



Mechanical Compliance Section

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ASME A17.3 in Nevada

- The American Society of Mechanical Engineers (ASME) A17.3 Code for Existing Elevators and Escalators is a retroactive elevator safety code, designed to make older elevator equipment as safe as possible. Basically, this code requires elevators to be brought up to the new elevator safety standard of roughly 20 years ago if such upgrades are possible.
- ASME A17.3 has been adopted by reference in Nevada Administrative Code (NAC) 455C and has been in effect in Nevada since 2004.
- New editions of ASME A17.3 are published every 3-4 years and are adopted automatically in Nevada 6 months after publication. The current version is ASME A17.3 2020, which became effective in Nevada in August of 2021 per NAC 455C.500. The only substantive change in the 2020 version of ASME A17.3 versus previous editions is the requirement for Ascending Car Overspeed Protection (discussed below).
- Currently, compliance with A17.3 is required as soon as new editions of the code book become effective, which can create challenges for elevator owners. To help address this, the MCS is proposing to give owners an additional year to comply with provisions of new versions of ASME A17.3 when new versions are published (LCB File number R034-21). While this would not affect the requirement to be in compliance with the current version of ASME A17.3, it would affect the timeline for compliance with future versions of ASME A17.3.

The following elevator safety items required by ASME A17.3 are currently among the issues facing Nevada elevator owners:

- **DOOR RESTRICTORS:** These important safety devices ensure that the elevator doors do not open when the elevator is outside of the landing zone. Door restrictors have been required on all new elevators since the 1980s and have been required by ASME A17.3 for all passenger elevators since 1996. Recently, authorized inspection agencies have improved their diligence in notating deficiencies with these devices. Door restrictors sometimes fall out of adjustment or are removed by maintenance personnel, leading to elevator inspection deficiencies.
- **DOOR LOCK MONITORING:** This safety feature ensures that the elevator will not operate if the door safety circuit is malfunctioning or disabled. This has been required on new elevators since the 1990s and has been a requirement of ASME A17.3 since 2015.
- **ASCENDING CAR OVERSPEED PROTECTION/UNINTENDED CAR MOVEMENT:** This safety feature stops the elevator from crashing into the roof of the elevator shaft and also stops the elevator in case failures in the elevator machine, elevator controller, or other critical systems. This functionality has been required on new traction elevators since 2000 and is now required on existing traction elevators by ASME A17.3. This functionality is not required for hydraulic elevators.

Compliance with ASME A17.3

- The upgrades required by ASME A17.3 are proven technologies which make elevators safer. However, not all elevators can accept these upgrades without significant re-engineering or rebuilding, which is often not practical. Provision is made for such circumstances:
 - **2020 ASME A17.3 1.3.2.1** states “Where a requirement, because of practical difficulty, cannot be complied with literally or where its literal application would cause undue hardship, the authority having jurisdiction shall be permitted, upon proper application, to grant exceptions, but only when it is clearly evident that reasonable safety is ensured.”
 - **NAC 455C.446(5)** states “Except as otherwise provided in this subsection, an alteration or repair to an existing installation must satisfy the requirements set forth in NAC 455C.400 to 455C.530, inclusive, and section 1 of LCB File No. R045-20. If the Mechanical Compliance Section determines that it is not practicable to satisfy any of those requirements, the alteration or repair must satisfy the requirements of the applicable provisions of the edition of each publication adopted by reference in NAC 455C.500 that was in effect at the time the elevator was installed.”
- Elevator owners who find that conforming to the requirements of ASME A17.3 will be impractical may make application to the MCS for exemption from such requirements on either a temporary or permanent basis.

Exemptions

- The MCS has authority to provide exemptions to adopted codes under NAC 455C.448. Such exemptions must be applied for by an elevator owner or their agent on a form supplied by the MCS (a sample form is attached to this handout) and is effective upon approval.
- All such exemptions are granted on a case-by-case basis, based on the particular challenges facing a particular installation. For instance, a temporary exemption to the requirement for door restrictors may be granted upon request due to a lack of available door restrictors in the supply chain. Alternatively, an elevator might be granted a permanent exemption to the requirement for ascending car overspeed protection due to a vintage design which will not accept such an upgrade. Exemptions must be requested for specific elevators. The MCS does not grant blanket exemptions.
- A copy of each exemption is included in the permanent record for an elevator in The Compliance Engine database, which elevator owners can access.

Frequently asked questions

- **Q:** My elevator doesn't have a door restrictor. If I put one on, do I have to obtain an alteration permit and make other upgrades to my elevator?
A: If your elevator has been built or altered since the early 1980s, then no. Since your elevator should already have a door restrictor, having a new one installed is simply a part replacement – no permit is necessary, and this will not trigger other upgrades. If your elevator was installed in the 1970s or before then a permit may be required. Please contact the MCS to discuss the details of your elevator.
- **Q:** I plan on upgrading all of my elevators over the next 5 years and will comply with new provisions at that time. Do I have to make these changes now or can I wait?
A: Depending on the specifics of your elevators, you may be able to wait. Please reach out to the MCS to discuss the details of your elevator.

- **Q:** My elevator company told me that I have to add door lock monitoring to my elevator, but I think I already have that. Can I request a free inspection from the MCS to find out for sure what I need?
A: Yes. The MCS is always available for elevator inspections to help owners resolve questions such as these. Such inspections are always free of charge.
- **Q:** In order to add ascending car overspeed protection to my elevator, my elevator company says that I will need to have a new elevator controller, which will also lead to new elevator cabs and other extensive modifications. Do I have to make these modifications?
A: No. As per ASME A17.3 1.3.2.1 and NAC 455C.446(5), you do not have to make the required modifications if they are impractical. Generally, changes which require the replacement of a controller or other extensive modifications to an elevator are considered to be impractical.