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The ASTM E60 Committee on Sustainability will meet on October 9-13, 2017 in New Orleans, Louisiana.  More

COLD-FORMED STEEL ENGINEERS INSTITUTE – NEWS AND UPDATES

Former CFSEI Executive Committee Member Steve Tipping

On behalf of the CFSEI Executive Committee, we regret to inform you of the unexpected passing of Steve Tipping, founder of Tipping Structural Engineers, on August 11, 2017. More

Save the Date! CFSEI EXPO Heads to San Diego in 2018

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CFSEI to Host Webinar on the Structural Aspect of Interior Nonstructural Cold-Formed Steel Framing on October 26, 2017

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CCFSS Issues Call for Papers for 2018 International Specialty Conference

The Wei-Wen Yu Center for Cold-Formed Steel Structures (CCFSS) at the Missouri University of Science and Technology has issued a call for papers for its biennial International Specialty Conference on Cold-Formed Steel Structures, which will be held November 7-8, 2018 at the Union Station Hotel in St. Louis, Missouri. More

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(2016 CFSEI Design Excellence Award Winner) The Wharf: DC’s Most Ambitious Development Project Set to Open

Three years after groundbreaking, the District’s largest new development project is ready for its close-up. More

As new multi-story wood-frame apartment complexes have become more common, some have raised safety concerns following recent fires.

Fires this summer have destroyed apartment complexes under construction in Waltham and damaged another in Dorchester. More

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• Creative Solutions Engineering
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• EEIS Consulting Engineers, Inc.
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• Leslie Engineering, LLC
• Skidmore, Owings & Merrill LLP
• The Raymond Group
• TranSystems
• WiSEengineers

UPCOMING EVENTS

October 26, 2017
The Structural Aspect of Interior Non-Structural CF Steel Framing
3:00 p.m. Eastern Time
More

October 24-26, 2017
25th Short Course on Cold-Formed Steel Structures
St. Louis, MO
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The U.S. Might Not Have Enough Construction Workers to Rebuild Houston after Harvey

The disaster that is Tropical Storm Harvey is still ongoing. It will be some time before the waters recede and the effect on Houston can be fully assessed. More

Why some buildings crumbled and others survived the Mexico City quake: A sober lesson for California

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Massachusetts Reviewing Construction Safety in Wake of Fires

Massachusetts fire and building officials have joined those in Boston in reviewing safety and fire prevention requirements on construction sites of large wood-frame buildings, the state fire marshal said Thursday. More

Growing Concern Over Fire Safety at Watertown Building Sites

Since late June, fire has destroyed three wood-frame apartment complexes under construction in Dorchester, Waltham and, most recently, Weymouth. More
TOP STORY

ASTM E60 Committee to Meet in New Orleans

The ASTM E60 Committee on Sustainability will meet on October 9-13, 2017 in New Orleans, Louisiana. The agenda covers many topics along with discussions on sustainability issues related to construction. However, of particular interest to our industry is the effort to change the definition of “recycle” to include products that are recovered and reprocessed to be burned. At present, the definition includes an exception that prohibits this activity, as highlighted below:

“Recycle, v - Recovering or reprocessing materials for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion.”

Every effort is being made to retain this definition as it is currently written. Additional assistance is requested to reinforce our position. We invite anyone who is a member of ASTM E60 and/or attending the meetings in New Orleans to contact us for further information on how to help. Send your inquiries to Maribeth Rizzuto at mrizzuto@steel.org.

Editor, Framework Online
Former CFSEI Executive Committee Member Steve Tipping

On behalf of the CFSEI Executive Committee, we regret to inform you of the unexpected passing of Steve Tipping, founder of Tipping Structural Engineers, on August 11, 2017. Steve served as a member of the Executive Committee from 2011 to 2013 and shared his expertise on seismic and constructability issues at many CFSEI venues. We extend our heartfelt sympathy to his wife Lu and their family. To learn more about Steve and his contributions to our industry, please visit www.tippingstructural.com.

Editor, Framework Online
Save the Date! CFSEI EXPO Heads to San Diego in 2018

Mark your calendars for the 2018 CFSEI EXPO to be held in San Diego, California on May 15-16, 2018. A preconference tour is being planned for the afternoon of May 14. This two-day event will feature 15 technical seminars eligible for continuing education credits. It is a great opportunity to learn and network with other experts in the cold-formed steel design community. Those interested in sponsoring, presenting an educational seminar, or attending the event should stay tuned to the CFSEI website (www.cfsei.org) for additional information to be announced soon.

Editor, Framework Online
CFSEI to Host Webinar on the Structural Aspect of Interior Nonstructural Cold-Formed Steel Framing on October 26, 2017

The Cold-Formed Steel Engineers Institute (CFSEI) will host a webinar on “The Structural Aspect of Interior Nonstructural Cold-Formed Steel Framing” on Thursday, October 26, 2017 at 3:00 p.m. ET. The webinar is designed for architects, engineers, building officials and contractors. Participants are eligible for 1.5 PDHs.

The webinar will review various interior nonstructural cold-formed steel framing for code-specified and engineered applications. Often, interior applications beyond ASTM installation standards are not thoroughly addressed in project contract documents. This webinar will assist building design professionals by highlighting code and industry standard limitations and illustrating which ones do not require analysis and which ones require additional engineering to determine proper member sizes and installation. The webinar will cover several topics, including:

- Industry technology,
- Wall and ceiling members: tables, bridging and limitations,
- Chase wall framing,
- Partial height partition support systems,
- Structure deflection accommodations, and
- Suspended ceiling systems.

The webinar will be conducted by Randy Kuss, Project Manager at ClarkDietrich Engineering Services, LLC. Randy has more than 25 years of experience in both structural and nonstructural cold-formed steel framing, ranging from basic interior partition installation requirements to complex architectural feature framing. His current responsibilities include engineering pricing, sales, design management, engineering design, detailing and field installation technical services for all aspects of structural and nonstructural cold-formed steel framing.

More information on the webinar and registration details is available at www.cfsei.org.

Editor, Framework Online
CFSEI Announces 2017-2018 Executive Committee Members

The Cold-Formed Steel Engineers Institute (CFSEI) has announced the members of its 2017-2018 Executive Committee. The committee is responsible for developing and maintaining the technology transfer activities related to cold-formed steel design through seminars, webinars and the publication of Technical Notes. Committee members serve for two years.

The 2017-2018 CFSEI Executive Committee includes:

- Chairman – Georgi Hall, P.E. – California Expanded Metals Products Co. (CEMCO), California
- Immediate Past Chairman (non-voting) – Robert Warr, P.E. – Frameworks Engineering, LLC, Georgia
- Vice Chairman – Paul Dalia, P.E. – 5400 Engineering, Florida

Committee Members:

- Nate Bacon, P.E. – Base Design Group, Inc., Maine
- Julie Lowrey, P.E. – Zabik-Turner Engineering, Florida
- Matthew Mancl, P.E. – ClarkDietrich Engineering Services, LLC, Indiana
- Kirsten Zeydel, S.E. – Digital Building Components, Arizona
AISI and CFSEI to Co-Sponsor 25th Short Course on Cold-Formed Steel Structures

Biennial course to be held October 24-26, 2017 in St. Louis, MO

The American Iron and Steel Institute (AISI) and the Cold-Formed Steel Engineers Institute (CFSEI), in cooperation with the Wei-Wen Yu Center for Cold-Formed Steel Structures at the Missouri University of Science and Technology, are co-sponsoring the 25th Short Course on Cold-Formed Steel Structures at the Drury Plaza Hotel at the Arch in St. Louis, Missouri from October 24-26, 2017. The Short Course provides information on the behavior of cold-formed steel members and connections for both commercial and residential applications, including wall studs, floor joists, purlins, girts, decks and panels. It is eligible for 2.4 Continuing Education Units (CEUs). Registration is required by October 10, 2017.

“This comprehensive course benefits all engineers interested in cold-formed steel design,” said Maribeth Rizzuto, LEED AP – BD+C, Managing Director, CFSEI. “For those unfamiliar with cold-formed steel design, the course will provide an introduction to the behavior of cold-formed steel members and connections and how that behavior is addressed by AISI S100, North American Specification for the Design of Cold-Formed Steel Structural Members. For experienced engineers, the course will strengthen their understanding of the fundamental behavior of cold-formed steel members and connections.”

Several topics will be covered during the Short Course, including:

- Mechanical Properties of Steel and Effect of Cold-Work of Forming
- Local Buckling and Postbuckling Strength of Thin Flat Elements
- Flexural Members – Bending Strength, Lateral-Torsional Buckling and Deflection
- Tension Members

Continued next page …
• Compression Members – Flexural, Torsional and Flexural-Torsional Buckling
• Bracing Requirements
• Design Based on Test Results
• Direct Strength Method
• Shear Wall Design

The instructors are Roger A. LaBoube, Ph.D., P.E., Curators’ Distinguished Teaching Professor Emeritus of Civil Engineering at the Missouri University of Science and Technology and Director of the Wei-Wen Yu Center for Cold-Formed Steel Structures; and Sutton Stephens, Ph.D., P.E., S.E., Chief Engineer (Retired-Advisor) at Pacific Northwest Engineering, Inc.

Additional co-sponsors of the Short Course include the Metal Building Manufacturers Association, Metal Construction Association, Rack Manufacturers Institute, Steel Deck Institute, Simpson Strong-Tie and Steel Framing Industry Association.

A special room rate at the Drury Plaza Hotel at the Arch is available for reservations made by September 21, 2017. For more information or to register online, visit the 25th Short Course on Cold-Formed Steel Structures web page at: [http://ccfssonline.org/cfs-short-course/](http://ccfssonline.org/cfs-short-course/)

Editor, Framework Online
CCFSS Issues Call for Papers for 2018 International Specialty Conference

Abstract submissions due by December 31, 2017

The Wei-Wen Yu Center for Cold-Formed Steel Structures (CCFSS) at the Missouri University of Science and Technology has issued a call for papers for its biennial International Specialty Conference on Cold-Formed Steel Structures, which will be held November 7-8, 2018 at the Union Station Hotel in St. Louis, Missouri. Abstracts are due by December 31, 2017, with final papers due by April 3, 2018.

Papers are invited for presentation on the following subjects concerning cold-formed steel for building construction:

- Basic and applied research
- Structural design
- Development of new products
- Development of new design criteria
- Manufacturing technique
- Construction methods
- Economy and effective use of cold-formed steel
- Engineering education

Papers accepted for presentation will be published in the proceedings made available at the conference. An additional category for paper submissions is open to students in either an M.S. or Ph.D. program for consideration for the Wei-Wen Yu Outstanding Paper Award. For more information on abstract/paper submissions and the conference, visit [http://ccfssonline.org/international-specialty-conference-2/](http://ccfssonline.org/international-specialty-conference-2/).
Since 1971, 24 International Specialty Conferences on Cold-Formed Steel Structures have been conducted. They bring together leading researchers, engineers, manufacturers, and educators engaged in research, design, manufacture and the use of cold-formed steel members to present detailed discussions on their recent findings.

Editor, Framework Online

HEADQUARTERS

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NEW MEMBERS

• Creative Solutions Engineering
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• Leslie Engineering, LLC
• Skidmore, Owings & Merrill LLP
• The Raymond Group
• TranSystems
• WiSEngineers

UPCOMING EVENTS

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St. Louis, MO
More
(2016 CFSEI Design Excellence Award Winner) The Wharf: DC’s Most Ambitious Development Project Set to Open

WASHINGTON — Three years after groundbreaking, the District’s largest new development project is ready for its close-up.

Phase 1 of District Wharf, more commonly known as The Wharf, is set to open Oct. 12. It includes 3 million square feet of mixed-use development along a 24-acre, mile-long stretch of the District’s Southwest Waterfront.

Southwest Washington was the principal commercial waterfront district in D.C. in the 1820s and 1830s, but this is the first significant development in Southwest D.C. in more than 50 years.

The Wharf was designed to be both a destination and a community with its broad promenade, new living, dining, shopping, working and entertainment venues and its much-improved access to the river and water activities.

WTOP’s special report, Destination Wharf, goes inside the new development for a sneak peek at the new housing, dining and entertainment options, as well as the traffic concerns and the environmental impact surrounding the project.

Phase 1, which broke ground in 2014, includes $2.5 billion in new office space, condos and apartments and retail, as well as four new piers, a new yacht club, a boardwalk along Washington Channel and hundreds of new boat slips.

The Wharf, which dubs itself as "Where D.C. Meets its Water," comprises 12 distinct areas, including Market Square, next to the Municipal Fish Market. Transit Pier offers water taxi access and an ice rink in the winter, and Recreation Pier offers kayak and paddle board rentals. Then there’s Yacht Club Plaza, Pearl Street, Wharf Street and 7th Street Park.

Continued next page …
It also preserves the Maine Avenue Fish Market, the oldest continuously operating open-air fish market in the U.S. The market opened in 1805, 17 years earlier than New York City’s famous Fulton Fish Market.

Twenty restaurants and bars are either ready for the Oct. 12 grand opening or will open soon after. They cover the gamut, from Spanish to Belgian, Asian to Irish, Mexican to French. Retail shops include a salon and spa, a distillery, craft wine and beer, an eyewear store, a home décor and clothing boutique, a chocolatier, a French furniture store, District Hardware, a Politics and Prose bookstore and a CVS.

It also includes more than 14 acres of park and public spaces, plus water taxi service to Georgetown, Old Town Alexandria and National Harbor.

How did we get here?
Developer PN Hoffman first won approval for the ambitious project in 2006, and spent years wading through a litany of District and federal government approvals. It eventually brought on development partner Madison-Marquette, forming the development team Hoffman-Madison, which oversaw the three-year build-out of Phase 1.

Besides the regulatory hurdles, it took some convincing to change people’s minds about the Southwest Waterfront.

“Everyone had a bias of what Southwest was. Everyone had their own definition of it, which really wasn’t very attractive. My biggest challenge was making people believe that it could be something different,” said PN Hoffman founder Monty Hoffman.

“For many years, it was sort of isolated. Overcoming that with everyone was the biggest hurdle. Certain uses started coming in and committing to it — tenants, retailers, restaurants, entertainment started committing to it, and it started creating its own energy and that’s very fulfilling,” he said.

The District has invested almost $200 million on infrastructure, including sewers, roads and its cobblestone promenade.
Live, Work, Enjoy

With close to 900 residential units, the first phase will have an estimated 2,000 people living there.

Two condominium buildings, 525 Water and Vio, are joining two apartment buildings, The Channel and Incanto, along the waterfront. In addition, the project features three hotels for guests to stay: Canopy by Hilton, Hyatt House and The Intercontinental.

New office space has attracted several notable relocations, including The American Psychiatric Association and WGL Energy, the parent company of Washington Gas. Office space is 60 percent to 70 percent leased, and includes Pier 4 Office, D.C.’s first office on a pier.

All counted, 14 building structures make up Phase 1.

According to Hoffman-Madison, 500 District residents were hired during the construction of the initial phase of construction, and nearly half the expenditures to date have gone to D.C. businesses. At full build-out, The Wharf is expected to create a total of about 5,800 permanent jobs.

In addition to its vision of creating a new waterfront gateway for the District, Hoffman-Madison also aimed to create an environmentally sustainable community. All buildings are designed to achieve LEED certification, many have green roofs, and The Wharf includes multiple forms of on-site sustainable energy, including solar and energy-efficient lighting.

Hoffman-Madison says it has planted more than 300 new trees and preserved existing, mature oaks.

Phase 2, expected to break ground in mid-2018, will extend the redevelopment project another half mile to Fort McNair and include an additional 1.5 million square feet of hotel, residential and office space.

Source: WTOP, September 11, 2017
MARKETPLACE

As new multi-story wood-frame apartment complexes have become more common, some have raised safety concerns following recent fires.

Fires this summer have destroyed apartment complexes under construction in Waltham and damaged another in Dorchester.

In the midst of a building boom of low- and mid-rise apartment and condominium complexes across Massachusetts, some are scrutinizing the safety of wood-frame construction following a spate of massive fires.

“I think, generally speaking, with wood-frame construction, it’s not that it produces an unsafe building, but it presents different challenges for fire safety during construction,” said Massachusetts State Fire Marshal Peter Ostroskey.

On July 23, a suspected arson fire completely destroyed a 264-unit apartment building that was under construction in Waltham. The previous month, an accidental fire destroyed part of an 83-unit apartment under construction in Dorchester.

Large apartment complexes spanning four to six stories have become increasingly common, particularly in urban areas across the country. In 2006, four- to six-story buildings made up 18 percent of new multifamily construction, according to FPInnovations, a nonprofit organization that researches issues related to the Canadian lumber industry. A decade later, they represented 37 percent of new multi-family homes. Over the same 10-year span, the use of wood frames in those buildings more than doubled.

For buildings that size, wood provides an option that is much more cost-effective than steel or concrete, according to industry analysts.

“It’s increased construction in this particular market we’re concerned about,” said Kevin Lawlor, spokesman for Build With Strength, an advocacy group launched by the National Ready Mixed Concrete Association. “Stick-built construction in low- to mid-rise construction is a danger at every phase of construction and occupancy. They are combustible materials.”

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David Barber, a fire protection engineer who consults on timber-framed buildings across the country with Washington-based firm Arup, accused Build With Strength of "spreading misinformation" by stating a building under construction has the same fire risk as a building that is occupied.

Wood-frame buildings, he said, include fire safety features such as gypsum drywall, alarms and sprinkler systems.

“There’s a significant difference between a building in construction and a building that’s ready to be occupied,” he said.

Ken Bland, vice president of codes and regulations for the American Wood Council, characterized the coalition’s criticism as market driven.

“They’re frustrated with a loss of market share, so they’re using fires as a means to promote their campaign,” he said.

**Fire safety on the job site**
The American Wood Council, through its work with the Construction Fire Safety Coalition, has helped develop a set of best practices to enhance fire safety during construction, Bland said. Those include assigning a dedicated fire prevention program manager, securing the construction site, ensuring that firefighters have access to the site and an adequate water supply, and adhering to a “hot work” permit system for work such as welding, soldering and cutting.

“We feel if we can raise awareness, we can reduce the number of construction fires across all types of buildings and all materials,” Bland said.

Construction site fires, though, continue to pose a public safety risk, Lawlor said. Ostroskey said that once buildings are completed and have fire suppression systems in place, they are generally safe. Lack of sprinklers or fire suppression systems during the construction phase, however, can present challenges. At the Dorchester construction site, the June 28 fire broke out one day before the building’s sprinkler system was reportedly scheduled for inspection.

If a blaze breaks out at a construction site before windows are installed, an increased airflow can speed the spread of fire.

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Causes of large fires

Massachusetts fires resulting in property losses of more than $1 million fluctuate from one year to the next, but have generally trended slightly upward over the past 15 years. Last year, there were 28 such fires. The database does not yet include complete up-to-date data for 2017. The type of data included in reports makes it challenging to define and quantify a “large” or “major” fire, according to the Division of Fire Services.

Additionally the definition of what constitutes a multi-alarm fire can vary from one fire department to another.

Buildings under construction haven’t been the only sites of large fires in recent months. Factors causing fires to grow to a massive scale can vary from one case to another, Ostroskey said.

Modern furnishings and finishes, which often feature synthetic materials, can contribute. They release extremely high levels of heat when they burn, which can cause a fire to grow in intensity, Ostroskey said.

“We also see things like changing trends. More and more smokers, for example, are smoking outdoors, igniting siding, which results in significant growth before the fire spreads to inside the building.”

A massive Dec. 3 fire in Cambridge, which affected 18 buildings and displaced 100 people, for example, was caused by a construction subcontractor’s improper disposal of a cigarette in a recycling bin, fire officials determined.

Careless disposal of a cigarette was also to blame for a June 12 fire in Lawrence that destroyed three homes, damaged four others and displaced 64 people. Ostroskey stressed the importance of modern fire safety equipment in saving lives and protecting property.

“There’s no better protection than a combination of a carbon monoxide detector, smoke detector, alarm and sprinkler system,” he said.

Source: The Patriot Ledger, September 7, 2017
MARKETPLACE

The U.S. Might Not Have Enough Construction Workers to Rebuild Houston after Harvey

The disaster that is Tropical Storm Harvey is still ongoing. It will be some time before the waters recede and the effect on Houston can be fully assessed. But it is already clear the damage to property will be immense. Tens of thousands of structures were impacted by floodwaters. Eventually, Houston will require massive cleanup, demolition, and reconstruction of individual homes, large buildings, and infrastructure.

The first concern will be the financial resources necessary: Will insurance companies cover all the losses, and how much of them? How will the federal government’s heavily indebted flood insurance program come up with the cash to pay claims? And how much additional assistance will the federal government provide?

There’s another problem: a lack of human resources. It takes a lot of labor to remove debris after a storm and then reinstall Sheetrock and drywall, rebuild floors, and fix electrical and plumbing systems. The work is resistant to automation. And it is but one way in which Houston, which was poorly situated to deal with a hurricane, may also be poorly situated to recover from it.

The issue is that the United States is suffering from a shortage of workers generally, and specifically from a shortage of workers with some of the necessary skills to assist in disaster recovery.

Let’s review. With the U.S. economy having created jobs for a record 82 months, there are 146.6 million people with payroll jobs. The unemployment rate is 4.3 percent. At the end of June, the Labor Department reports, there were a record 6.16 million jobs open in the U.S. (That compares with about 4 million in August 2005, when Katrina hit.) Put another way, it’s harder to find labor in the U.S. right now than at any point in recent history.

But that’s not the whole story. There are particular shortages in the types of trades that get called into action after a disaster. America’s construction labor force has undergone a sea change in the past decade. When the housing bust came, hundreds of thousands of roofers and other skilled and unskilled tradespeople were laid off.

Continued next page
Because the recovery was remarkably slow, many went on to find work in different industries. Many construction workers had come to the United States (legally and illegally) from Mexico and Central America to work in the boom years, and in the bust years some of them went home. Others were deported. And in recent years, the flow of new potential workers has slowed down significantly. The result: As the U.S. housing and construction recovery has chugged on, it has become more difficult to hire construction workers. In June, there were some 225,000 open construction jobs in the U.S., up 31 percent from June 2016.

All over the United States, in Colorado, in Nebraska, and elsewhere, construction companies have been complaining that they can’t find enough labor to do their job. The National Association of Home Builders reports that 77 percent of builders are facing a shortage of framing crews while 61 percent are grappling with a shortage of drywall installation workers and 45 percent report a shortage of weatherization workers. The problem is particularly acute in Texas, where the housing industry has been powered by consistent population and job growth and whose service industries are disproportionately reliant on immigrant labor. Last fall, as the Wall Street Journal reported, “In Dallas, the King of Texas Roofing Co. says it has turned down $20 million worth of projects in the past two years because it doesn’t have enough workers.”

In the aftermath of natural disasters, first responders and recovery crews flood the zone on a temporary basis. But reconstruction, cleanup, and recovery requires many thousands of workers who can stay for many months or more. FEMA Administrator Brock Long told CNN that “FEMA is going to be there for years.” Houston will require a surge of employment—tens of thousands of people. It will have to find places for them to live, since so much of the housing stock is damaged. And it will likely have to pay them above-market wages, because it will need to lure them away from existing jobs.

And given the Trump administration’s hostility to Latinos and desire to ramp up deportations, it’s unlikely that what worked in previous disasters will work again. Back in 2007, the Washington Post reported on a Tulane and University of California, Berkeley, study that found some 100,000 Hispanic workers thronged into the Gulf Coast region in the wake of Katrina, many of them undocumented.

Houston will need a similar migration for it to recover. In 2017, from where will those workers come?

Source: The Slate, August 28, 2017
MARKETPLACE

Why some buildings crumbled and others survived the Mexico City quake: A sober lesson for California

The amateur videos emerging from the magnitude 7.1 earthquake that devastated Mexico City on Tuesday are grim. Some show taller buildings swaying. Others show short, squat structures suddenly collapsing. Remains of brick walls have fallen onto sidewalks in heaps of rubble.

Over decades, seismologists and structural engineers have gained extensive knowledge about why some buildings collapse while others remain standing during an earthquake. Part of the answer lies with construction: Concrete buildings without enough steel reinforcement can become disastrously brittle during shaking, allowing concrete to burst out of the columns just before a catastrophic collapse.

But buildings can either survive or fail based on the vagaries of geology, geography and physics.

In Tuesday’s quake in Mexico, preliminary reports suggest that shorter buildings were especially susceptible to collapse, including older structures that had survived the nation’s 1985 magnitude 8 earthquake that killed an estimated 10,000 people. Meanwhile, unlike the ’85 quake, Mexico City’s taller buildings appeared to ride out the latest temblor in better shape.

Seismology and engineering experts say because Tuesday’s calamity hit far closer to Mexico’s capital — 80 miles away compared with 250 miles in the 1985 quake — shorter buildings were far more vulnerable than they were during the earthquake that struck a generation ago.

The reports illustrate a fact of seismology: Short buildings are especially at risk when big earthquakes strike nearby. They actually can avoid major damage if the structures are farther away from the origin of megaquakes.
Taller buildings, meanwhile, are especially threatened by megaquakes, even if the temblors originate from a significant distance.

Experts say the lessons are clear for California and underscore an ominous warning: Just because your home or workplace survived a previous earthquake doesn’t mean it will endure the next one.

Source: Los Angeles Times, September 21, 2017
Massachusetts Reviewing Construction Safety in Wake of Fires

Massachusetts fire and building officials have joined those in Boston in reviewing safety and fire prevention requirements on construction sites of large wood-frame buildings, the state fire marshal said Thursday.

Fire Marshal Peter J. Ostroskey said his office, along with the two state commissions charged with overseeing state codes, is reviewing the building code and an upcoming fire code update for ways to prevent construction site fires.

Ostroskey told NBC Boston about this review in the wake of a third wood-frame building fire, early Thursday morning in Weymouth.

"Within the context of these recent incidents, we've undertaken some additional scrutiny with respect to these incidents and what code implications there might be," he said.

A fire burned through the top floors of an apartment building in the Ashmont section of Dorchester in June, and another fire destroyed a large apartment complex under construction in Waltham in July.

The fire marshal's office does not review or enact building or fire code. But Ostroskey said his office is reviewing existing code with the state Board of Building Regulations and Standards, which oversees the Massachusetts building code, and the Board of Fire Prevention Regulations, which oversees the fire code.

"I think we have to take a look at the fires, the causes of these fires, and the significance of them with respect to the codes and how they work," he said.

Those buildings were not completed and inspected at the time of the fires. In Dorchester, the walls were up, but the sprinklers were off. In Waltham, parts of the complex were still open and without sprinkler systems.

The cause of the Weymouth fire is still under investigation, but the building was in various stages of completion.
None of the buildings were occupied at the times of the fires. No one was injured in Weymouth, and firefighters suffered minor injuries in Waltham and Dorchester.

Boston Fire Commissioner Joseph E. Finn and Inspectional Services Commissioner William Christopher in July announced that they would review the city’s regulations.

“During construction, when the building is the most vulnerable, is where Joe and our teams are going to look together for things we can improve so this situation doesn't repeat itself,” Christopher said then.

The NBC Boston Investigators began digging into wood frame construction after the June Dorchester fire.

Many wood frame buildings, including the one in Dorchester, use lightweight engineered wood, which is comprised of pressed wood chips to form either a solid beam or an I-beam. Those materials are used in floor and ceiling systems to allow for larger rooms and higher ceilings.

Finn said that while the Ashmont building still smoldered behind him in June, the I-beams in the ceiling of the building began to fail shortly after his crews arrived. He immediately called them off the roof as machinery and equipment began to fall through.

"Lightweight construction has some hazards to firefighters," Ostroskey said Thursday. "Certainly they're sound practice prior to introducing a fire to the building, but those components will change the way the tactics and strategies the fire departments use."

According to studies and fire and construction experts, the I-beams in particular can fail quickly if the pressed wood chips in the middle burn, meaning people and objects can fall through floors.

But officials and experts emphasized that once the drywall is up, and smoke detectors and sprinkler systems are operational, the risks associated with those materials, and wood materials in general, drop significantly.

"Once these buildings are constructed and are in operation, they are fully closed and have working systems, they are safe buildings to occupy," Ostroskey said.
A revision to the International Building Code, which Massachusetts and most states base their codes on, allowed for larger and taller wood-frame construction. Builders like it because it is quicker and easier to work with, and cheaper than concrete and steel.

Officials determined the Dorchester fire started because an exhaust pipe from a generator in the basement was just inches from combustible materials in the wall near the ceiling. The building code requires such exhaust pipes to be at least 12 inches on all sides from combustible materials.

That building was finished, but the sprinkler system was turned off. It was due for a final inspection, when the sprinklers would have been pressurized and tested, the day after the fire.

The Waltham fire, which started early on a Sunday morning, was ruled arson. The fire marshal's office is still looking for the public's help to solve that crime. Anyone with information should call the state's arson hotline at 800-682-9229.

The state is offering a reward of up to $5,000 for information that helps to solve the crime of arson. And the contractor, Callahan Construction, is offering up to $100,000 for information that leads to the arrest and conviction of those responsible.

Source: NECN, September 14, 2017
MARKETPLACE

Growing Concern Over Fire Safety at Watertown Building Sites

Since late June, fire has destroyed three wood-frame apartment complexes under construction in Dorchester, Waltham and, most recently, Weymouth.

Watertown residents have started to express concerns.

“Residents are weighing in because there’s quite a bit of development in Watertown,” said Town Council President Mark Sideris.

Combustible wood is just one of many potential fire risks in buildings under construction, where sprinkler systems have not yet been installed or activated. To protect both the community and the multi-million dollar projects, Watertown officials work with developers to promote fire safety at each site.

Under the Massachusetts fire code, the site’s developer must create a fire prevention plan. Unlike some larger cities, Watertown does not require a written plan. Instead, Capt. Ryan Nicholson, Watertown’s fire inspector, said he and building inspector Ken Thompson meet with developers to review their plans.

“We sit down and have a verbal conversation about what we expect from the site, what will make it safer,” Nicholson said. “They first let us know what their plan is, and if it needs any critiquing, we’ll do that and get it worked out.”

Throughout the construction process, developers regularly communicate with the fire department. Nicholson said developers often copy him on emails about the site’s status and notify him of significant activities, such as changes to access roads or the delivery of combustible materials.

Nicholson said he or Thompson drive by or visit construction sites daily, and firefighters may serve details at the site.

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Security
Common security measures include fencing, cameras and security guards. The Waltham complex destroyed in July had surveillance cameras, but no overnight security guards.

Nicholson said any time he wanted a site to employ security guards, the developer had already included guards in the plan.

“Developers want to protect their site, too – they’re spending a lot of money,” Nicholson said. “They know it could be a target, like the situation in Waltham.”

Fire prevention
Watertown has an abundance of fire hydrants with “great water pressure,” Nicholson said. The fire code requires standpipes that can connect to the water supply at the construction site.

“As the building comes out of the ground, the standpipes have to follow,” Nicholson said. Smoking is allowed only in designated areas. Nicholson expects the developer’s plan to specify how the smoking policy will be communicated to workers.

Cleanliness
Safety plans should ensure that trash, combustible waste and dust do not accumulate on the site.

While the recent fires had different causes – an improperly installed pipe in Dorchester and suspected arson in Waltham – the projects all used wood-framing. Nicholson said steel-framing is safer in many ways, but he understands why developers choose wood. “Wood-framing is the economical choice,” Nicholson said. “We do our best to keep it as safe as we can.”

Sideris said he spoke with the building inspector after the Waltham fire about safety concerns. While state regulations limit Watertown's control over the types of materials used in projects, Sideris said surveillance and security guards may increase safety at these sites.

“It’s incumbent on the developers to secure their properties,” Sideris said.

Source: Wicked Local, September 22, 2017