

**SECTION 14000 – ELEVATOR CHECKLIST**  
**CONSTRUCTION STANDARD**

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**PART 1: GENERAL**

1.01        Scope of Standard

- A.        This standard provides general guidance concerning the specific preferences of The University of Texas at Austin for elevator and escalator basic requirements.
- B.        UT recognizes that project conditions and requirements vary, thus precluding the absolute adherence to the items identified herein in all cases. However, unless there is adequate written justification, it is expected that these checklists will govern the design and specifications for UT projects.

**PART 2:        PRODUCTS**

Not Used.

**PART 3:        EXECUTION**

- A.        Elevator Check List, per ASME/ANSI A17.1
  - 1.        One smoke detector is required in each elevator lobby. Wiring from the detector is run to the elevator machine room to the elevator controller. Smoke detectors shall not be self-resetting. Primary and alternate zones for smoke detectors are required to provide the code required elevator alternate landing feature. Rule 211.3. Sprinkler required in pit of hydraulic elevators.
  - 2.        Metal pit ladder is to extend from the pit floor upward, not less than 42” above the bottom landing floor level. One ladder per elevator is required. Rule 106.1.
  - 3.        Pit light and switch shall be accessible and 42” above the bottom landing floor level. The pit convenience outlet shall be a GFI and mounted 48” above the pit floor. If sprinkled, NEMA 4 electrical apparatus required below four feet.

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4. Machine room to be vented, if necessary, to maintain temperatures in the mid 80°'s F. Rule 101.5b.
  
5. Fused, padlockable mainline disconnect switch in machine room with feeder wires to elevator controller, all piped in accordance with N.F.P.A. and grounded. Disconnect switch must be in sight of the elevator machine and shall be the type that cannot be engaged with the door open. Rule 210.5. Shunt trip to be installed in disconnect or separate enclosure in the elevator machine room. A17.1 rule 102.2. If the elevator is a Hydraulic type, the mainline disconnect shall have auxiliary contacts to remove power from the battery lowering unit.
  
6. One (1) 120 volt, 20 amp, single phase power supply, fused padlockable disconnect in machine room and run to the elevator controller for the car light supply, for each elevator.
  
7. Provide an ADA compliant telephone or intercom in the elevator cab which is hooked up to a 24-hour maintained location. Rule 211.1. Provide phone in elevator machine room for communication with the elevator car.
  
8. Only elevator equipment is allowed in an elevator machine room. A sprinkler head is required in the machine room. There shall be a heat detector mounted within 2 feet of the sprinkler head and there shall be a smoke detector in the machine room. When hoistway and/or machine room sprinklers are provided, then an automatic disconnect for elevator power (shunt trip) must be provided. Rule 102.2. When the hoistway is sprinkled, it shall have a heat and smoke detector. If the **hoistway is not sprinkled** there shall not be a smoke detector in the hoistway. For hydraulic elevators, a sprinkler heads is required in the pit. If the sprinkler head is no more than two feet from the pit floor, no heat detector is required. All risers and returns shall be located outside the hoistway and machine room. Branch lines in the hoistway shall supply sprinklers at no more than one floor level.
  
9. Machine room door-B-labeled-shall be self-closing and self-locking that can be opened from the machine room side without a key. Keys to unlock the machine room doors shall be readily accessible to authorized personnel, but not accessible to the general public. Rule 101.3d(4)

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10. All fire sprinkler risers shall be located outside elevator hoistway. Rule 102.2.
  
11. Elevator hoistway shall be two (2) hour rated. Machine room(s) shall be rated for two (2) hour fire rating. There are exceptions to this rule, but it varies between areas. Rule 101.1a.
  
12. Pit shall be so designed as to prevent the entry of ground water and remain dry. A sump pump is required and the sump pump recess must have a metal grate cover that is substantially flush with the pit floor. The sump pump is to have a separate circuit with a non-GFI simplex receptacle for the pump plug-in mounted 48” above bottom of the Elevator shaft floor. Rule 102.2(5). The motor-rated switch for controlling the sump pump is to be mounted 42” (+6”-0”) above bottom landing floor level, adjacent to light switch. Label switch “pump”. The pump discharge piping is to be routed to a location near the pump switch (42” above bottom landing floor level). A hose bib is to be placed on the piping at this point. Valves (gate and/or check) are not required in discharge pipe; only a union is to be installed at the pump for disassembly by maintenance. The local alarm panel shall be located above pump switch (where Practical), shall have an alarm silence feature, and shall be powered from sump pump circuit at all times or other means. Switches and hose bib shall be located by ladder.
  
13. All machine rooms must have permanent lighting. (10 foot candle at floor). Rule 101.5.
  
14. Hoistway walls shall be substantially flush on hoistway side. Any offsets over 2” shall be provided with a beveled angle of not less than 75°. Rule 100.6.
  
15. Pipes, conduits, or ducts conveying air, gases, vapors, or liquids which are not used in connection with the operation of the elevator are not permitted in the hoistway or machine rooms. Rule 102.2.
  
16. Spaces containing machine, control equipment sheaves and other machinery shall be enclosed with fire-resistive enclosure. Enclosures and access doors thereto shall have a fire-resistance rating at least equal to that required for the hoistway enclosure. Rule 101.1a.

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17. Grout space between floor and sill edge.
18. Patch any holes in the hoistway wall and “clip” all screws or other items projecting into elevator shaft.
19. Refuge space between top of car and structure is to be 43” minimum.  
Rule 300.8g.
20. Car number required in all cabs. (At least 1/2” in height) Rule 211.9d.
21. Hall buttons wires to be in conduit. Rule 102.1.
22. Ventilation of Elevator shaft required for all elevators 4 floors or more.  
Rule 100.4.
23. ALL hall button covers to have Appendix “H” pictograph with words: “In case of fire, elevators are out of service use exit”. UBC 3003.6.

**B. Escalator Check List, per ASME/ANSI A17.1**

1. **SAFETY ZONE:** The entry and exit zones shall be kept clear of all obstacles. The width of the zones shall be not less than the width between the centerlines of the handrail plus 8 in. (203mm). The length of the zone, measured from the end of the newel, shall be no less than twice the distance between the centerline of the handrails. These dimensions are absolute minimums and every consideration should be given to traffic patterns. Rule 802.6d.
2. The headroom shall be 7 ft (2.13 m) measured vertically from the step noseline, landing plates, and landings. Rule 802.12.
3. Rolling shutters, if used, shall be provided with a device which shall be actuated as the shutters begin to close to cause the electric power to be removed from the escalator driving machine motor and brake. Rule 805.3g
4. The interior of the escalator truss shall have a GFI duplex receptacle rated at not less than 15 A, 120 V, accessibly located, shall be provided under the

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access plates (Rule 806.3 at the top and bottom landing and in any machine areas located in the incline. Rule 806.1b.

5. The lighting of escalator landing floor plates and all exposed step treads shall be illuminated with a lighting intensity of not less than 5 ftc (54 lx). The illumination of these surfaces shall be of uniform intensity and not contrast materially with that of the surrounding area. Rule 806.2.

6. Reasonable access to the interior of the escalator shall be provided for the inspection and maintenance. Rule 806.3.

7. All electrical equipment and wiring shall conform to ANSI/NFPA 70.