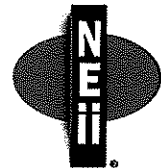


# National Elevator Industry, Inc.



September 6, 2016

Stephen J. Carley  
Assistant General Counsel  
Massachusetts Department of Public Safety  
Boston, MA

RE: Comments on Proposed Changes to MA 524 CMR

Dear Mr. Carley:

The National Elevator Industry Inc. (NEII®) appreciates the opportunity to provide comments regarding the proposed revisions to the Massachusetts 524 CMR Board of Elevator Regulations. First and foremost, safety is a top priority for NEII® and its member companies. NEII® members are actively involved in the development of the model codes in North America, we and believe these standards provide the utmost in safety.

NEII® would like to commend the board for its efforts to try to align the various codes that impact our industry, namely the *Safety Codes for Elevators and Escalators* (ASME A17.1/CSA B44), the International Building Codes and the National Electric Code. These model codes are developed by a national body of experts through an American National Standards Institute (ANSI) approved consensus process. NEII® supports the adoption of these model codes without modification, as any deviations to the model codes should be avoided, as any changes are likely to have unintended consequences. And, if a local jurisdiction considers any modifications, it should have proper justification for the change(s) so that the regulated community can understand the reason a state or locality might not follow the model codes.

NEII® is very concerned that the proposed changes to 524 CMR do not include the adoption of A17.2, A17.3, A17.4, A17.5 A17.6 or A17.7. All of the A17 series codes have been carefully written by subject experts to insure the safety of the public, elevator industry workers, and state and local inspectors. These supplemental codes are frequently referenced in A17.1 and provide much more detail for the inspectors, workers and elevator companies. Omitting any of the codes significantly increases the risk of injury to all persons and property. We believe the Board of Elevator Regulations does not want to reduce safety for the riding public and elevator personnel; therefore, NEII® urges the MA Department of Public Safety to reconsider the adoption of these standards.

The exclusion of ASME A17.2, *Guide for Inspection of Elevators, Escalators, and Moving Walks*, would eliminate an important reference document that is widely used by inspectors, especially new inspectors. DPS has a continuing education class for the purpose of keeping the inspectors' elevator licenses current, but there is little or no training for new inspectors aside from a week of shadowing a current inspector. As a result, incorrect methods may be passed on

to new inspectors, and inspectors might not inspect everything they should. It is our understanding that the checklists in A17.2 were used in the development of DPS's new IPS system. Since the checklists from A17.2 were used to make the checklists in the new IPS system (with only minor changes), it only makes sense that the foundational document be available for inspectors to use as a valuable reference to help them understand items on the checklists.

ASME A17.3, *Safety Code for Existing Elevators and Escalators*, includes requirements for existing electric and hydraulic elevators and escalators and is intended to serve as a basis for adopting retroactive requirements for existing installations. While Massachusetts does have requirements for existing elevators to comply with and be maintained to the safety requirements of the ASME A17.1 code in effect at the time of installation, newer safety provisions from subsequent editions of the code can and should be applied to existing installations. The whole purpose of the ASME A17.3 code is to focus on those safety provisions that can be practically applied to existing installations and that will provide the greatest level of safety to the riding public, with the smaller associated costs. Some of the key elements in A17.3 include requirements for Firefighter's Emergency Operation, single bottom cylinders, and door restrictors.

ASME A17.4, *Guide for Emergency Personnel*, should be adopted and provided to all emergency personnel. Our understanding is that there is currently no formal process used by the DPS to train emergency personnel, and this document could supplement any future training provided.

CSA B44.1/ASME A17.5, *Elevator and Escalator Electrical Equipment*, applies standards for the electrical equipment for elevators and escalators. It is a jointly developed harmonized standard between Canada CSA and ASME. As part of the requirements, every component must meet strict standards including, but not limited to: wiring, insulation, voltage, grounding, temperature, under and over current applications, and circuit boards. In addition to meeting the standards, the equipment is thoroughly tested to maintain the highest level of safety. Every elevator must meet these difficult standards to have a certified control system with a specific list of approved and tested components. This is the most practical way to protect the riding public and elevator personnel.

The omission of B44.1/A17.5 increases the risk of serious injury or death to the riding public and all people working on the equipment. Without B44.1/A17.5 there are no requirements for the certification of the elevator or escalator electrical equipment. For example, someone could make a controller in their garage using various components. They would not have to list and test the parts as an integral machine, would not have to test for proper grounding, and they could bypass the testing necessary to make sure the public is safe. Simply stated, the risk of electrical failure or shock exponentially increases without the rigorous requirements and testing found in B44.1/A17.5.

ASME A17.6, *Standard for Elevator Suspension, Compensation, and Governor Systems*, details the standards for means of suspension including requirements for steel stranded wire rope, aramid rope, and elastomeric, coated steel suspension means. The A17.6 criteria have been just as carefully crafted as the other ASME A17 family of codes by subject experts and have been developed to maintain the same high level of safety and equipment integrity. This standard

clearly identifies the materials, testing, and replacement criteria that apply to all types of suspension means. Replacement criteria is not contained in A17.1/B44. It references the requirements in A17.6, Requirement 8.6.3.2.1, for detailed direction on replacement of suspension means. Without the strict definition found in A17.6, the means for suspension may not contain the rigorous requirements necessary for safety. As examples, A17.1 does not have requirements for when a single rope is damaged, how many breaks in strands trigger replacement, or what to do with a kinked rope. In fact, without A17.6 contractors could potentially replace a single rope, unintentionally compromising the safety of the equipment.

ASME A17.7, *Performance-Based Safety Code for Elevators and Escalators*, is another important part of the A17 family of codes. This standard allows for the introduction of new technology before it is included in the A17.1/B44, while ensuring that it meets a rigorous review by an authorized third party certification facility. Even though Massachusetts already has a variance process, A17.7 could be used to supplement this process and provide documentation that a new product or component has been thoroughly reviewed for safety. The adoption of A17.7 does not prevent a jurisdiction from rejecting a new design. Many jurisdictions have used A17.7 to aid in the review of new technology.

These are just a few examples of why it is so important to maintain the complete set of standards. The A17 family of codes are not mutually exclusive. They have been developed to work together and complement each other. Utilizing the family of codes as intended will allow the industry to continue to provide the highest level of safety for the public, our workers, and inspectors in the State of Massachusetts.

NEII® believes there may be potential unintended consequences of some of the proposed requirement changes. One example is relative to elevator controllers and control rooms. Specifically, proposed requirement 2.7.3.6.2 states that the controller must be in a control room. The proposed definition of control room in 524 CMR would not allow the elevator machine to be in the control room. The result would be that a traditional machine room with the machine and controller in the same room would not be allowed by these proposals. While we do not believe that was the intent of these changes, we do feel that it could be interpreted this way and do not think this change is justified.

As mentioned previously, NEII® supports adoption of the model codes without deviation, but recognizes that modifications may be necessary to accommodate unique circumstances in a jurisdiction and should be accompanied by the proper justification so that it is clear why the changes might be necessary. With that in mind, NEII® strongly objects to some of the proposed deviations outlined in the proposed rules, including but not limited to, the requirement for all controllers to be in a control room and the prohibition of hydraulic elevator machines in the hoistway, which seem to be focused on limiting the application of MRL equipment. The necessity for these modifications is unclear, and we request that DPS provide clear rationale for these proposals before adoption to avoid significant costs and potential unintended consequences. Our industry takes safety very seriously, and we are not aware of any safety reason for these changes. In fact, data provided to the U.S. Occupational Safety and Health Administration (OSHA) indicates that accidents and injuries have decreased significantly while the sales of MRL equipment (including configurations with no control or machine rooms) have increased exponentially.

NEII® is also concerned that some of the proposed changes may create conflicts with the other codes being updated such as the ventilation requirements, use of sprinklers in the hoistway and changes to the firefighters operation. For example, hoistway ventilation was removed from the 2015 IBC in favor of pressurization. These changes have been developed in the model codes with input from firefighters and other experts. Any deviation may actually reduce safety. Another example is the proposed change to requirement 2.27.3.3 for the fire key to be removable in the "On" position. This change could put firefighters in unsafe conditions if they unintentionally remove the key in the "On" position while they leave the elevator to search for people during a fire. If the elevator is moved from the floor because the key is in the "On" position, the fire fighter and anyone they are trying to rescue could be stranded at that floor.

The format for the changes is another area of concern. Because the changes were presented as new material, rather than modifications directly to the existing standards, it was a tedious process to review the changes, even for our members who deal with codes on a daily basis. We are concerned that this will result in confusion for many of the people who need to work with the codes in the Massachusetts and may also result in a reduction in safety.

Thank you for the opportunity to provide the elevator industry's comments. NEII® is committed to public and elevator personnel safety and is ready to support you in this process. Representatives from NEII® and our member companies operating in Massachusetts are available to discuss specific questions regarding these comments and provide additional technical input as needed. Please let us know if you would like to meet for a more in-depth dialogue. We reserve the right to supplement our comments as needed.

Sincerely,



Amy J. Blankenbiller  
NEII® Government Affairs Director

*NEII® is the premier national trade association representing the interest of firms that install, maintain, and/or manufacture elevators, escalators, moving walks, and other building transportation products. The NEII® membership includes the top elevator companies in the United States, if not the world, and reports more than eighty percent of the works hours for the industry. Member companies include: Otis Elevator Company, Schindler Elevator Corp., ThyssenKrupp Elevator Corporation, KONE Inc. and many other companies. Safety for the riding public and industry personnel is a top priority for the industry and the NEII® member companies.*