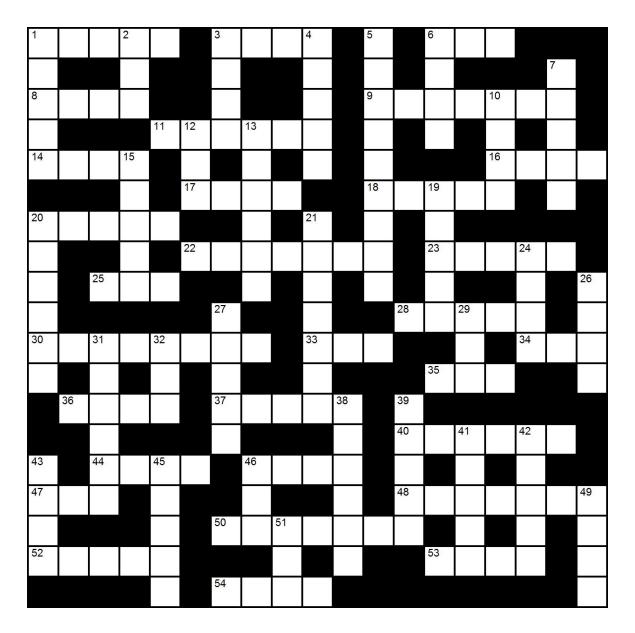
Decoded Crossword – Part 2

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Each clue is linked to a related article or website, in case you need a hint or want to learn more. The numbers in () indicate the quantity of letters in the answer. Good luck!



Abbreviations:

ADA = Americans with Disabilities Act ASHER = Active Shooter / Hostile Event Response BHMA = Builders Hardware Manufacturers Assoc. DHI = Door Security + Safety Professionals FDAI = Fire Door Assembly Inspection GWB = Gypsum Wallboard IBC = International Building Code IFC = International Fire Code NEC = National Electrical Code NFPA = National Fire Protection Association

Across

- 1 If the bottom rail of a glass door without vertical stiles is tapered at an angle of ______ degrees, a 10-inch bottom rail is not mandated by the accessibility standards. (5)
- **3** Temperature rise is the difference in temperature measured on the unexposed ______ of a door during a fire test. (4)
- 6 The 2017 edition of NFPA 70, also known as the _____, requires listed panic hardware for doors serving rooms which house electrical equipment rated at 1000 volts or 800 amps. (3)
- 8 When you submit a photo via iDigHardware's photo submission page, you can choose to post your name and/or company, or to remain ______. (4)
- 9 To determine whether a door serving an electrical room requires panic hardware, you must know the number of volts and ______ of the equipment in the room, and which edition of NFPA 70 has been adopted. (7)
- 11 Chapter 10 of the IBC and Chapter 7 of NFPA 101 address the requirements for ______. (6)
- 14 The IBC states that if a ______ is not intended to be occupied (for example, if it is used only for mechanical equipment), the door leading from that space into the building may be locked to prevent entry. (4)
- **16** For a project under construction, requirements for a fire door inspection to be conducted after installation may be listed in the ______ . (4)
- 17 A delayed egress lock is required to have an audible alarm, but the specific type of sound (a tone, buzz, ______, etc.) is not prescribed by code. (4)
- **18** Beginning with the 2016 edition, NFPA 80 allows 20-minute wood doors to have clearance of 1/8-inch +/- 1/16-inch, if installed in a hollow metal ______. (5)
- 20 NFPA 101 defines two types of multiple occupancies: _____ occupancies, and separated occupancies. (5)
- 22 According to NFPA 80, the total area of all _____ attached to a fire door assembly must not exceed 5 percent of the area of the face of the door. (7)
- 23 According to NFPA 80, if a deficiency is found during a fire door inspection, it must be repaired without ______. (5)
- 25 In most jurisdictions, it is not code-compliant to _____ a retrofit security device to an existing door if the door will no longer unlatch with one releasing operation. (3)
- 28 Most US states _____ model codes such as the IBC, the IFC, or NFPA 101, and often include state-specific modifications. (5)
- 30 Panic hardware is required by the IBC for doors which lock or latch, serving an _____ or educational occupancy with an occupant load of 50 people or more. (8)
- 33 The majority of US states have adopted the _____ as the state building code, often with amendments to the base code. (3)

- 34 The Knowledge Center answers hundreds of questions about door hardware, such as the proper way to test a solenoid using an _____ meter. (3)
- **35** On manual doors, a flush, smooth surface is required on the bottom of the push side, from the floor to ______ inches up the face of the door. (3)
- **36** The opening force of a door can be affected by wind, air pressure, weatherstrip, latchbolts, and other conditions such as a door that fits too ______ in the frame. (4)
- **37** Due to a revision to the 2018 IBC, delayed egress locks are allowed on secondary exits serving _____rooms, even though these are typically assembly occupancies. (5)
- 40 The most common application for electrified hardware controlled _____ with free egress
 typically complies with the same egress requirements as doors with mechanical hardware. (6)
- **44** The accessibility standards require interior, non-fire-rated, manual doors to _____ with no more than five pounds of force. (4)
- 46 One way for a fire door inspector to demonstrate knowledge of fire door assemblies is to complete DHI's _____ program. (4)
- 47 Terminated stops up to 6 inches from the floor are allowed on fire door assemblies; UL 1784 does not typically measure the ______-flow in this area of the door opening. (3)
- **48** A clarification was added to the 2018 IBC which states that delayed action _____ can be installed on fire doors. (7)
- 50 With the exception of dwelling units and sleeping units, most doors in a means of egress are required to ______ with one releasing operation. (7)
- 52 When ______ bolts are installed on the inactive leaf of a pair of egress doors, no "dummy" hardware may be installed on the egress side of the inactive leaf. (5)
- 53 In order to research a code requirement, you must know which code has been adopted, including the _____ the adopted code was published. (4)
- 54 According to the 2018 model codes, classroom security hardware used during a lock_____ must allow authorized access from the outside with a key or other approved means. (4)

Down

- **1** A _____ discharge door may be mechanically locked on the outside but must allow free egress from the stairwell. (5)
- 2 Manually-operated sliding doors are allowed by the IBC on rooms with an occupant load of people or less, with the exception of high hazard occupancies. (3)
- **3** The _____ Housing Act requires most multifamily dwellings ready for first occupancy after March 13, 1991 to be accessible and usable by people with disabilities. (4)

- <u>4</u> NFPA 101 defines an ______ing building as, "A building erected or officially authorized prior to the effective date of the adoption of this edition of the Code by the agency or jurisdiction." (5)
- 5 NFPA 80 requires fire door assembly inspections to be conducted by a _____ person with knowledge and understanding of fire door assemblies. (9)
- <u>6</u> Hundreds of codes and standards may be read at no charge on the website of the National Fire Protection Association, _____.org. (4)
- 7 NFPA 3000 is the Standard for an Active Shooter / Hostile Event Response (_____), developed in 2018. (5)
- **10** The maximum slope of a threshold that is 1/2-inch high is a _____ of 1 and a run of 2. (4)
- 12 NFPA 80 requires gypsum wallboard, also known as ______, to project 1/2-inch into the throat of a fire-rated hollow metal frame. (3)
- **13** BHMA A156.19 includes requirements for signage on doors with low _____ automatic operators and on power assist doors. (6)
- **15** According to NFPA 80, a _____ modification is an alteration to a fire door assembly that requires approval from the listing laboratory before work can begin. (5)
- **19** Registering on iDigHardware allows favorite posts to be ______ to a custom library for easy reference at a later date. (5)
- 20 _____ flush bolts and surface bolts are allowed by the IBC in certain occupancy classifications with a limited occupant load. (6)
- 21 In health care facilities, a double-egress pair installed in a smoke _____ is not typically required to have fire door labels or positive-latching hardware. (7)
- 24 When ______ flush bolts are installed on a pair of doors, a coordinator is required to ensure that the door leaves close in the proper sequence. (4)
- 26 Representing manufacturers of builders hardware, the Codes and Government Affairs Committee of _____ participates in the development of codes and standards. (4)
- **27** LockDont_____.org is a website from the Door Security & Safety Foundation, with information about the dangers of security devices that inhibit egress. (5)
- 29 Prior editions of NFPA 80 limited most job-site preparations to ______-inch diameter holes, but the 2016 edition includes a change to the allowable hole size. (3)
- 31 The IBC section called "Access-Controlled Egress Doors" has now been changed to "______ Release of Electrically Locked Egress Doors." (6)
- 32 When ______-locks are released by a switch in the door-mounted hardware, the model codes do not require the door to unlock upon fire alarm activation. (3)
- 38 According to the IBC, exterior doors must operate with the following maximum forces: 15 pounds to release the latch, _____ pounds to set the door in motion, and 15 pounds to open the door fully. (6)

- <u>39</u> ______ fittings can create a problem on all-glass doors that are required to have a flush, smooth surface at the bottom of the door. (5)
- **<u>41</u>** A fire-rated communicating door between adjoining hotel rooms is not required to ______ each time it is opened, but the door is required to be self-latching. (5)
- 42 Direct-hold electromagnetic locks and _____ locks are addressed in two sections of the model codes, depending on whether they are unlocked by a sensor or by a switch in the door-mounted hardware. (5)
- 43 The actuating portion of panic hardware must measure at least _____ the width of the door. (4)
- **45** When a manually-operated door is installed in a recess of ______ inches or more, the required maneuvering clearance may be affected. (5)
- 46 As demonstrated by this crossword puzzle (as well as Part 1), learning about codes can be a lot of _____. :-) (3)
- **49** To facilitate stairwell reentry, a fail _____ lockset or trim for fire exit hardware should be installed. (4)
- **51** If a classroom barricade device is mounted at floor level, it is too ______ to comply with the ADA standards which require operable hardware to be mounted between 34 inches and 48 inches above the floor. (3)