

# SPECWORK



## In This Issue

- President's thoughts
- What I Learned From CSI - Networking Across the USA / By: Gary Bergeron, CSI, CCS, GSR Technical Chair
- Fixed-It Friday: Push/Pull to Release / By: Lori Greene / I Dig Hardware
- Licensing Boards: Entities That Govern the Design Professions Part 4 – Enforcement / By: Kevin O'Beirne, PE, FCSI, CCS, CCCA, CDT
- Throw-Back Thursday: Daily Inspections in Schools / By: Lori Greene, I Dig Hardware Blog
- Fixed-It Friday - Screwed / Fixed-It Friday - Three Strikes / By: Lori Greene / I Dig Hardware
- Decoded: Fire Door Inspections vs. Egress Door Inspections for Swinging Doors / By: Lori Greene / I Dig Hardware
- Decoded: Annual Inspection of Egress Door / By: Lori Greene / I Dig Hardware
- Seeking a Code Modification / By: Mark Kuhn / I Dig Hardware
- Quick Question: "Special" Hinges on Fire Door Assemblies / By: Lori Greene / I Dig Hardware
- Quick Question: Fire Exit Hardware Mounting Height / By: Lori Greene, I Dig Hardware Blog
- Childhood Safety Act / By : Lori Greene, I Dig Hardware Blog
- Fail Secure Electric Strikes and Fire Alarms / By: Mark Kuhn / I Dig Hardware
- EPDs and the Future of Design / By: Brad Blank / Ron Blank and Associates
- Do assisted living units need fire protection / By: Lori Greene, I Dig Hardware Blog
- Quotes on Strength and Happiness / By: Various People
- Little Rock Chapter Information







Here we are, already in October. Halloween, Thanksgiving and Christmas are just around the corner. As we approach the Holiday Season, we should be thinking about what we are thankful for. For many of us full employment, good health, family, and friends are top of the list. We also need to think about those who work every day to keep us safe, to guarantee our continue freedoms, and those who are there when we need someone to help us get through one of the “worst days of our lives”.

- As I am a veteran, I always think of those members of the Military serving around the world trying to make a difference.
- I think of the first responders (police, fire, medical) who respond to help us when we need it.
- I think of the people who maintain our roadways, who raise the crops that become our food, those who enforce codes that protect our health safety and welfare.
- And finally those who collect our garbage and recyclables. These are the just a few of the unsung heroes who work behind the scenes to protect and serve our communities.

Before we enter the Holiday Season, we have plenty to do. At the end of this newsletter I have placed several quotes on Strength and Happiness to help guide you in day-to-day feelings and actions. I hope they help in some small way.

Finally, I want to welcome the membership of the Little Rock Chapter Mr. Scott Stricker from Cromwell Architects, Little Rock. I know everyone in the Chapter will welcome him and make him feel at home. I would like to personally take the time to welcome him and let Scott know that anything he needs or if he has any questions, please feel free to contact me directly.





## What I Learned From CSI - Networking Across the USA

By: Gary Bergeron, CSI, CCS, GSR Technical Chair

Karina Kane is a fourth year UTK architecture student working in our mechanical engineering office part time. She mentioned that Ted Shelton's integration class had a school project located in Denver, Colorado. A quick Google maps search of the address indicated some "dated" aerial images. Karina recognized that more data was needed. She looked for a Denver GIS similar to Knoxville's KGIS program. <https://www.kgis.org/kgismaps/map.htm> Karina was disappointed to find there was not a GIS with more up-to-date information. Karina took a "long shot" and contacted the Denver CSI board of directors via email with the text below.

My name is Karina Kane, I am a fourth-year architecture student at the University of Tennessee, Knoxville, and a student member of the CSI Knoxville Chapter. Being a part of CSI has been one of the greatest decisions in my life. The people I have been connected with, by being involved with the Knoxville, Nashville, and even Chattanooga chapters have taught me so much valuable information that I will carry with me for the rest of my career. When I first got involved, the CSI community welcomed me with open arms. Now, they have made a wonderful effort to help me grow in this profession by teaching me from their own experiences. I have to say, this community has the most hard-working, passionate, caring, intelligent, and creative people I've ever met and I am so honored to be part of CSI. With CSI being such a compassionate organization, I am reaching out about a potential sponsorship through the Denver, CO Chapter for a one-day site visit located at 1338 N Emerson St, Denver, CO, 80218. This site visit would be for an integration school project (a project for fourth-year students only) which I am tackling this semester through the College of Architecture at the University of Tennessee, Knoxville. Not only would visiting the site help to provide critical information including photos and written accounts, but having that contextual experience will give me a leg up in the project that is being submitted to a national competition (brief attached below). I was just presented the brief yesterday, with the final project for class due before Thanksgiving, November 20th specifically, meaning visiting the site would have to occur in the next month. I truly appreciate what CSI has been able to do for me and how beneficial being a part of the organization is to my career. If possible, working out a date to visit the site and meet you with the Denver, CO Chapter, would be more than awesome!

Thank you so much and I am looking forward to hearing from you soon!

Within just a few hours Athena Van Waardenburg (secretary of CSI Denver Chapter) responded with an email that she was forwarding Karina's request to the Denver CSI board of directors. Little did Karina know, the board found the request to be worthy of financial support. It was less than 24 hours later, Erica Thompson (treasurer of CSI Denver Chapter), called Karina with CSI Denver's offer to pay for the Knoxville to Denver flight, pick her up at the airport, tour the project site, and provide her guest room for Karina's time in Denver. Karina also brought to Erica's attention the interest in meeting some of the CSI Denver Chapter members on her trip. Erica emailed a few people letting them know about this incredible moment where their chapter was able to help a student from another chapter on the other side of the nation. Karina is set to meet a few people from the CSI Denver Chapter on her trip, learning from their experiences as well as being able to share information about herself. Stay tuned for part two of this article, which details the information Karina will obtain during her Denver visit.

# Fixed-It Friday: Push/Pull to Release

By: [Lori Greene](#), I Dig Hardware Blog

One of my favorite retired AHJs sent me today's [Fixed-it Friday](#) photos, taken in a new grocery store. Can you spot the problem?



The panic hardware shown is a Von Duprin Chexit delayed egress device, which will delay egress for 15 seconds under normal operation. There will be no delay upon fire alarm activation or upon power failure. The purpose of this device in a grocery store would be to deter theft.

The problem here is with the signage. I'm guessing that the signage shipped with the Chexit was not installed because braille signage was desired. I have not seen a code requirement for braille signage for a delayed egress lock – if you know of a code that requires this, let me know in the comments.

The model codes are very specific about the required signage for doors with delayed egress locks:

I-Codes: Signage must state "PUSH [PULL] UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS." These signs are required for doors equipped with delayed egress locks (see exception for Group I), and must be mounted above and within 12 inches of the door exit hardware. Beginning with the 2015 edition, signage is required to comply with the visual character requirements of ICC A117.1 – Accessible and Usable Buildings and Facilities. In Group I – institutional occupancies, the AHJ may allow signage to be omitted for certain types of treatment areas.

NFPA: The required text for the signage is the same as the signage required by the I-Codes: "PUSH [PULL] UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 [30] SECONDS." The NFPA codes require signage for delayed egress locks to be readily visible, durable, with letters not less than 1-inch high and 1/8-inch stroke with a contrasting background, located on the egress side of the door adjacent to the release device.

Both sets of model codes require the signage to be mounted on the door (not beside the door), and the required language is very clear. For outswinging doors, the signage must state, "Push until alarm sounds..." and for inswinging doors, "Pull until alarm sounds..." The delay time must also be shown on the sign – typically 15 seconds unless a 30-second delay is approved by the AHJ. It's very important for building occupants to know how this type of lock works, so the confusing signage should be replaced.



# Licensing Boards: Entities That Govern the Design Professions Part 4 – Enforcement

By: Kevin O'Beirne, PE, FCSI, CCS, CCCA, CDT

*This is the fourth in a four-part series on this blog addressing licensing boards governing the design professions, comprised of: (a) Part 1 – Introduction to Licensing Boards and Revisions of Laws and Regulations; (b) Part 2 – Qualifications of Perspective Licensees and Licensing Exams; (c) Part 3 – Issuance of Licenses and Registrations; and (d) Part 4 - Enforcement. This article describes the enforcement functions of licensing boards governing the design professions and how their operations affect personnel engaged in architecture, engineering, and other design professions in the United States. In this article, laws, rules, and regulations are referenced as either "laws and regulations" or "statutory requirements".*



An important responsibility of licensing boards is investigating alleged misconduct by design professionals and enforcing applicable laws and regulations. Licensing boards are typically not empowered to investigate complaints of alleged excessive fees or charges but can investigate claims of fraudulent billing. To this end, licensing boards function similar to a court, although their authority is limited to specific laws and regulations. Therefore, a licensing board is neither a criminal nor civil court. The board has the right to issue subpoenas to persons, compel submittal of evidence, and receive depositions and testimony.

## What Constitutes Misconduct?

Professional misconduct is the failure of a licensed professional to comply with standards of practice. The National Council of Architectural Registration Boards (NCARB) publishes model statutory language for the regulation of the practice of architecture in the United States. Section 501 of NCARB Model Laws and Regulations indicates that misconduct includes the following:

- a. A conviction for or other official determination of a violation of any law, rule, or regulation of (Jurisdiction), any other Jurisdiction, or the federal government, pertaining to any aspect of the Practice of Architecture;
- b. Unprofessional conduct relating to the Practice of Architecture;
- c. Failure to conform to the accepted minimum standard of care;
- d. Financial misconduct such as improper or fraudulent billing practices;
- e. Incapacity or impairment, for whatever reason, that prevents an Architect from engaging in the Practice of Architecture consistent with the accepted minimum standard of care;
- f. Conviction of a felony;
- g. Engaging, or aiding and abetting any Person with engaging, in the Practice of Architecture without being licensed or registered pursuant to this Act;
- h. Falsely using the title of "Architect" or any derivative thereof;
- i. A conviction or other official determination of engaging in the Practice of Architecture in another Jurisdiction without being duly licensed in that Jurisdiction;
- j. Attempting to use or using the License or seal of another Architect as their own;
- k. Having had any license to engage in the Practice of Architecture subjected to disciplinary action by a licensing authority recognized by the Board, if the basis of such disciplinary action would have resulted in a violation in (Jurisdiction);
- l. Failure to comply with policies and procedures related to the examination and Approved Experience Program required by the Board for an initial License;
- m. Having been sanctioned by the NCARB Board of Directors;
- n. Failure to report to the Board any information as required under Article VI[,] – Complaints[,] of this Act;

- o. Failure to disclose a fact or misrepresentation of a fact to the Board;
- p. Failure to cooperate with the Board in an investigation pending against any Person;
- q. Failure to comply with any stipulation or agreement of any Board disciplinary action; or
- r. Any other grounds as provided by the Board in regulation.”

Additional grounds for disciplinary action, such as violating the security of the Architecture Registration Examination, are set forth in Section R501 of NCARB’s Model Laws and Regulations.

Similarly, the National Council of Examiners for Engineering and Surveying (NCEES) publishes suggested language for state and territorial laws and regulations governing the practice of professional engineering and land surveying in the United States. Section 150.10.A of NCEES’s Model Law (revised September 2021) establishes the following as misconduct for licensees and interns, where interns are persons who have successfully passed the Fundamentals of Engineering Exam, also known as Engineer-in-Training exam (bracketed text, below, is not present in the original but is included here for clarity):

1. Any fraud or deceit in obtaining or attempting to obtain or renew a certificate of licensure.
2. Any negligence, incompetence, or misconduct in the practice of engineering or surveying.
3. Conviction of or entry of a plea of guilty or nolo contendere [i.e., pleading no contest to the charges without admitting guilt] to any crime that is a felony, whether or not related to the practice of engineering or surveying; and conviction of or entry of a plea of guilty or nolo contendere to any crime, whether a felony, misdemeanor, or otherwise, an essential element of which is dishonesty or which is directly related to the practice of engineering or surveying.
4. Failure to comply with any of the provisions of this Act or any of the rules or regulations of the board.
5. Discipline (including voluntary surrender of a professional engineer’s or professional surveyor’s license in order to avoid disciplinary action) by another jurisdiction, foreign country, or the United States government, if at least one of the grounds for discipline is the same or substantially equivalent to those contained in this Act.
6. Failure to provide information requested by the board as a result of a formal or informal complaint to the board that alleges a violation of this Act.
7. Knowingly making false statements or signing false statements, certifications, or affidavits in connection with the practice of engineering or surveying.
8. Aiding or assisting another person in violating any provision of this Act or the rules or regulations of the board.
9. Violating any terms of any Order imposed or agreed to by the board or using a seal or practicing engineering or surveying while the licensee’s license is inactive or restricted.
10. Signing, affixing, or permitting the licensee’s seal or signature to be affixed to any specifications, reports, drawings, plans, plats, design information, construction documents or calculations, surveys, or revisions thereof which have not been prepared by the licensee or under the licensee’s responsible charge
11. Engaging in dishonorable, unethical, or unprofessional conduct of a character likely to deceive, defraud, or harm the public.
12. Providing false testimony or information to the board.
13. Habitual intoxication or addiction to the use of drugs or alcohol.
14. Providing engineering or surveying services outside any of the licensee’s areas of competence”

In addition, Section 150.30.A of NCEES's Model Law indicates the following as grounds for disciplinary action against unlicensed individuals:

1. Engaging in the practice or offer to practice of engineering or surveying in this jurisdiction without being licensed in accordance with the provisions of this Act.
2. Using or employing the words "engineer," "engineering," "surveyor," "surveying," or any modification or derivative thereof in his or her name or form of business activity except as licensed in this Act.
3. Presenting or attempting to use the certificate of licensure or seal of a licensee
4. Engaging in any fraud or deceit in obtaining or attempting to obtain a certificate of licensure or intern certification.
5. Impersonating any licensee.
6. Using or attempting to use an expired, suspended, revoked, inactive, retired, or nonexistent certificate of licensure"

### **Examples of Misconduct Cases**

Examples of malpractice convictions are available in licensing boards' newsletters or online listings of disciplinary cases. A summary of a majority of reported disciplinary cases for architects and engineers in New York and Pennsylvania for the period January 2022 through April 2024 is presented below:

#### **New York State – Architecture**

- "...failing to comply with the mandatory continuing education requirements ..."
- "...failing two audits of the New York City Department of Buildings [NYCDB], ... which resulted in the revocation of a permit."
- "...filing 14 professionally certified applications with the ... [NYCDB] during the period of probation imposed as a sanction ... in grossly negligent violation of the New York Administrative Code."
- "...filing five professionally-certified applications with the ... [NYCDB] that contained false statements."
- "...certifying and affixing his signature to documentation submitted to the building department, authenticating that a property complied with codes, without visually inspecting said property."
- "...submitting four professionally-certified applications for construction document approval, ... to the ... [NYCDB], which contained errors that resulted in permit revocations."
- "...filing four professionally certified applications with the ... [NYCDB] that contained violations of the Rules of the City of New York."
- "...filing ... forms with the ... [NYCDB], which contained materially erroneous statements."
- "...willful failure to comply with mandatory continuing education requirements."
- "...filing four limited supervisory check applications with the ... [NYCDB] that contained violations of the Rules of the City of New York."
- "...professional misconduct for ... Theft of Funds from Employee Benefit Plan, a felony."
- "... using the exact drawing of another architect, without his permission, to file a plan/work application with the ... [NYCDB]."
- "...filing six professionally certified applications with the ... [NYCDB] that contained violations of the Rules of the City of New York."
- "... submitting three professionally-certified applications for construction document approval, ... to the ... [NYCDB], which contained errors constituting a violation of the New York City Administrative Code."
- "... submitting two professionally-certified applications for construction document approval ... to the ... [NYCDB], even though both applications contained errors, which resulted in permit revocations."
- "... practicing as an architect while not registered or otherwise authorized to practice architecture."



## **New York State – Professional Engineering**

“...convicted of Driving While Intoxicated.”

“... failing to furnish the department with written reports indicating whether or not he was mentally fit to practice his profession, and failing to answer and submit quarterly questionnaires ... as required by the terms of probation imposed ...”

“... filing five professionally certified applications with the ... [NYCDB] that contained violations of the Rules of the City of New York.”

“... filing eight applications with the ... [NYCDB], which contained materially false statements.”

“... failing to notify the ... [NYCDB] that the approved Department of Building plans were not being executed and that the excavation support system was inadequate.”

“... Criminally Negligent Homicide, a felony; and Reckless Endangerment in the 2nd Degree, a misdemeanor.”

“... willful failure to comply with mandatory continuing education requirements.

“... submitting plans and documents for two jobs to the ... [NYCDB] that were not of sufficient clarity to show compliance with applicable laws.”

“...filing six professionally certified applications with the ... [NYCDB] that contained violations of the Rules of the City of New York.”

“... negligently making material false statements in a ... [NYCDB] professional certification which resulted in revocation of a permit.”

“... receiving fees from a third party in connection with the performance of engineering services.”

“... receiving fees for performing engineering services as an individual, independent practitioner, who is also a minority shareholder in a general business corporation that is not authorized to perform engineering services; and sharing said fees with the majority shareholder, who is not a licensed professional.”

“... submitting four professionally-certified applications for construction document approval, ... to the ... [NYCDB], even though the applications contained errors, which resulted in permit revocations.”

## **Pennsylvania – Architecture**

“ [Design firm name] unlawfully used a sign, card, or device implying that it was competent to engage in the practice of architecture without prior approval by the Board; [Person 1] unlawfully used the title architect in a manner that would imply he was engaged in the practice of architecture without licensure by the Board; and [Person 2] aided and abetted the unlicensed practice of the profession.”

### **Pennsylvania – Professional Engineering**

“... practiced the profession of an engineer on a lapsed and expired license.”

“... practiced the profession of an engineer without being properly licensed to do so.”

“... had a license to practice engineering, ... suspended or revoked ... for conduct relating to the practice of engineering, ... by the proper licensing authority of another state...”

“...practiced the profession of an engineer without being properly licensed to do so under this act.”

“...engaged in conduct that is unprofessional and inconsistent with honorable and dignified bearing for any professional engineer, by acting for [Person’s] client or employer in professional matters otherwise than as a faithful agent or trustee, or by accepting any remuneration other than [Person’s] stated recompense for services rendered, as evidenced by [Person’s] failure to disclose a conflict of interest to [Person’s] client.”

“...has a felony of the third degree, and due to the nature of the criminal convictions, licensure of the respondent would pose a substantial risk to the health and safety of the respondents’ clients or the public, or a substantial risk of further convictions.”

“...engaging in gross negligence in the practice of engineering.”

## Key Concepts Regarding Enforcement

Each licensing board's jurisdiction includes all aspects of the subject design profession in the state, regardless of whether or not an alleged violator was a licensed design professional. Therefore, a state licensing board's authority extends to: (1) unlicensed individuals accused of violating the state's associated laws and regulations; (2) individuals licensed in other jurisdictions, but not in the board's jurisdiction, accused of violating the state's associated laws and regulations; (3) other senior personnel from a design consulting firm's leadership, especially when such individuals placed in responsible charge a person accused of misconduct; as well as (4) persons properly licensed and registered to practice the subject design profession in the state.

Anyone can file a complaint with the licensing board. Complaints may be filed by a coworker or colleague of the alleged violator, a client of a design professional consulting firm, a person with an interest in the project(s) where alleged violations occurred, members of the licensing board, employees or representatives of any other authority having jurisdiction over a specific project, or a member of the general public. Complaints must be in writing, present the circumstances of the alleged misconduct, and typically cannot be anonymous. Section 602 of NCARB's Model Laws and Regulations and Section 240.15.A.8 of NCEES's Model Rules (revised August 2022) require licensees, applicants for licensure, and firms to report known or suspected misconduct, and NCARB Section 602 further obligates licensees to self-report their own misconduct. In some states, such as Colorado and California, licensed individuals are required to report to the appropriate licensing board, within a stipulated period, malpractice claim settlements or judgments greater than a statutorily indicated amount, regardless of whether the claim was covered under professional liability insurance. At its discretion, the board may elect to make such information available to the public.

## Enforcement Procedures

When a complaint is received, the authority having jurisdiction will perform an initial evaluation to determine whether the licensing board has jurisdiction and, when the complaint is within the board's jurisdiction, an investigator will be assigned, who will then contact the complainant to obtain additional information. When the board does not have jurisdiction, it may refer the matter to another entity of competent jurisdiction.

Receiving notice of alleged misconduct from a licensing board is a serious matter. A person or firm accused of misconduct may choose to be represented by legal counsel rather than attempting to represent themselves. When the person is employed by a business or other organization where the alleged misconduct occurred during the course of the person's performance, in good faith, of their responsibilities, the organization will typically furnish legal counsel to represent the accused.

For hearings, the board may either appoint an "examiner" to preside or, in the absence of an examiner, the board chairman may preside at disciplinary hearings, typically with the advice of the board's legal counsel.

Procedures for the board's investigation and subsequent action are fairly straightforward. For example, Section 150.20 of NCEES's Model Law states in part (bracketed text, below is not present in the original and is included here for brevity and clarity):

- "C. All complaints shall be reviewed by the board or an investigative committee designated by the board. After review, the board or the investigative committee shall determine or recommend, as appropriate, if charges are warranted.
- D. All charges, unless dismissed by the board as unfounded, trivial, or unless settled informally, shall be heard by the board. The time and place for the hearing shall be fixed by the board, and a copy of the charges, together with a notice of the time and place of hearing, shall be personally served on or mailed to the last known address of such accused individual at least 30 days before the date fixed for

the hearing. The summons and notice of charges shall be prepared in accordance with [NCEES's] Model Rules 250.30. At any hearing, the accused individual shall have the right to appear in person or by counsel, or both, to cross-examine witnesses in their defense and to produce evidence and witnesses in their defense. If the accused individual fails or refuses to appear at the hearing, the board may proceed to hear and determine the validity of the charges in the accused individual's absence. The hearing shall be conducted in accordance with [NCEES's] Model Rules 250.30.

- E. If after such hearing a majority of the board votes in favor of sustaining the charges, ... [the required disciplinary action shall be imposed].
- F. Order of the Board

The board shall issue an order within [insert number] days of the date of the hearing. It shall include and shall state separately:

- 1. Findings of fact that are based exclusively on the evidence and on matters officially noticed, stated by a concise and explicit statement of the underlying facts supporting the findings.
- 2. Conclusions of lawThe prosecutor and/or respondent shall be delivered a copy of the findings of fact and conclusions of law by person or by mail with return receipt requested. The attorney of record for the respondent shall also be mailed a copy.
- G. Discipline[:] Upon an order by the board in which the respondent is found guilty of the charges preferred, the board may take appropriate disciplinary action against the respondent."

Additional requirements for procedures for hearings and related matters are presented in Section 250.30 of NCEES's Model Rules (revised August 2022).

Boards may conduct hearings, allowing the accused to defend themselves, give testimony, present witnesses, and submit evidence. Rules for presenting evidence may differ from those for criminal cases and may be the same or similar to those in civil cases. Hearings will typically proceed in a manner similar to those of other administrative bodies with opening statements, testimony, cross-examination, and closing statements. In addition to legal counsel and the presiding person, board members may ask questions during hearings, unless they have a conflict of interest or bias in the case at hand. A written record of each hearing, including motions and rulings of the opposing parties, record of evidence, and, possibly, transcripts, is prepared and remains in the board's files.

### **Consequences of Misconduct**

The licensing board's decisions in misconduct cases are rendered in writing. Consequences of misconduct may include one or more of the following: (1) censure or reprimand, (2) imposing probationary terms on a licensee, (3) suspension of licensure for a specified period, (4) permanent revocation of license, (5) denial of licensure or renewal to an applicant, (6) fine or civil penalty, (7) the board may obtain injunction(s) from a court or authority of competent jurisdiction to compel compliance, and (8) adverse publicity. In some jurisdictions, certain severe offenses, such as practicing the profession without a license, or repeat offenses, may be a felony. Each state's licensing board's website includes a feature whereby anyone may verify licensure status or lookup licensees. In the event of disciplinary action, the licensee's record displayed as a result of such online searches will indicate the outcome of the disciplinary action. Also, results of disciplinary cases may be published online on the board's website. Board decisions may be appealed through civil courts of competent jurisdiction.

A determination of misconduct has the potential to adversely affect the licensee's ability to renew or obtain licensure in other jurisdictions, retain membership in professional organizations, remain employed, and/or obtain new business from clients.

## Enforcement and Design Firms

Design firms are subject to disciplinary action similar to individuals. Statutory requirements for submitting complaints against a firm, the need for representation by legal counsel, procedures, and potential consequences for firms are all very similar to those presented above for disciplinary cases against individuals. The outcome of disciplinary action against a firm may fall on the firm itself or upon individuals within the firm's senior staff and management.

## Conclusions

Licensing boards have authority to establish requirements for what constitutes misconduct relative to the design professions and are empowered to enforce the associated laws and regulations. Anyone can submit a written complaint to a licensing board alleging a violation of the applicable statutory requirements. In evaluating complaints, boards will perform investigations and conduct hearings in a manner similar to other administrative bodies. Consequences of misconduct can be serious and may include reprimand, temporary or permanent loss of licensure, and others. Additionally, disciplinary action is likely to have other serious outcomes, including adverse effects on licensure in other jurisdictions, employment, business opportunities, and reputation, both for individuals and design firms.

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*The author of this blog post is not an attorney and nothing in this blog post constitutes legal advice. Readers in need of legal advice should consult with a qualified, experienced attorney.*

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# Throw-Back Thursday: Daily Inspections in Schools

By: [Lori Greene](#), I Dig Hardware Blog



A couple of weeks ago, I updated a Decoded article about egress door inspections vs. fire door inspections – these two types of inspections are very different. I mentioned in that post, that NFPA 101 – Life Safety Code mandates **daily** inspections of all exit facilities in schools, including stairways and doors. These inspections are to be conducted by principals, teachers, or staff, and help to ensure that these portions of the means of egress are in proper condition.

This requirement is found in Chapters 14 and 15 of the 2024 Life Safety Code for new and existing educational occupancies, and similar language is found in Chapters 16 and 17 for new and existing day-care occupancies. Annex A of NFPA 101 talks about the importance of keeping doors unlocked (assumably in the direction of egress), ensuring that stair doors are not blocked open, and that on exterior doors, accumulation of snow and ice do not interfere with rapid escape from the building.

One of my favorite retired AHJs commented that he liked this requirement for daily inspections, and wondered whether the requirement was being enforced in jurisdictions where NFPA 101 was the adopted code. He asked when this requirement was added to the Life Safety Code. In today's Throw Back Thursday post, I'll answer that question, but before I do...what's your guess? How long ago was this requirement added to the code?

Here it is, as introduced to the Building Exits Code – 1929 edition – almost 100 years ago! I can't help but wonder...do any districts require these daily checks in schools and day care centers? If you know, leave a comment!

1179. It shall be the duty of principals and teachers to inspect all exit facilities daily in order to make sure that all stairways, doors and other exits are in proper condition. Particular attention should be given to keeping all doors unlocked, having doors closed which serve to protect the safety of paths of egress (such as doors on stairway enclosures) and under no conditions blocked open, keeping outside stairs and fire escapes free from all obstructions and clear of snow and ice, allowing no accumulation of snow or ice or materials of any kind outside exit doors which might prevent the opening of the door or interfere with rapid escape from the building.

Any condition likely to interfere with safe exit should be immediately corrected if possible, otherwise reported at once to the appropriate authorities.

# Fixed-It Friday: Screwed

By: [Lori Greene](#), I Dig Hardware Blog



Lee Frazier of Allegion sent me today's Fixed-it Friday photos, illustrating exactly why fire door assemblies need to be inspected after installation, after maintenance work, and annually! Without a knowledgeable person noting this deficiency, it would likely remain this way for years. Will this fire door perform properly during a fire or other emergency? Who knows??



# Fixed-It Friday: Three Strikes

By: [Lori Greene](#), I Dig Hardware Blog



Today's Fixed-it Friday photos were sent in by David Shahriari of ALVB Outcomes, LLC. These photos were taken in a school...the extra strikes are intended to address the excess clearance and allow the latch to engage.

Even if this is not a fire door assembly where clearances are strictly limited, the excess clearance causes a major security issue. This lockset has a deadlatch – I just spent some time explaining this feature to a security officer at a high school. When the door and hardware are installed properly, the latchbolt projects into the strike, and the auxiliary deadlatch is depressed by the strike.

With the auxiliary deadlatch in the correct position, the latchbolt can not be pried back with a screwdriver or credit card. With the application shown in the photos below, the auxiliary deadlatch is not depressed by the strike, and it is very easy to push the latch in – even with a finger or pencil.

# Decoded: Fire Door Inspections vs. Egress Door Inspections for Swinging Doors

By: Lori Greene / iDig Hardware

In this month's Decoded column for Door Security + Safety Magazine, I answered a question about the difference between fire door inspections and egress door inspections. If you have a code question you'd like to see answered in my column, you can submit it by visiting [iDigHardware.com/decoded-qa](https://idighardware.com/decoded-qa).

In recent years, there has been increased focus on the fire door assembly inspections required by the model codes and NFPA 80 – Standard for Fire Doors and Other Opening Protectives. Current codes and standards mandate these inspections after installation, after maintenance work, as well as annually.

NFPA 101 – Life Safety Code addresses an additional type of door inspection, which is getting some attention because of a new state law in Ohio. The Childhood Safety Act requires certain doors in Ohio schools to be inspected annually, with the documentation of the inspections made available for review by the authority having jurisdiction (AHJ). Which brings me to this month's Decoded question:

What is the difference between the fire door assembly inspections required by the model codes and NFPA 80, vs. the egress door inspections addressed by NFPA 101?



Doors with special locking arrangements are one of the types of openings that must be inspected annually in accordance with NFPA 101, where required by the applicable occupancy chapter.

## Occupancy Types

**Fire Door Inspections:** Inspection and testing of fire door assemblies is required by the model codes and NFPA 80 for opening protectives in all occupancy types. In some cases, smoke doors may be required to be inspected annually in accordance with NFPA 105 – Smoke Door Assemblies and Other Opening Protectives.

**Egress Door Inspections:** For jurisdictions that have adopted NFPA 101, the code has included requirements for the annual inspection of specific egress door assemblies, beginning with the 2009 edition. The 2024 edition of the Life Safety Code requires the inspections for the following occupancies: Assembly, Educational, Day-Care, Residential Board and Care, Hotels and Dormitories, Apartment Buildings, Mercantile, Business, Industrial, and Storage. Note that the requirements for egress door inspections in residential board and care facilities vary slightly from the other occupancy classifications.

## Door Assemblies

**Fire Door Inspections:** The fire door inspection requirements apply to all fire door assemblies installed in locations where an opening protective is required by code. If a labeled fire door or frame is installed in a wall that is not required to have a fire resistance rating, NFPA 101 does not require the assembly to comply with NFPA 80 nor to be inspected annually. Requirements for fire door assembly inspections are found in Chapter 5 of NFPA 80.

**Egress Door Inspections:** The requirements for annual inspections and testing of egress doors apply to specific openings: doors equipped with panic hardware or fire exit hardware, exit enclosure doors – typically stairwell and exit passageway doors, electrically controlled egress doors where the electrified hardware is released by a switch in the door mounted hardware, and doors with special locking arrangements such as delayed egress locks, locks released by a sensor, controlled egress locks in health care facilities, and fail safe locks on doors serving elevator lobbies. Requirements for egress door inspections are found in Chapter 7 of NFPA 101.

For some door openings, NFPA 101 requires both fire door inspections and egress door inspections. Annual inspections of egress doors are not currently mandated by the International Building Code (IBC) or International Fire Code (IFC), although all doors in a means of egress must be kept in code-compliant condition at all times. The I-Codes do require fire door assemblies to comply with the inspection requirements. The IBC states that fire door assemblies must be installed in accordance with NFPA 80, and the IFC specifically references the inspections: Opening protectives in fire-resistance-rated assemblies shall be inspected and maintained in accordance with NFPA 80.

### **Inspection Criteria**

**Fire Door Inspections:** NFPA 80 currently includes 13 criteria for fire door assembly inspections. Prior to the 2013 edition of the standard, there were 11 inspection items listed.

1. Labels are present and legible.
2. No open holes or breaks in the door or frame.
3. Glazing and glass kit / glass beads are intact and securely fastened.
4. Door, frame, and hardware are in proper working order.
5. No missing or broken parts.
6. Door clearances are within allowable limits.
7. Door closer / spring hinges are operational and the door is self-closing.
8. Coordinator ensures that door leaves close in proper sequence (pairs only).
9. Door is self-latching in the closed position.
10. Opening is not equipped with auxiliary hardware items that interfere with operation.
11. No field modifications have been performed that void the label.
12. Gasketing and edge seals, where required, are present, continuous, and of the proper type for a fire door.
13. Signage on the door is compliant with the referenced version of NFPA 80. Note that the requirements for signage size and methods of attachment have changed in recent editions of the standard.

**Egress Door Inspections:** NFPA 101 also lists 13 criteria for the inspection of the egress doors fitting the description above, but the items to be verified are not the same as those required for fire door assemblies.

1. Door opens and closes freely, with clear floor space on both sides of the opening.
2. Opening force is within allowable limits.
3. Latching and locking devices comply with the requirements of the code.
4. Hardware used to release the latch(es) is mounted between 34 inches and 48 inches above the floor (existing installations may be below 34 inches, and some state code requirements vary).
5. Pairs of doors have hardware that allows the door leaves to be operated independently, or automatic flush bolts in accordance with the code.
6. Closing speed is within the limits of the accessibility standards.



7. Encroachment of the door into the egress path is compliant with the code.
8. Automatic doors meet the requirements of the code and the referenced ANSI/BHMA standards.
9. Required signage is present and legible.
10. Door openings with special locking arrangements function in accordance with the code.
11. Security devices that impede egress are not installed.
12. Luminous egress path markings are present and intact, where required by the code.
13. Where emergency lighting is required for doors with special locking arrangements, it is present and functional.



Some openings may be subject to the inspection requirements for both fire door assemblies and egress door assemblies.

## **Documentation and Remediation**

**Fire Door Inspections:** NFPA 80 requires new and existing fire door assemblies to be inspected when they are installed, after maintenance is performed, and each year thereafter. The standard includes detailed requirements for the information that must be included in the inspection report. The inspections must be conducted by a qualified person, which is defined as: A person who, by possession of a recognized degree, certificate, professional standing, or skill, and who, by knowledge, training, and experience, has demonstrated the ability to deal with the subject matter, the work, or the project.

## **Egress Door Inspections:**

NFPA 101 requires the egress doors described previously to be inspected annually, with the inspection and testing records signed by the inspector and made available to the AHJ. Testing must be performed by individuals who can demonstrate knowledge and understanding of the operating components of the applicable type of door.

For both types of inspections, the NFPA codes and standards allow a performance-based program to be implemented. This type of program may allow the inspections to be conducted less frequently, but the program must be approved by the AHJ.

## **Inspection Benefits:**

Inspecting and testing doors, frames, and hardware helps to ensure that the door assembly is installed properly and functions as designed and tested throughout the life of the building. Without these inspections by a qualified person, a door that has been damaged or modified in a non-code-compliant way may not perform as expected during a fire or other emergency. Egress through a door with special locking arrangements could be affected if the system is not installed and programmed correctly.

It is important to check the adopted codes and referenced standards for a specific jurisdiction to see if there have been changes made to the inspection and testing requirements. States and local jurisdictions may modify the model codes, and AHJs may also implement specific mandates to help ensure the safety of buildings. Refer to the adopted codes and standards for detailed requirements.

# Decoded: Annual Inspection of Egress Door

By: Lori Greene / IDig Hardware

Egress door inspections are getting more attention these days so I am updating this Decoded article to include current code requirements.



In recent years, there has been a lot of publicity about the annual inspections required for fire door assemblies, but we must also be familiar with the inspection and testing requirements for egress doors. These requirements were added to the 2009 edition of NFPA 101 – The Life Safety Code, and are also found in subsequent editions of the code.

In the 2024 edition of NFPA 101, these inspections are covered in Section 7.2.1.14 – Inspection of Door Openings. The same section title was used in previous editions but the section numbers may vary. Inspections of specified egress doors are required not less than annually by NFPA 101 if so stated in chapters 11-43 – the occupancy chapters. The occupancy chapters in this edition that refer to Section 7.2.1.14 are:

- Assembly (12.7.1.3, 13.7.1.3)
- Educational (14.7.3.3, 15.7.3.3)
- Day-Care (16.7.3.4, 17.7.3.4)
- Residential Board and Care (32.7.7, 33.7.7)
- Hotels and Dormitories (28.7.7, 29.7.7)
- Apartment Buildings (30.7.3, 31.7.3)
- Mercantile (36.7.7, 37.7.7)
- Business (38.7.7, 39.7.7)
- Industrial (40.7.3)
- Storage (42.9.3)

Section 7.2.1.14 also addresses the inspection of fire doors (performed in accordance with NFPA 80) and smoke doors (performed in accordance with NFPA 105), for fire doors and smoke doors in all occupancy types.

The egress door inspection and testing requirements do not apply to every door in a facility, but the following doors in the referenced occupancy types must be inspected annually:

- **Door leaves equipped with panic hardware or fire exit hardware in accordance with Section 7.2.1.7:** Panic hardware is required by NFPA 101 for doors in Assembly, Educational, and Day Care occupancies serving a calculated occupant load of 100 people or more. According to NFPA 101, Annex A, the inspection requirements should also apply to other doors that are equipped with panic hardware or fire exit hardware where it is not specifically required by the code.
- **Door assemblies in exit enclosures:** These are typically doors serving stairwells and exit passageways. Because most interior exit enclosure doors are required to be fire door assemblies, these doors are typically subject to both fire door inspections and egress door inspections.

- **Electrically controlled egress doors:** The common application for this type of door is an electromagnetic lock that is released by door-mounted hardware such as panic hardware with an integral request-to-exit switch. The section of the Life Safety Code that addresses these doors is called Door Hardware Release of Electrically Locked Egress Door Assemblies.
- **Door assemblies with special locking arrangements subject to Section 7.2.1.6:** Special locking arrangements include delayed-egress electrical locking systems, sensor-release of electrical locking systems, and elevator lobby exit access door assemblies.
- **Note:** For Residential Board and Care, the inspection requirements apply to doors that are required to swing in the direction of egress – typically doors serving areas with an occupant load of 50 or more, and doors used in exit enclosures.



Inspecting doors in these locations helps to ensure that the openings used most frequently and that are more prone to wear and tear are operating properly. Similar to the NFPA 80 requirements for fire door inspections, door assemblies must be visually inspected from both sides of the opening to assess the condition. Functional testing must be performed by qualified individuals who can demonstrate knowledge and understanding of the type of doors subject to testing.

A written record must be signed and kept for review by the authority having jurisdiction (AHJ), this documentation provides an enforcement tool to ensure that the inspections are done properly. Any deficiencies noted during the inspection must be repaired or replaced “without delay.” There is a set of guidelines in NFPA 80 for a written performance-based program which allows the inspection period to exceed 12 months, and this can also be applied to egress door inspections.

From the 2024 edition of NFPA 101:

As a minimum, the following items shall be verified:

- (1) Floor space on both sides of the openings is clear of obstructions, and door leaves open fully and close freely.
- (2) Forces required to set door leaves in motion and move to the fully open position do not exceed the requirements in 7.2.1.4.5.
- (3) Latching and locking devices comply with 7.2.1.5.
- (4) Releasing hardware devices are installed in accordance with 7.2.1.5.3.1.
- (5) Door leaves of paired openings are installed in accordance with 7.2.1.5.9.
- (6) Door closers are adjusted properly to control the closing speed of door leaves in accordance with accessibility requirements.
- (7) Projection of door leaves into the path of egress does not exceed the encroachment permitted by 7.2.1.4.3.
- (8) Powered door openings operate in accordance with 7.2.1.9.
- (9) Signage required by 7.2.1.4.1(3), 7.2.1.5.6, 7.2.1.6, and 7.2.1.9 is intact and legible.
- (10) Door openings with special locking arrangements function in accordance with 7.2.1.6.
- (11) Security devices that impede egress are not installed on openings, as required by 7.2.1.5.10.
- (12) Where required by 7.2.2.5.5.7, door hardware marking is present and intact.
- (13) Emergency lighting on sensor-release of electrical locking systems and doors equipped with delayed-egress electrical locking systems is present in accordance with Section 7.9.

The AHJ may require annual inspections for additional doors if he or she determines that there is a hazard to building occupants. Annual inspections of fire doors, egress doors, and smoke doors will help to ensure that the assemblies perform as designed, tested, and required by code. Even if the annual inspection requirements are not being enforced in a particular jurisdiction, each building owner or property manager is required to maintain their fire doors, egress doors, and smoke doors in proper operating condition.

*Note: NFPA 101 requires all exit facilities, including stairways and doors, in Educational and Day Care occupancies to be inspected daily by principals, teachers, or staff to ensure that they are in proper condition. This is not the same type of inspection that is required to be performed and documented annually, but with knowledgeable staff, this practice could go a long way toward code-compliant egress doors. Annex A specifically mentions that attention should be given to keeping egress doors unlocked, and avoiding non-compliant hold-open devices on fire doors.*



## CSI is excited to announce the 2024 Class of Fellows.

Fellows are selected by their peers based on their achievements in the industry and above-and-beyond contributions to CSI at the national, regional, and chapter levels. The distinction of Fellow is one of the highest honors given to a CSI member.

Join us in congratulating these well-deserving recipients:

- Gregg Jones, FCSI, CCS®, CDT®, AIA
- Erica Kennedy, FCSI, CDT®, AIA
- Jarrold Mann FCSI, CCCA®, CDT®, PE
- Ellen Onstad, FCSI, CDT®
- Doyle Phillips, EdD, FCSI, CCCA®, CDT®, CPC, FCPE
- Kevin Wang, FCSI, CCS®, CCCA®, CDT®

The CSI community will honor and celebrate these individuals at the 2024 CSI National Conference October 16-18 in Houston, TX.



# Seeking a Code Modification

By: Mark Kuhn, I Dig Hardware Blog

*The latest post from Mark Kuhn looks at a situation that is not uncommon – when a modification to the code is needed in order to allow a desired application. Have any of you ever been through this process?*



Sometimes in the course of my day job, I run across situations where the owner and architect want to do something that is not code compliant. When I see this happening, my job is to let them know of the violation (this typically involves showing them the actual section of code they are violating) and then searching for a way to accomplish what the owner wants while staying within the guidelines of the code.

However, there are times when we come to an impasse, and I explain that the only way they can accomplish their goal is with approval from the Authority Having Jurisdiction (AHJ). When this happens, the architect must go through an appeal process. The following is one of those situations.

**The Project:** The facility is a multifamily apartment building with a public parking garage on the lower floors. Common stairwells act as egress for both the residential portion of the building and the parking garage. The owner does not want people from the parking garage to have access to the building if they are not residents. So, he would like to lock all of the

doors from the stairwell to the residential floors – the doors would allow free egress into the stair but would be locked on the stair side, preventing access for non-residents.

**The Problem:** At the time the building permit was issued for this project, the code that had been adopted in the jurisdiction was the 2015 edition of the International Building Code (IBC). In IBC-2015 there was no provision for locking these particular stair doors, because of an inadvertently specific set of limitations in the code.

To accommodate the stairwell reentry requirements, the code allowed for a positive latching fail safe electrified lock for stairs serving 4 stories or less, and for stairwell doors in high-rise buildings (with an occupied floor located more than 75 feet above the lowest level of fire department vehicle access). But there was what the architect describes in his appeal as a “hole in the code” because the code did not address this application for stairs serving more than 4 stories if the building was not a high-rise (ex. 5-6 stories). The building in question was 6 stories.

Although there would be no life-safety-related reason for the code to prohibit fail safe electrified locks on 5- or 6-story buildings, that’s how the code was written at the time. The difference between the 4-story requirements and the high-rise requirements was a mandate for a stairway communication system in high-rise buildings. This was clarified in the 2018 edition of the IBC – the communication system is not required if the building is not a high-rise, and electrified locks are permitted for stairs serving any number of stories. (Read more about this loophole at <https://idighardware.com/2014/09/stairwell-reentry-revisited/>)

**The Appeal:** The architect's appeal to the code official stated the following:

*For reasons of tenant security, the design of this building incorporates access control from the exit stair enclosures into the corridors of each residential floor. IBC 1010.1.9.11 states that interior stairway means of egress doors shall be openable from both sides without the use of a key or special knowledge or effort. Technically, this design is in violation of this code section.*

*However, Exception 2 says (per IBC Section 403.5.3) that stairway doors may be permitted to be locked from the stairwell side if they are capable of being unlocked simultaneously without unlatching upon a signal from the fire command center. The design of this building complies with this exception. But, this exception only applies to high-rise buildings. This building is six stories, which is not a high rise.*

*In addition, Exception 3 to this section permits these doors to be locked, provided that they are openable from the egress side and capable of being unlocked simultaneously without unlatching upon a signal from the fire command center. The design of this building complies with this exception. But, this exception is only allowed in buildings of four stories or less. This building is six stories.*

*So, the building code permits the design that has been implemented in buildings of four stories or less, and in high rises, but not in buildings between five stories and high-rise height. We are seeking relief from this "hole" in the code "donut" to permit an installation that would comply with both exceptions 2 and 3 were it not for the issue of building height.*

*It is important to note that the upcoming 2018 IBC, closes the donut hole and permits this design configuration for buildings of any height.*

*We are hopeful that the information provided herein will allow the appeal for this issue to be granted by the Board.*

**Resolution:** The appeal was granted, and we were able to lock the doors in compliance with more recent editions of the IBC.

I wanted to share this exercise as an example of how to handle such a situation. It's important to note that the architect and owner were not asking for something unrealistic. It also helped their case that a subsequent edition of the IBC had addressed the loophole they were seeking the modification for.

# Quick Question: “Special” Hinges on Fire Door Assemblies

By Lori Greene, I Dig Hardware Blog .



A long, long time ago (now that song is stuck in my head)...I wrote a post here on iDigHardware about different types of hinges, but I didn't cover today's Quick Question in that post:

**Are “special” hinges like swing clear, wide throw, raised barrel, etc., acceptable for use on fire door assemblies?**

Most components of a fire door assembly are required to be labeled, to indicate compliance with appropriate standards or performance in a specified manner. However, NFPA 80 – Standard for Fire Doors and Other Opening Protectives states: *Specification of items of a generic nature, such as hinges, that are not labeled shall comply with the specifications contained in this standard.*

This statement in NFPA 80 means that hinges do not have to bear a label or listing mark, as long as they meet the requirements of the standard. For example, for a 3-foot-wide x 7-foot-high fire door, steel, ball-bearing, standard weight hinges (mortise- or surface-mounted), measuring 4 1/2-inches x 4 1/2-inches, would meet the requirements of NFPA 80. These hinges would not require a label because they are items of a generic nature that comply with the specifications of the standard.

But what about those “special” hinges? If they comply with the requirements of NFPA 80 regarding the size, quantity, base material, type, etc., are they acceptable to install on a fire door assembly?

To find a definitive answer, I had to refer to a Certificate of Compliance from Underwriters Laboratories. **This particular certificate applies to certain Ives hinges only** – for other hinges you would need to consult that product's Certificate of Compliance. Based on the certificate below, Ives 3CB1, 3CB1HW, 5BB1, and 5BB1HW hinges are compliant, including these hinges with the suffixes WT (wide throw), RC (round corner), SC (swing clear), BSC (beveled swing clear), or HT (hospital tip).

So yes...these hinges, including the WT, RC, SC, BSC, and HT versions, would be acceptable to install on a fire door assembly, as long as they were provided in the quantity required by NFPA 80.

## CERTIFICATE OF COMPLIANCE

Certificate Number	R-R16697
Report Reference	R16697-2017-12-08
Date	2023-September-14

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements

### Models:

USL, CNL - TW4, TW8, and TW12 electric power transfer hinges. May be suffixed M, MON, or CON.  
USL, CNL - 3CB1, 3CB1HW, 5BB1, 5BB1HW, mechanical hinges. May be suffixed WT, RC, SC, BSC or HT.  
Unlisted Components - XY-TWP and 700CS-TWP electric power transfer hinges.

### Standards for Safety:

UL 10C, Positive Pressure Fire Tests of Door Assemblies  
UL 10B, Fire Tests of Door Assemblies  
CAN/ULC-S104-15-R2020, Fire Tests of Door Assemblies

# Quick Question: Fire Exit Hardware Mounting Height

By Lori Greene, I Dig Hardware Blog

.After working for almost 40 years in the hardware industry – 30 years with the Allegion brands – and 15 years writing daily posts on iDigHardware, there aren't a whole lot of things that make me go, "Hmmm..." Today's Quick Question was an exception:



***If the permitted mounting height for operable hardware is between 34 inches and 48 inches above the floor, does this range also apply to fire exit hardware?***

My first thought was that the codes and standards state this height range requirement without specifically addressing or exempting fire exit hardware, so I didn't immediately see an objection to installing fire exit hardware as high as 48 inches above the floor or as low as 34 inches above the floor (or as further limited by state or local codes).

But then I pondered the question further. If fire exit hardware is installed at the manufacturer's standard mounting height during the fire test, would it function the same way if it was mounted 6 to 8 inches higher or lower? Maybe, maybe not.

For vertical rod fire exit hardware, changing the location of the device probably wouldn't be as much of an issue, because the latching positions do not change. But for mortise and rim devices, the change in mounting height could affect the deformation profile of the door during the fire endurance portion of the test. There is no way to know without testing the door with the hardware installed at a different mounting height.

My unofficial answer would be that if the installation instructions show the fire exit hardware installed at a specific location (rather than a range), and a different height is desired, the door and hardware manufacturers should be consulted to see if additional testing has been conducted. If not, it would be up to the authority having jurisdiction (AHJ) to decide whether to allow the alternate mounting height as an equivalency.

Have you had experience with installing fire exit hardware at a mounting height other than the manufacturer's standard location?



# Childhood Safety Act

By Lori Greene, I Dig Hardware Blog



A new law in Ohio will require school doors meeting certain criteria to be inspected annually.

A new state law has passed that will affect the safety of Ohio's schools, and could raise awareness of life safety requirements in other states as well. Originally known as SB112, the bill was signed into law by the governor on July 24th, 2024, and goes into effect on October 24th. This law will require certain types of doors within schools to be inspected annually, ensuring compliance with NFPA 101 – Life Safety Code. You can read the text of the law [here](#).

Is the intent of this law to require annual inspections of fire door assemblies?

The annual inspections required by the law are not specifically fire door inspections, although the NFPA 80 standard is referenced by the law. The Ohio State Fire Code requires opening protectives (fire door assemblies) to be maintained in accordance with NFPA 80, which would include the annual fire door assembly inspection requirements of the standard. The Ohio law references another type of door inspection that is required by NFPA 101, which is applicable to certain doors in a means of egress whether they are fire rated or not (there is detailed information in this [Decoded](#) article).

Who is permitted to conduct the inspections?

The Childhood Safety Act will require Ohio schools to have door inspections conducted annually by a qualified inspector, which is defined as “a person, who by possession of a recognized degree, certificate, professional standing, or skill, and who, by knowledge, training, and experience, has demonstrated the ability to deal with the subject matter, the work, or the project.”

## Which doors are required by the law to be inspected annually?

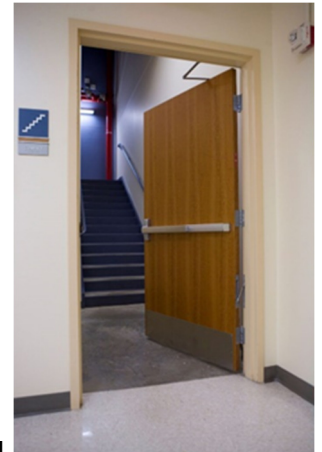
The doors that must be inspected in accordance with NFPA 101 – Life Safety Code are “protective door assemblies,” which are defined by the law as:

- (a) Doors with panic hardware or fire exit hardware;
- (b) Door assemblies in exit enclosures;
- (c) Electricity controlled egress doors;
- (d) Door assemblies with special locking arrangements, such as delayed egress, sensor release egress doors, and elevator lobby doors.

## What is verified during the annual egress door inspection?

For doors that fall into one of the four categories listed above, the Life Safety Code includes 13 items to be verified:

1. There is clear floor space on both sides of the door, allowing the door leaves to open fully and close freely.



Doors with panic hardware or fire exit hardware, stairwell doors, and doors with special locking arrangements are addressed by the Childhood Safety Act.



2. The force needed to open the door is within the allowable limits of the code,
3. Latching and locking devices meet the requirements related to the operation of hardware used to unlatch the door,
4. Releasing hardware is mounted between 34 inches and 48 inches above the floor,
5. Pairs of doors are either equipped with hardware that allows each leaf to operate independently, or if the inactive leaf is equipped with automatic flush bolts, that leaf must have no hardware on the egress side,
6. Door closers are adjusted so the closing speed is at least 5 seconds from the 90-degree position to the 12-degree position,
7. Door leaves do not project into the path of egress more than permitted by the code for encroachment,
8. Automatic doors meet the requirements of the code and the referenced standards,
9. Signage required by the code is intact and legible,
10. Door openings equipped with special locking arrangements function as required by the code,
11. Security devices that impede egress are not installed, as prohibited by the code,
12. Where luminous egress path markings are required by the code, the door hardware marking is present and intact,



13. Where emergency lighting is required due to special locking arrangements, the lighting is present and in accordance with the code.

### **What happens after the inspection is complete?**

Documentation of these inspections must be maintained by each school governing authority. If a protective door assembly is found to be non-compliant, all steps must be taken to remedy the problems and the assembly must then be reinspected. NFPA 101 states, "Door openings not in proper operating condition shall be repaired or replaced without delay." Beginning eighteen months after the effective date of the law, the authority having jurisdiction (AHJ) must review the inspection records annually.



### **Will classroom barricade devices be permitted by the Childhood Safety Act?**

Many of you will remember that Ohio was one of the first states to pass a state law allowing temporary locking devices in schools, despite the concerns of many individuals and organizations (you can read about the concerns here).



The new law does not prohibit the use of these devices, stating: "Notwithstanding any provision of this section, a temporary door-locking device in compliance with the rules adopted by the fire marshal is not in conflict with this section." The section of the Ohio Building Code addressing temporary locking devices is here.

The Childhood Safety Act is a step toward ensuring that schools are compliant with the door-related requirements of the model codes, and the inspections are an opportunity to identify additional code issues. For example, if a barricade device is discovered during an inspection and does not comply with the Ohio State Building Code, the inspector can address this with school administrators. For more information about the concerns surrounding barricade devices, refer to this Decoded article (<https://idighardware.com/2024/03/decoded-classroom-barricade-devices/>).

Although some temporary locking devices are permitted by the Ohio State Building Code, some barricade devices do not comply. Refer to the adopted code for details.

# Fail Secure Electric Strikes and Fire Alarms

By Mark Kuhn, I Dig Hardware Blog

Mark Kuhn's latest post addresses an issue that I wrote about a while back...it's been 10 years so I guess it's time to take a fresh look.



I kind of hesitated about writing this post, because this is one of those posts that people will either say, “Well duh...” or “Wow! I’ve never thought about that before either!” I’m kind of hoping it’s the latter.

I have a colleague who never fails to come up with some of the most fascinating code questions. Whenever he calls, it’s similar to how comics say they go to family reunions for good material. He always has something that makes me scratch my head and say, “I have never thought of that before.” (And “That will make a great iDighardware post...” LOL). Last week he asked me just such a question.

**He asked: “Do you use a fire alarm interface with a fail-secure electric strike on a fire door?”**

I use a lot of fire alarm interfaces, because the I-Codes call for them in all kinds of places: stairway doors, sensor release of electrically locked egress doors, delayed egress locking systems, controlled egress in Groups I-1 and I-2, elevator lobby exit access doors...you get the idea. However, all of these locations require fail-safe locks, and the reason we need a fire alarm interface is so that the lock will unlock and people can egress through these doors when the fire alarm is activated.

My buddy was asking about an entirely different scenario. He wants the door to lock when triggered by the fire alarm. But is that really what he wants? The answer is NO. What he really wants is to ensure that the door is positively latched when triggered by the fire alarm. This is a requirement of NFPA 80 – Standard for Fire Doors and Other Opening Protectives.



As a spec writer, I already have one such application where I specify a fire alarm contact for this purpose, and that is electric latch retraction fire exit hardware. Electric latch retraction devices are specified quite often in fire rated openings. Imagine an auditorium with fire exit hardware on the egress doors. It is very common to hold the latches retracted to cut down on the noise of exiting during a performance. When the egress doors are fire rated, electric latch retraction fire exit hardware is used to accomplish this “push/pull” function. If the fire alarm is activated, the latches will project, causing the doors to be positively latched but still allowing free egress.

So back to my friend’s question...the concern is that a fail secure electric strike on a fire door assembly could be left in the unlocked/unlatched position by the access control system or with a toggle credential. If you are not familiar with toggle credentials, presenting the credential to the reader unlocks the door until the credential is presented again to lock the door. In the case of the electric strike installed on a fire door assembly, the toggle credential or access control system could cause the door to be unlatched during a fire. Adding a fire alarm interface would help to ensure that door is latched during a fire.

# EPDs and the Future of Design

By: Brad Blank, Ron Blank and Associates



The planet is in trouble. Climate destabilization, acid rain, ozone depletion, and massive pollution are negatively affecting our ecosystems including the places we live, work, and play. Design professionals and building product manufacturers must unite to solve these ecological issues related to the construction industry. Fortunately, there are tools available to help mitigate these issues.

Environmental Product Declarations (EPDs) play a critical role in helping design professionals specify more sustainable building products.

Buildings are where we live, work, and play. Buildings make up the fabric of our cities. From the pyramids in Egypt to the New York skyline, architecture is part of our culture and the buildings that occupy these spaces can have significant impacts on the environment where they reside. EPDs and HPDs are becoming two of the most used specification tools in the AEC industry. EPDs provide a standardized summary of a product's environmental impact, while Health Product Declarations (HPDs) disclose the health effects of a product's materials and ingredients.

## Introduction to LCA

The extraction, manufacturing, and transport of building materials can wreak havoc on ecosystems. Pollution, toxins, smog, and other impacts can negatively affect communities and the climate. In an ideal world, manufacturers would make harmless building products and design professionals would specify products that do no harm. However, that is not reality. Engagement by both manufacturers and design professionals is critical. Manufacturers should strive to create optimized building products and design professionals should specify the most environmentally friendly products.

Life-cycle assessment (LCA) offers a detailed view of materials and products, helping project teams make better environmental, health, and community decisions while driving manufacturers to innovate. LCA involves compiling and evaluating a product's inputs, outputs, and potential environmental impacts throughout its life cycle. This includes examining the entire life cycle of a product or building, identifying processes and materials, and assessing environmental effects from raw material extraction to end-of-life stages.

An LCA is the main component used to create an EPD. The LCA is a detailed report, while the EPD is a summarized version. EPDs communicate the environmental impacts of a product or system, including raw material extraction, energy use, chemical makeup, waste generation, and emissions. For LEED credits, EPDs must come from program operators following ISO standards.

## Environmental Impacts

Design professionals must consider six impact categories in LCA or EPD when selecting products based on their goals:

- Global Warming Potential (GWP): CO<sub>2</sub> and greenhouse gas emissions during production and use.
- Ozone Layer Depletion: Damage from ozone-depleting gases like CFCs, HCFCs, and halons.
- Acidification: Acidic gases like sulfur dioxide reacting with atmospheric water, causing acid rain.
- Eutrophication: Excess nitrates or phosphates in water leading to harmful algal blooms and fish deaths.
- Tropospheric Ozone Formation: Nitrogen oxides and VOCs forming ozone and smog at low atmospheric levels.
- Depletion of Nonrenewable Energy: Use of fossil fuels.

The software firm One Click LCA which specializes in LCAs and carbon assessments, offers insight when comparing EPDs. If a product is compared just for manufacturing impacts to another one, this can lead to several different sub-optimization traps, including:

- The alternative requires more replacements during building life cycle
- The alternative generates additional demand for other products, for example, if the floor slabs become thicker, external walls become thicker, too
- The alternative has higher life cycle impacts due to maintenance and end of life processing
- The alternative or design using it changes operational energy balances, e.g. via daylighting, conductive heat loss, thermal capacity or other parameters

Furthermore, One Click LCA offers these words of wisdom, if all other things are not equal, compare the products at the building level using LCA methodology. If you consider for example options for a façade, most likely the options also differ in terms of operational energy performance. Also, in this case, the EPD is an essential tool for the comparison, as it provides the manufacturing impacts which is one part of the whole-building level impacts.

In these cases, a comparison is possible via building LCA. If the options vary in terms of operational energy use, in terms of envelope shape or layer thicknesses, all that is bread and butter of types of analyses LCA can provide an answer for. LCA will provide the whole life cycle impacts cradle to grave. This means comparing the product environmental impacts for the lifetime of the building into which they are planned to be installed, in the conditions that the building requires.

## **LEED v5 and EPDs**

LEED v5 aims for the deep decarbonization of the built environment and propel market transformation toward achieving the 2030 and 2050 Paris Climate Accord targets. The USGBC will employ a comprehensive suite of strategies to reduce emissions from operations, materials, construction, refrigerants and transportation, while promoting carbon sequestration and net positive outcomes. Accountability for performance is imperative. The US green building council notes that more ambitious requirements will be phased in over time.

- Achieve carbon neutrality for normal operations and meet more ambitious targets for embodied carbon, refrigerants and vehicle charging for Building Design and Construction.
- Achieve carbon neutrality for normal operations and meet more ambitious targets for embodied carbon, refrigerants and vehicle charging for Operations and Maintenance.
- Establish pathways for carbon positive buildings.

EPDs will play a critical role in LEED v5. Over 50% of the LEED v5 credit weightings are focused on carbon. EPDs offer a resource for design professionals to select products with the least amount of carbon impacts. Here's how EPDs are utilized in the process:

- Understanding Environmental Impact: EPDs provide transparent and standardized information about the environmental impacts of products throughout their lifecycle. This includes data on energy use, greenhouse gas emissions, water consumption, and other environmental indicators.

- **Comparative Analysis:** Design professionals use EPDs to compare different products within the same category (e.g., insulation materials, flooring options) based on their environmental performance. This helps in selecting products with lower environmental impacts.
- **LEED Credit Requirements:** EPDs contribute towards earning specific credits under LEED. The LEED v5 MR Credit: Optimized Building Products offers many opportunities for manufacturers with EPDs.
- **Life Cycle Assessment (LCA) Alignment:** EPDs often include data from Life Cycle Assessments (LCAs), which evaluate the environmental impacts of products from cradle to grave. Design professionals use EPDs to align product selection with LCA findings to ensure they meet sustainability goals.
- **Documentation and Certification:** EPDs provide documented proof of a product's environmental performance, which is crucial for LEED certification documentation. Design professionals can submit EPDs as part of the LEED certification process to demonstrate compliance with environmental criteria.

## Wrap Up

Overall, EPDs empower design professionals to make informed decisions about building materials and products that align with sustainability goals, contribute to LEED certification, and reduce the environmental impact of buildings throughout their lifecycle.

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About the author: **Brad Blank** has worked with building product manufacturers, architects, engineers, and specifiers for over fifteen years. Having made architectural specification calls for numerous building product manufacturers, Brad understands first-hand the importance of being able to offer proof of a product's sustainability claims. He obtained his M.F.A. from the University of Miami graduate film program. After working as a producer, writer, and director in the motion picture industry in Los Angeles, Brad turned his attention to the education market. As Media Director for GreenCE, Brad has created several video continuing education courses on topics such as Net Zero Energy Building Certification™ (NZEB), LEED Platinum schools, and Health Product Declarations (HPDs). He oversees our video services which include: concept & development, script writing, production, and post-production.



# Do assisted living units need fire protection?

By Lori Greene, I Dig Hardware Blog



I know that many people think the code development process is as exciting as watching paint dry, but I spend many hours with the BHMA Codes, Government and Industry Affairs Committee proposing and monitoring code changes. I am on the edge of my seat during the hearings where these proposals are discussed and voted on.

We are now in the code development cycle for the 2027 model codes – approved proposals will become part of the 2027 editions of the International Building Code (IBC), International Fire Code (IFC), NFPA 101 – Life Safety Code, etc. One proposal caught my eye, and in truth, a little tear leaked out. The proposal is called FS65-24, and you can read it at <chrome-extension://efaidnbmninnbpcajpcgclclefindmkaj/https://idighardware.com/wp-content/uploads/2024/06/FS65-24-Assisted-Living-Closers.pdf>.

In the 2024 edition of the IBC (and prior editions), Section 716 – Opening Protectives, includes the requirements for fire door assemblies. One of the most important requirements for a fire door is that the door is closed and latched during a fire – this helps to deter the spread of smoke and flames that could pass through an open door. Currently, the IBC states: **716.2.6.1 Door closing. Fire doors shall be latching and self- or automatic-closing in accordance with this section.** There are exceptions for communicating doors between hotel rooms, storm shelter doors, and one related to certain elevator hoistway doors.

Proposal FS65-24 would add another exception: Fire doors located in corridors and serving sleeping rooms in Group I-1, Condition 2 shall be permitted without automatic- or self-closing devices.

In the I-Codes, Group I-1 includes alcohol and drug centers, assisted living facilities, congregate care facilities, group homes, halfway houses, residential board and care facilities and social rehabilitation facilities, and here's how the code defines Group I-1, Condition 2: This occupancy condition shall include buildings in which there are any persons receiving custodial care who require limited verbal or physical assistance while responding to an emergency situation to complete building evacuation.

The most common example of Group I-1, Condition 2 is an assisted living facility. Although the types of living units and services may vary from one facility to the next, my grandmother lived in assisted living and I have visited assisted living apartments in other facilities as well. The buildings I visited were basically multifamily apartment buildings for seniors, typically one-bedroom or studio apartments with kitchenettes. Residents were able to request assistance from staff members for certain tasks – typically non-medical needs like bathing or getting dressed.

According to the IBC, residents of Group I-1, Condition 2 facilities are able to evacuate with limited assistance. Although they may have some physical limitations, they are expected to get themselves out of the building during a fire. For the most part, they are living independently, with some support when they need it.

Currently, the IBC requires doors serving residential dwelling and sleeping units, including assisted living units, to be self-closing, self-latching fire door assemblies. These are typically 20-minute fire doors, which will help to deter the spread of smoke and flames for at least 20 minutes. The proposed change would allow the closing devices to be omitted from assisted living unit entry doors, so the doors will be easier to open. The doors could also be left open for prolonged periods of time, as a resident or staff member would have to close the door manually.



I understand the reason this change has been proposed. Opening a fire door with a door closer can be difficult for someone with limited strength or who has a disability. BUT – these residents need the protection provided by a closed and latched fire door. In past apartment fires, unit entry doors and other fire doors that were open during the fire contributed to the fire's spread, sometimes leading to fatalities. A 2004 fire at the Rosepark Care Home in Uddington, Scotland resulted in the deaths of 14 elderly residents. An inquiry found that door closers on many of the unit entry doors had been deactivated or removed at the request of the residents or their families.

As I shared in a 2022 Decoded article, the NFPA reported that in 2020 there were 86,000 apartment fires in the U.S. – an average of 236 apartment fires PER DAY. This total applies to apartments of all types – not just to assisted living units. But the most common causes of home fires reported by the NFPA could apply to assisted living apartments: cooking, heating, electrical distribution and lighting equipment, intentional fire setting, and smoking materials.

Years ago, patient rooms in hospitals and nursing homes were required to have self-closing or automatic-closing doors. This requirement was removed from the model codes with the addition of increased requirements for automatic sprinkler systems in health care occupancies and the expectation that staff would be trained to close patient room doors if a fire occurred. The model codes no longer mandate 20-minute fire doors for these rooms in hospitals and nursing homes, but positive-latching hardware is required.

Although current codes require assisted living facilities to have sprinkler systems, the staffing levels in assisted living are much lower than in health care facilities. Staffing levels, particularly at night, could impact the process of manually closing any open fire doors in an assisted living facility. For example:

- **Health Care Facilities** – Staff-to-Patient Ratio: A Critical KPI for Your Healthcare Practice: *The ideal staff-to-patient ratio will vary depending on the type of healthcare facility and the needs of the patients. However, in general, a **ratio of 1:4 or better** is considered to be a good benchmark.*
- **Assisted Living** – Staff to Resident Ratios for Assisted Living: *The US Department of Health and Human Services released a study that found that one-quarter of assisted living communities had a ratio of **1 PCA for each 23 or more residents**. (PCA=personal care assistant)*

There are products available that will close the unit entry door to provide the necessary fire protection, while also meeting the needs of assisted living residents, and I will share those in a follow-up post. But I sincerely hope that the ICC Technical Committee will see the potential dangers that would arise from dwelling unit entry doors (that are supposed to provide fire protection), standing open and allowing smoke and flames to spread, compromising the means of egress.

No one saves us but ourselves. No one can and no one may. We ourselves must walk the path.’ – **Buddha**

‘Strength does not come from physical capacity. It comes from an indomitable will.’ – **Mahatma Gandhi**

‘Permanence, perseverance and persistence in spite of all obstacles, discouragements, and impossibilities: It is this, that in all things distinguishes the strong soul from the weak.’ – **Thomas Carlyle**

‘Some cause happiness wherever they go; others whenever they go.’ – **Oscar Wilde**

‘Happiness is when what you think, what you say, and what you do are in harmony.’ – **Mahatma Gandhi**

‘I, not events, have the power to make me happy or unhappy today. I can choose which it shall be. Yesterday is dead, tomorrow hasn’t arrived yet. I have just one day, today, and I’m going to be happy in it.’ – **Groucho Marx**

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## **Chapter Info**

**Chapter Website:**

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**Chapter Newsletter:**

**SpecWork**

**Chapter Meeting Day and Time:**

**2<sup>nd</sup> Wednesday of Each Month unless otherwise specified by the Chapter President**

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