceptance of new building technologies and products that are not specifically covered in adopted codes and standards. This includes items like new truss plate designs, fire and decay prevention treatments, and other advanced concepts that may not be specifically addressed in the codes.

Another International Code Council service of interest to the truss industry is the International Accreditation Service (IAS). IAS assesses and monitors the acceptability of testing laboratories, calibration laboratories, independent inspection and quality control agencies/fabricator third-party inspection programs for manufacturers using specific materials (wood, steel and concrete) to certain standards contained in the I-Codes and international standards associated with conformity assessment.

PROFESSIONAL CERTIFICATION & DEVELOPMENT

Through the International Code Council, professional certifications are available from plan reviewer to certified building official. Many certifications are specific to state, regional and national codes and standards throughout the U.S. While not required to design or manufacture trusses, professional certification in the wide range of code-related subject areas can help foster a good working relationship between engineers in the truss industry and the building regulatory profession.

The International Code Council also makes available educational resources to support the professional growth of code users. Curriculum for the codes is comprehensive and has the highest technical quality. Seminars provide hands-on practice and practical problem solving. Curriculum can be tailored to maximize learning. There are more than 150 subject titles available. The International Code Council also provides customized on-site training. For those in the truss industry, professional development seminars can further reinforce code knowledge, increase client's perceived value and address some concerns about liability.

BEHIND THE CODES

Although most in the truss industry would agree on the need for consistent, updated construction codes, developing the I-Codes took nearly a decade and involved the combined efforts of many organizations, individuals and associations.

The International Code Council produces a single set of construction codes using a governmental consensus process. Representing professionals nationwide, the International Code Council spearheaded this effort and developed the new construction code family incorporating strengths from each of the legacy codes and advancing them so they could be used and applied nationally.

In addition to developing the I-Codes in an open process and securing industry support, the International Code Council maintains the codes with a public hearing and revision procedure.

“This helps adopting jurisdictions feel comfortable with the entire process and makes the transition from former codes easier,” says Yerkes.

Eligible voting members emphasize that they are code enforcement and fire service officials with no vested interest. They review the recommendations of the International Code Council code development committee at their annual conference and determine the final action. Following consideration of all public comments, each proposal is individually balloted by the eligible voters. The final action on the proposals is based on the aggregate count of all votes cast.

Yerkes says that this process ensures that the I-Codes will reflect the latest technical advances and address the concerns of those throughout the industry in a fair and equitable manner. The I-Codes are revised every 18 months.

“It took a lot of hard work and the combined efforts of thousands of professionals to develop these codes,” says Yerkes. “We honestly feel they are the best way policy makers can help protect the public and regulate their local building industry.”

ECONOMIC ADVANTAGES

Large and small jurisdictions throughout the United States have recognized the economic benefits and started the steps necessary for adoption.

“Having one set of codes boosts the entire industry. People can move around more freely and build more economically,” acknowledges Ron Nienaber, CBO, director of fire and building inspection services for Maple Grove, MN.

Maple Grove’s building department has recommended adopting the International Building Code, International Residential Code, International Mechanical Code, and International Fire Code to City Administrator Al Madsen to replace the Uniform Building Code. The move would benefit the local business economy and boost public safety, says Madsen. In the case of Overland Park, which has adopted the IBC and other I-Codes, this is the first time ever that the metropolitan area and state are using the same construction codes.

“This puts us in a good spot with regard to economic development,” Nachbar explains.

In Nashville, TN, which formerly used the Southern Building Code, building officials and policy makers supported the I-Codes from an economic standpoint.

“Whether you’re located in Dallas or Detroit, you can design for a building in Nashville or Davidson County without having to stop and research local codes,” explains Terry Cobb, director of the Department of Codes Administration for the Metropolitan Government of Nashville and

Davidson County.

Even the nation's largest city, New York, which is not subject to state authority in this area and has maintained its own code for nearly 50 years, is currently reviewing the I-Codes as a way to open employment doors nationally while helping to generate more affordable housing. I-Codes also would make the city consistent in its construction rules with the rest of the state. The New York State Code, which does not apply to the city of New York, is based on the I-Codes.

Calling New York's building code the "largest and most complex in the country, taking up hundreds of pages in the City's Administrative Code," Mayor Michael R. Bloomberg said adopting the IBC would help generate more affordable housing and make New York a more attractive place to do business.

"Adopting the IBC will be a tremendous boon to both construction professionals and the buildings department," added Department of Buildings Commissioner Patricia Lancaster.

Based on city data, it's expected that adopting the I-Codes would save up to 15 percent on building development costs. Based on that estimate, New York would save \$350 million in commercial construction annually. The city also anticipates saving up to 13 percent in residential construction, both single-family and multi-family.

Adopting the I-Codes would make the region a more attractive draw to relocating businesses and contractors, boosting the local economy. One multi-family builder pointed to the city's outdated building and fire codes as adding unnecessary costs. On a typical \$20-million project, the extra time spent to comply with local codes would add approximately \$6,000 to \$8,000 per apartment unit. His company has only developed one such unit in the NYC area over the past five years, due in large part to the economic burden in meeting the former New York State Uniform Fire Prevention & Building Code.

SMOOTH TRANSITION

Because the I-Codes update and improve on the three former model-building codes (National Building Code, Uniform Building Code, and Southern Building Code), which are used by many U.S. jurisdictions, adopters report smooth transitions.

"We found the I-Codes to be a natural advancement of the National Building Code. That code was good at recognizing new technologies and a lot of those philosophies have carried over to the I-Codes," says Ryan.

"From everything I've seen and heard, our transition has been extremely smooth," agrees Nachbar.

"The transition has been a real success for us," reports Cobb. "We've been impressed with the codes and the industry's fast acceptance of them."

MULTIPLE BENEFITS

With so many benefits in the offing from improving public safety to bolstering local building markets, it's important for policymakers to be proactive and aggressive in adopting better construction codes, notes International Code Council's Yerkes.

"When policymakers are aware of the I-Codes, and their potential to protect the public's safety and well-being, they become avid proponents for their fast adoption," she said. "To facilitate widespread adoption, the International Code Council must demonstrate to the public and elected officials that its code-development process is objective and trustworthy and that the International Code Council is not serving as a vehicle for monopolistic marketing practices under the guise of model public safety regulations."

She points to the quick and ongoing adoption of the I-Codes by jurisdictions nationwide and support from federal agencies including the Department of Defense, U.S. Federal Emergency and Management Agency, and U.S. Department of Housing and Urban Development. National organizations that support the I-Codes include the American Gas Association, American Institute of Architects, American Planning Association, American Seniors Housing Association, Building Owners and Managers Association, Institute for Business and Home Safety, Insurance Building Code Coalition, National Apartment Association, NAHB, the National Multi Housing Council, Wood Truss Council of America and others, as proof that the International Code Council has sustained industry support.

"They are the most advanced construction codes ever written ensuring the safest building and occupancy practices," Yerkes said. "The truss industry should insist on their adoption and use."

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