SECTION 14 20 00 - ELEVATORS, DUMBWAITERS, AND CHAIR LIFTS

1.1 GENERAL

A. Basis-of-Design Product: Subject to compliance with requirements, provide a complete conveying system by one of the following:

1. Kone Corporation (formerly Montgomery-Kone).
2. Schindler USA & Canada.
3. ThyssenKrupp Elevator.
4. Otis Elevator.

B. Conveying Systems shall use non-proprietary equipment, software, hardware, and maintenance tools to be acceptable, such that a Service Agreement may be entered into with other than the initial system manufacturer/installer.

C. All installations shall be ADA compliant and shall be equipped with a factory installed ADA compliant automatic dialing telephone.

D. Provide a one (1) year Warranty from the date of Substantial Completion of the Project.

1. Early turnover of conveying equipment for the Contractor's use is acceptable, so long as the Contractor acquires and pays for all additional warranty extension time. The Owner shall continue to have a one (1) year warranty from the date of Substantial Completion of the Project.

E. Upon completion of the Work, and as a condition of its acceptance, and at no additional cost to the Owner, deliver to the Owner requisite copies of the following:

1. Executed copies of Warranty.
2. Project Record Documents.
3. Maintenance Manuals: Bound manual as well as electronic software for elevator equipment, with operating and maintenance instructions, parts listing, recommended parts inventory listing, purchase source listing for major and critical components, emergency instructions, and similar information.
4. Provide to the Owner all special service tools and computer interface hardware, including operating software.
5. Provide to the Owner complete as built wiring diagrams.
6. Provide to the Case Western Reserve University elevator maintenance contractor:

    a. One set of elevator as built shop drawings.
    b. One set of elevator repair manuals.
    c. Service tools.
    d. Computer software for equipment maintenance.
    e. Employee training.

1.2 QUALITY ASSURANCE

A. Installer Qualifications: The Elevator Contractor shall have a minimum of five (5) years of successful experience in the type of work specified.

B. Regulatory Requirements: All work shall comply with current governing local codes, laws, ordinances, and regulations.

C. Standards: Except as modified by local codes, the work shall comply with the current edition of the following standards.

1. ANSI A117.1: American National Standards Institute.
2. ASME A17: American Society of Mechanical Engineers.
3. ASTM: American Society for Testing Materials.
4. AWS: American Welding Society.
5. IEEE: Institute of Electronic and Electrical Engineers.
6. NEII: National Elevator Industry Inc.
7. NEC: National Electrical Code.
8. NEMA: National Electrical Manufacturing Association.
9. OSHA: Occupational Safety and Health Administration.
10. UL: Underwriters Laboratories.

D. Special attention shall be paid to ASME A17 requirements pertaining to the following:

1. Pit Lighting.
2. Shaft Ventilation.
3. Fire Rated Doors.
4. Electrical Panel Locations.

1.3 TESTS

A. Upon substantial completion, test entire system in accordance with ASME A17.

B. State of Ohio Elevator Inspection Violation Reference List is included in as Attachment 01.

1.4 HOISTWAY VENTILATION

A. If Hoistway requires ventilation, it is recommended to use a cupola style such as Greenheck PEV-400 Penthouse Elevator Vent or approved equal. This assures protection of the Hoisway from rain water and melting snow.

1.5

A. Any tools or equipment required for diagnostics, troubleshooting, or setting parameters that are not commercially available from other sources and required to provide proper maintenance and operation of the diagnostic equipment shall be provided to the Owner as a part of the work.

B. A back-up copy of the final software shall be provided to the Owner for their use.

1.6 Flooring –

Nora flooring product:

Nora – Norament Arago 5173 – Color: Fervor
https://www.nora.com/united-states/en/products/norament-arago

END OF SECTION

Elevator Inspection Violation Reference List for
NEW *Passenger, Freight and LULA Elevators*

Pre-Inspection Checklist

for New Installations of
Passenger, Freight and LULA Elevators

This form is to be completed and submitted to the Elevator Section Scheduling Coordinator at the time the request for an inspection is submitted. The checklist is required for all new installations of Passenger, Freight and LULA elevators.

See the ASME A17.1 2004S edition for the full text of the violations listed. In addition, see the referenced documents of NFPA #70 2082 for electrical code violations, the Ohio Building Code for fire rating and venting requirements, and NFPA 13 and 72 for sprinklers and firefighter emergency operations. See the following link for a list of common violations:
http://www.com.state.oh.us/dico/docs/elev_PreInspectionCheckList.pdf

Please Read Before Signing:

- **A state of Ohio Field Inspector must inspect an elevator, and a temporary or permanent certificate of operation issued before an elevator may be used for any purpose.**
- **No person or company including a contractor, owner, tenant or Elevator Company may use the elevator to haul construction materials, furniture or persons not directly related to the installation and construction of the elevator unless permitted by a temporary certificate of operation issued by the Chief Elevator Inspector.**
- **An inspection will not be scheduled unless this form is included with your request to schedule an inspection.**
- **The unit will not be scheduled unless all potential violation items are completed prior to the inspection. The elevator inspection section does not perform "punch-list" type inspections or provide consulting services.**

Provide State Elevator ID Number:_____

Name of Elevator Company:_____

Phone Number:_____ Fax Number:_____

Certified by: Print Name: _____ **Signature:** _____

Date: _____

Additional Notes and Remarks

_____

_____

_____

Ohio Elevator Records Management System
Support File List
Category: ACC TEST VIOLATIONS

Category	Code	Description	Discontinue Flag	Discontinue Date
N-	1	ACCESS/ROOF-HOISTWY ---Access to and from the roof and machine room shall be by the means of a stairway. When access is over a sloping roof or a roof with vertical obstructions, a walkway shall be provided. Access shall be safe and convenient. It is prohibited to allow access to a machine room to non-authorized personnel. Doors, which allow passage through a machine room to gain access to a roof area or other building equipment, shall be prohibited. See ASME A17.1 Item 2.7.3.	NO	
N-	2	NON-ELEVATOR RELATED ---All non-elevator-related piping and equipment shall be prohibited from entering or passing through the machine room per ASME A17.1 Item 2.8.1 and Item 2.8.2.	NO	
N-	3	ELECTRICAL DISCONNECT ---Electrical disconnects shall be lockable in the open position and properly located within sight of the elevator devices as outlined in NFPA 70 Rule 620-51. All disconnects shall be properly fused or utilize a non-self resetting circuit breaker. A lockable disconnect with overcurrent protection shall be located in the machine room serving the car lighting per NFPA 70 620-22 and 620-53. Advisory: The preferred location for electrical disconnects is near the jamb side of the machine room door in order to be readily accessible to qualified personnel.	NO	
N-	4	RECEPTACLES ---Receptacles in the machine room and machinery spaces shall have GFCI protection either by a GFCI-type receptacle or a GFCI-type circuit breaker per NFPA 70 Rule 620-85. Warning signs shall be posted when there is power from more than one source per NFPA 70 Rule 620-52-see also 620-91 & 620-51.	NO	
N-	5	ELECTRICAL CLEARANCE ---All electrical clearances shall be provided and maintained in front of the controller and disconnect at all times. Advisory: It is interpreted that machine room doors that swing into the electrical clearance area endanger worker safety and are prohibited and they shall meet the provisions of NFPA 70 Rule 620-5.	NO	
N-	6	MACHINE ROOM LIGHT ---Permanent electric light shall be provided in all machine rooms and machine spaces. The illumination shall be not less than 19ftc at the floor per ASME A17.1 sec. 2.7.9.	NO	
N-	7	ELECEQUIP/CONTR/MACH ---All electrical equipment, controllers, and machines shall be properly installed and grounded per NFPA 70 Rule 620-81; 82; 83 and ASME A17.1 Item 2.8.2.3.	NO	
N-	8	ELECTRICAL CONDUIT ---All electrical conduit shall be properly secured and routed in a workman like manner. See NFPA 70 Rule 620-21.	NO	
N-	9	ABC TYPE FIRE EXTING ---A properly tested and maintained ABC type fire extinguisher of adequate size shall be provided in the machine room per ASME A17.1 Item 8.6.1.6.5. The fire extinguisher in machine room is to be of sufficient size to allow workers within the room to exit safely in the case of a fire within the machine room occurs during their maintenance procedures. The extinguisher is not meant for usage for returning to the room to fight the fire. The extinguisher is to be located in an area of the room that will allow easy access to the extinguisher by workers. It is recommended that when	NO	

possible, the extinguisher be located near the jamb side of the elevator room entrance door.

Category	Code	Description	Discontinue Flag	Discontinue Date
N-	10	CONDUCTORS ---All conductors used in raceways and for hoistway door interlock wiring shall be flame-retardant per NFPA 70 Rule 620-11/Table 400.4.	NO	
N-	11	DOOR SELF-CLOSE/LOCK ---The machine room door shall be self-closing and self-locking. The door shall always require a key to be opened from the outside, but can always be opened from the inside without a key per ASME A17.1 Item 2.7.3.4.1.	NO	
N-	12	CLEAR HEADROOM ---The clear headroom in a machine room shall be not less than 7 feet. This shall be measured from any overhead obstruction per ASME A17.1 Item 2.7.4.1. LULA elevator headroom clearances shall be not less than 79" per ASME A17.1 Item 5.2.7.8	NO	
N-	13	MACHINE ROOM VENTED ---Machine rooms shall be provided with natural or mechanical means to keep the ambient air temperature and humidity in the range specified by the elevator equipment manufacturer to ensure safe and normal operation of the elevator. The temperature and humidity range shall be permanently posted in the machine room per ASME A17.1 Item 2.7.5.2.	NO	
N-	14	COMMUNICATION --Where required, a permanent means of communication shall be provide between the elevator car and remote machine/control room per ASME A17.1 Item 2.7.8.4.	NO	
N-	15	SPRINKLERS ---Sprinklers may serve a machine room via a branch line, when the machine room is located above the roof of the building, risers, return pipes, and branch lines for the machine room sprinkler(s) shall be permitted to be located in the hoistway between the top floor and the machine room, but they shall not pass through the machine room per ASME A17.1 Item 2.8.2.3.1.	NO	
N-	16	SHUNT TRIP OPERATION ---Power shall be removed from the main line disconnect prior to the application of the sprinkler, commonly referred to as "shunt-trip operation." See ASME A17.1 Item 2.8.2 and NFPA 70 section 620; and NFPA 72 and 13.	NO	
N-	17	EXPOSED EQUIPMENT ---Exposed equipment shall be guarded as required per ASME A17.1 Item 2.10.	NO	
N-	18	PIT LADDER ---For pits greater than 35 inches in depth, a pit ladder shall be provided with a handrail at least 48 inches above the landing, the rungs are to have at least 4 ½ inches of toe clearance; and be not less than 16 inches in width (with 9 inches permitted under certain circumstances); and have a 12 inch separation between rungs. The ladder shall be non-combustible and within 39 inches from the egress door per ASME A17.1 Item 2.2.4.2.	NO	
N-	19	PIT REFUGE AREA	NO	

---A pit refuge area of not less than 24 inches to 42 inches in height (depending on available width) is required when the car is on a fully compressed buffer per ASME A17.1 Item 2.4.1. LULA elevators shall conform to ASME A17.1 Item 5.2.1.4.

Category	Code	Description	Discontinue Flag	Discontinue Date
N-	20	PIT STOP SWITCH ---A pit stop switch shall be located within reach of this access floor, adjacent to the pit ladder and located about 18" above the landing in order to be accessible before stepping onto the pit ladder per ASME A17.1 Item 2.2.6.2..	NO	
N-	21	2ND PIT STOP SWITCH ---A second pit stop switch shall be provided when the pit exceeds 67" in depth and located approximately 47" from the pit floor per ASME A17.1 Rule 2.2.6.2.	NO	
N-	22	LIGHT FOR PIT ---A light for the pit shall be located so as to provide 10 fc lighting for the area. The switch shall be near the stop switch. The light shall be guarded per ASME A17.1 Section 2.2.5.	NO	
N-	23	REQUIRED PIT LIGHT ---The required pit lighting shall not be connected to the load side of the GFCI per NFPA 70 620-24.	NO	
N-	24	GFCI TYPE RECEPTACLE ---A GFCI type receptacle shall be provided in pits and on car tops per NFPA 70 Rule 620-85.	NO	
N-	25	SPRINKLER IN HOISTWY ---When a sprinkler is present in the hoistway or pit area, all electrical conduit shall be enclosed in NEMA-4 and wiring shall be identified for use in wet locations per ASME A17.1 Item 2.8.2.3.4.	NO	
N-	26	RECEPTACLES ---Receptacles for sump pumps shall conform to NFPA 70 620-85.	NO	
N-	27	DRAINS ---When fire fighter's service is present, drains shall be provided for all passenger, freight and LULA elevators. When a drain cannot be provided, a permanently installed sump pump shall be provided. The sump hole in the pit area shall be guarded with non-combustible material. All sump pumps are to discharge the fluid outside of the hoistway. See ASME A17.1 Item 2.2.2.4. The purpose of the sump pump is to prevent the accumulation of water in the pit area originating from the interior of the building due to fire fighting operations and to allow for the elevator to remain in servcie for operation under Phase II firefighter servcie. See ASME A17.1 Item 8.6.4.7.4 and published ASME A17.1 interpretations and the Ohio Plumbing Code. Oil sensing devices may be present on the sump pump, but electrical supply and auxiliary equipment must be located outside of the elevator hoistway.	NO	
N-	28	OFFSETS OR LEDGES ---All offsets or ledges within the hoistway greater than 4 inches shall be tapered to not less than 75 degrees per ASME A17.1 Item 2.1.6.2.	NO	
N-	29	SPRINKLER IN HOISTWY ---Sprinklers provided in the hoistway, (if required by the local jurisdiction), shall not interfere with the required clearances on top of the elevator car or the moving equipment within the hoistway per ASME A17.1 Section 2.8.2.	NO	
N-	30	BRANCH LINES ---Only branch lines shall be permitted to serve the hoistway, and the line may not serve more than one level per ASME A17.1 Item 2.8.2.1.2.	NO	

Category	Code	Description	Discontinue Flag	Discontinue Date
N-	31	MAIN LINE DISCONNECT ---Power shall be removed from the main line disconnect prior to the application of the sprinkler. The device shall be located within 2 feet of each sprinkler head. Smoke detectors shall not be used to activate shunt trip devices. See ASME A17.1 Item 2.8.2.3.2 and NFPA 72.	NO	
N-	32	SPRINKLER HEADS ---Sprinkler heads located in the pit area shall not be located more than 2 feet above the pit floor per NFPA 13 Item 4.13.5. or ASME A 17.1 item 2.8.2.3.2 .Shunt trip devices are not required for pit sprinkler heads if the location of the sprinkler head is in conformance with the previous statement.	NO	
N-	33	CLEARANCES ---Top and bottom car and counterweight runby and vertical clearances shall meet the requirements of ASME A17.1 Section 2.4 for traction/drum elevators and ASME A17.1 Section 3.4 for hydraulic elevators.	NO	
N-	34	OVERHEAD CLEARANCE ---Overhead working clearances shall be provided in the upper end of the hoistway. When the elevator is at extreme travel, a minimum of 43 inch refuge area is required for traction/drum elevators when the counterweight is on a fully compressed buffer per ASME A17.1 Item 2.4.12.1, and a 43-inch refuge area is to be provided for hydraulic elevators (when on the stop ring) per ASME A17.1 Item 3.4.7.	NO	
N-	35	HORIZONTAL/REFUGE ---In any area outside the refuge space where the vertical clearance between the top of the car enclosure and the overhead structure shall be clearly marked. The marking shall consist of alternating 4" diagonal red and white stripes. In addition, a sign with the words "Danger Low Clearance" shall be prominently posted on the crosshead and be visible from the entrance. The sign shall be permanently and readily legible per ASME A17.1 Item 2.4.12.2.	NO	
N-	36	MINIMUM/CROSSHEAD ---A minimum of 24 inches shall be provided over the crosshead for counterweighted elevators. Beams are not to interfere with these clearances per ASME A17.1 Item 2.4.6.	NO	
N-	37	6" CLEARANCE/CARTOP ---A minimum of 6 inches of clearance shall remain between the top of any auxiliary devices on the car-top and the overhead structure when the car is at extreme upward travel (strike point) per ASME A17.1 Item 2.4.11/2.4.6.2(c) for traction/drum elevators and ASME A17.1 Item 3.4.5 for hydraulic elevators. In addition, hydraulic elevator crossheads shall have a minimum of 12 inches of vertical clearance to the horizontal plane as described by the lowest point of the overhead structure.	NO	
N-	38	LULA/BOTTOM CLEARANC ---Bottom car clearances for LULA elevators shall conform to ASME A17.1 Item 5.2.1.4 or meet the alternative bottom car clearances per ASME A17.1 Item 5.2.1.4.2.	NO	
N-	39	LULA/TOP CLEARANCE ---Car top clearances for LULA elevators shall conform to ASME A17.1 Item 5.2.1.4.3. Alternative car top clearances per ASME A17.1 Item1 5.2.1.4.4 shall be applied only to LULAs installed in existing buildings.	NO	
N-	40	HORIZONTAL CLEARANCE ---Horizontal clearances shall meet ASME A17.1 Section 2.5 for both traction/drum and hydraulic elevators. LULA elevators shall conform to ASME A17.1 Item 5.2.1.5 for traction/drum units and Item 5.2.2.1 for hydraulic LULA units.	NO	

N-	41	ESCAPE HATCH ---Car top escape hatches shall be provided for LULA elevators when manual operation is not provided as described in ASME A17.1 Item 5.2.1.28 per ASME A17.1 Item 5.2.1.14(b).	NO
N-	42	2-WAY/24-HR COMMUNIC ---Two-way 24-hour voice communication shall be provided from the elevator car to a location that can take action per ASME A17.1 Item 2.27.1.1.3 and previous ASME interpretations. Advisory: Refer to the "ADAAG" guidelines for additional requirements for "hands free" telephone operation.	NO
N-	43	SMOKE DETECTORS ---Fire-service initiating devices (smoke detectors) shall be properly located in the enclosed elevator lobbies and machine rooms. Initiating devices are required in the hoistway when a sprinkler head is located in the hoistway. See ASME A17.1 Section 2.27.3.2 & NFPA 72 for specific requirements for wiring methods and detector placement.	NO
N-	44	SMOKE ACTIVATION ---Smoke and not heat shall activate the fire-service initiating device unless approved by the jurisdiction having authority per NFPA 72; ASME A17.1 2.27.3.1.4 and ASME A17.1 published interpretations.	NO
N-	45	FIRE ALARM/VISUAL ---Either the fire alarm initiating device in the machine room or hoistway shall cause the visual signal in the car to illuminate intermittently per ASME A17.1 Item 2.27.3.2.6.	NO
N-	46	FIREFIGHTERSERV/LULA ---Firefighters service is not required for LULA elevators, but if provided, the installation shall meet the full provisions of ASME A17.1 Item 5.2.1.27.	NO
N-	47	HOISTWAY GLASS ---All glass used in construction of the hoistway enclosure shall be laminated. The laminated glass shall be marked with the proper ASME Z97.1 laminated glass etching on each and every panel per ASME A17.1 Item 2.1.1.2.2 (d)	NO
N-	48	RESTRICTED OPENDEVIC ---All hoistway/car door restricted opening devices shall be installed per ASME A17.1 Item 2.12.5.	NO
N-	49	MATERIALS/FLAME ---Materials used on floor and walls of an elevator car enclosure shall adhere to the flame spread and smoke density requirement of ASME A17.1 Item 2.14.2.1. The materials shall be certified and tested by the manufacturer for their end use configuration including adhesives.	NO
N-	50	GLASS IN CAB ---All glass used in the elevator cab shall meet the marking requirements of ASME A17.1 Item 2.14.1.8.	NO
N-	51	ILLUMINATION/LANDING ---Illumination at the landing sill shall be not less than 10 ftc per ASME A17.1 Item 2.11.10.2.	NO

N-	52	HOISTWAY DOOR GUIDES ---Hoistway door guides and safety retainers shall conform to ASME A17.1 Item 2.11.11.6	NO
N-	53	ROPE SOCKET/RET CLIP ---Wedge rope sockets and retaining clips shall be installed per ASME A17.1 Item 2.20.9.5.	NO
N-	54	ANTI-ROTATION DEVICE ---Anti-rotation devices shall be provided to prevent the rotation of the suspension ropes without restricting their movement horizontally or vertically per ASME A17.1 Item 2.20.9.8.	NO
N-	55	CONTROLLERS/UL/CSA ---All elevator controllers shall be "UL" or "CSA" labeled as to conforming to the requirements of ASME A17.5 per ASME A17.1 Item 2.26.4 or Item 3.26 for hydraulics and Item 5.2.2 for LULA Elevators.	NO
N-	56	DOOR INTERLOCKS ---All hoistway door interlocks shall be labeled as to conforming with the testing requirements of ASME A17.1 Item 8.3.3 per ASME A17.1 Item 2.12.4.3 or Item 3.12 for hydraulics, or item 5.3.1.7 for LULA elevators.	NO
N-	57	CODE DATA PLATES ---Code data plates shall be installed per ASME A17.1 Item 8.9.	NO
N-	58	FIRE SERVICE INSTRUC ---Fire service instructions shall be installed per ASME A17.1 Item 2.27.7	NO
N-	59	ID NUMBERING ---Emergency identification numbering shall be provided when more than one elevator is in a hoistway or machine room. The following items shall be numbered: the driving machine; the mainline disconnect switch; the crosshead; and the car operating panel per ASME A17.1 Item 2.29.1.	NO
N-	60	HOISTWAY NUMBERS ---Hoistway door floor numbers visible from within the hoistway shall be provided per ASME A17.1 Item 2.29.2, or Item 3.1 for hydraulic elevators and Item 5.2.1.1 for LULA elevators.	NO
N-	61	ROPE DATA TAGS ---Rope data tags shall be installed per ASME A17.1 Rules 2.20.2.1 on the crosshead and 2.20.2.2 on the wire rope fastenings, and Item 3.20 for roped hydraulics and Item 5.2.1.20 for LULA elevators.	NO
N-	62	PRESSURES POSTING ---Full-load working pressures for hydraulic elevators shall be permanently posted per ASME A17.1 Item 3.24.1.1, and Item 5.2.2.12 for LULA elevators.	NO
N-	63	PUMP RELIEF VALVES ---Pump relief valves shall be sealed after being set to the correct pressure per ASME A17.1 Item 3.19.4.2.1(c)	NO

N-	64	CAR CAPACITY PLATE ---In-car capacity plate shall be installed per ASME A17.1 Item 2.16.3, or Item 3.16.3 and Item 5.2.1.16.2 for LULA elevators.	NO
N-	65	FREIGHT LOADING SIGN ---Freight elevators shall be provided with a sign specifying the type of loading for which the elevator is designed per ASME A17.1 Item 2.16.5.	NO
N-	66	NO PASSENGERS SIGN ---Freight elevators not permitted to carry passengers shall have a sign reading: "This is not a passenger elevator. No persons other than the operator and freight handlers are permitted to ride on this elevator" per ASME A17.1 Item 2.16.5.	NO
N-	67	MAINLINE DISCONNECT ---For hydraulic elevators, a sign shall be placed on the mainline disconnect reading "Keep switch closed except during maintenance, repair and inspection" per ASME A17.1 Item 3.26.3.1.	NO
N-	68	CROSSHEAD DATA TAGS ---Crosshead data tags shall be installed per ASME A17.1 Item 2.16.3.1 or 5.2.1.16.2.	NO
N-	69	GOVERNOR ROPE TAGS ---Governor rope data tags shall be installed per ASME A17.1 Item 2.18.5.3.	NO
N-	70	TRIPPING SPEEDS TAGS ---The tags indicating the governor tripping speeds shall be installed per ASME A17.1 Item 2.18.9.	NO
N-	71	CLEARANCE SIGNS ---For LULA elevators, signs shall be posted in the pit or overhead whenever there is insufficient bottom car clearance or insufficient car top clearance per ASME A17.1 Item 5.2.1.4.2 and Item 5.2.1.4.4.	NO
N-	72	FIREFIGHTER SERVICE ---Firefighter Service shall function properly per ASME A17.1 Item 2.27.3.	NO
N-	73	TOP OF CAR RAILING ---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 12" Horizontal cleaarnce per ASME A17.1 Item 2.14.1.7.1	NO
N-	74	PIT ACCESS DOOR ---Pit access doors shall be provided when pit floor is more than 120" and conform to the the requirements of Item 2.2.4 per ASME A17.1.	NO
N-	75	MAINTENANCE CLEARANCE ---A clear path and a clearance of not less than 18" shall be provided in the directions required for maintenance access per ASME A17.1 Item 2.7.2.2.	NO

N-	76	BUILDING WITHOUT FIRE ALARMS SYSTEMS ---In facilities without a building fire alarm system, these smoke detectors shall be connected to a dedicated fire alarm system control unit that shall be designated as "elevator recall control and supervisory panel".The "elevator recall control and supervisory panel" shall receive input and monitor the smoke detectors within the dedicated fire alarm system per NFPA 72 - 2002 section 6.15.3.	NO
N-	77	CONTROL CIRCUIT FOR SHUNT TRIPS ---Control circuits to shutdown elevator power shall be monitored for presence of operating voltage. Loss of voltage to the control circuit for the disconnecting means shall cause a supervisory signal to be indicated at the control unit and required remote annunciators per NFPA 72 section 6.15.4.4 and NFPA 70 section 620.	NO
N-	86	Hoistway Access Switch --Hoistway access switches shall be provided and function accordingly. Per A17.1 Sec.2.12.7	NO
N-	87	Closing Data Plate --A data plate shall be attached to the power door operator or crosshead containing minimum closing times. Per A17.1 Sec.2.13.4.2.4	NO
N-	88	Machine Room Source --A separate branch circuit shall supply the machine room or control room/machine space or control space lighting/receptacle(s). Per NFPA 70 620.23	NO
N-	89	Machine Room Lighting/GFCI --Machine rooms shall be properly lighted so the electrical control devices and machinery are well illuminated. The light switch shall be located in the machine room and shall be placed near the machine room door jamb per ASME A17.1 Sec. 2.7.5.1. The required lighting shall not be connected to the load side of a GFCI per NFPA 70 620-23.	NO
N-	93	Top car Inspection --Operating devices for inspection operation shall be provided on the top of car and labled accordingly. Per A17.1 Sec. 2.26.1.4	NO
N-	95	Em. Exit Elec. Contact --All exit covers shall be provided with a electrical device, positively opened, cannot close accidentally, manually reset, and protected against mechanical damage. Per A17.1 Sec. 2.14.1.5	NO
N-	96	Top Car Light/Recept. --Each elevator shall be provided with an electric light and outlet on top of the car. Per A17.1 Sec. 2.14.7.1.4	NO

Category	Code	Description	Discontinue Flag	Discontinue Date
N1	30	Light source --A separate branch circuit shall supply the car lights, receptacle(s), auxiliary lighting power source and ventilation on each elevator car. Per NFPA 70 620.22	NO	
N1	31	Headroom in Car --The minimum clear headroom of 80 inches above the car floor shall be provided. Per A17.1 Sec. 2.14.2.4	NO	
N1	35	Displays --Visual displays shall have edges beveled or rounded and shall not project greater than 1.5 inches. Per A17.1 Sec. 2.14.1.9.1.(d)	NO	
N1	36	In Car Venting --Natural ventilation in the car shall be guarded to prevent straight-through passage. Per A17.1 Sec. 2.14.2.3.1	NO	
N1	37	Symbols --Symbols shall be as specified in Table 2.26.12.1 or required wording. Per A17.1 Sec. 2.26.12	NO	
N1	38	Stop --An emergency stop switch or in car stop switch where required shall function accordingly. Per A1`7.1 Sec. 2.14.1.4.4/2.14.1.4.5	NO	
N1	39	In Car Lights --The minimum illumination shall not be less than 5ftc for passenger/2.5 ftc for freight and shall not be less than 2 lamps. Per A17.1 Sec. 2.14.7	NO	
N1	40	Guard Lights --Light bulb and tubes within the car shall be equipped with guards. Per A17.1 Sec.2.14.7.4	NO	
N1	41	Emergency Lights --Each elevator shall be provided with auxiliary lighting of .2 ftc. Per A17.1 Sec. 2.14.7.	NO	
N1	42	ALARM ON AN EMERGENCY STOP SWITCH --When an emergency stop switch is provided an audible signal device shall be provided. Per A17.1 Sec. 2.27.1.2	NO	
N1	43	Emergency Alarm --The audible signal device shall function for at least 1 hr. Per A17.1 Sec.2.27.1.1.5	NO	
N1	45	Reopening device --Reopening devices for power operated car doors and gates shall function accordingly. Per A17.1 Sec. 2.13.5	NO	
N1	46	Door Force --The force necessary to prevent closing of hoistway door from rest shall not exceed 30lbf. Per A17.1 Sec.2.13.4.2.3	NO	
N1	66	Phase I Label --Phase I switch shall be labeled "Fire Recall" with position marked "Reset", "Off", and "On". Per A17.1 Sec. 2.27.3.1.1b	NO	

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N1	67	Phase I Illuminate --All "Fire Recall" switches shall be provided with an illuminated visual signal to indicate when Phase I emergency recall operation is in effect. Per A17.1 Sec. 2.27.3.1.5	NO	
N1	68	Visual Signal --The visual signal shall remain activated until the car is restored to automatic operation. Per A17.1 Sec. 2.27.3.1.6(h)	NO	
N1	69	Phase II Panel Layout --All buttons and switches shall be readily accessible, located not more than 72 inches above the floor and shall be arranged as shown in Fig.2.27.3.3.7 Per A17.1 Sec.2.27.3.3.7	NO	
N1	70	Fed From Sign --The disconnecting means shall be provided with a sign to Identify the location of the supply side over current protective device. Per NFPA 70 620.54/ 620.53/620.51(D)	NO	
N1	71	Parts of Controller Sign --Warning sign for multiple disconnecting means shall be clearly legible and shall read; "Warning parts of the controller are not de-energized by this switch." Per NFPA 70 620.52(B)	NO	
N1	72	Drive Sheave Data tag --Drive sheaves and drums shall be permanently and legibly marked to state the minimum sheave and drum diameter. Per A17.1 Sec. 2.24.2.4	NO	
N1	73	Drive Machine Brake Marking Plate --The brake setting and method of measurement shall be permanently and legibly marked on the drive machine. Per A17.1 Sec. 2.24.8.5	NO	
N1	74	Ascending car --Ascending car over speed protection shall be provided and function accordingly A17.1 Sec. 2.19	NO	
N1	75	Unintentional Movement --Protection shall be provided with a device to prevent unintended car movement away from the landing and shall function accordingly. A17.1 Sec.2.19.2	NO	
N1	76	Emergency Brake --When required for protection against ascending car over speed. An emergency brake shall be provided and function accordingly. A17.1 Sec. 2.19.3	NO	
N1	77	Emergency Brake/Rope Gripper Marking Pla --The Emergency Brake/ Rope Gripper shall be provided with a marking plate. Per A17.1 Sec.2.19.3.3	NO	
N1	78	Checking Liquid Level --Tanks shall be provided with means for checking liquid level. Per /A17.1 Sec. 3.24.3.3 (Dip Stick or magnet)	NO	

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N1	79	Pressure Switch --When cylinders are installed with the top of the cylinder above the top of the storage tank. A pressure switch shall be provided. Per A17.1 Sec.3.26.8	NO	
N1	80	Low Oil Protection --A means shall be provided to render the elevator on normal operation inoperative if for any reason the liquid level in the tank falls below the permissible minimum. Per A17.1 Sec. 3.26.9	NO	
N1	81	Battery Lowering --Where the auxiliary power supply provided solely for the purpose of lowering the car shall conform according to A17.1 Sec. 3.26.10	NO	
N1	82	Emergency Power/Standby --Where an emergency or standby power system is provided to operate an elevator in the event of normal power failure shall conform to Sec. 2.27. Per A17.1 Sec. 2.27.2	NO	
N1	83	Pit Source --A separate branch circuit shall supply the hoistway pit lighting and receptacle(s). Per NFPA 620.24 (A)	NO	
N1	84	Sump Cover --Sumps and sump pumps in pits where provided, shall be covered. The cover shall be secured and level with the pit floor. Per A17.1 Sec. 2.2.2.6	NO	
N1	85	Buffer Plates --Buffer shall be provided with marking plates per A17.1 Sec.2.22.3.3/ 2.22.4.11	NO	
N1	86	Max Runby Sign --Shall provide a data plate with "MAXIMUM DESIGN COUNTERWEIGHT RUNBY" Per A17.1 Sec. 2.4.5	NO	
N1	87	Platform Guard --The entrance of the platform of passenger and freight elevators shall be provided with a smooth metal guard securely braced Per A17.1 Sec. 2.15.9	NO	
N1	88	Safety Bulkhead --Clearance shall be provided at the bottom of the cylinder that the bottom of the plunger will not strike the safety bulkhead of the cylinder when the car is resting on its fully compressed buffer. Per A17.1 Sec. 3.18.3.3	NO	
N1	89	5 Gallon Collection --A means shall be provided to collect for removal any oil leakage from the cylinder head seals or packing gland. Per A17.1 Sec. 3.18.3.7	NO	
N1	90	Buried Cylinder --Cylinders buried in ground shall be protected from corrosion due to galvanic or electrolytic action, saltwater or other underground conditions. Per A17.1 Sec. 3.18.3.8	NO	
N1	91	Hyd. Pipe Identification --A marking shall be applied to accessible piping that is located outside the elevator machine room or hoistway "Elevator Hydraulic Line". Per A17.1 Sec. 3.19.2.5	NO	

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N1	92	Over speed Valve --Over speed valve shall be installed and mounted and sealed accordingly to A17.1 Sec. 3.19.4.7.3	NO	