

INTRODUCTION:

Well over 100 interpretations (confirmed) just on 204 & 2.14 (up to book 33), There are contributing interpretations, alteration interpretations etc.

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204 General

Inquiry: 79-28

Subject: Sections 110, 111, 112, 204, and 207
Passenger Elevator Entrances
Edition: A17.1-1978

Question: The elevator in question is a passenger elevator, 6000lb capacity, 66 in. x 114 in. platform size, and has bi-parting powered hoistway doors (14 ft x 6 ft). The car gate is vertically sliding, wire mesh (1 1/2-inch openings), multi-section up open, with a safety edge and powered sequence operation. It covers the opening or entrance to a 6 ft- 6 in. height. Can this be accepted as a passenger elevator that carries the handicapped?

Answer: Sections 110, 111, 112, 204, and 207 indicate that an elevator designed for passenger service and loading, and equipped with the hoistway doors, car gates, and operation described in the question may be classified and used as a passenger elevator, provided that in addition, all hoistway doors are equipped with hoistway-unit-system hoistway door interlocks.

Inquiry: 81-22

Subject: Section 204
Advertising in Elevator Cars
Edition: A17.1-1978 including Supplement A17.1a-1979

Question: Does the Code allow advertising in elevator cars? The advertising would be placed upon the front wall of the elevator car. The approximate size would be 6 in. by 5 ft (other sizes may be used later). It would be placed within a bracket, securely fastened, and would be of no danger to the occupants of the elevator.

Answer: There is nothing in the Code which prohibits advertising in elevator cars provided that the materials, tests, and application are in conformance with the Code.

204.1-1C Securing and Strength

Inquiry: 84-100

Subject: Rules 204.1c and 204.1f
Car Enclosure Deflections
Edition: A17.1-1984

Question: Rule 204.1c limits the deflection of enclosure walls under the action of the loading specified yet Rule 204.1f specifies no limit to the deflection of the car enclosure top resulting from the applied loading. Neither Rule specifies a factor of safety for the required strength of the walls or enclosure top. Was it intended that there be no limit on the deflection of the car top and on the strength of the car walls and top?

Answer: The Code does not specify requirements for these items

Inquiry: 87-42

Subject: Rule 204.1 b
Securing of Enclosures
Edition: A17.1-1984 including Supplements through A17.1e-1987

Question: Clarification is requested on the phrase: "The car enclosure shall be so constructed that removable portions cannot be dismantled within the car."

- (1) Does this Rule apply to decorative wall panels attached to a metal shell of chassis type construction, where, when the panels are removed, leave direct exposure to the shaft?
- (2) Does this Rule apply to decorative wall panels attached to a wood or steel shell that has no perforations larger than 3/8 in. in diameter?

Answer: Decorative wall panels removable from inside the car must be backed up by a car enclosure meeting the requirements of Rule 204.1b. Holes in the car enclosure for attachment of removable panels are acceptable as long as the panels are installed.

Inquiry: 90-35

Subject: Rules 204.1b, 204.1h, 1003.3, 1202.5(c)
Alterations to Elevator Cars
Edition: A17.1-1987

Question: (1) New panels and/or a drop ceiling, replacing the old ones, are added to traction elevators. The increase in weight does not exceed the 5% as noted in Rule 1003.3(d). Is a full load safety test required to assure compliance with Rule 204.1b?

- (2) Is a safety test required at all to assure compliance with Rule 204.1b?
- (3) If a test is not required, how do you assure compliance with Rule 204.1b? Please explain.
- (4) Mirrors are installed in an existing elevator as outlined in Rule 204.1h. Is a full load safety test required to assure compliance with Rule 204.1h? If not, how do you assure compliance? Please explain.
- (5) Must mirrors provided in elevators exceeding 1 ft², be laminated and meet the requirements for laminated glass in ANSI Z97.1?

Answer: (1) No.
(2) This is not addressed by the Code.
(3) This is not addressed by the Code.
(4) This is not addressed by the Code.
(5) Yes.

Inquiry: 96-65

Subject: Rule 204.1c(1)(d)
Emergency Exit
Edition: A17.1-1993 including A17.1b-1995

Question: A movable portion of a suspended ceiling panel is constrained from falling during normal use and contains handholds on the top side. When access through the top exit opening is required, the movable portion is lifted by the handholds through the top exit and placed on the car top where it cannot fall on or interfere with exiting passengers. There is sufficient room to place the movable portion on the car top without interfering with the top exit or the required refuge space. Due to design there are no hinges or chains. Does this arrangement comply with the requirements in Rule 204.1c(1)(d)?

Answer: The ASME A17 Committee does not approve 'designs and cannot comment on this design. The intent of the Rule is that the movable portion (exit panel) of the suspended ceiling, which is below the top exit opening, shall be restrained from falling. The Rule further states that the movable portion of the suspended ceiling may be hinged upward or downward provided the exit will permit a clear opening with the top exit opening. The Rule addressed the condition when emergency exiting is performed and the movable portion of the suspended ceiling that is hinged downward swinging or restrained from closing when opening upward. The Rule does not address the condition when a movable portion of the suspended ceiling is not restrained after it is moved from its normal position to permit clear opening with the top exit opening.

204.1e / 2.14.1.5 Emergency Exits

Inquiry: 73-12

Subject: Rule 204.le
Top Emergency Exits
Edition: A17.1-1971 and Supplement A17.la-1972

Question: Would a car top section, four (4) feet by ten (10) feet in size, and made of **No.** 14 U.S. gage steel plate, installed in a manner requiring thirty-six (**36**) screws to be removed for removal of the section meet the Code requirement for a top emergency exit cover?

Answer: This described car top construction does not meet the intent of Rule 204.le as it could not be easily removed in an emergency.

Inquiry: 77-47

Subject: Rule 204.le
Top Emergency Exits
Edition: A17.1-1971 including Supplements A17.1a-1972 through A17.lg-1976

Question: Would Rule 204.le apply to an elevator car on which the top emergency exit cover must be maintained loose for permitting instant evacuation in view of the extreme fire potential of the type of occupancy of the premises?

Answer: This Rule applies to all elevators.

Inquiry: 78-71

Subject: Rule 204.1e-3
Top Emergency Exit - Car
Edition: A17.1-1971 including Supplements A17.la-1972 through A17.1g-1976

Question: This Rule reads: "The exit cover shall open outward and shall be hinged or otherwise attached to the car top and so arranged that the cover can be opened from the top of the car on/v (*italics added*). Does this mean from outside and on top of the car or from the inside of the car at the top?

Answer: This means from the outside and on top of the car.

Inquiry: 82-19

Subject: Rule 204.le
Top Emergency Exit
Edition: A17.1-1978 including Supplements A17.la-1979 and A17.lb-1980

Question: The use of suspended ceilings has developed from the simple frame with plexiglass panels to heavy panels not easily moved. This has resulted in cab manufacturers hinging the portion of the suspended ceiling below the top of the cab to swing down into the car. It is the writer's opinion that the intent of the code was to have the top emergency exit panels swing outward precluding any object from entering the passenger space. It would be acceptable to have the emergency exit panel in the suspended ceiling movable sideways above the ceiling but in no case require parts to enter the passenger space. An additional point: if the exit panel in the ceiling is fastened in place and not considered part of the top emergency exit, is it then a fixed object in violation of Rule 204.1e(2)?

Answer: Rule 204.le does not prohibit a panel in a suspended ceiling from swinging into the car.

Inquiry: 83-29

Subject: Rule 204.le
Top Emergency Exit

Edition: A17.1-1981

Question: Rule 204.1e(2) requires the top emergency exit to be so located as to provide a clear passageway unobstructed by fixed elevator equipment located on top of the car. Depending upon the layout consideration, it may be necessary to locate the top exit beneath the car frame crosshead or other structural members while still maintaining sufficient vertical height to enable passengers to pass through the top exit. In such a case, what is the interpretation of the requirement for "a clear passageway unobstructed"? Would a clear vertical height of 42 in. be sufficient, since that dimension was considered to be the minimum refuge height as specified in Rules 107.1k and 300.3h?

Answer: The response to this question is covered by Inquiry 81-24.

Inquiry: 84-93

Subject: Rule 204.1e(3)
Top Emergency Exit
Edition: A17.1-1981 including Supplements A17.1a-1982 and A17.1b-1983

Question: I recently inspected an elevator and required that a hinge or chain be installed on the car top emergency exit cover. I cited the above referenced Rule as the basis for this requirement. The elevator company contends that the arrangement it has supplied meets the intent of the Code. The arrangement supplied consists of four bolts permanently mounted in the car top which extends up through the exit cover. The cover is then secured to the car top by wing nuts. I feel that once the cover is removed, it still should be attached to the car in some manner, thus justifying my requirement. Would the arrangement described conform to the requirements of this Rule?

Answer: The intent of the requirement is to have the exit cover attached to the top of the car at all times. The purpose of this requirement is to ensure that the cover is not removed or does not fall off the top of the car.

Inquiry: 85-9

Subject: Rules 102.1, 204.1e. and 210.3
Electrical Wiring in Car Ceiling
Edition: A17.1-1984

Question: Are exposed wires for the car lighting, between the top exit and the in-car ceiling, required to be enclosed as outlined in NEC 620-21?

Answer: Exposed wires for the car lighting, between the top exit and the in-car ceiling, are required to comply with the National Electrical Code, ANSI/NFPA No. 70, Section 620-21.

Inquiry: 89-17

Subject: Rule 204.1e
Top Emergency Exits for Observation Elevators
Edition: A17.1-1987 including A17.1a-1988

Question: Are top emergency exits required for observation elevators in unenclosed hoistways?

Answer: Yes, under the current Code.

Inquiry: 96-66

Subject: Rule 204.1e
Top Emergency Exit
Edition: A17.1-1993 including A17.1b-1995

Question: Is it permissible for the emergency exit of the suspended ceiling to be supported by chain or cable when the exit floor latch has been released? The exit door would be hanging freely by the cable, still maintaining the 80 in. (2032

mm) minimum clearance. Then at this point the exit door would be removed from the cables and placed onto the floor of the elevator. Giving us our clear passage out of the cab.

Answer: The ASME A17 Committee does not approve designs and cannot comment on this design. The intent of the Rule is that the movable portion (exit panel) of the suspended ceiling, which is below the top exit opening, shall be restrained from falling. The Rule further states that the movable portion of the suspended ceiling may be hinged downward provided the exit will permit a clear opening with the top exit opening and a minimum clear headroom of 80 in. (2032 mm) above the car floor shall be maintained when downward swinging suspended ceiling exit panel is used. The Rule states that a clear opening be provided with the top exit opening. It is the intent of the Rule that personnel designated and trained to perform rescue duties provide the access for the passengers to exit the elevator. It is not the intent that the passenger removes hanging panels to permit a clear opening with the top exit opening.

Inquiry: 05-04 (Reconsideration)

Subject: Rule 204.1(e)(1)(d)
Edition: A17.1b-1998

Question:

(a) Is it enough that the movable portion (which opens up and out through the Top Emergency Exit; or placed on top of the stationary portion of the suspended ceiling) of the suspended ceiling be secured (locked down with wing nuts) to the stationary portion of the suspended ceiling, while the car is in service?

(b) Must there be a chain (or other method) attached to the movable portion of the suspended ceiling, to restrain the movable portion from falling, when either service is required or in case of emergency access?

Answer: The movable portion of the suspended ceiling must be restrained from falling.

Inquiry: 05-19

Subject: Requirement 2.14.1.5.1, Top Emergency Exit
Edition: A17.1-2000 through A17.1-2004

Question (1): Is the closing of the exit cover an acceptable means of "manually resetting" the car top emergency exit electrical device?

Answer (1): No.

Question (2): If not, is the elevator to be prevented from operating until the car top emergency exit electrical device is manually reset from the top of the car?

Answer (2): Yes.

Inquiry: 08-03

Subject: Requirements 2.14.1.5 and 2.14.2.2, Top Emergency Exits and Openings Prohibited
Edition: ASME A17.1-2000

Background: The car enclosure top has a series of holes cut in it in which recessed light fixtures are mounted. The fixtures extend above the elevator car top, where they are covered with metal boxes to prevent damage to the light fixtures.

Question (1): Do these penetrations violate 2.14.2.2, "Openings Prohibited"?

Answer (1): No.

Question (2): Would such a penetration be permitted in the top emergency exit cover itself providing that all other requirements of 2.14.1.5.1 are met?

Answer (2): Yes.

Inquiry: 14-1000

Subject: Requirement 2.14.1.5.1(b)(2), Unobstructed Passage of Parallelepiped Volume

Edition: ASME A17.1-2010/CSA B44-10

Question: Requirement 2.14.1.5.1 states that the top emergency exit opening shall be not less than 0.26 m² (400 in.²), with no side less than 400 mm (16 in.). Does this also apply to the cab interior suspended ceiling opening below it? Or does the unobstructed parallelepiped volume [2.14.1.5.1(b)(2) and Nonmandatory Appendix C] apply here?

Answer: The suspended ceiling opening must be sized and located such that conformance with 2.14.1.5.1(b) and (d) is attained. Nonmandatory Appendix C provides an illustration of this condition.

Inquiry: 15-1447

Subject: Requirement 2.14.1.5.1, Top Emergency Exit Suspended Ceiling Exit Panel
Edition: ASME A17.1-2000/CSA B44-00 through ASME A17.1-2013/CSA B44-13

Question: In a case where the movable portion (exit panel) of the suspended ceiling is not hinged upward or downward but instead is moved laterally away from the opening to allow for a clear opening through the top exit, and where the exit panel is restrained by being positioned on the top of the fixed portion of the suspended ceiling clear of the opening, must a tether or other restraining means also be provided?

Answer: If the suspended ceiling is restrained in compliance with 2.14.1.5.1(d), an additional restraint is not required.

Following the 2016 Edition, interpretations will not be included in editions of the Code; they will be issued in real time in ASME's Interpretation Database at <http://go.asme.org/Interpretations>. Historical Code interpretations may also be found in the Database.

204.1f, g / 2.14.1.6, 7 Car Enclosure Tops

Inquiry: 90-64

Subject: Rule 204.1g
Equipment Prohibited on Top of Car
Edition: A17.1-1987 including A17.1a-1988 and A17.1b-1989

Question: Does Rule 204.1g permit a top-of-car intrusion device, which upon unauthorized entry to the top of an elevator car, will sound an alarm and cause electric power to be removed from the elevator driving machine motor and brake?

Answer: Since the device is not required for the operation of the elevator or its appliances, it is not permitted by Rule 204.1g

Inquiry: 93-24

Subject: 204.1f
Car Enclosure Tops
Edition: A17.1-1987 including A17.1b-1989

Question: Must a flat, horizontal laminated glass skylight in an observation car comply with requirements of Rule 204.1f?

Answer: Yes.

Inquiry: 93-62

Subject: Rules 204.1g and 204.2c(2)
Equipment on Top of Car
Edition: A17.1-1990 including A17.1a-1991

Question: (1) Can an air conditioner be installed on top of an elevator to cool the cab, provided you have the proper overhead clearances?
(2) If so, what do you do with the excessive condensation runoff? Observation elevator hoistways are a good example where you have direct exposure to sunlight, this in turn would create a lot of condensation when using an air conditioner.

Answer: (1) Yes.
(2) Condensation runoff is not addressed in the Code.

Inquiry: 96-39

Subject: Rule 204.19
Equipment Prohibited on Top of Car
Edition: A17.1-1993 including A17.1b-1995

Question: Does Rule 204.1g preclude installation of a guard rail on top of the car?

Answer: No.

Inquiry: 05-50

Subject: Requirement 2.14.1.7.3
Edition: A17.1-2004

Question: Does an operation that automatically causes the car to run at a speed not exceeding inspection speed whenever a person has opened and then closed a hoistway door, where the car is not present, conflict with 2.14.1.7.3? A means would be provided for elevator personnel to return the car to automatic operation.

Answer: No. The operation described is not related to 2.14.1.7.3.

Inquiry: 07-22

Subject: Requirement 2.14.1.7.1, Railing and Equipment on Top of Cars
Edition: A17.1-2000 including A17.1b-2003

Background: Requirement 2.14.1.7.1 states: "A standard railing conforming to 2.10.2 shall be provided on the outside perimeter of the car top on all sides where the perpendicular distance between the edges of the car top and the adjacent hoistway enclosure exceeds 300 mm (12 in.) horizontal clearance."

Question (1): Does 2.14.1.7.1 require a railing on the car top for elevators in unenclosed hoistways?

Answer (1): Yes, that is the intent.

Question (2): Does 2.14.1.7.1 require a railing completely around the car top when the distance from the car top to the hoistway enclosure exceeds 12 in. on only one side?

Answer (2): No.

Inquiry: 07-22 (Reconsideration)

Subject: Requirement 2.14.1.7.1, Railing and Equipment on Top of Cars
Edition: ASME A17.1-2000/CSA B44-00 through addenda ASME A17.1b-2003

Background: Requirement 2.14.1.7.1 states: "A standard railing conforming to 2.10.2 shall be provided on the outside perimeter of the car top on all sides where the perpendicular distance between the edges of the car top and the adjacent hoistway enclosure exceeds 300 mm (12 in.) horizontal clearance!"

Question (1): Does 2.14.1.7.1 require a railing on the car top for elevators in unenclosed hoistways?

Answer (1): Yes, that is the intent.

Question (2): Does 2.14.1.7.1 require a railing completely around the car top when the distance from the car top to the hoistway enclosure exceeds 12 in. on only one side?

Answer (2): No

Revised Answer

(1): Yes, that is the intent. See revision to 2.14.1.7.1 below: 2.14.1.7 Railing and Equipment on Top of Cars 2.14.1.7.1 A standard railing conforming to 2.10.2 shall be provided on the outside perimeter of the car top on all sides where the perpendicular distance between the edges of the car top and the adjacent hoistway enclosure exceeds 300 mm (12 in.) horizontal clearance and on sides where there is no hoistway enclosure.

Answer (2): No.

Inquiry: 09-32

Subject: Requirement 2.14.1.7

Edition: ASME A17.1-2004/CSA B44-04

Background: Requirement 2.14.1.7 requires a "standard railing" conforming to 2.10.2 whenever the distance between the edge of the car top and the adjacent hoistway enclosure exceeds 300 mm.

Question: Is a collapsible railing acceptable to meet 2.14.1.7? The elevator in question will be in a glass hoistway and the architect would like to design the car top such that the standard railing is unobtrusive or hidden when the car is in normal operation. When a mechanic gets on top of the car, the railing would be raised to its required setting.

Answer: No.

204.1h / 2.14.1.8 Glass in Cars

Inquiry: 73-13

Subject: Rule 204.1h

Use of Glass in Elevator Cars

Edition: A17.1-1971 and Supplement A17.la-1972

Question: Does Rule 204.1h permit elevator cars to be fully enclosed by glass? **Also**, is tempered glass permitted to be used for car enclosures?

Answer: Rule 204.1h permits use of glass but it does not indicate that the car may be all glass. In addition Rule 204.1h-3 and -4 will not allow it. Furthermore, the Rule specifically requires laminated glass for safety. In reference to passenger car enclosures, Rule 204.2 states that materials for car enclosures shall be **of** metal or fire-retardant, treated wood, or other equally fire retardant, approved material.

Inquiry: 77-60

Subject: Rule 204.1 h

Use of Glass in Elevator Cars

Edition: A17.1-1971 including Supplements A17.la-1972 through A17.lg-1976

Question: As indicated in Figures 77-60(1) and **77-60(2)**, the building in question is served by two hydraulic elevators, centrally located and separated from the building by a two (2)-hour rated wall. The back wall of the cars have a five-foot six-(6) inch diameter window which permits passengers to view the exterior through the fourth hoistway wall, which is a glass curtain wall structurally supported at every floor. The car window is considered acceptable and meets the ANSI standards and Uniform Building Code criteria concerning its construction. The hotel is type 1 construction throughout, which is the most restrictive Uniform Building Code category. In addition, the building is entirely sprinklered. Directly outside the hoistway, there has been provided a pad at grade for support of the local fire-fighting equipment in servicing the building in the event of fire. In support of the design:

(1) Both the local building inspector and fire chief, who have concern for entire building safety, have endorsed the design.

(2) Rule 100.5 of the A17.1 Code prohibits the use of windows in walls of hoistway enclosures. As defined in the Code, the exterior glass curtain wall does not represent an element of the hoistway enclosure in **that** it does not isolate the hoistway from all other parts of the building or from an adjacent hoistway.

(3) Our design effectively isolates the elevator hoistway from the building by a two-hour (2) rating. In our estimation and that of the local building officials, the treatment of the exterior glass wall will not affect the spread of fire within the building nor the safety of the hoistway.

(4) Our elevator inspector has interpreted the Code as permitting exposed elevator cars to operate on the outside wall of the building provided an exterior wall is not included. If such a provision is in fact acceptable, we would strongly argue that introduction of the four (4) inch glass wall does not affect building safety nor the **potential spread of fire**. An interpretation of any requirements applicable to the described installation is requested.

Answer: Supplement ANSI A17.1f-1975 provides for observation type elevators which have no hoistway wall other than the front door wall. It appears that a glass hoistway would be satisfactory if it met the requirements of:

(1) Rule 100.6 - Projections, Recesses and Setbacks in Hoistway Enclosures

(2) Rule 204.1h - Glass in Elevator Cars While Rule 204.1h applies to cars, it seems sensible to extend this Rule to hoistways also.

Inquiry: 80-33

Subject Rule 204.1h

Glass in Elevator Cars

Edition: A17.1-1978 including Supplement A17.1a-1979

Question: What is the intent of the guard required by Rule 204.1h-3? Is it to prevent people from falling out of an elevator, to prevent glass from falling on passengers, or to prevent someone from getting cut on broken glass?

Answer: It is the intent of Rule 204.1h to establish safety requirements for glass used in elevator cars. The requirement for laminated glass prevents the glass from splintering and retains its integrity because of its layered construction. The glass must also be able to withstand the required elevator tests without damage. If the requirements of Rule 204.1h-1, -2 and -4 are complied with then Rule 204.1h-3 will also be satisfied and the three types of protection in your question will be provided.

Inquiry: 86-60

Subject: Rule 204.1h

Glass in Elevator Cars

Edition: ANWASME A17.1-1981

Question: Does the phrase "Glass exceeding 1 ft² (0.93 m²) in area" mean that each individual piece of glass in an elevator car exceeds 1 ft², or does it mean that the total of all individual pieces of glass within a car that exceeds 1 ft², even though each piece is less than 1 ft²? For example, if there are three separate 60 in. pieces of glass in an elevator car, do they exceed 1 ft² per Rule 204.1h?

Answer: "The "1 ft² in area" requirement refers to each individual piece of glass.

Inquiry: 87-35

Subject: Rules 101.1c, 110.7, and 204.1h
Glass Doors
Edition: A17.1-1984 including Supplements through A17.1d-1986

Question: Rule 100.1c allows laminated glass to **be** installed in the hoistway enclosure. Does this include the doors? Would it be allowable to put panels **of** laminated glass in the elevator doors, and if **so** what would be the restrictions on the size of the glass? Also, in Rule 204.1h, glass is allowed in elevator car enclosures. Would this allow glass to be installed in car doors, or in both cases would Rule 110.7, Hoistway Door Vision Panels, prevail?

Answer: There are no restrictions on the use of glass doors, provided all the requirements for car and hoistway doors are met.

Inquiry: 90-6

Subject: Rule 204.1h
Glass in Elevator Cars
Edition: A17.1-1987 including A17.1a-1988 and A17.1b-1989

Question: Does glass in elevator cabs require the manufacturer's permanently etched logo be on the glass itself indicating compliance with ANSI Z97.1 in order to meet the code?

Answer: Yes. A17.1 Rule 204.1h requires glass greater than 1 ft² to meet the requirements for laminated glass in ANSI Z97.1-1984. This standard states in part:

After having successfully passed the appropriate tests in this standard, like products and materials produced in the same manner as specimens submitted per test shall be legibly and permanently marked in one corner with the words "American National Standard Z97.1-1984" and shall be marked also with the manufacturer's distinctive mark or designation.

Inquiry: 90-35

Subject: Rules 204.1b, 204.1h, 1003.3, 1202.5(c)
Alterations to Elevator Cars
Edition: A17.1-1987

Question: (1) New panels and/or a drop ceiling, replacing the old ones, are added to traction elevators. The increase in weight does not exceed the 5% as noted in Rule 1003.3(d). Is a full load safety test required to assure compliance with Rule 204.1b?

(2) Is a safety test required at all to assure compliance with Rule 204.1b?

(3) If a test is not required, how do you assure compliance with Rule 204.1b? Please explain.

(4) Mirrors are installed in an existing elevator as outlined in Rule 204.1h. Is a full load safety test required to assure compliance with Rule 204.1h? If not, how do you assure compliance? Please explain.

(5) Must mirrors provided in elevators exceeding 1 ft², be laminated and meet the requirements for laminated glass in ANSI Z97.1?

Answer: (1) No.

(2) This is not addressed by the Code.

(3) This is not addressed by the Code.

(4) This is not addressed by the Code.

(5) Yes.

Inquiry: 91-21

Subject: Rules 204.1h and 204.1i
Mirrors in Elevator Cars
Edition: A17.1-1987 including A17.1a-1988 and A17.1b-1989

Question: (1) Does Rule 204.1h apply to mirrors in elevator cars regardless of size?

(2)(a) If a mirror is provided in an elevator, must it be mounted in the structure as noted in Rule 204.1h(2)? Please explain what "in the structure" means. (b) Does this apply only to observation elevators and elevators with vision panels?

(3) If a mirror is provided in an elevator and it exceeds 1 ft², does it have to be laminated?

(4) Would a "laminated" mirror, exceeding 1 e, mounted in a frame, permanently be acceptable by Rule 204.1i?

(5) Must mirrors less than 1 ft², mounted in a frame, permanently secured, be laminated?

Answer: (1) Yes, if made from glass.

(2)(a) The structure refers to the means by which the glass is mounted.

(b) This applies to glass in all elevators.

(3) Yes, if made from glass.

(4) Yes, if it meets all of the requirements of Rules 204.1h and 204.1i.

(5) No, provided that the total area of glass including abutting panels does not exceed 1ft².

Inquiry: 95-21

Subject: Rule 204.1h

Glass in Elevator Cars

Edition: A17.1-1993

Question: "Glass ceramics" are made up of vitreous material and crystallized silicates. The material has a very high bending strength of 8676lb/in². The material acts much more like a ceramic tile than glass. "Glass ceramics," when installed in an elevator, is set in a full adhesive bed and laminated to the substrate of the elevator car in the same method of ceramic tile or thin stone.

(1) Do "glass ceramics" have to comply to the requirements of Rule 204.1h, Glass in Elevator Cars?

(2) Should "glass ceramics" comply with ANSI Z97.1?

Answer: (1) Yes, "glass ceramics" do have to comply to the requirements in Rule 204.1h

(2) See answer to (1).

Inquiry: 96-54

Subject: Rule 204.1h

Glass in Elevator Cars

Edition: A17.1-1993 including A17.1b-1995

Question: If glass conforming to testing and marking as required by 16 CFR, Part 1201, Rule 1201.5 is installed in an elevator to comply with Rule 204.1h(3)(c), does it also require markings as specified in Rule 204.1h(4)?

Answer: The intent of Rule 204.1h(4) is that each separate piece of glass has to have the markings specified in Rule 204.1h(3)(c).

Inquiry: 02-02

Subject: Requirement 2.11.7.2, Glass Doors

Requirement 2.14.1.8, Glass in Elevator Cars

Edition: A17.1-2000

Question: (1) Requirements 2.1.1.2.2(d) and 2.14.5.8.2(a) permit the use of glass, in conformance to ANSI Z97.1 or 16 CFR Part 1201, in elevator hoistway enclosure and car doors. Why is glass in conformance to ANSI Z97.1 no longer permitted by 2.11.7.1.4(b) in elevator hoistway doors?

(2) Should 2.11.7.1.4(b) be revised to permit the use of glass in conformance to ANSI Z97.1?

(3) The elevator hoistway enclosure [2.1.1.2.2(d)] and car doors [2.14.5.8.2(a)] are permitted by A17.1-2000 to use glass in conformance to ANSI Z97.1 or 16 CFR Part 1201. Why is glass in conformance to ANSI Z97.1 no longer permitted by 2.14.1.8.1(a) in elevator car enclosure panels?

(4) Should 2.14.1.8.1(a) be revised to permit the use of glass in conformance to ANSI Z97.1?

(5) The scope of 16 CFR Part 1201 is for storm doors or combination doors, doors, bathtub doors and enclosures (definition: bathtub doors and enclosures means assemblies of panels and/or doors that are installed on the lip of or

immediately surrounding a bathtub), shower doors and enclosures (definition: shower door and enclosure means an assembly of one or more panels installed to form all or part of the wall and or door of a shower stall), sliding glass doors (patio-type).

- (a) Is 16 CFR Part 1201 the correct standard for elevator hoistway enclosures and car enclosure panels?
- (b) Should all requirements, excluding doors, specify only the requirement to conform to the impact standard of 16 CFR Part 1201?

Answer: (1) The requirements were revised in A17.1–2000 to coordinate with the glazing requirements of the Consumer Product Safety Commission and Building Codes.

(2) No. See answer to Question (1).

(3) See answer to Question (1).

(4) No. See answer to Question (1).

(5)(a) It is one of the standards. See 2.14.1.8.1(a) and 2.1.1.2.2(d).

(b) No.

Inquiry: 11-854

Subject: Requirement 2.14.1.8

Edition: ASME A17.1-2010/CSA B44-10

Background: Requirement 2.14.1.8.1(a) allows specific types of glass for enclosures, as extracted in items (a) through (d) below.

(a) Laminated glass compliant to 16 CFR Part 1201, section 1201.1 and 1201.2

(b) Laminated glass compliant to CAN/CGSB-12.1 (Tempered or Laminated Safety Glass)

(c) Safety glass compliant to CAN/CGSB-12.11 (Wired Safety Glass)

(d) Safety plastic compliant to CAN/CGSB-12.12 (Plastic Safety Glazing Sheets)

NOTE (1): Per ANSI Z97.1 laminated glass is a manufactured assembly consisting of at least one sheet of glass bonded to at least one other sheet of glass or plastic glazing material with an organic interlayer. NOTE (2): When broken, numerous cracks appear, but glass fragments tend to adhere to the interlayer.

Question (1): Is the summary of (a) through (d) above reflective of the content of 2.14.1.8.1(a)?

Answer (1): Yes.

Question (2): For enclosure glass to be compliant with (a) above, must the glass be laminated?

Answer (2): Yes.

Question (3): For enclosure glass to be compliant with (a) above, is tempered glass allowed?

Answer (3): Only laminated glass compliant to 16 CFR Part 1201, section 1201.1 and 1201.2, is permitted.

Question (4): For enclosure glass to be compliant with (a) above, is other nonlaminated safety glazing permissible?

Answer (4): No.

Question (5): For enclosure glass to be compliant with (a) above, if nonlaminated glass is bonded to a nonpolymeric coating, sheeting, or film and can achieve test results specified for laminated glass per 16 CFR Part 1201, is its use permitted?

Answer (5): Only laminated glass compliant to 16 CFR Part 1201, section 1201.1 and 1201.2, is permitted.

Question (6): For enclosure glass to be compliant with (b) above, must the glass be laminated?

Answer (6): Yes.

Question (7): For enclosure glass to be compliant with (b) above, is tempered glass allowed?

Answer (7): Only laminated glass compliant to CAN/CGSB-12.1 is permitted.

Question (8): For enclosure glass to be compliant with (b) above, is glass bonded to a nonpolymeric coating, sheeting, or film that can achieve test results specified for laminated glass per CAN/CGSB-12.1 permitted?

Answer (8): Only laminated glass compliant to CAN/CGSB-12.1 is permitted.

Question (9): Requirement 2.14.1.8.2 allows glass used for lining walls or ceilings to conform to 2.14.1.8.1(a) and (c), but says tempered glass is permissible with some conditions. When glass is used to line walls and ceilings, if tempered glass is used, must it conform to 2.14.1.8.2(a), (b), (c), and (d)?

Answer (9): Yes.

Question (10): When glass is used to line walls and ceilings, if tempered glass is used, is it permissible to conform to 2.14.1.8.2(a), (b), (c), or (d)?

Answer (10): See response to Question (9).

Question (11): When glass is used to line walls and ceilings, if tempered glass is used, must it be bonded to a nonpolymeric coating, sheeting, or film?

Answer (11): Yes. See 2.14.1.8.2(c).

Question (12): When glass is used to line walls and ceilings, if mirrored glass is used, must it be either tempered or laminated?

Answer (12): Mirrored glass must meet the requirements of 2.14.1.8.2.

Question (13): When glass is used to line walls and ceilings, glass meeting 2.14.1.8.1(a) must be secured per 2.14.1.8.1(c). If tempered glass is used, does the mounting criterion of 2.14.1.8.1(c) apply?

Answer (13): Yes.

Question (14): When glass is used to line walls and ceilings, does 2.14.1.8.2(b) prohibit the painting (or silvering) of glass after it is tempered?

Answer (14): Yes.

204.1i / 2.14.1.9 Equipment Inside Cars

Inquiry: 78-10 (2)

Subject: Rule 204.li

Equipment Prohibited Inside Cars

Edition: A17.1-1971 including Supplements A17.la-1972 through A17.lg-1976

Question: Would ash trays be considered **as** apparatus or equipment which is prohibited **by** Rule 204.li from being installed inside elevator cars?

Answer: Yes, Rule 204.li prohibits inside any elevator car, the installation of apparatus **or** equipment other than that used in connection with the operation of the elevator. The only exception to this Rule are railroad and conveyor tracks, and lighting, heating, ventilating and air-conditioning equipment.

Inquiry: 86-53

Subject: Rule 204.1i

Equipment Prohibited Inside Cars

Edition: A17.1-1978

Question: Would a metal picture frame 20 in. x 28 in. be considered as apparatus or equipment which is prohibited by Rule 204.li from being installed inside elevator cars?

Answer: A picture frame is not considered apparatus or equipment as covered by Rule 204.1i.

Inquiry: 81-22 also under general

Inquiry: 89-11

Subject: Rules 204.1i and 204.2a

Equipment Prohibited Inside Cars

Edition: A17.1-1984 including A17.1a-1985

Question: (1) Are decorative and/or functional items such as artwork, posters, and acrylic (shatterproof) personal mirror, advertising, etc. prohibited from being installed inside an elevator car under Rule 204.1i?

(2) Are they considered "visual communication devices" under Rule 204.2a(5)?

(3) If the answers to (1) and (2) are no, must these items conform to the requirements in Rule 204.2a(1)? If so, please interpret the phrase "materials in their end use configuration" as it applies to such items.

Answer: (1) See Inquiries 87-55, 86-53, and 81-22.

(2) No. The visual communication devices referred to are devices used in connection with the function or operation of the elevator.

(3) Yes. Depending upon the design and construction of these items, it may be necessary to evaluate the total construction of the item and part of the car wall to which it is fastened. Consultation with the testing laboratory will be necessary to determine the specific test method.

Inquiry: 87-55

Subject: Rule 204.1i

Equipment Permitted in Cars

Edition: A17.1-1984 including Supplements through A17.1e-1987

Question: (1) Are decorative display cases mounted on the walls of the car prohibited by this Rule?

(2) Is a closed-circuit television monitor prohibited by this Rule?

(3) Is an electronic reader board display panel prohibited by this Rule?

(4) Inquiry 78-10 prohibits apparatus such as ashtrays, but Inquiry 81-22 does not prohibit advertising. Where is the line drawn when the Rule specifically states that the equipment shall not be installed if it has nothing to do with operation of the elevator?

Answer: (1) This is not specifically covered by the Code.

(2) No, if it is used in connection with the function or use of the elevator.

(3) No, if it is used in connection with the function or use of the elevator.

(4) This is not specifically covered by the Code.

Inquiry: 90-25

Subject: Rule 204.1i

Benches in Elevator Cars

Edition: A17.1-1987 including A17.1a-1988

Question: Are benches permitted in elevator cars?

Answer: Yes.

Inquiry: 91-21 also in 204.1h

Inquiry: 93-65

Subject: Rule 204.1i

Equipment Inside Cars

Edition: A17.1-1990

Question: Please refer to the attached drawing of a thru section of a rear cab wall.

(1) If this part of the cab is to be considered cab wall, is it in violation of Rule 204.1i because it projects more than 1 ½ in.?

(2) Or is it considered part of the cab floor? If so, then is it in violation of Rule 204.1i(2) because it projects more than 1/4 in. from the floor.

Answer: (1) Rule 204.1i(1)(d) applies only to picture frames, graphic display boards, plaques, and other similar visual displays.

(2) Yes. The intent of the Code is that the cross-sectional area of the floor be substantially flat with depression and projections not exceeding 1/4 in. [Rule 204.1i(2)]. The cross-sectional area of the floor is measured as stipulated in Rule 207.1.

Inquiry: 10-1491

Subject: Requirement 2.14.1.9.1
Edition: ASME A17.1-2007/CSA B44-07

Question: Regarding 2.14.1.9.1, "Apparatus or equipment not used in connection with the function or use of the elevator shall not be installed inside of any elevator car," is the carrying of a portable Automated External Defibrillator within a locked and flush-mounted panel enclosure a permitted "function or use of the elevator"?

Answer: No.

204.1j / 2.14.1.10 Side Emergency Exits

Was 204.2d

Inquiry: 82-46

Subject: Rule 212 (1945) and Rule 204.2d-5 (1955)
Side Emergency Exits
Edition: 1945 Reprint of A17.1-1937 and A17.1-1955

Question: (1) What was the reason for the wording changes between 1945 and 1955? Specifically why was it deemed necessary to explain that a lock requires a special shaped removable key and that a lock should not be operable by use of ordinary tools or instruments when such things should be implicit in the use of the word "lock." (2) Would a door latching system operable from inside the car by simply asserting a square bar or a square-tipped wrench constitute a "lock" by the 1945 reprint? (3) Same as #2 except by the 1955 Code? (4) If not, does the 1955 Code or any code up to 1979 require modification of any such existing lock? (5) **Is** a simple square-ended tool considered a "key" by the 1945 reprint of the 1937 Code? If not, why? (6) **Is** a simple square ended tool considered a "special shaped key" by the 1955 Code? If not, why? (7) **Is** a common flat bladed screwdriver or a typical door key considered an "ordinary tool or instrument" by the 1955 Code? (8) Would a one-piece handrail bolted to both the stationary wall and the emergency side exit door inside a car violate any provision of the 1945 reprint? If **so**, which one(s) and why? (9) **Is** the authority having jurisdiction, the owner, or the maintenance contractor ever granted authority to bolt side emergency-exit doors shut in any Code between 1945 and the present? If so, which provisions of which Codes? If not, why?

Answer: (1). (2), (3), (5), (6) and (7) Extensive changes were made to the Code between the 1937 edition and the 1955 edition. These changes were developed through numerous meetings, discussion, and correspondence involving several hundred persons over an 18-year period. To comment on the reason for a specific wording change some 40 years later would be mere speculation and inappropriate. For the same reason, it would also be inappropriate to comment on the intended meaning in 1937 or 1955 of terms such as "lock" or "key." (4) The Scope of each edition of the Code indicates that Rule 204.2d only applies to new installations except where required in the Part covering Alterations, Repair and Replacement (1955 Part XI and 1981 Part XII). (8) The handrail would not conform to the requirements of the 1945 Code if it prevented the panel from being removed [Rule 212(e)(3)1 or opened [Rule 212(e)(4)1, or if the clear width or height did not conform to the requirements of Rule 212(e)(5). (9) Bolting side emergency exits shut would be considered a minor alteration by the Code (Rule 1100.lb in the 1955 through 1965 editions, and Rule 1200.lb in the 1971 and later editions). It would be prohibited since it would not conform to the requirements of the Code (Rule 204.2d). The authority having jurisdiction, however, may change the A17.1 Code requirements in its adopting legislation or grant exceptions as specified in Section 2.

Inquiry: 83-27

Subject: Rule 204.2d

Side Emergency Exits
Edition: A17.1-1978

Question: Please define the intended meaning of the following terms as used in this Rule:

- (1) lock
- (2) special-shaped removable key
- (3) ordinary tools or instruments

Does nothing more than a recessed square hole on the inside of the side emergency exit comply with the intended purpose in light of the fact that it can be readily operated by insertion of an appropriately sized ordinary screwdriver blade?

Answer: When a term used in the Code is not defined in Section 3, its meaning is as defined in a dictionary. The intent of these terms is to make it difficult for an unauthorized person to open a side emergency exit. The Committee cannot approve or disapprove a specific device.

Inquiry: 84-7

Subject: Rule 204.2d
Side Emergency Exits
Edition: A17.1-1981

Question: Are side emergency exits permitted on elevators where the distance between car platforms exceeds 30 in.?

Answer: One of the conditions under which side emergency exits are required is that the distance between adjacent car platforms does not exceed 30 in. This dimension was selected with the intent to limit the installation of side emergency exits where an excessive distance (over 30 in.) is provided.

Inquiry: 84-31

Subject: Rule 204.2d
Side Emergency Exits
Edition: A17.1-1981 including Supplement A17.1a-1982

Question: Rule 204.2d covers the case of an elevator located in an adjacent hoistway. Subject to the condition specified in the first paragraph, the Rule requires a side emergency exit to be provided in each such adjacent car. This is straightforward as far as a two-car arrangement is concerned. I would like an interpretation of the Rule for multiple car arrangements as follows.

- (1) In a three-car group where the cars are arranged in a line, is it required that the center car have a side exit located on each side of the car so that regardless of which car is stopped, side egress can always be done by an adjacent car?
- (2) In a four-car group where the cars are arranged in a line, as shown below, side egress to an adjacent car is always possible just by providing side exits facing each other on cars 1 and 2 and similarly between cars 3 and 4. Is this a correct interpretation of the rule? Please explain if you disagree (see Fig. 84-31).

Answer: (1) Yes, the center car is required to have side emergency exits on both sides. (2) No, the Code requires a side emergency exit door in each such adjacent car.

Inquiry: 88-11

Subject: Rule 204.2d
Side Emergency Exits
Edition: A17.1-1984 including Supplements through A17.1e-1987

Question: I have had several requests for waivers to not install side emergency exits where required by the subject rule. Please provide me with a list of reasons why side emergency exits are required by the subject rule.

Answer: Side emergency exits are required as an additional means for the evacuation of passengers from stalled elevators. See the A17.4 Guide for additional information.

Inquiry: 88-25

Subject Rule 204.2d
Side Emergency Exit Door Contacts
Edition: A17.1-1987

Question: Rule 204.2d(3)(g) states that electric contacts must conform to Rule 111.5. I feel that a letter was left out and possibly it should read Rule 111.5c. I am sure that it was not the intent to have contacts on side emergency doors conform to Rule 111.5a which covers operating the driving machine with doors open. This is completely opposed to Item 121.2 in the Inspectors' Manual ANSI/ASME A17.2b-1984, which states in part, "properly functioning electric contact to interrupt power to the driving machine and brake when opened."

Answer: It was not intended that Rule 111.5a apply to side emergency exit door contacts.

Inquiry: 89-32

Subject: Rules 204.2d and 1900.1a(3)
Separation Between Hoistways and Side Emergency Exits
Edition: A17.1-1987 including A17.1a-1988

Question: When a temporary separation is provided according to Rule 1900.1a(3), must it be removed when the elevator is completed so that it will not interfere with the side emergency exits?

Answer: The intent was that this separation be temporary, i.e. used only while it was an elevator used for construction.

Inquiry: 94-59

Subject: Rule 301.7
Side Emergency Exits - Hydraulic Elevators
Edition: A17.1-1993

Question: As recently as the 1990 edition of the Code, Rule 204.2d required side emergency exits under certain conditions. In the 1991 edition, the Rule was renumbered as Rule 204.1j and changed to permit such side exits under similar conditions. In the 1993 edition, Rule 301.7, which referenced the old Rule 204.2d, was editorially revised to reflect the referenced numbering change. But the Rule still uses the words "are only required ... when ...," so side emergency exits still seem to be required for hydraulics when a car safety is provided. Is it the intent of the Code that side emergency exits are required when hydraulic passenger cars are provided with a car safety?

If the Committee intends that side exits are permitted under the condition of Rule 204.1j, whether or not a car safety is provided, may I suggest that Rule 301.7 be shortened to read "car enclosures, car doors and gates, and car illumination shall conform to the requirements of Section 204"?

If the Committee intends that side exits are not required, but are permitted under the conditions of 204.1j only when safeties are provided, may I suggest the following: Change the phrase "...except that side emergency exits (see Rule 204.1j) are only required in passenger elevator cars when.." to "...except that side emergency exits (see Rule 204.1j) are permitted only when ..."

If the Committee intends that side emergency exits are indeed required in hydraulic passenger elevator cars when a safety is provided, a further editorial revision of Rule 301.7 might clarify the intent. The word "only" should be removed. It is merely a remnant of the old requirement for traction cars.

Answer: Yes. Side emergency exits are required when hydraulic passenger cars are provided with a car safety subject to the conditions stated in Rule 204.1j

Inquiry: 02-20

Subject: Rule 204.1j,
Side Emergency Exits
Edition: A17.1-1996

Question: Rule 204.1j(2)(g) requires that the car door electric contact for a side emergency exit be located so as to be inaccessible from inside the car. Must the contacts be inaccessible from inside the car with the side emergency door in the open and closed positions?

Answer: The Code does not specify whether the door is in the open or closed position.

204.2a / 2.14.2.1 Passenger Car Enclosure-Materials

Inquiry: 73-14

Subject: Rule 204.2a
Material for Passenger Car Enclosures
Edition: A17.1-1971 and Supplement A17.1a-1972

Question: Would an elevator car enclosure of fiberglass construction with fiberglass stiffeners and backup plates of cold rolled steel be permitted by the Code?
Will fiberglass meeting the UL94 Standard rating be considered as another equally approved fire-retardant material?
The deflection of the enclosure meets or exceeds the present Code requirements

Answer: The Code does not prohibit the use of the materials described. However, the material must fully conform to all applicable requirements in Rule 204.2a.

Inquiry: 74-21

Subject: Rule 204.2a
Material for Passenger Car Enclosures and Enclosure Linings
Edition: A17.1-1971 including Supplements A17.1a-1972 and A17.1b-1973

Question: What are the minimum requirements in this Rule as they apply to the fire-retarding property of carpeting used on **floors** of passenger cars?

Answer: Rule 204.2a specifies only those materials which may be used in car enclosures and enclosure linings. By definition, as it appears in Section 3, a car enclosure includes only the top and the walls of a car. It does not apply to floor coverings in cars.

Inquiry: 76-2

Subject: Rule 204.2a
Material for Enclosures and Enclosure Lining - Passenger Cars
Edition: A17.1-1971 including Supplements A17.1a-1972 through A17.1f-1975

Question: Please interpret this Rule as it applies to a passenger elevator car having a **floor** and enclosure covered with carpeting which has a flame spread rating of less than fifty (**50**).

Answer: The Code does not prohibit such carpeting from being used to cover the **floor**, but Rule 204.2a does not approve any material with padding or tufting being used to cover the enclosure.

Inquiry: 76-33

Subject: Rule 204.2a

Material for Passenger-Car Enclosures and Enclosure Linings
Edition: A17.1-1971 including Supplements A17.la-1972 through A17.lf-1975

Question: Does this Rule permit the use of tufted materials of a class **B** fire rating with a minimum of fifty (**50**) or less flame spread rating for covering the surface of a car enclosure?

Answer: It is not the intent of the requirement to permit the use of the type of material described.

Inquiry: 76-39

Subject: Rule 204.2a
Material for Passenger Car Enclosures and Enclosure Linings
Edition: A17.1-1971 including Supplements A17.la-1972 through A17.lf-1975

Question: Does a car enclosure covered with wall-type woven wool carpet attached by adhesive to sheet metal meet the requirement of this Rule?

Answer: The intent of this Rule does not permit woven wool carpeting to be used for lining metal enclosures in elevator cars.

Inquiry: 79-25

Subject: Rule 204.2a-2
Passenger-Car Enclosures - Material
Edition: A17.1-1978

Question: Is carpeting a "tufted" material and thus prohibited from being installed on the walls of car enclosures by Rule 204.2a-2?

Answer: The previous interpretations are reaffirmed. Carpeting is presently prohibited for use on elevator car walls.

Inquiry: 80-1

Subject: Rule 204.2a
Car Enclosures
Edition: A17.1-1978 including Supplement A17.la-1979

Question: Does this Rule permit the use of the submitted fabric for elevator car enclosures which meets the flame resistance requirements (vertical) of the Federal Aviation Administration Regulations for Compartment Interiors, Paragraph 25.853(b)?

Answer: This Rule establishes the criteria for approval of material for passenger-car enclosures, but the committee does not approve specific items.

Inquiry: 80-42

Subject: Rule 204.2a
Edition: A17.1-1978 including Supplement A17.la-1979

Question: Does a material with the following specifications meet the requirements of Rule 204.2a for use on car enclosures?

- (1) Flame Spread Classification: 21
- (2) Smoke Density: 240
- (3) Fuel Contribution: 7
- (4) Material Class: A
- (5) ASTM Test: E84-70

Please note that this is a Class A material with fire test characteristics superior to those of laminated plastic and other approved materials.

Answer: This Rule establishes the criteria for approval of material for passenger-car enclosures, but the committee does not approve specific items.

Inquiry: 81-22 also under general

Inquiry: 83-11

Subject: Rule 204.2a
Car Enclosure Materials
Edition: A17.1-1981

Question: This Rule includes the sentence: "Such materials shall not be padded or tufted." The material in question is composed of a randomized layer of very fine filaments (approximately ½ the diameter of a human hair). The material is attached (glued?) to, rather than woven through, a loosely woven backing. I hope that, from this information, you will be able to tell me whether or not this is "tufted" material.

Answer: Where a term used in the Code is not defined in Section 3, its meaning is as defined in a dictionary. The Committee does not approve specific products.

Inquiry: 83-30

Subject: Rule 204.2a
Car Enclosure Linings
Edition: A17.1-1981

Question: A person was injured when she tripped and fell while entering an elevator. At the time of this injury, the passenger elevator car was equipped with a protective, padded lining which precluded the person from grabbing the railing in the back of the car to catch her fall. It is my understanding that this type of padding is permitted to be used only temporarily inside cars during the handling of freight. However, at the time of the accident, no freight was being moved. In fact, the reason why the padding remained installed was because the employees of the building forgot to remove it earlier in the day. The narrow question that evolves from this situation is whether the failure to remove the padded lining from the car, while no moving activities were taking place, constituted a violation of the Exception to Rule 204.2a(2) of the Code.

Answer: No. The intent of the Exception to Rule 204.2a(2) is to establish requirements for fire retardant material. The Code does not address the periods of use.

Inquiry: 85-7

Subject: Rule 204.2a(2)
Padded Protective Linings in Car Enclosures
Edition: A17.1-1981

Question: The Exception to Rule 204.2a(2) states: "The fire retardant treatment shall be renewed as needed." What do the words "as needed" refer to? What code or test could be used to require padded protective linings to be retreated with fire retardant material?

Answer: It was intended that the fire-retardant value be certified by the manufacturer as to the useful life span prior to renewal. In as much as the life span is indeterminate and subject to differing usage and atmospheric conditions, the requirement was revised in A17.1a-1985.

Inquiry: 84-17

Subject: Rule 204.2a
Materials for Car Enclosures

Edition: A17.1-1981 including Supplement A17.1a-1982

Question: Rule 204.2a(1) specifies the materials for car enclosures as metal, fire-retardant treated wood, or other equally fire-retardant approved materials. The Exception to Rule 204.2a(1) allows the use of non-fire-retardant treated wood or materials of equivalent combustible characteristics provided that all exterior surfaces of the enclosures are covered with one of the following:

- (1) 0.0179 in. minimum thickness sheet metal, or
- (2) other equally fire-retardant material, or
- (3) approved fire-retardant paint having a flame spread rating not more than 50 based upon the ASTM E 84 test procedure. Previous answers to Inquiries 80-1 and 80-42 state that Rule 204.2a establishes the criteria for approval of material for passenger car enclosures. The Exception to Rule 204.2a specifies that materials not specifically addressed in Rule 204.2a(1) are allowed as long as any one of the three methods of fire protection are applied to the car enclosure exterior. Please confirm whether this interpretation is correct so that the criteria for approval of material can be applied and evaluated correctly.

Answer: The Exception to Rule 204.2a(1) states that non-fire-retardant treated wood or materials of equivalent combustible characteristics not specifically addressed in Rule 204.2a(1) are allowed as long as any one of the three methods of fire protection are applied to the car enclosure exterior.

Inquiry: 85-37

Subject: Rule 204.2a(4)
Material for Car Enclosures
Edition: A17.1-1984 including Supplement A17.1a-1985

Question: (1) What is meant by the term "floor covering"? (2) What is meant by the term "underlayment"? (3) If the flooring surface exposed to the car interior consisted of wood, is Rule 204.2a(4) applicable? (4) Or, does the flooring only have to comply with Rule 204.2a(1)?

Answer: (1) Floor covering is the upper surface of the platform which is exposed to the interior of the car floor. (2) Underlayment, if used, is the material between the structural platform and the floor covering. (3) & (4) The intent of the requirements is that Rule 204.2a(4) is applicable and that Rule 204.2a(1) is not.

Inquiry: 86-21

Subject: Rules 204.2a
Material for Car Enclosures
Edition: A17.1-1984 including Supplement A17.1a-1985

Question: I have a question regarding the use of real wood veneer, prefinished on 3/4 in. fire retardant particle board for application to elevator car interiors. To determine whether or not we can meet 0 to 75 flame spread ratings, I have been in touch with certain agencies and vendors to try and nail some kind of standard down. U.B.C. states the following in section 5111(A): "Material for car enclosures shall be metal, fire retardant treated wood, or other equally fire-retardant approved material which complies with section 5202 of this code." Section 5202 of U.B.C. is for approved materials with flame spread rating of 225 or less, so this must be for laminated plastic and/or suspended ceiling materials.

I have also been in contact with one of our real wood vendors, who supplies veneers, finished or unfinished, applied to fire-retardant particle plywood core material. His panels, which have been tested in accordance with ASTM E 84 and are rated class 1 panels, have a flame spread rating of 25, fuel contribution of 20, and smoke development of 35-125. The wood veneer is 1/28 in. to 1/40 in. thick, and the four-coat final finish on the veneer is no thicker than 8 mils total. In my conversation with him, he stated that when his panels were tested, the finish and the wood veneer were not even considered in the evaluation of the test results because they were 1/28 in. or less in thickness. The core material of the panel is basically what passed the test.

Rule 204.2a(1) states that materials in their end use configuration, other than those covered by Rule 204.2a(2), shall conform to the following requirements, based on tests conducted in accordance with the requirements of ASTM E 84 : (a) flame spread rating of 0 to 75; (b) smoke development of 0 to 450.

My point is that this vendor can supply panels that have been tested in accordance with ASTM E 84, and passed. Why would we even consider testing anything ourselves?

Chapter 51 of the U.B.C., section 5109, states "ANSI code adopted," since ANSI does not specifically lay out any requirements for wood products to be used in elevator car interiors, other than conforming to 204.2a(1), then why would ANSI not accept what is stated in chapter 42 of U.B.C., section 4201, General, "Fire-Resistive standards for fire-protection." This clearly states that materials less than 1/28 in. are not considered "Interior Finish." Any finishing of the

wood veneer whether it be an oil-rubbed finish, varnish, or whatever should also not be considered, as it too is less than 1/28 in. thick. Our final interpretation of what the code is asking for in Rule 204.2a(1) is, for real wood veneer, 1/28 in. or less applied to a 3/4 in. fire-retardant particle core plywood, with the veneer having a surface finish of any varnish, oil, lacquer, etc.. as long as it does not exceed 8 mils in thickness.

Answer: In the first paragraph, you cite a reference to the Uniform Building Code (UBC), Section 511 I(A), which apparently is the 1979 edition as this Section is not in the 1982 and 1985 editions. This Section was in the Appendix to UBC and was not a requirement. It was similar to the requirement in Rule 204.2a of the 1984 and earlier editions of the A17.1 Code. UBC removed these provisions in 1982 and A17.1 Rule 204.2a was revised in Supplement A17.1a-1985. The 1985 UBC Section 4201, Interior Wall and Ceiling Finish, exempts from testing and classification "materials less than 1/28 in. thick cemented to the surfaces of walls or ceilings if these materials have surface-burning characteristics no greater than paper of this thickness cemented to a noncombustible backing." The term noncombustible is further defined in UBC Section 415 as follows:

Noncombustible as applied to building construction material means a material which, in the form in which it is used, is either one of the following:

1. Material of which no part will ignite and burn when subjected to fire. Any material conforming to U.B.C. Standard No. 4-1 shall be considered noncombustible within the meaning of the section.
2. Material having a structural base of noncombustible material as defined in Item No. 1 above with a surfacing material not over 1/8-inch-thick when it has a flame-spread rating of 50 or less. Noncombustible does not apply to.. -

UBC Standard No. 4-1 is the same as ASTM E 136 Standard Test Method for Behavior of Materials in a Vertical Tube Furnace. Materials which are classified as noncombustible are tested with a furnace temperature of 1382°F (1750°F) for a period of five min and do not cause a temperature rise of the surface or interior thermocouples in excess of 54°F (12.22°C) above the furnace air temperature at the beginning of the test and which do not flame after an exposure of 30 sec. Similar requirements are found in all the model building codes and have shown by test to be valid for the paper surfaces on gypsum wallboard and for ordinary paint. In building construction, interior finishes are applied to building walls which normally are not subjected to the ASTM E 84 test. They are subject to the ASTM E 119 Standard Methods of Fire Test of Building Construction and Materials. Section 1.3 of ASTM E 119 states:

This standard should be used to measure and describe the properties of materials, products or assemblies in response to heat and flame under controlled laboratory conditions and should not be used to describe or appraise the fire hazard or fire risk of materials, products, or assemblies under actual fire conditions. However, results of this test may be used as elements of a fire risk assessment which takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use. Note 1-A method of fire hazard classification based on rate of flame spread is covered in ASTM Method E 84 Test for Surface Burning Characteristics of Building Materials. It should be clear that comparing requirements for building walls and car enclosures is not possible. A17.1a-1985 Rule 204.2a is very specific requiring materials to be tested in their end use configuration. This statement requires car enclosures of sandwich construction to be tested as one complete sample. You cannot take the individual components of the sandwich construction and test them individually and average all the results to get the flame spread and smoke development rating for the complete assembly. When these components are combined and tested as one, the results will most likely be entirely different. Rule 204.2a also requires that, unless a metal cab is used, samples be tested on both the sides exposed to the car interior and the hoistway. In reviewing the requirement for testing of the enclosure material in its end use configuration with manufacturers who have tested walls, it has been shown that wall veneers, their finishes, and adhesives have a direct bearing on the results of the test. Testing has shown minor changes of any one component, even when that component was acceptable when tested individually, have resulted in unacceptable flame spread and smoke development ratings for the car enclosure in its end use configuration.

Inquiry: 86-62

Subject: Rule 204.2a

Lacquered Metal Cab Construction

Edition: A17.1-1984 including Supplements through A17.1--1986

Question: Rule 204.2a requires cab enclosure materials to be of metal or conform to the other specified requirements for the fire integrity of the materials in their end use configuration. The presumption is that metal does not need any further specification put on it, however, metal panels are frequently covered with several coats of lacquer in order to give it a very high gloss interior finish as specified by many architects. The spirit of the Rule is that materials be evaluated in their end use configuration. Once several coats of lacquer are applied to a metal cab construction, the end use configuration really has a flame spread associated with it due to the flammability of the lacquer coating itself. Is it the intent of Rule 204.2a that as long as a panel or cab construction is metal it does not have to conform to any requirements for flame spread, even though the metal panel could be covered with such a lacquered finish described above?

Answer: It is the intent of Rule 204.2a that metal and its painted or lacquered finish does not have to meet the requirements of Rule 204.2a(l) through (5). The application of a paint or lacquer finish to metal does not significantly add to the fire exposure of the car enclosure material.

Inquiry: 87-41

Subject: Rule 204.2a
Material for Passenger Car Enclosures
Edition: A17.1-1984 including Supplements through A17.1d-1986

Question: Clarification is requested on why the determination was made that materials in their "end use configuration" must be Class B or better fire rated when tested in accordance with ASTM E 84.

- (1) In the case of solid wood materials, would it not be just as safe to have the wood treated with an approved Class A rated fire-retardant material, rather than having to test the complete piece in its "end use"? If no, please explain and cite an example.
- (2) In the case of fabric and carpet wall covering, is it correct that this material must conform to Section 1104 only? Does this material, once wrapped around a wood substrate, also have to conform to the ASTM E 84 test?

Answer: (1) No. See Inquiry 86-21.

(2) The fabric or carpeting must meet the requirements of Rule 204.2a(2). The substrate must meet the requirements of Rule 204.2a(1).

Inquiry: 10-610

Subject: Requirement 2.14.2.1, Material for Car Enclosures, Enclosure Linings, and Floor Coverings
Edition: ASME A17.1-2004/CSA B44-04

Question: Does an adhesive (which is not exposed to the car interior) that is used to secure to a substrate a Rule 2.14.2.1 compliant material (e.g., stainless steel) need to be tested to meet the requirements of "ASTM E84, UL 723, NFPA 252, or CAN/ULC-S102.2, whichever is applicable"?

Answer: No.

Inquiry: 11-1605

Subject: Requirement 2.14.2.1.1, Materials in Their End-Use Configurations
Edition: ASME A17.1-2007/CSA B44-07 through ASME A17.1a-2008/CSA B44a-08

Question: Are the materials in their "end-use configuration" as described in 2.14.2.1.1

- (a) tested as individual materials of an assembly, or
- (b) tested as completed assemblies (such as decorative panels)?

Answer:

- (a) No.
- (b) Yes.

204.2b/2.14.2.2 Openings Prohibited

Inquiry: 74-22

Subject: Rule 204.2b
Openings Prohibited in Passenger-Car Enclosures
Edition: A17.1-1971 including Supplements A17.1a-1972 and A17.1b-1973

Question: Does this Rule apply to panels which are installed over the open areas between vertical frame members of a car chassis to form an integral part of the car enclosure?

Answer: The intent of this requirement is to prohibit openings in sides of car enclosures and ones which could be readily exposed from inside the car so as to prevent a hazardous exposure to passengers riding in the car. It is not intended to apply to panels which are designed to form an integral part of the enclosure and which are secured in place by means not accessible from inside the car.

Inquiry: 78-1

Subject: Rule 204.2b
Openings Prohibited in Passenger Car Enclosures
Edition: A17.1-1971 including Supplements A17.1a-1972 through A17.1g-1976

Question: Clarification is requested regarding hinged car operating panels, especially the type that are integral with the car front panel necessitating hinging of the entire front return for maintenance purposes. Are such panels covered under the main body of the Rule as "operating or communication equipment, or are they covered under the Exception as "access panels for maintenance"?

Answer: Swing return panels are covered by the main body of Rule 204.2b, and since the swing panels contain signal and operating equipment, they are permitted. Also, attention is directed to the requirements of Rule 210.4.

Inquiry: 02-19

Subject: Rule 204.2b
Openings Prohibited
Edition: A17.1-1996

Question: (1) Are access panels used for the cleaning of car enclosure glass considered access panels for maintenance as defined in the A17.1 Code?
(2) Are access panels that meet the requirements of Rule 204.2b(6) permitted for cleaning of car enclosure glass?

Answer: (1) Access panels for cleaning glass were not specifically addressed in the A17.1 Code until the 2000 edition.
(2) This is subject to the approval of the authority having jurisdiction.

Inquiry: 02-54

Subject: Rule 204.2b,
Cleaning of Glass Edition: A17.1-1996

Question: Rule 204.2b prohibits openings or hinged panels or removable panels in a car enclosure, with six exceptions. One exception is for access panels for the maintenance of equipment. Maintenance is defined as a process for the purpose of ensuring performance in accordance with the applicable Code requirements. Since dirty glass car and hoistway panels do not in any way affect an elevator's performance and are not considered equipment, are openings or hinged panels or removable panels in a car enclosure permitted for the purpose of cleaning glass car and hoistway panels?

Answer: The use of access panels for maintenance (i.e., cleaning of glass) is subject to the approval of the authority having jurisdiction. See also Rule 1206.9.

Inquiry: 05-59

Subject: Requirement 2.14.2.2, Openings Prohibited
Edition: A17.1-2000

Question (1): Does 2.14.2.2, last sentence ("Such panels, where provided, shall conform to....") apply to (f) only, or does it apply to (a) through (f)?

Answer (1): The last paragraph applies to (f) only.

Question (2): If it applies to (a) through (f), does the Code require car-operating panels to have an electric contact required by 2.14.1.10.2(g)?

Answer (2): See answer to Question (1).

Question (3): Was it intentional that 2.14.1.10.2(g)(1) and (2) are identical?

Answer (3): No, duplication was not intended.

204.2c/2.14.2.3 Ventilation (passenger cars)

Inquiry: 74-23

Subject: Rule 204.2c

Ventilation - Passenger-Car Enclosures

Edition: A17.1-1971 including Supplements A17.la-1972 and A17.lb-1973

Question: Does this Rule require mechanically forced ventilation when vent slots are not provided at the base perimeter **of** the car?

Answer: This Rule does not require mechanical ventilation to be provided in an elevator car. This Rule requires that when car doors are installed, ventilating means be provided in the car, but such means may consist of vent openings in the enclosure.

Inquiry: 74-24

Subject: Rule 204.2c

Ventilation - Passenger-Car Enclosures

Edition: A17.1-1971 including Supplements A17.la-1972 and A17.1b-1973

Question: Does this Rule limit vent openings above the height of six (6) feet to be located in the car enclosure sides, or does it permit them to be located anywhere in the enclosure above the six (6) foot height?

Answer: This Rule does not require vent openings to be located in the sides **of** the car enclosure. It only stipulates that the vent openings shall not be located in the portion **of** the side enclosure between the height of one (1) foot and six (6) feet above the car floor, and does not exclude the top of the car for the location **of** the required vent openings.

Inquiry: 86-28

Subject: Rule 204.2c

Car Ventilation

Edition: A17.1-1984 including Supplements through A17.lb-1985

Question: Please provide an interpretation of Rule 204.2c. The Rule provides criteria for car ventilation. Is there an implied or another specific requirement for positive air supply and/or ventilation in the elevator hoistway?

Answer: No.

Inquiry: 86-54

Subject: Rule 204.2c(2)

Ventilation in Car of Observation Elevator

Edition: A17.1-1984 including Supplements through A17.lc-1986

Question: Is an elevator car considered exposed to direct sunlight if the glassed hoistway walls are constructed of reflective thermal glass or laminated glass coated with sunscreen organic coating?

Answer: Yes, the car would be considered exposed to direct sunlight.

Inquiry 87-23

Subject: Rule 204.2c(2)
Car Ventilation for Observation Elevators
Edition: A17.1-1984 including Supplements through A17.le-1987

Question: Clarification is requested on the phrase "Observation elevators with glass walls exposed to direct sunlight."

(1) See Fig. 87-23. Please advise if this Rule is applicable to (a) or (b), or both (a) and (b).

(2) Does the car direction have any bearing on determining how much glass is exposed to sunlight?

Answer: (1) The Rule is applicable to both situations.

(2) This Rule applies to cars exposed to direct sunlight and the car orientation may have an effect.

Inquiry: 87-40

Subject: Rule 204.2c(l)(b)
Car Ventilation
Edition: A17.1-1984 including Supplements through A17.ld-1986

Question: Clarification is requested on guarding ventilation slots to prevent straight-through passage. Is it the intent to have a baffle located outside the car enclosure or is it the intent to have some type of mesh screening covering the ventilation slots?

Answer: Any means which prevents straight-through passage beyond the running clearance would meet the requirement of this Rule.

Inquiry: 88-34

Subject: Rule 204.2c
Ventilation
Edition: A17.1-1987

Question: Is an observation elevator with glass walls exposed to direct sunlight required to meet both Rules 204.2c(1) and 204.2c(2)?

Answer: Yes.

Inquiry: 96-62 -also under 'enclosure car tops'

Inquiry: 96-63

Subject: Rule 204.2c(2)(b)
Emergency Ventilation
Edition: A17.1-1993 including A17.1b-1995

Question: Do emergency ventilation systems that use bulb-type thermostats to provide an emergency power source comply with the ruling calling for "continuous period of at least 1 h" when the thermostat can turn off the fan during that

period interrupting the continuous period requirement? In addition, if someone tampers with the bulb thermostat, the system may not function when required. Other manufacturers supply emergency ventilation systems that either power the normal AC fan during a power outage, or continuously power a DC fan during normal and emergency situations. Both of these styles of systems provide "emergency power for a continuous period of at least 1 h." Please interpret if systems using bulb-type thermostat (capable of turning the emergency ventilation on and off during a power outage) meet the requirements of the ruling calling for "continuous."

Answer: Thermostat control is not addressed in the A17.1 Code. The power supply must be capable of supplying 1 h of continuous operation.

Inquiry: 09-1619

Subject: Requirement 2.14.2.3.2(b)
Edition: ASME A17.1-2000/CSA B44-00

Question: Is a configuration of having one uninterruptible power supply as the source of auxiliary power for two elevator cabs in compliance with 2.14.2.3.2(b)?

Answer: No.

Inquiry: 09-1625

Subject: Requirement 2.14.2.3.2(b)
Edition: ASME A17.1-2000/CSA B44-00

Question: Does the location of an auxiliary power source capable of providing the minimum air handling capacity for a continuous period of at least 1 hr have to be between the elevator and the electrical breaker?

Answer: The requirement is that the power supply be located on the car; however, the location of the breaker is not addressed by 2.14.2.3.2(b).

204.2e/2.14.2.5, 2.14.2.6 Vision Panels – Access Panels

Inquiry: 93-74

Subject: Rule 204.2e
Vision Panels
Edition: A17.1-1990 including A17.1b-1992

Question: When vision panels are provided:

- (1) What is the meaning of total area as stated in Rule 204.2e(1)? Does total area refer to each vision panel or a sum total of all vision panels?
- (2) The Rule does not stipulate the number of vision panels allowed. What is the minimum number?
- (3) Does the minimum number refer to each door opening, door panel, and/or cab return panel?

Answer: (1) Total area refers to the sum total of all vision panels.
(2) There is no minimum number of vision panels. A vision panel is not required.
(3) See answer to (2).

204.3/2.14.3 Freight-Car Enclosure

Inquiry: 84-57

Subject: Rule 204.3
Freight Car Enclosures
Edition: A17.1-1981 including Supplement A17.1a-1982

Question: There has been a request to line the interiors of three freight cars with 1/2 in. plywood. In reviewing Rule 204.3 of the Code, we do not see where this is allowed. Rule 204.3 reads, "Enclosure shall be of metal without perforation to a height of not less than 6 ft above the floor." This is a very definite statement requiring that the enclosure be of metal. Rule 204.2, Passenger Car Enclosures, provides for the car enclosure to have wood linings. Can a wood lining be installed in a freight car?

Answer: Yes, a wood lining may be installed in a freight car.

204.4e/h/m/2.14.4.5/7/11 Passenger & Freight-Car Car Door/Gate

Inquiry: 82-22

Subject: Section 204
Car Doors and Gates
Edition: A17.1-1981 they asked a question on the 81 code

Question: Is a freight elevator, installed in a four-story factory building in New York City in 1925, required today to have gates and/or car doors and gate electric contacts? What is the minimum enclosure requirement for such an elevator?

Answer: Rules 204.1, 204.3, and 204.4 of A17.1-1981 apply only to new installations, as indicated in the Scope of the Code

Inquiry: 83-12

Subject: Rule 204.4
Roll-Up-Type Car Gates
Edition: A17.1-1981

Question: Are roll-up-type car gates prohibited for use on freight elevator cars?

Answer: The Code does not prohibit the use of roll-up type car gates for freight elevator cars.

Inquiry: 06-22

Subject: Requirements 2.5.1.5.3(a), 2.12.5, and 2.14.4.2.2
Edition: ASME A17.1-2004

Question: Do the requirements of 2.12.5 restricted opening device meet the requirements of 2.14.4.2.2, car door interlock?

Answer: No.

Inquiry: 09-09

Subject: Requirement 2.14.4.2, Door and Gate Electric Contacts and Door Interlocks
Edition: ASME A17.1-2007/CSA B44-07

Question: Requirement 2.14.4.2.2 allows 2.5.1.5 not to be met if a car door interlock is provided. Can the electric contacts and the mechanical lock be separate devices?

Answer: No. In addition, the General Design Requirements (ASME A17.1-2007/CSA B44-07) in part state:
"2.12.2.4.1 Interlock contacts shall be positively opened by the locking member or by a member connected to and mechanically operated by the locking member, and the contacts shall be maintained in the open position by the action of gravity, or by a restrained compression spring, or by both, or by means of the opening member (see 2.26.2.14)."

Inquiry: 11-718

Subject: Requirement 7.2.1, Car Enclosures and Car Doors; Requirement 7.2.1.2, Car Doors or Gates; Requirement 7.2.1.2.1; and Requirement 2.14.4.1, Door/Gate
Edition: ASME A17.1-2010/CSA B44-10

Question: The Code states the doors or gates shall be horizontal or vertical sliding. Is it correct that car swing doors or lift-up flaps are not allowed?

Answer: Car swing doors or lift-up flaps are not permitted.

Inquiry: 77-59

Subject: Rules 112.4 and 112.5
Power-Operated Door Reopening Device
Edition: A17.1-1971 including Supplements A17.1a-1972 through A17.1g-1976

Question: A question has been raised concerning the location of the safety shoe or sensitive edge, particularly of the mechanical type. How far should the shoe project beyond the car and/or hoistway door while moving, i.e., closing? A problem is generated when, for various reasons, the hoistway door and car door clutching arrangement places the hoistway door ahead of the car door. We are unable to find a specific dimension for the relationship of the doors or for the projection of the sensitive edge shoe.

Answer: Rule 204.4e-3 establishes that five and one-half (5 ½) inches from the face of the car door to the face of the hoistway door is the maximum. Further, Rule 110.4 limits the distance from the hoistway door to sill at two and one-quarter (2 ¼) inches. The doors are purposely put close together for safety reasons. In between the five and one-half (5 ½) inches, the safety edge is installed if provided. It is hard not to have it activate if a person is in the entrance way. We do not establish design distances such as was noted on the undimensioned drawing but require a reopening device as noted in Rules 112.4 and 112.5 The reopening device may be a mechanical shoe, photoelectric device, some electronic detector etc., and in order not to become a design handbook, the dimensions requested are not specified. The safety device is often selected based on door mass and speed. If the kinetic energy of the system is two and one-half (2 1/2) foot-pounds or less, no reversing device is required. For the reasons outlined, specific dimensions are not used in the Code

Inquiry: 84-3

Subject: Rules 110.4(a) and 204.4e
Distances Between Car and Hoistway Doors
Edition: A17.1-1981 including Supplement A17.1a-1982

Question: (1) Rule 110.4(a) allows 4 in. from the landing sill to the hoistway face of swinging doors while Rule 110.4(b) only allows 1/4 in. Why is there a difference based on the type of car operation?
(2) Why can the distance be 2 1/4 in. for a sliding door in lieu of the 3/4 in. requirement for a swinging door per Rule 110.4(b)?
(3) The differences between swinging and sliding doors are also evident in Rule 204.4e. Why are all of the dimensions less for swinging doors than for sliding doors?
(4) Why is the distance measured between different points for swinging doors and sliding doors as called for in Rule 204.4e(2)(a) and (b)?

Answer: (1) The purpose of Rule 110.4 is to reduce the possibility of a person or object being caught between the hoistway door and the car door or gate. The permissible distance is greater for elevators which can only be operated

from within the car [Rule 110.4(a) since the operator has control of the car and would not operate it if a person or object was in this area.

(2) The permissible distance is less for swinging doors than for sliding doors since a swinging door can close behind someone, forcing the person into the area between the two doors. This is not the case with sliding doors.

(3) The reasons for the distances are the same as in Answers (1) and (2). Also, the distance is less for car gates than for car doors since gates can deflect more than doors.

(4) The reason for these differences in the points of measurement is also based on reducing the possibility of entrapping a person between doors. With a swinging hoistway door, the largest "entrapment area" is between the hoistway door and the section of the car door farthest from it. With sliding car and hoistway doors, the leading sections are the ones which could cause entrapment, and these sections are the ones nearest to each other.

Inquiry: 87-7

Subject: Rule 204.4h

Manual Opening of Car Doors and Gates

Edition: A17.1-1984 including Supplements A17.1-1985

Question: Inquiry 85-13 states that it is permissible not to have an unlocking zone (zero inches). This inquiry goes on to say, if an unlocking zone is not provided then Rule 204.5h does not apply.

(1) If an unlocking zone is not provided (zero inches), must access to the elevator be available from outside the hoistway at all floors? Please elaborate.

(2) If access is required at all floors, must you be able to open the car door at the floor the car is at? Please elaborate.

(3) Is it permissible to require access to the top of the elevator as the only way to unlock the car door? Please elaborate.

(4) If the answer to (3) is yes, how do you open the car door with the elevator shut down at the upper terminal landing? Please elaborate.

Answer: (1) There is no requirement for access to the elevator from outside of the hoistway from all floors. See Rules 111.9 and 111.10.

(2) See Answer (1).

(3) This is not prohibited by the Code.

(4) See the ANSVASME A17.4 Guide for Emergency Evacuation of Passengers from Elevators for the proper procedure

Inquiry: 78-21(1)

Subject: Rule 204.4m

Manual Opening of Car Doors or Gates

Edition: A17.1-1971 including Supplements A17.1a-1972 through A17.1g-1976

Question: What is the rationale for requiring that the force to open the door shall not exceed seventy-five (75) pounds?

Answer: It has been found that by using the flat of a hand, the door can be moved far enough so that the fingers can hook around the door panel. The intent of this Rule is to have a finite value or force in the Code so that passengers can move the door from inside the door.

Inquiry: 78-21 (2)

Subject: Rule 204.4m

Manual Opening of Car Doors or Gates

Edition: A17.1-1971 including Supplements A17.1a-1972 through A17.1g-1976

Question: This Rule requires that car doors be arranged so as to be openable when the car is stopped and power is cut off. What "power" is intended in this requirement?

Answer: This requirement refers to the main power supply.

Inquiry: 78-37

Subject: Rule 204.4m

Manual Opening of Car Doors or Gates

Edition: A17.1-1971 including Supplements A17.la-1972 through A17.lg-1976

Question: What is the logic behind the requirement which permits the opening of a car door from inside the car when the power is off?

Answer: The intent of this Rule is to permit authorized personnel to aid in evacuating passengers from stalled cars. The A17 Guide-Evacuation of Passengers from Stalled Elevator Cars covers the proper method for emergency passenger transfer from cars.

Inquiry: 82-27

Subject: Rules 110.1 and 204.4m

Elevator Lobby

Edition: A17.1-1978 including supplements A17.la-1979 and A17.1b-1980

Question: We have a five-landing hydraulic elevator installed in a condominium building. Floor 1 has coded-type call stations. You must know the code to call the elevator. Basements 2 through 4 have normal push-type hall call buttons. On 2 through 4 the hall call stations are in the condominium unit behind the locked door, not in the 10 in. space between the car door and the condominium door. The car has normal call buttons for each floor but only 1 and basement are operable. The other floors are reached by a coded call through another station in the car. The whole system is under closed circuit TV surveillance in the lobby and it is all designed for security. The reason they have doors directly in front of the entrances is because each of the upper floors (2 through 4) is a separate living unit. While we have no disagreement regarding the need for security, it seems the doors increase the problem of entrapment and possibly violate the code for the following reasons:

(1) Rule 204.4m. It would seem that while the elevator equipment does comply with this requirement, such compliance is obviated because the locked condominium door makes opening of the elevator doors of no value.

(2) The condominium locked doors closing off the elevator entrances in effect make it a blind hoistway to the tenants except for their door, which they can unlock. While the travel of this elevator is insufficient to be considered in relation to Rule 110.1, larger buildings could be construed as not complying with 110.1.

(3) Since the tenant on 2 cannot go by choice to the upper floors and the locked doors above him present a blind hoistway, his floor in effect becomes a terminal landing to him. If this line of reasoning is valid, then the elevator does not comply with Rule 300.3b limiting the top runby to 24 in. This would also apply to the 3rd level tenant as his floor becomes a terminal landing to him.

(4) Any of the upper floor tenants could be trapped at a lower level in the event of a malfunction in a down trip. While the code does not specifically address entrapment, we feel that this unusual situation enhances the possibility. Particularly this would be true in a larger building, say 20 floors, if the top 15 floor entrances were blocked in such a manner.

Answer: The doors located in front of the **elevator entrance** are not within the Scope of the A17.1 Code. This subject is within the jurisdiction of building codes.

Inquiries: 85-13 and 85-38

Inquiry 85-13, which was published in Interpretations Book No. 7, and Inquiry 85-38, which was published in Interpretations Book No. 9, have been reconsidered. As a result of A17 Main Committee and ASME Board on Safety Codes and Standards actions, a future cut-off date has been established, after which interpretations resulting from Inquiries 85-13 and 85-38 are no longer valid for use. The cut-off date established by the Main Committee is July 16, 1988, which coincides with the effective date of the A17.1-1987 Code.

Inquiry: 85-13

Subject: Rules 111.12(c) and **204.4m**

Unlocking Zone

Edition: A17.1-1984

Question: Rule 111.12(c) states that "the unlocking zone shall extend from the landing floor level to a point no greater than 18 in. (457 mm) above or below the landing floor level."

(1) Is it the intent of this Rule to require an 18 in. unlocking zone above or below the landing floor level?

- (2) Is it the intent of this Rule to allow the unlocking zone to be from landing floor level up to 18 in. maximum above or below the landing floor level?
- (3) If the unlocking zone can be from landing floor level to a point no greater than 18 in. above or below the landing floor level, is it acceptable by this Rule to have no unlocking zone (zero inches)?
- (4) If zero inches is permissible, as noted in (3) above, must the opening of the car door and the mechanically related hoistway door comply with 204.4m?

Answer: (1) No.
(2) Yes.
(3) Yes.
(4) No.

Inquiry: 85-38

Subject Rule 204.4m
Opening of Doors Within Unlocking Zone
Edition: A17.1-1984

Question: The answer to Inquiry 85-13, question (4), is very confusing. Please explain why the car door does not have to comply with 204.4m which states: "... when the car is stopped within the unlocking zone and power to the door or gate operator is cut off..."

Unlocking zone is defined as extending from a point below a landing to a point 18 in. above a landing; therefore, the maximum force of 75 lb to open the car door is required at 0 in. also.

Answer: The Code permits an unlocking zone but does not require it. The answer to Inquiry 85-13 is reaffirmed.

Inquiry: 06-11

Subject: Requirements 2.12.5 and 2.14.5.7
Edition: ASME A17.1-2000 **door restriction**

Question (1): Would an electronic device with battery backup that meets the requirements of 2.12.5, installed on the car door and car door header, be considered part of the door operator?

Answer (1): Requirement 2.14.5.7 is written in performance language. See the definition for "door or gate power operator." See also Inquiry 06-02.

Question (2): The restrictor device needs to disengage (when inside the unlocking zone) before the door(s) may be opened. If power to the elevator and battery backup power to the device is removed the device would not permit the door(s) to be opened as required by 2.14.5.7. Is this permitted?

Answer (2): The conditions described in the question, in which backup power to the device is purposely removed are not addressed in 2.14.5.7 and does not comply with 8.6.1.6.1. The Code does not preclude the use of a battery backup (see Inquiry 04-43). See also Inquiries 00-30 and 06-02.

204.5/2.14.5 Passenger Car Doors

Inquiry: 90-53

Subject: Rule 110.11e, Section 204
Clearance Between Car Door and Header and Jambs
Edition: A17.1-1987

Question: (1) Is there a Rule for the maximum clearance permissible between car door panels and car jambs and headers? (2) Does Rule 110.11e(2) also cover car door panels?

Answer: (1) No. (2) No. **see 204.5g**

Inquiry: 96-20

Subject: Rule 204.5
Passenger Car Doors and Gates
Edition: A17.1-1993 including A17.1a-1994

Question: We have been under the assumption that all new passenger elevators were required to be provided with solid enclosures, including the cab entrance. Rule 204.5b states horizontal sliding doors, or vertically sliding doors or gates shall be provided for passenger elevators. Rule 204.5e states there shall be no openings in doors, except where vision panels are used.

- (1) It appears from the above, our assumption is correct, however, gates are not referenced. Is our assumption correct?
- (2) Is it also the intent that if a vertically sliding gate is used on a passenger elevator, there shall be no openings?

Answer: (1) Yes.
(2) Yes.

inquiry: 74-25

Subject: Rule 204.5a
Number **of** Car Entrances Permitted
Edition: A17.1-1971 including Supplements A17.1a-1972 and A17.1b-1973

Question: Does **any** Rule in the Code permit three (3) entrances in **a** freight car?

Answer: Rule 204.5a, which is the only Rule in the Code that restricts the number **of** allowable entrances in a car, applies to passenger elevators only.

Inquiry: 81-37

Subject: Rule 204.5a
Number of Entrances Permitted
Edition: A17.1-1978 including Supplements A17.1a-1979 and A17.1b-1980

Question: In a new railroad station the architect proposes a 3-door elevator, to accommodate the flow of baggage handling and of passengers. The elevator car is 7 ft x 11 ft-9 in. with a 4 ft-6 in. door at either end of the 7 ft dimension so a motorized cart can enter one door at lobby level and leave the car at platform level without backing out. The passenger entrance or exit is at one end of the 11 ft-9 in. dimension at lobby level; at the platform level it is at the same opening as the freight. It is proposed that the freight entrance be keyed and interlocked so that the passenger door can be used, as in any elevator installation, when freight is not being transported. Therefore, we require an interpretation of Rule 204.5a which states "There shall be not more than two (2) entrances to the car."

Answer: If the elevators are used to carry passengers, they must meet all of the requirements for passenger elevators. These requirements include Rule 204.5a which specifically prohibits more than two entrances.

Inquiry: 88-30

Subject: Rules 110.2a, 204.6d, and 204.5c
Doors and Gates for Freight Elevators Authorized to Carry Passengers
Edition: A17.1-1987

Question: Rule 110.2d(1) states: "Entrances shall be one of the following types ... (e) hand or power-operated vertical slide which slide up to open." Rule 204.6d(2) refers to Rule 204.5c which states that doors and gates must be power operated. Which Rule should be used, i.e., for freight elevators authorized to carry passengers, must the doors be power operated or is manual operation acceptable?

Answer: All three Rules apply. Rule 110.2a (1)(e) applies to hoistway doors and permits them to be hand operated. Rules 204.6d(2) and 204.5c apply to car doors and require them to be power operated.

Inquiry: 93-49

Subject: Rules 110.2a(1)(d), 112.6a(1)(a), 204.5b, 204.5c, 207.4
Vertically Sliding Biparting Doors on Passenger Elevators
Edition: A17.1-1987

Question: Do the above referenced Rules permit the use of vertically sliding biparting doors on passenger elevators or do they all require reference to Rule 207.4 which applies only to freight elevators authorized to carry passengers?

Answer: Vertically sliding biparting doors are permitted for passenger elevators by Rule 110.2a(1)(d)

Inquiry: 97-58

Subject: Rule 204.5g
Door Panels
Edition: A17.1-1996

Question: Do the requirements of Rule 204.5g apply to both the car and hoistway side of a car door panel or is it intended to apply only to the side of the door panel to which a passenger is exposed; the car side?

Answer: The intent is to apply only to the side of the door that is exposed to the passengers.

204.6/2.14.6 Freight Elevator Car Doors/Gates

Inquiry: 77-42

Subject: Rule 204.6b
Dimensions of Doors and Gates - Freight Elevator Cars
Edition: A17.1-1971 including Supplements A17.1a-1972 through A17.19-1976Subject:

Question: The elevator in question is a freight elevator which has power-operated hoistway doors and car gates. There are four (4) inch long legs on the car gate which has a soft rubber reopening device mounted on the bottom of the gate. When the car gate is in the down position, there is no effort needed to put one's foot under the rubber reopening device to a height of three and three-quarter inches between the floor and the bottom member of the gate.

Rule 204.6b states "Gates when fully closed against the jamb or sill shall extend from a point not more than one (1) inch above the floor to a point at least six (6) feet above the floor."

Rule 112.5 permits a reopening device on this gate. Does this described gate with a reopening device meet the Code requirements?

Answer: A safety edge is required by Rule 112.36 which also requires sequence operation and limited gate closing speed. The purpose of these Rules is to protect the passengers from a closing gate. The safety shoe must be contacted while the gate is closing in order to cause a reopening, and the shoe is made soft to prevent injury to someone who might be in the path.

At any time while closing, the gate will reverse if it is touched. Once the gate is fully closed, the hoistway door closed and locked, and the car is running, the safety edge is deactivated since it then has no function. If someone deliberately pushes the toes of his foot against the safety edge and manages to bend the edge, he will have to extend the toes several inches before contacting the hoistway wall or door. The intent of Rule 204.6b is to be certain that the complete entrance is substantially covered.

Inquiry 88-30 also located under 'passenger car doors'

Inquiry: 91-34

Subject: Rule 204.6
Horizontal Type Sliding Doors
Edition: A17.1-1990

Question: Rule 110.2 addresses both passenger elevators and freight elevators and permits the use of horizontal type sliding hoistway doors for both. Rule 204.6, however, when addressing freight elevator car doors and gates for Class B and C duty, limits the type to vertical sliding type. This Rule references Rule 207.4 when passengers are carried on freight elevators which in turn references Rule 110.2(a) that permits the horizontally sliding type car door. There seems to be some contradiction in the above Rules. May horizontal sliding car doors or gates be used on Class B and C freight elevators? If this is not permitted, please explain the rationale for same. If it is permitted, I would suggest that the requirements be clarified.

Answer: Rule 204.6a only prohibits horizontally sliding gates. Horizontally sliding doors are permitted.

204.7/2.14.7 Illumination and lighting fixtures

Inquiry: 75-23

Subject: Rule 204.7a
Required Illumination of Cars and Lighting Fixtures
Edition: A17.1-1971 including Supplements A17.1a-1972 through A17.1~1974

Question: Does Rule 204.7a-3 require electric battery-operated emergency lights to be provided in an elevator car in addition to a car lighting means which is connected to an emergency power generating source?

Answer: If the car lighting is connected to an emergency power supply system and conforms to the requirements of Rule 204.7a-3 -a and -b, an additional lighting means powered by a battery would not be required by this Rule.

Inquiry: 76-41

Subject: Rule 204.7a
Lights and Illumination Required
Edition: A17.1-1971 including Supplements A17.1a-1972 through A17.1f-1975

Question: Does the minimum illumination required to be provided at the landing edge of the car platform include that furnished by the light source in the hall, in addition to that supplied by the car light source?

Answer: The intent of this Rule is to measure the illumination without contribution of any hallway lighting source.

Inquiry: 77-1

Subject: Rule 204.7
Illumination of Cars
Edition: A17.1-1971 including Supplements A17.1a-1972 through A17.1g-1976

Question: Is it required that the battery pack emergency lighting system be located on top of the elevator car in all cases to comply with Rule 204.7a?

Answer: It is required that the battery pack emergency lighting be on the car and not necessarily on top.

Inquiry: 77-8

Subject: Rule 204.7a
Illumination of Cars
Edition: A17.1-1971 including Supplements A17.la-1972 through A17.19-1976

Question: Does Rule 204.7a require that the emergency light be self-powered, such as with a battery pack?

Answer: Yes.

Inquiry: 77-57

Subject: Rule 204.7d
Protection of Light Bulbs and Tubes in Elevator Cars
Edition: A17.1-1971 including Supplements A17.la-1972 through A17.lg-1976

Question: Would exposed lamps, installed in recessed areas and of the size shown in Figures 77-57(1) and 77-57(2), for a suspended ceiling in an elevator car be considered to be suitably protected to comply with 204.7d?

Answer: The car lighting installation described and illustrated in Figures 77-57(1) and 77-57(2) does not meet the protection requirement of this Rule. To comply with the intent of this Rule, protective means are required to be provided.

Inquiry: 78-10 (3)

Subject: Rule 204.7d
Protection of Light Bulbs and Tubes
Edition: A17.1-1971 including Supplements A17.la-1972 through A17.19-1976

Question: What does Rule 204.7d mean by suitably protected against accidental breakage? Would it require a wire screen? Are there any specific indications regarding protection, or is it left to the imagination of persons concerned?

Answer: This Rule requires that protective means be provided not only to protect light bulbs and tubes, but most importantly, to protect the passengers; however, what constitutes suitable protection is left to the discretion of the enforcing authorities.

Inquiry: 78-39

Subject: Rule 204.7a
Illumination of Cars
Edition: A17.1-1971 including Supplements A17.la-1972 through A17.1g-1976

Question: What constitutes the emergency lighting required by this Rule for elevators in hospitals? Hospital generators are tested at least monthly and the installation of battery powered lights would seem to be "backup."

Answer: This Rule requires emergency lighting such as a battery pack light unit on the car. The term "emergency system" as used in this Rule is interpreted as a system located on the car. The intent of this Rule is to ensure continued illumination in the car regardless of the source of electric power interruption, for example, loss of traveling cable, blown fuse, etc.

Inquiry: 78-43

Subject: Rule 204.7d
Protection of Light Bulbs and Tubes
Edition: A17.1-1971 including Supplements A17.la-1972 through A17.lg-1976

Question: Do lamps of the design having a special rubber-like outside coating which provides resistance to breakage meet the intent of Rule 204.74 for use in elevator cars?

Answer: A lamp of the described design is not considered a suitable protection against accidental breakage to meet the requirements of Rule 204.7d.

Inquiry: 84-103

Subject: Rule 204.7a(1)
Car Lighting
Edition: A17.1-1981

Question: (1) What is the intent of Rule 204.7a(1)? (2) Both lamps of a dual element fixture, which are the elevators' sole light source, cease to emit light if one is removed or becomes inoperative; the emergency car lighting remains off. Is this example in accordance with the intent of the Rule?

Answer. (1) The intent of the requirement is to ensure that there will still be illumination from one lamp if the other one goes out. (2) No.

Inquiry: 85-24

Subject: Rules 204.7b and 204.7c
Car Lighting
Edition: A17.1-1984

Question: The lighting system in an elevator operates automatically from the machine room control panel. When a car does not receive a demand dispatch at a dispatching landing for a time period of 30 min, the power conversion unit disconnects and shuts down the car lighting automatically, after it has opened car and landing doors. When a demand dispatch is received from the supervisory system, the car automatically restarts and reenergizes the car light circuit. Is use of this type of control and location of control circuitry in accordance with Rule 204.7c, or must this type of control meet a different standard?

Answer: We assume the question is in reference to Rule 204.7b and not Rule 204.7c. The requirements of Rule 204.7b apply to car light control switches when provided. Rule 110.3(b), however, prohibits the car being parked with the doors open.

Inquiry: 87-25

Subject: Rule 204.7
Car Illumination
Edition: A17.1-1984 including Supplements through A17.1d-1986

Question: It has come to my attention that some elevator companies are shutting off the car lights after the car has been parked for a predetermined time. It would seem to me that under some circumstances a person could be trapped with the lights out. Does the Code permit automatic shutdown of the car lights?

Answer: Automatic shutdown of car lights is not presently covered by the A17.1 Code.

Inquiry: 87-54

Subject: Rule 204.7a(2)(a)
Car Lighting
Edition: A17.1-1984 including Supplements through A17.1e-1987

Question: The answer to Inquiry 87-25, along with the proposed technical revision TR 85-68 concerning the turning off of car lights appear to further the inference that cars with a car lighting supply failure are not permitted to run in normal operation. That is, the emergency lighting supply is used only to ensure a safe means of egress and reassure persons trapped in a stopped car when there is a loss of building power. This inference is made from the fact that the illumination requirements for the emergency lighting system, Rule 204.7a(3)(a), do not comply with Rule 204.7a(2)(a), and the fact that emergency system's life is of only 4hr duration. Therefore, a car lighting supply failure in excess of this period can also negate the emergency lighting and permit the car to run with no lighting.

(1) Is it the intent of the code that cars without code level lighting as specified in Rule 204.7a(2)(a) not be allowed to run in:

(a) Normal service?

(b) Phase II firefighters' service?

(2) If the answer to (1)(a) and/or (b) is "yes," should not the Code require a measure to prevent continued car operation with a car lighting supply failure?

Answer: (1) No.

(2) No.

(3) See Answers (1) and (2). Rule 204.7a(1) requires at least two lamps, the intent of which is to ensure that there will still be illumination from one lamp if the other one goes out. See Inquiry 84-103. If one lamp burns out, it could very well mean that the lighting level specified by Rule 204.7a(2)(a) will not be complied with. It is assumed that burned out lamps are replaced by regular maintenance before all lamps are burned out.

Inquiry: 93-21

Subject: Rule 204.7a

Illumination of Cars

Edition: A17.1-1990

Question: In Inquiry 78-39, you indicated that battery pack lighting must be provided in order to comply with this Rule, due to the possibility of loss of the traveling cable or blown fuse. The blown fuse could also occur on the car in the charging unit and, therefore, this also would remove the battery pack from the supply. The National Electrical Code, in Section 517-42(g) requires the cab lighting circuit to be connected to the standby power source. Therefore, the batteries are on a continuous charge either from the generator or from the normal power source. The testing that is performed by either the elevator technician or elevator inspector does not cycle the battery sufficiently to discharge it, and we find that a lot of batteries have simply deteriorated due to this continuous charging. Our Company services elevators in about ¾ of the State of Wisconsin, we have noticed that we replaced 128 batteries in 1990, 144 batteries in 1991, and 160 batteries in 1992. In each one of these cases, if the normal power failed, there would be no illumination in the car nor would the alarm bell function. Since the telephone is an accepted means of emergency communication which also relies on the traveling cable, we believe that a review of Inquiry 78-39 is warranted. We ask that on those installations where the elevator cab lighting circuit is connected to the alternate power source as required by Section 517 of the Electrical Code, the battery pack on the elevator car be omitted. Since the alternate power source, we believe, is more reliable than the battery pack on the elevators. We have also found that in most cases where the battery is under continuous charge, the life of the battery is greatly reduced from its rated life expectancy.

Answer: No. The requirements of Rule 204.7a(3) are in addition to the Emergency Systems required by other codes and standards such as the Model Building Codes (SBC, UBC, BOCA) and the Health Care Facility Standards (ANSI/NFPA 99). To clarify this point, ASME A17.1b-1992, Rules 204.7a(3) and 204.2(2)(b) now use the term "auxiliary" in lieu of "standby (emergency)" lighting power, so as not to confuse it with the NEC definitions and requirements for "emergency" and "standby" power systems.

Inquiry: 94-11

Subject: Rule 204.7d

Protection of Light Bulbs and Tubes

Edition: A17.1-1990

Question: We would appreciate it very much if you would kindly obtain clarification for us on the requirement for the protection of light bulbs. It was our belief that this paragraph applied to the light bulbs and tubes within the elevator car and did not apply to the light on top of the car or underneath the car if provided. Since the light on top of the car is

covered under Rule 204.7a(4), it appears that provisions must be made to contain the broken glass in case the light bulb on top of the car is broken.

Answer: It is the intent of this requirement to apply to light bulbs and tubes within the car only.

Inquiry: 96-18

Subject: Rule 204.7d
Protection of Light Bulbs and Tubes
Edition: A17.1-1993 including A17.1a-1994

Question: Is it permissible to have bare, unguarded light bulbs on the car-top? Per Inquiry 94-11, the fixture does not need to contain broken glass, but does the fixture need to guard against accidental contact? It appears that Inquiry 94-11 has left us with no rule covering guarding of the top-of-car light.

Answer: The requirements of Rule 204.7d only apply to protection of light bulbs and tubes within the car (see A17.1b-1995). However, ANSI/NFPA 70-1996, Section 110-17(b) requires that "in locations where electric equipment is likely to be exposed to physical damage, enclosures or guards shall be so arranged and of such strength as to prevent such damage." "Equipment" is a general term used in the NEC (see Article 100) and includes "material, fittings, devices, appliances, fixtures, apparatus, and the like used as a part of or in connection with, an electrical installation." Rules 102.1 and 210.4(a) require compliance with ANSI/NFPA 70.

Inquiry: 97-47

Subject: Rule 204.7a(3)(a)
Illumination and Outlets Required
Edition: A17.1-1996

Question: ASME A17.1-1996, Rule 204.7a(3)(a) states "...The intensity of illumination 4 ft (1219 mm) above the car floor and approximately 1 ft (305 mm) in front of the car-operating device shall be not less than 0.2ftc (2.2 lx)...." If a passenger elevator has two car-operating panels, (either one on each side of single car opening or one at both a front and rear opening), does this Rule require the illumination to be 0.2ftc in front of each car-operating panel?

Answer: No. The intent of the Code is to require general illumination in the car and to provide illumination at a car operating panel which has devices the occupant will use during a normal lighting failure.

Inquiry: 02-05

Subject: Requirement 2.14.7.1
Illumination and Outlets Required
Edition: A17.1-2000

Question: Requirement 2.14.7.1.3 states, "Passenger Elevators shall be provided with auxiliary lighting on each elevator conforming to the following." In previous editions of A17.1, wording in Rule 204.7a(3) required the "power supply" for the auxiliary lighting to be "on each elevator." This meant that a battery power supply of some sort had to be on the elevator.

- (1) Is it the intent of A17.1-2000 to not require the power source for the auxiliary lighting to be on the elevator?
- (2) Would other forms of power supply for the auxiliary lighting such as building emergency generators that provide emergency power to the car lighting branch circuit, be acceptable in lieu of a power supply "on the elevator" as long as the other conditions of 2.14.7.1.3 are met?
- (3) If so, this seems to conflict with Article 620-22 (A) of NFPA-70 (NEC 1999 and 2002), which requires that the branch circuit for the car lighting feed the "auxiliary lighting power source."

Answer: (1) The Code is written in performance language. The location of the power source is not specified.
(2) You must meet the requirement to turn on auxiliary lights when the "normal car lighting power fails" (e.g., car light circuit failure, travel cable failure)
(3) This question is outside of the scope of A17.1.

Inquiry: 03-50

Subject: Requirements 2.14.7.2.1 and 8.1, Security
Edition: A17.1-2000 including A17.1a-2002

Question: It is assumed that 8.1.1(a) is referring to devices or locks that are not part of or related to the elevator system.
(a) A common method of controlling the lights and fan in an elevator car has been to include both the lights and fan in the same key switch, with the positions marked as off-light-light and fan. Since the fan is not mentioned in Section 8.1 (except possibly under Rule 8.1.5 Group 4 Other), and since the keys in Group 2 are not prohibited from being part of a master key system, can the combination light fan switch still be used?
(b) If separate light and fan switches are used, can the same key control both, with the fan being considered part of the master key system?

Answer: (a) Yes. (b) Yes.

Inquiry: 04-20

Subject: Requirement 2.14.7.1.3, Car Lighting
Edition: A17.1-2000

Background: It is our understanding that the purpose of auxiliary lighting is to enable the elevator passengers to see the emergency functions contained on a car operating panel ("ALARM" button, "STOP" button, two-way communication device) in the event of a power failure. Since these items are generally located at 35 in. and below, the light intensity may be enough to pass the Code requirement but not aid the passenger in an emergency situation.

Question (1): What exactly is the auxiliary lighting meant to illuminate?

Answer (1): The auxiliary lighting is meant to provide general illumination in the car by providing not less than 2lx at the specified point of measurement.

Question (2): If the alarm button is located at 35 in., should the illumination be tested at that height instead of 48 in.?

Answer (2): No. See response to Question (1).

Inquiry: 06-33

Subject: Requirement 2.14.7.1
Edition: ASME A17.1-2004 including through A17.1a~2005 and ASME A17.1S-2005

Background: Requirement 2.14.7.1.1 states, "Not less than two lamps shall be provided." Requirement 2.14.7.1.3 states, "Each elevator shall be provided with auxiliary lighting having its power source located on the car. It shall conform to the following: (a) Not less than two lamps of approximately equal wattage shall be used."

Question (1): Does this mean that at least four lamps are required, or can the two lamps used to comply with 2.14.7.1.1 be the same two lamps used to comply with 2.14.7.1.3(e)?

Answer (1): At least two lamps are required.

Question (2): If only two lamps are required, does a system where one lamp is illuminated when the car and lamp are operating normally, and the other lamp illuminates when the first lamp fails comply with 2.14.7.1.1?

Answer (2): No. Requirement 2.14.7.1.1 states that "not less than two lamps shall be provided."

Question (3): If only two lamps are required, does a system where one lamp is illuminated when the car and lamp are operating normally, and the other lamp illuminates when the power fails comply with 2.14.7.1.3(e)?

Answer (3): No. Requirement 2.14.7.1.3(e) states that "not less than two lamps . . . shall be used."

Inquiry: 11-59

Subject Requirement 2.14.7, Illumination of Cars and Lighting Fixtures
ASME A17.1-2007/CSA B44-07

Background: Requirement 2.14.7 of ASME A17.1-2007/CSA B44-07 contains provisions for car lighting, car lighting fixtures, and light control switches. I have several questions based on various portions of 2.14.7 that I would like to have answered. These questions are as follows

Question (1): Are switches (dimmer switches) that allow the level of illumination inside an elevator car to be adjusted prohibited? If the answer to this question is yes, then please disregard the remaining questions.

Answer (1): No

Question (2): Does 2.14.7.2.1 require these dimmer switches to be located in or adjacent to the car operating devices?

Answer (2): The switch must be located in or adjacent to the operating device in the car. The location of the dimmer is not addressed by the ASME A17.1 /CSA B44 Code.

Question (3): If the answer to Question (2) is no, would these dimmer switches be permitted to be located

(a) on the car top?

(b) inside the car?

(c) inside the machine room/space or control room/space?

(d) anywhere someone wants as long as compliance with 2.14.7.1.2 is provided for the specific type of elevator?

Answer (3): See response to Question (2).

Question (4): Does 2.14.7 require these dimmer switches to be configured such that the level of illumination could not be adjusted below the minimum level required of the specific type of elevator?

Answer (4): The configuration requirements of a dimmer switch are not addressed by the ASME A17.1/CSA B44 Code. However, if you reduce the level of illumination below that required by 2.14.7.1.2, it is not in compliance with the Code, except as permitted by 2.14.7.2.2.

Inquiry: 12-1751

Subject: Requirement 2.14.7.1.3(e)

Edition: ASME A17.1-2007/CSA B44-07

Question: Does a single LED fixture comprising two or more LEDs in series (therefore, failure would result in all the LEDs going out) meet the requirement for "Not less than two lamps of approximately equal wattage shall be used"?

Answer: No. The purpose of the second lamp is to provide illumination if the first lamp fails. See ASME A17.1-2010/CSA B44-10, 2.14.7.1.3(f).

Contributing Interpretations

Inquiry: 79-2

Subject: Rule 211.1-a-3

Emergency Power Supply for Audible Signaling Device

Edition: A17.1-1978

Question: Does the alarm bell derive its power from the power source required by Rule 204.7a-3?

Answer: Rule 211.1-a-3 requires that the audible signaling device be supplied with emergency power within ten **(10)** seconds if the normal power fails. This may be done by using the same emergency power source that supplies power for the emergency lighting in the car.

Inquiry: 87-39

Subject: Rule 210.2(e)

Emergency Stop Switch

Edition: A17.1-1984 including Supplements through A17.1d-1986

Question: The wording "perforated enclosure" in this Rule is very misleading and needs an interpretation. An enclosure is required on all elevators as indicated by Rule 204.la. Rule 204.lb requires that the enclosure shall be securely fastened to the car platform. Openings in the enclosure are allowed for ventilation by Rule 204.2b. These openings are certainly perforations in the enclosure. From the above it would appear that if there were ventilation openings in the car, an emergency stop switch would be required. I do not believe this was the original intent.

Answer: Car enclosure openings required for ventilation are clearly defined and have to be guarded to prevent straight-through passage per Rule 204.2c(1)(b) and (c).

Inquiry: 77-43

Subject: Rule 110.2b
Types of Entrances for Freight Elevators
Edition: A17.1-1971 including Supplements A17.la-1972 through A17.lg-1976

Question: Are power-operated, roll-up type hoistway doors for freight elevators prohibited?

Answer: There are no Rules which prohibit roll-up type hoistway doors. However, the following conditions must be met. Roll-up type hoistway doors shall:

- (1) Have the required fire-resistance rating
- (2) Be setback the proper distance from the edge of the sill (Rule 110.4b);
- (3) Be properly interlocked
- (4) Support two hundred and fifty (250) pounds over a four (4) inch by four (4) inch area as required by swing and slide doors (Rule 110.13c-5
- (5) Should be counter balanced (Rule 204.4h-5)
- (6) Should be openable manually if power fails.

Inquiry: 04-39

Subject: Requirement 5.3.1.8, Light in Car
Edition: A17.1-2004

Background: Requirement 5.3.1.8.3, Light in Car, requires a light in the car. It does not contain any language regarding the glass used in the light fixtures. Requirement 5.3.1.8.1, Car Enclosure, requires that glass used in elevator cars comply with 2.14.1.8. Requirement 2.14.1.8, Glass in Elevator Cars, provides requirements for panels of glass in enclosures and glass used to line walls or ceilings. It does not contain any language for glass in light fixtures. Requirement 2.14.7.3, Car Lighting Devices, requires glass used for lighting fixtures in electric elevators to comply with 2.14.1.8. Requirements 5.3.1.8.3 and 2.14.1.8 do not specifically cover glass in lighting fixtures and Section 5.3 does not refer to 2.14.7.3, which specifically provides requirements for glass in lighting fixtures.

Question: Are there requirements for the glass used in lighting fixtures on private residence elevators?

Answer: No.

Inquiry: 07-31

Subject: Requirement 2.14.1.7.1, Railing Requirement on Top of Cars
Edition: A17.1-2000 through A17.1-2007

Background: The requirement reads: "A standard railing conforming to 2.10.2 shall be provided on the outside perimeter of the car top on all sides where the perpendicular distance between the edges of the car top and the adjacent hoistway enclosure exceeds 300 mm (12 in.) horizontal clearance.

Question: In a hoistway enclosure with multiple cars, does the requirement reference to "the perpendicular distance between the edges of the car top and the adjacent hoistway enclosure" include the wall that is over an adjacent car, in some cases as much as 20 ft away from the edge of the car top and therefore require a standard handrail because it exceeds 300 mm (12 in.)?

Answer: Yes.

Inquiry: 08-19

Subject: Requirements 2.5.1.5.1 and 2.5.1.5.3
Edition: ASME A17.1-2000

Background: Requirement 2.5.1.5.1 states The clearance between the edge of the car platform, sill and the hoistway enclosure or fascia plate for the full width of the clear hoistway door opening shall be not more than (a) for vertically sliding doors, 190 mm (7.5 in.); and (b) for other doors, 125 mm (5 in.). Requirement 2.5.1.5.3(a) states, "The clearance is not limited on passenger elevators, provided that a car-door interlock conforming to 2.14.4.2.3 is provided to prevent a door from being opened unless the car is within the unlocking zone (see 2.14.4.2) . . ."

Question: Does a passenger elevator with a car-door electric contact and a car-door restricting device meet the exception requirements put forth by 2.5.1.5.3?

Answer: No. The combination of a car-door electric contact and a car-door restricting device is not a car-door interlock.

Inquiry: 08-20

Subject: Requirement 2.5.1.5.3
Edition: ASME A17.1-2000

Background: Requirement 2.5.1.5.3(a) states, "The clearance is not limited on passenger elevators, provided that a car-door interlock conforming to 2.14.4.2.3 is provided to prevent a door from, being opened unless the car is within the unlocking zone (see 2.14.4.2)."

Question: The referenced 2.14.4.2.3 defines criteria for car-door and gate electric contacts. Is this a mistaken reference? Should 2.5.1.5.3 refer to 2.14.4.2.2, which defines criteria for car-door interlocks?

Answer: Yes, the intent is to use a car-door interlock. The reference has been corrected in A17.1b-2003.

Residential

Inquiry: 95-22

Subject: Part V
Emergency Lighting
Edition: A17.1-1990 including A17.1b-1992

Question: It is my understanding that Rule 501.5 requires a light in the elevator car and Rule 509.1 describes emergency signals which are required. Are there no requirements for residential elevators to have emergency battery-operated power lights or bells?

Answer: There are no requirements in Part V for battery-operated lights and bells.

Alterations

Inquiry: 90-35

Subject: 204.lb, 204.lh, 1003.3, 1202.5(c)
Alterations to Elevator Cars
Edition: A17.1-1987

Question: (1) New panels and/or a drop ceiling, replacing the old ones, are added to traction elevators. The increase in weight does not exceed the 5% as noted in Rule 1003.3(d). Is a full load safety test required to assure compliance with Rule 204.lb?

- (2) Is a safety test required at all to assure compliance with Rule 204.lb?
(3) If a test is not required, how do you assure compliance with Rule 204.lb? Please explain.
(4) Mirrors are installed in an existing elevator as outlined in Rule 204.lh. Is a full load safety test required to assure compliance with Rule 204.lh? If not, how do you assure compliance? Please explain. (5) Must mirrors provided in elevators exceeding 1 ft², be laminated and meet the requirements for laminated glass in ANSI Z97.1?

Answer: (1) No.

(2) This is not addressed by the Code.

(3) This is not addressed by the Code.

(4) This is not addressed by the Code.

(5) Yes.

Inquiry: 92-33

Subject: Rule 1202.5

Alteration to Cars

Edition: A17.1-1990

Question: if plastic laminate is installed over an existing wood car interior, does Rule 1202.5 require conformance with Rule 204.2a(1)? *material use requirements

Answer: Yes.

Inquiry: 96-25

Subject: Rules 2501.5(b), 2501.15, and 2502.4

Manual Operation/Car-Top Exit

Edition: A17.1-1993 including A17.lb-1995

Question: (1) On a hydraulic LU/LA elevator (either roped or direct acting) is the manual lowering valve (required by Rule 303.4d3 considered a form of manual operation?

(2) On a hydraulic LU/LA elevator with a manual lowering valve, is a car top exit required?

Answer: (1) Yes.

Answer: (2) No.