

12 Nov 2019

TO: PA Elevator Safety Board Meeting

FROM: Samuel W. Clark – State Fire Academy Instructor/Elevator Rescue Instructor

SUBJECT: Public Comments

Below are topics for presentation at the meeting of PA's Elevator Safety Board, to be held at the Labor and Industry Building, Room E-100, 651 Boas Street, Harrisburg, PA 17121-0750 at 09:00 on 12 November 2019.

These comments are from the perspective of the Fire & Emergency services. It is not gleaned from elevator industry personnel. I am not an elevator technician. The intent is to convey some of our challenges and concerns, and of course concerns for the safety of all people, including the public, the elevator industry, and the emergency response community.

Concerns were the result of a combination of knowledge and experience, as a result of teaching elevator rescue to fire departments for well over 20 years, of which the last 18 years were for two community colleges as a PA State Fire Academy instructor. Additionally, experience was gained as a career firefighter with the Harrisburg Bureau of Fire for 26 years, routinely performing elevator rescues. I have sought out and taken all available elevator rescue training to be found, to include ASME certificated training in New York City. I have conducted 357 classes with over 4000 students.

- **Fire Service Phase I and Phase II controls – (2 items)**
 - The largest single challenge to the Fire Service is that there is no standard key for these controls. I am aware that the proposed version of the code will in fact specify the FEO-K1 key as a universal key to be used. This is a good move in the right direction, but will not affect prior installs as grandfathering will be in place. While I would love to see a retroactive requirement to change to a universal key, I have an appreciation for costs associated with changing prior installs. ***I do not recommend that prior installs be required to change to the universal key. However, my concern is that if the new version of ASME A17 is adopted, that compliance issues and or pushback may present and that new installs may not carry the new universal key. I recommend that the code be enforced going forward with regard to the Fire Service FEO-K1 key. This will eventually reduce the number of keys the Fire Department need to carry.***

- The second concern with Fire Service controls involves testing of these controls during Inspections. When I am teaching, and also when using these controls at fire incidents, I have found an abundance of elevators where these controls do not work as they should. In taller buildings, where firefighters find it necessary to run elevators on Fire Service Phase II, due to the height of the building, it is critical that these systems work as they should. The response times to upper floors is greatly extended if forced to operate via the stairs to carry equipment, firefighters, tools, etc. to fight a serious fire. I have been actively involved in serious fires on upper floors, to include the PennDot building in June of 1994. My recommendation is that L & I strictly enforce the required testing of Fire Service Phase I & Phase II controls when inspections are done. I have had conversations with inspectors over the years, and have been told at times these are not tested if they know the FD does not use the controls. In one jurisdiction where I am a fire chief, I had asked the building owner to have their elevator company install Phase II fire service control, as it was missing in this converted 4 story elderly building. They were told by their elevator company “absolutely not, then the FD will use the elevator”. There are times where the FD may need the elevator to move injured or challenged people from upper floors, when there is serious smoke in the structure. With no Phase II installed and the cars down on Phase I recall from the alarm system, the car is not available to the FD. I recommend these be tested in accordance with code at all locations required.

- **Car Door Restrictors**

- Car door restrictors have been required on new installs or upgrades in PA, since adoption of UCC/ASME A17. Frequently when I am teaching in the field, I find them tied mechanically so they will not operate, or adjusted so they do not work. Just this last weekend while teaching in Shippensburg, PA, the FD and I found two different installations with restrictors installed, but not operable when the car was clearly out of the landing zone and a fall hazard existed below the car.

I have spoken to elevator mechanics about this issue, and not always, but often the reply is “we never had to deal with those things, we hate them”. This is directly tied to why I find them inoperable. I feel that enforcement of the code is paramount for life safety of occupants. The logic for having a restrictor is sound, and there is a ton of documentation of serious injuries and fatalities that have occurred when occupants of a stalled car manage to push open the car

door, manipulate the hoistway door and attempt to jump to a lower landing.

One example of several fatal incidents that I use during teaching is the case involving the death of Katherine Ibanez at Atherton Hall at Penn State University that occurred in December of 2003. There is no need for me to expound to the board as to why restrictors are needed. My simple input is that I feel that inspection practices must be strict with regard to operability of car door restrictors, when required.

- **Power Shut Off location for MRL's**

- It seems there is no identified required location for the main drive power shut off switch (not an upstream breaker or feed as this does not guarantee removal of potential energy from back-up battery or other sources, if installed). I have found them installed in obscure, remote locations that would not be anticipated, I have found them on various floors within the same building, and I frequently find them installed in the elevator door bucks (door jamb) near the entrance point, inside a locked cabinet.

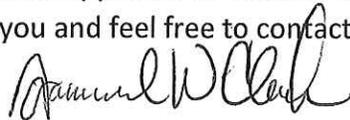
For a long period of time, the FD only had to catalog keys for the machine room door lock, hoist way door keys, and fire service control keys. It is paramount for safety reasons, that the main drive power be shut off, and the only acceptable location is the designed power control point for the elevator machine (drive system), not an upstream breaker or switch. The control point was found in the machine room, whether hydraulic drive or cabled-traction overhead machine room. With MRL's we have no idea where it may be. It appears, but I am uncertain, that code does not require a standard location for power control points for MRL's. I am unsure of the fix, but the FD needs to know the location of the power control point, and also needs access to locked areas to control power before beginning non-destructive techniques described in ASME A17.4. I am finding that the key to the power control points inside locked cabinets are keys other than the fire service control key. My recommendation is that wherever MRL's are installed, the location of the designed power control point for the drive machine, be communicated to the FD along with identification of any required keys to access this power control point.

- **Fire Service Awareness/ Operations Education**

- I have discussed this topic many times, going back into the 1990's with PSFA staff and former Commission Mann, former PSFA Administrator Stapleton, former Curriculum Specialists, as well as sitting Commissioner Trego.

Having taught this specialty topic for well over 20 years, I will tell you there is an on-going need for fire departments to receive basic training on the non-destructive rescue techniques that are described in ASME A17.4. There are a handful of very competent fire instructors who understand what curriculum and what techniques are needed and are acceptable. For several valid reasons, the elevator industry typically does not provide in-depth rescue training to fire personnel. The largest reason among these include liability issues and labor union concerns. It is uncontested that when elevator industry personnel are present or available, that they are the best choice for who is to perform occupant removals from stalled cars. The fact remains that often the fire department must perform these occupant removals. *This requires sound training in accordance with ASME A17.4 "Guide for Emergency Service Personnel"*.

My recommendation to the PA Elevator Safety Board, is to provide support to (endorsement) and encouragement to (communication) the PA State Fire Academy to foster basic educational programs for the emergency services with regard to elevator emergencies, to include elevator use during fire alarms and fires, and also occupant removals from stalled cars. Some of this may be done online, but to be sure, hands-on limited training is required to ensure competency. The demand is high, for this type training, and the instructor base is very small. The PSFA has an "Academy on the Road" program to take training to the FD's. My thoughts are that the PSFA should provide a basic course, one time every few years, in all 67 counties in PA. This would foster a cultural change in the PA fire service approach to elevator use at fire events and at stalled car rescues. Thank you and feel free to contact me with any concerns.



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