

Comparison 2011, 2014 and 2017 ASME A18.1						
	2011	2014	2017	General Comments	Comments Specific to SPS 318	
	PART 2 - VERTICAL PLATFORM LIFTS					
1	<p>2.1.1.2 The runway entrance shall be guarded at the upper landing by a door of unperforated construction not wider than the platform plus 25 mm (1 in.). The door shall be self-closing and at least 1 100 mm (42 in.) high. The runway side of the door shall present a smooth surface. The door shall be located not more than 75 mm (3 in.) from the platform sill.</p>	<p>(14) 2.1.1.2 The runway entrance shall be guarded at the upper landing by a door of unperforated construction not wider than the platform plus 25 mm (1 in.). The door shall be self-closing and at least 1 100 mm (42 in.) high. The runway side of the door and sill shall present a smooth surface. The lift side of the door and sill shall present a smooth surface located not closer than 10 mm (0.375 in.) nor more than 20 mm (0.75 in.) from the access edge of the platform floor.</p>		Added wording to include the runway door sill, not just the door, in the requirement to present a smooth surface toward the lift platform.	Not a significant change.	
2	<p>2.1.1.7 Platform sides not used for entrance or exit shall be guarded by enclosure walls of smooth construction to a height of at least 1 100 mm (42 in.) above the platform floor with no openings other than those necessary for operation. Openings necessary for operation shall reject a ball 12 mm (0.5 in.) in diameter. A grab rail extending the full length of either sidewall shall be provided at a height of 850 mm (34 in.) to 1 000 mm (38 in.). The running clearance between platform enclosure walls that extend less than 2 000 mm (79 in.) above the platform floor and the runway enclosure walls, vertical face of the machine housing, or other rigid surfaces shall be not less than 50 mm (2 in.). The running clearance between platform enclosure walls that extend a minimum of 2 000 mm (79 in.) above the platform floor and runway walls or other surfaces shall be not less than 20 mm (0.75 in.). Running clearance between enclosure wall ends and the entrance and exit side of the runway shall be not less than 10 mm (0.375 in.) nor more than 75 mm (3 in.).</p>		<p>2.1.1.7 A minimum of one platform side not used for entrance or exit shall be guarded by a platform enclosure wall of smooth construction to a height of at least 1 100 mm (42 in.) above the platform floor with no openings other than those necessary for operation. Openings necessary for operation shall reject a ball 12 mm (0.5 in.) in diameter. A grab rail extending the length of at least one sidewall shall be provided at a height of 850 mm (34 in.) to 1 000 mm (38 in.). The running clearance between platform enclosure walls that extend less than 2 000 mm (79 in.) above the platform floor and the runway enclosure walls, vertical face of the machine housing, or other rigid surfaces shall be not less than 50 mm (2 in.). The running clearance between platform enclosure wall(s) that extend a minimum of 2 000 mm (79 in.) above the platform floor and runway walls or other surfaces shall be not less than 20 mm (0.75 in.). Running clearance between enclosure wall ends and the entrance and exit side of the runway shall be not less than 10 mm (0.375 in.) nor more than 75 mm (3 in.).</p>	(17) Added allowance for a VPL to have just one platform enclosure side instead of two. This is not meant to prohibit the common VPL with two platform enclosure sides.		
3	NONE		<p>2.1.1.7.1 Where the running clearance between the platform enclosure wall that extends less than 2 000 mm (79 in.) above the platform floor and the runway enclosure wall is less than 50 mm (2 in.), edge protection is required at the top edge of the platform enclosure wall. When edge protection is used, the clearance between the platform enclosure wall and vertical face of the machine housing or other surfaces shall be not less than 10 mm (0.375 in.) nor more than 20 mm (0.75 in.). Edge protection required shall be permitted to use mechanically operated, magnetically operated, optical, or static-type switches. When activated, the switch shall cause the electric power to be removed from the driving-machine motor and brake, if provided. When activated, the platform shall stop within 12 mm (0.5 in.) in the "UP" direction only.</p>	(17) Added requirement for the remaining enclosure side to have edge protection on the top, most likely 42" above the platform floor.		
4	<p>2.1.2.2 The runway entrance shall be guarded at the uppermost landing by a door of unperforated construction not wider than the entrance to the platform plus 25 mm (1 in.). The door shall be self-closing and at least 1 100 mm (42 in.) high. The door shall be located not more than 75 mm (3 in.) from the platform sill.</p>	<p>(14) 2.1.2.2 The runway entrance shall be guarded at the uppermost landing by a door of unperforated construction not wider than the entrance to the platform plus 25 mm (1 in.). The door shall be self-closing and at least 1 100 mm (42 in.) high. The lift side of the door and sill shall present a smooth surface located not closer than 10 mm (0.375 in.) nor more than 20 mm (0.75 in.) from the access edge of the platform floor.</p>		Moved upper landing door from 3" away to 3/8" to 3/4" away from platform for <i>partial-runway-enclosure</i> VPLs.	Previously understood to be required. No changed needed.	

5	<p>2.1.3.1 The runway entrance shall be guarded at the upper landing by a door of unperforated construction. The door shall be self-closing, at least 1 100 mm (42 in.) high, and withstand, without permanent deformation, a force of 550 N (125 lbf) applied on a 100 mm (4 in.) by 100 mm (4 in.) area. The door shall be located not more than 75 mm (3 in.) from the platform sill.</p>	<p>(14) 2.1.3.1 The runway entrance shall be guarded at the upper landing by a door of unperforated construction. The door shall be self-closing, at least 1 100 mm (42 in.) high, and withstand, without permanent deformation, a force of 550 N (125 lbf) applied on a 100 mm (4 in.) by 100 mm (4 in.) area. The lift side of the door and sill shall present a smooth surface located not closer than 10 mm (0.375 in.) nor more than 20 mm (0.75 in.) from the access edge of the platform floor.</p>		<p>Moved upper landing door from 3" away to 3/8" to 3/4" away from platform for runway-enclosure-not-provided VPLs.</p>	<p>Previously understood to be required. No changed needed.</p>
6	<p>2.1.4.1 The runway entrance shall be guarded at the uppermost landing by a door of unperforated construction. The door shall be self-closing or power-operated, at a height not less than 900 mm (36 in.), and withstand, without permanent deformation, a force of 550 N (125 lbf) applied on any 100 mm (4 in.) by 100 mm (4 in.) area. The door shall be located not more than 75 mm (3 in.) from the platform sill.</p>	<p>(14) 2.1.4.1 The runway entrance shall be guarded at the uppermost landing by a door of unperforated construction. The door shall be self-closing or power operated, at a height not less than 900 mm (36 in.), and withstand, without permanent deformation, a force of 550 N (125 lbf) applied on any 100 mm (4 in.) by 100 mm (4 in.) area. The lift side of the door and sill shall present a smooth surface located not closer than 10 mm (0.375 in.) nor more than 20 mm (0.75 in.) from the access edge of the platform floor.</p>		<p>Moved upper landing door from 3" away to 3/8" to 3/4" away from platform for courtroom type VPLs.</p>	<p>Previously understood to be required. No changed needed.</p>
7	<p>2.1.5 Pipes in Runway Vicinity. Pipes conveying steam, gas, or liquids that, if discharged into the runway, would endanger life or health shall not be permitted.</p>		<p>2.1.5 Relocatable Lifts (17)</p> <p>2.1.5.1 Relocatable lifts shall comply with section 2 and with paras. 2.1.5.2 through 2.1.5.6.</p> <p>2.1.5.2 Level Surface. A device shall be provided to prevent the lift from operating if out of level greater than 1:20 (5%) in any direction.</p> <p>2.1.5.3 Stability. When the relocatable lift is placed on an incline equal to 1:20 (5%) in any direction, the unsecured lift shall not tip over if a horizontal force of 550 N (125 lbf) is applied to the uppermost part of the lift in any direction, both with the full load centered in any of the four quadrants of the platform floor at maximum travel height and with no load.</p> <p>2.1.5.4 Alignment. A sign shall be securely fastened to the lift in a location conspicuous to personnel setting up the relocatable lift stating: "Align lift with the upper landing edge per manufacturer's instructions."</p> <p>2.1.5.5 Electrical Connection. A disconnecting means in accordance with ANSI/NFPA 70 shall be provided as part of the lift.</p> <p>2.1.5.6 Wheels. Lifts that have wheels shall be operable only when the wheels are removed or retracted. The wheels shall not bear any load while the lift is in operation.</p>	<p>Replaced code for pipes in the runway with new requirements for portable vertical platform lifts.</p>	<p>The department has not regulated portable vertical platform lifts. Doing so would expand the scope of SPS 318 and enforcement. Enforcement has been determined to be difficult due to such lifts being in storage and times of use for inspection being unknown.</p>
8	<p>NONE</p>	<p>2.3 Driving Means and Sheaves (j) lever screw</p>		<p>New type of drive machine</p>	<p>No need to address this.</p>
9	<p>(11) 2.3.1.5 Driving-machine chains and sprockets shall be of steel and shall conform in design and dimensions to the requirements of ASME B29.100.</p>		<p>(17) 2.3.1.5 Driving-machine chains and sprockets shall be of steel and shall conform in design and dimensions to the requirements of ASME B29.1.</p>	<p>Corrected standard number.</p>	<p>No need to address this.</p>

10	<p>2.3.2 Hydraulic Driving Machines. Direct-plunger hydraulic driving machines, where used, shall conform to the requirements of para. 8.1, except para. 8.1.2. Roped-hydraulic machines shall also conform to the requirements of para. 8.1 except for paras. 8.1.1, 8.1.3, 8.1.4.3, and 8.1.4.7.</p>	(14) 2.3.2 Hydraulic Driving Machines. Direct-plunger hydraulic driving machines, where used, shall conform to the requirements of para. 8.1, except para. 8.1.2. Roped-hydraulic and chain-hydraulic machines shall also conform to the requirements of para. 8.1 except for paras. 8.1.1, 8.1.3, and 8.1.4.3.		Added chained-hydraulic to roped-hydraulic as hydraulic driving machines that must meet requirements in 8.1 (with exceptions). Removed the exception that allowed these to be without a means to collect oil leakage from hydraulic jacks in 8.1.4.7.	
11	<p>2.3.9.1 General Requirements. Belt sets shall be selected on the basis of the manufacturer's rated breaking strength and a factor of safety of 10. Chain and sprocket sets shall be selected on the basis of recommendations set forth in the Supplementary Information section of ASME B29.100, using a service factor of 2. Offset links in chain are not permitted.</p> <p>Sprockets in a chain drive set and also a driven set shall be assembled onto a common hub, with teeth cut in-line after assembly to ensure equal load distribution on all chains. Tooth sheaves for a belt drive shall be constructed in a manner to ensure equal load distribution on each belt in the set. Load determination for both the belt and chain sets shall be based on the maximum static loading on the platform, which is the full load in the platform at rest and at a position in the runway that creates the greatest load, including either the platform or counterweight resting on its buffer.</p> <p>Chain drives and belt drives shall be guarded to protect against accidental contact and to prevent foreign objects from interfering with drives.</p>	(11)	(17) 2.3.9.1 General Requirements. Belt sets shall be selected on the basis of the manufacturer's rated breaking strength and a factor of safety of 10. Chain and sprocket sets shall be selected on the basis of recommendations set forth in the Supplementary Information section of ASME B29.1, using a service factor of 2. Offset links in chain are not permitted. <p>Sprockets in a chain drive set and also a driven set shall be assembled onto a common hub, with teeth cut in-line after assembly to ensure equal load distribution on all chains. Tooth sheaves for a belt drive shall be constructed in a manner to ensure equal load distribution on each belt in the set. Load determination for both the belt and chain sets shall be based on the maximum static loading on the platform, which is the full load in the platform at rest and at a position in the runway that creates the greatest load, including either the platform or counterweight resting on its buffer.</p> <p>Chain drives and belt drives shall be guarded to protect against accidental contact and to prevent foreign objects from interfering with drives.</p>	Corrected standard number.	No need to address this.
12	<p>2.6.7 Protection of Platforms Against Fire. For lifts that penetrate a floor, and when fire-resistive runway enclosure construction is required by the building code, the platform enclosure, which includes the walls, top, and floor, shall be protected against fire. Where the materials used for the platform enclosure do not have a flame spread rating less than 75, the platform enclosure shall be protected against fire by one of the following methods:</p> <p>(a) covering with sheet steel a minimum of 0.4 mm (0.0164 in.) in thickness or with equally fire-retardant material.</p> <p>(b) painting with an approved fire-retardant paint having a flame spread rating of not over 75, applied in accordance with the instructions of the manufacturer. Such ratings shall be based on the test procedure specified in ANSI/ASTM E 84.</p> <p>A pictograph as shown in Fig. 2.6.7 should be posted over each platform lift corridor call station. The pictograph is 125 mm (5 in.) wide and 200 mm (8 in.) high.</p>	(11)	(17) 2.6.7 Protection of Platforms Against Fire. For lifts that penetrate a floor, and when fire-resistive runway enclosure construction is required by the building code, the platform enclosure, which includes the walls, top, and floor, shall be protected against fire. Where the materials used for the platform enclosure do not have a flame spread rating less than 75, the platform enclosure shall be protected against fire by one of the following methods: <p>(a) covering with sheet steel a minimum of 0.4 mm (0.0164 in.) in thickness or with equally fire-retardant material.</p> <p>(b) painting with an approved fire-retardant paint having a flame spread rating of not over 75, applied in accordance with the instructions of the manufacturer. Such ratings shall be based on the test procedure specified in ASTM E8.</p> <p>A pictograph as shown in Fig. 2.6.7 should be posted over each platform lift corridor call station. The pictograph is 125 mm (5 in.) wide and 200 mm (8 in.) high.</p>	Corrected standard number.	No need to address this.

13	<p>2.7.1 Limitation of Load, Speed, and Travel. The rated load shall be not less than 200 kg (450 lb) nor more than 475 kg (1,050 lb). Platforms with a floor greater than 1.4 m² (15 ft²) shall have a rated load of not less than 340 kg (750 lb). Platforms with a floor greater than 1.7 m² (18 ft²) shall have a rated load of not less than 475 kg (1,050 lb). The lift shall be capable of sustaining and lowering a load as specified in Fig. 9.7. The rated speed shall not exceed 0.15 m/s (30 ft/min). Travel of lifts conforming to paras. 2.1.1 and 2.1.2 shall not exceed 4 250 mm (168 in.). Travel of lifts conforming to para. 2.1.3 shall not exceed 1 500 mm (60 in.). Travel of lifts conforming to para. 2.1.4 shall not exceed 600 mm (24 in.).</p>	<p>2.7.1 Limitation of Load, Speed, and Travel. The rated load shall be not less than 250 kg (550 lb) nor more than 475 kg (1,050 lb). Platforms with a floor greater than 1.4 m² (15 ft²) shall have a rated load of not less than 340 kg (750 lb). Platforms with a floor greater than 1.7 m² (18 ft²) shall have a rated load of not less than 475 kg (1,050 lb). The lift shall be capable of sustaining and lowering a load as specified in Fig. 9.7. The rated speed shall not exceed 0.15 m/s (30 ft/min). Travel of lifts conforming to paras. 2.1.1 and 2.1.2 shall not exceed 4 250 mm (168 in.). Travel of lifts conforming to para. 2.1.3 shall not exceed 1 500 mm (60 in.). Travel of lifts conforming to para. 2.1.4 shall not exceed 600 mm (24 in.).</p>	<p>2.7.1 Limitation of Load, Speed, and Travel. The rated load shall be not less than 250 kg (550 lb) nor more than 475 kg (1,050 lb). Platforms with a floor greater than 1.4 m² (15 ft²) shall have a rated load of not less than 340 kg (750 lb). Platforms with a floor greater than 1.7 m² (18 ft²) shall have a rated load of not less than 475 kg (1,050 lb). The lift shall be capable of sustaining and lowering a load as specified in Fig. 9.7. The rated speed shall not exceed 0.15 m/s (30 ft/min). Travel of lifts conforming to para. 2.1.1 or 2.1.2 shall not exceed 4 250 mm (168 in.). Travel of lifts conforming to para. 2.1.3 or 2.1.5 shall not exceed 1 500 mm (60 in.). Travel of lifts conforming to para. 2.1.4 shall not exceed 600 mm (24 in.).</p>	<p>2014: Raised the minimum rated load for a VPL from 450 lbs to 550 lbs. 2017: Added 2.1.5 therefore portables to those not to exceed 60" of travel.</p>	<p>SPS 318.1802(7) requires 750 lb rated load for typical VPLs, that is all those that are not courtroom lifts.</p>
14	<p>2.9.1 Normal terminal stopping devices required by para. 2.9.2 shall be permitted to use mechanically-operated, magnetically-operated, optical, or static-type switches. Final terminal stopping devices required by para. 2.9.3 shall use only mechanically-operated switches. Terminal stopping devices that are located on the platform or in the runway shall be of the enclosed type and securely mounted in such a manner so that horizontal movement of the platform shall not affect the operation of the device.</p>	<p>2.9.1 Normal terminal stopping devices required by para. 2.9.2 shall use mechanically-operated, magnetically-operated, optical, or static-type switches. Final terminal stopping devices required by para. 2.9.3 shall use only mechanically-operated switches. Terminal stopping devices that are located on the platform or in the runway shall be of the enclosed type and securely mounted in such a manner so that horizontal movement of the platform shall not affect the operation of the device.</p>		<p>Added requirement for normal terminal stopping devices to be mechanically-operated, magnetically-operated, optical or static type switches instead of <i>permitting</i> them to be one of those types (first sentence).</p>	
15	<p>2.9.2 Normal stopping devices operated by the platform shall be provided, and shall be set to stop the platform floor within a tolerance of 12 mm (0.5 in.) of the landings under rated loading to zero loading conditions. The normal stopping devices shall be permitted to also serve as the upper and lower terminal stopping devices.</p>	<p>(14) 2.9.2 Except as specified in para. 2.9.7, normal stopping devices operated by the platform shall be provided, and shall be set to stop the platform floor within a tolerance of 12 mm (0.5 in.) of the landings under rated loading to zero loading conditions. The normal stopping devices shall be permitted to also serve as the upper and lower terminal stopping devices.</p>		<p>Added allowance to eliminate the lower normal terminal stopping device according to 2.9.7.</p>	
16	<p>NONE</p>	<p>(14) 2.9.7 A lower normal terminal stopping device is not required for direct-plunger driving machines where the platform rests on a physical stop at the bottom terminal landing and where the platform floor stops within a tolerance of 12 mm (0.5 in.) of the lower landing under rated loading to zero loading conditions.</p>		<p>Added allowance to eliminate the lower normal terminal device for direct plunger driving machines.</p>	<p>No need to address this.</p>

17	<p>2.10.10 Manual Operations. Means shall be provided to permit authorized personnel to raise or lower the platform manually in the event of power failure, unless standby (emergency) power is provided. The means to raise or lower the platform shall be capable of being accessed and operated without working directly above the platform.</p>	<p>(14) 2.10.10 Manual Operations. Means shall be provided to permit authorized personnel to raise or lower the platform manually in the event of power failure, unless standby (emergency) power complying with Requirement 2.12 is provided. The means to raise or lower the platform shall be capable of moving the platform to a landing and of being accessed and operated without working directly above the platform.</p>	<p>2.10.10 Manual Operations. Means shall be provided to permit lift or authorized personnel to raise or lower the platform manually in the event of power failure, unless standby (emergency) power complying with para. 2.12 is provided. The means to raise or lower the platform shall be capable of moving the platform to a landing and of being accessed and operated without working directly above the platform.</p> <p>(17)</p>	<p>2014: Added reference to stand-by power being required to meet 2.12 for a lift not provided with manual operations. Added requirement for manual operation to move the platform to a landing. 2017: Added the allowance for "lift personnel", not just authorized personnel to raise or lower the platform manually.</p>	<p>SPS 318.1802(9) defines the type of operation on stand-by power that qualifies a VPL to not require manual operation. Should add "to a landing" to be consistent with A18.1, 2014 and "lift personnel" to be consistent with A18.1, 2017.</p>
18	<p>2.11 Emergency Signals</p> <p>If the platform is installed in an area not visible to personnel at all times, emergency signaling devices shall be provided in accordance with the requirements of para. 2.11.1 or 2.11.2. Standby power shall be provided in accordance with para. 2.11.3.</p> <p>2.11.1 The platform shall be provided with an audible signaling device, operable from the emergency stop switch, marked also with "ALARM" or from a separate switch marked "ALARM," which is located in or adjacent to each platform operating panel. The switch marked "ALARM" shall illuminate when actuated. The signaling device shall be audible inside the platform and outside the runway. The audible signaling device shall have a rated sound pressure rating of not less than 80 dBA nor greater than 90 dBA at 3 000 mm (120 in.) and respond without delay after the switch has been activated.</p>		<p>2.11 Emergency Signals (17)</p> <p>Emergency signals shall comply with 2.11.1 through 2.11.3.</p> <p>2.11.1 The platform shall be provided with an audible signaling device, located outside the platform area adjacent to lift operable from the emergency stop switch, marked also with "ALARM" or from a separate switch marked "ALARM" that is located in or adjacent to each platform operating panel. The switch marked "ALARM" shall illuminate when actuated. The signaling device shall be audible outside the platform and outside the runway. The audible signaling device shall have a rated sound pressure rating of not less than 70 dBA nor greater than 80 dBA at 3 000 mm (120 in.) and respond without delay after the switch has been activated.</p>	<p>Moved the requirement for emergency signals for lifts that are not always visible out of the intro sentence. See 2.11.2. Added requirement to comply with 2.11.1 through 2.11.3, not 2.11.1 or 2.11.2. Moved the alarm horn, buzzer, etc., to outside the runway. Changed the sound pressure from 80 -90 dBA to 70 - 80 dBA.</p>	<p>May require rewording of SPS 318.1802(10), first sentence because the introductory paragraph it refers to has changed. Suggestion: leave the higher sound pressure ratings in SPS 318.1802(10)(a) for lifts installed outdoors. Maybe raise instead of lower them if the horn, buzzer, etc., will be outside the runway.</p>
19	<p>2.11.2 The lift shall be provided with a means of two-way conversation between the platform and a readily accessible point outside the runway that is available to emergency personnel (telephone, intercom, etc.). The means to activate the two-way conversation system does not have to be provided on the platform.</p>		<p>2.11.2 Where the lift is installed in a location of a building that is not normally occupied when the site is in use, the lift shall be provided with a means of two-way conversation between the platform and a readily accessible point outside the runway that is available to building or emergency personnel (telephone, intercom, etc.).</p>	<p>Changed to require two-way conversation for a lift not in a normally occupied location. Removed the statement that the means to activate the two-way conversation does not have to be provided on the platform.</p>	<p>This has been made more similar to SPS 318.1802(10) however 318.1802(10) still contains details and references to A17.1 that are more specific.</p>

20	<p>2.11.3 If the audible signaling device(s), or the means of two-way conversation, or both, are normally connected to the building power supply, they shall automatically transfer to a source of standby or emergency power as required by the applicable building code or, where applicable, Standard for Health Care Facilities (NFPA 99) after the normal power supply fails. The power source shall be capable of providing for the operation of the audible signaling device and illumination of the alarm switch for at least 1 h, and the means of two-way conversation for at least 4 h.</p>	(11)	<p>2.11.3 If the audible signaling device(s), or the means of two-way conversation, or both, are normally connected to the building power supply, they shall automatically transfer to a source of standby or emergency power as required by the applicable building code or, where applicable, Standard for Health Care Facilities (NFPA 99) after the normal power supply fails. The power source shall be capable of providing for the operation of the audible signaling device and illumination of the alarm switch for at least 1 h, and the means of two-way conversation for at least 4 h.</p>	No change	
21	<p>2.12 Standby Power</p> <p>Lifts equipped with standby power shall comply with this rule.</p> <p>2.12.1 Standby Power. Except where permitted by 2.12.1.1, the lift shall be powered by a standby power system from the building.</p> <p>2.12.1.1 Battery Power. A lift equipped with rechargeable battery power capable of cycling the lift under full load for five cycles minimum after building power is removed shall be permitted.</p>		<p>2.12 Standby Power (14)</p> <p>Lifts shall be permitted to have standby power to raise or lower the lift. Where the standby power is to be used in lieu of manual operation complying with Requirement 2.10.10, it shall comply with 2.12.1 through 2.12.3.</p> <p>2.12.1 Standby Power Source. The lift shall be powered by a standby power system from the building or from a rechargeable battery power system.</p> <p>2.12.2 Operation. The standby power system shall be capable of cycling the lift under full load for five cycles minimum after building power is removed.</p> <p>2.12.3 Transfer. The transfer between the normal and the standby power system shall be automatic.</p>		<p>Clarified allowance for battery power to be considered a type of stand-by power instead of saying it is "permitted".</p> <p>Battery power technically isn't "stand-by" power according to the building or electrical codes.</p>
PART 3 - INCLINED PLATFORM LIFTS					
22	NONE		<p>(14) 3.3 Driving Means and Sheaves</p> <p>(f) lever screw</p>	New type of drive machine	No need to address this.
23	<p>3.3.1.5 Driving-machine chains and sprockets shall be of steel and shall conform in design and dimensions to the requirements of ASME B29.100.</p>	(11)	<p>(17) 3.3.1.5 Driving-machine chains and sprockets shall be of steel and shall conform in design and dimensions to the requirements of ASME B29.1.</p>	Corrected standard number.	No need to address this.
24	<p>3.3.6.1 General Requirements. Belt sets shall be selected on the basis of the manufacturer's rated breaking strength and a factor of safety of 10. Chain and sprocket sets shall be selected on the basis of recommendations set forth in the Supplementary Information section of ASME B29.100, using a service factor of 2. Offset links in chain are not permitted.</p>	(11)	<p>(17) 3.3.6.1 General Requirements. Belt sets shall be selected on the basis of the manufacturer's rated breaking strength and a factor of safety of 10. Chain and sprocket sets shall be selected on the basis of recommendations set forth in the Supplementary Information section of ASME B29.1, using a service factor of 2. Offset links in chain are not permitted.</p>	Corrected standard number.	No need to address this.
25	NONE		<p>3.6.8.2.5 Means shall be provided to manually fold the platform and passenger restraining arms. The platform and passenger restraining arms shall remain in the folded position after being manually folded.</p>	New requirement for IPL to be capable of being manually folded.	
26	<p>3.7.1 Limitations of Capacity, Load, and Speed. The capacity shall be one person. The rated load shall be not less than 200 kg (450 lb) and not greater than 340 kg (750 lb). Platforms with a floor area greater than 1.4 m² (15 ft²) shall have a rated load of 340 kg (750 lb). The lift shall be capable of sustaining and lowering a load as specified in Fig. 9.7. The rated speed measured along the incline shall not exceed 0.15 m/s (30 ft/min).</p>	(11)	<p>3.7.1 Limitations of Capacity, Load, and Speed. The capacity shall be one person. The rated load shall be not less than 250 kg (550 lb) and not greater than 340 kg (750 lb). Platforms with a floor area greater than 1.4 m² (15 ft²) shall have a rated load of 340 kg (750 lb). The lift shall be capable of sustaining and lowering a load as specified in Fig. 9.7. The rated speed measured along the incline shall not exceed 0.15 m/s (30 ft/min).</p>	Raised the minimum rated load for an IPL from 450 lbs to 550 lbs.	

27	<p>(11) 3.10.10 Manual Operations. Means shall be provided to permit authorized personnel from a position outside the platform to raise or lower the platform manually along the path of travel. For lifts installed in compliance with para. 3.6.8.2, means shall be provided to manually fold the platform unless the lift can be manually moved to a dedicated storage location that is provided at the upper or lower terminal landing away from the circulation path.</p>		<p>3.10.10 Manual Operations. Means shall be provided to permit lift or authorized personnel from a position outside the platform to raise or lower the platform manually along the path of travel, unless standby (emergency) power complying with para. 3.12 is provided. The means to raise or lower the platform shall be capable of moving the platform to a landing. (17)</p>	<p>Added the allowance for "lift personnel", not just authorized personnel to raise or lower the platform manually. Added requirement that the platform be capable of being raised or lowered to a landing.</p>	
28	<p>3.11.1 The lift shall be provided with an audible signaling device, operable from the emergency stop switch, marked also with "ALARM" or from a separate switch marked "ALARM," which is located in or adjacent to each platform operating panel. The switch marked "ALARM" shall illuminate when actuated. The signaling device shall be audible inside the platform and outside the runway. The audible signaling device shall have a rated sound pressure rating of not less than 80 dBA nor greater than 90 dBA at 3 000 m (120 in.) and respond without delay after the switch has been activated.</p>		<p>3.11.1 The lift shall be provided with an audible signaling device, located outside the platform area adjacent to lift operable from the emergency stop switch, marked also with "ALARM" or from a separate switch marked "ALARM" that is located in or adjacent to each platform operating panel. The switch marked "ALARM" shall illuminate when actuated. The signaling device shall be audible outside the platform and outside the runway. The audible signaling device shall have a rated sound pressure rating of not less than 70 dBA nor greater than 80 dBA at 3 000 m (120 in.) and respond without delay after the switch has been activated. (17)</p>	<p>Moved the alarm horn, buzzer, etc., to off the platform. Changed the sound pressure from 80 -90 dBA to 70 - 80 dBA.</p>	
29	<p>3.12 Standby Power Lifts equipped with standby power shall comply with this rule. 3.12.1 Standby Power. Except where permitted by para. 3.12.1.1, the lift shall be powered by a standby power system from the building. 3.12.1.1 Battery Power. A lift equipped with rechargeable battery power capable of cycling the lift under full load for five cycles minimum after building power is removed shall be permitted.</p>	<p>3.12 Standby Power (14) Lifts shall be permitted to have standby power to raise or lower the lift. Where the standby power is to be used in lieu of manual operation complying with para. 3.10.10, it shall comply with 3.12.1 through 3.12.3. 3.12.1 Standby Power Source. The lift shall be powered by a standby power system from the building or from a rechargeable battery power system. 3.12.2 Operation. The standby power system shall be capable of cycling the lift under full load for five cycles minimum after building power is removed. 3.12.3 Transfer. The transfer between the normal and the standby power system shall be automatic.</p>		<p>Clarified allowance for battery power to be considered a type of stand-by power instead of saying it is "permitted".</p>	<p>Battery power technically isn't "stand-by" power according to the building or electrical codes.</p>
PART 4 - STAIRWAY CHAIRLIFTS					
30	NONE	(14) 4.3 Driving Means and Sheaves (j) lever screw		New type of drive machine	No need to address this.
31	(11) 4.3.1.2 Driving-machine chains and sprockets shall be of steel and shall conform in design and dimensions to the requirements of ASME B29.100.		4.3.1.2 Driving-machine chains and sprockets shall be of steel and shall conform in design and dimensions to the requirements of ASME B29.1. (17)	Corrected standard number.	No need to address this.

32	<p>4.3.6.1 General Requirements. Belt sets shall be selected on the basis of the manufacturer's rated breaking strength and a factor of safety of 10. Chain and sprocket sets shall be selected on the basis of recommendations set forth in the Supplementary Information section of ASME B29.100, using a service factor of 2. Offset links in chain are not permitted.</p> <p>Sprockets in a chain drive set and also a driven set shall be assembled onto a common hub, with teeth cut in-line after assembly to assure equal load distribution on all chains. Tooth sheaves for a belt drive shall be constructed in a manner to assure equal load distribution on each belt in the set. Load determination for both the belt and chain sets shall be based on the maximum static loading on the carriage, which is the full load on the chair at rest and at a position in the runway that creates the greatest load, including either the carriage or counterweight resting on its buffer.</p> <p>Chain drives and belt drives shall be guarded to protect against accidental contact and to prevent foreign objects from interfering with drives.</p>	(11)	<p>(17) 4.3.6.1 General Requirements. Belt sets shall be selected on the basis of the manufacturer's rated breaking strength and a factor of safety of 10. Chain and sprocket sets shall be selected on the basis of recommendations set forth in the Supplementary Information section of ASME B29.1, using a service factor of 2. Offset links in chain are not permitted.</p> <p>Sprockets in a chain drive set and also a driven set shall be assembled onto a common hub, with teeth cut in-line after assembly to assure equal load distribution on all chains. Tooth sheaves for a belt drive shall be constructed in a manner to assure equal load distribution on each belt in the set. Load determination for both the belt and chain sets shall be based on the maximum static loading on the carriage, which is the full load on the chair at rest and at a position in the runway that creates the greatest load, including either the carriage or counterweight resting on its buffer.</p> <p>Chain drives and belt drives shall be guarded to protect against accidental contact and to prevent foreign objects from interfering with drives.</p>	Corrected standard number.	No need to address this.
33	<p>4.8 Safeties and Speed Governors</p> <p>All carriages shall be provided with a safety, except for carriages of direct-plunger hydraulic lifts. The safety shall be actuated by the action of a speed governor or by the breakage or slackening of the suspension or support means. Where actuation is by a governor, the safety shall be set at a maximum speed of 0.4 m/s (75 ft/min). Where actuation is by breakage of the suspension or support means, the safety shall be set without delay, and independent of the speed governor, if provided. Safety parts shall conform to the requirements of para. 4.8.1. Governor ropes, where provided, shall conform to the requirements of para. 4.8.2. The application and release of safeties shall conform to the requirements of para. 4.8.3.</p>		<p>(17) 4.8 Safeties and Speed Governors</p> <p>All carriages shall be provided with a safety, except for carriages of direct-plunger hydraulic lifts or other drive systems that are designed so that the failure of any single drive component cannot result in the platform overspeeding. The safety shall be actuated by the action of a speed governor or by the breakage or slackening of the suspension or support means. Where actuation is by a governor, the safety shall be set at a maximum speed of 0.4 m/s (75 ft/min). Where actuation is by breakage of the suspension or support means, the safety shall be set without delay, and independent of the speed governor, if provided. Safety parts shall conform to the requirements of para. 4.8.1. Governor ropes, where provided, shall conform to the requirements of para. 4.8.2. The application and release of safeties shall conform to the requirements of para. 4.8.3.</p>	Added "or other drive systems ... cannot result in the platform overspeeding".	Unclear as to what other drive systems would qualify as not requiring an overspeed safety device.

34	NONE		<p>(17) 9.9.3 Engineering Tests — Type Testing of Safeties on Inclined Platform Lifts and Inclined Stairway Chairlifts. Suspend the platform or carriage with the specified load at a height that is more than 15.24 cm (6 in.) from the lower limit of the normal travel. Allow it to drop (free-fall) until the platform or carriage and load is stopped by the overspeed Type A, B, or C safety device. The test shall be witnessed by, and the test results certified by, a nationally recognized testing laboratory (NRTL). A minimum of 12 tests shall be conducted equally divided between the following four test types listed below:</p> <p>(a) <i>test type 1:</i> test using rated load with the lift operating at an angle of 45 deg from the horizontal.</p> <p>(b) <i>test type 2:</i> test using rated load with the lift operating at an angle of 20 deg or the minimum operating angle as specified by the manufacturer, whichever is greater.</p> <p>(c) <i>test type 3:</i> test using no load with the lift operating at an angle of 45 deg from the horizontal.</p> <p>(d) <i>test type 4:</i> test using no load with the lift operating at an angle of 20 deg or the minimum operating angle as specified by the manufacture, whichever is greater.</p> <p>At the conclusion of the test series, the braking distance for any test shall not exceed 15.24 cm (6 in.) and all support or safety components of the overspeed safety device, rail, and truck shall have performed without structural failure. A test on a given capacity lift shall be acceptable for all similarly designed lifts by the manufacturer for the same or lesser capacity (rated loads).</p>	Added requirements for factory testing of safety devices for inclined platform lifts and stairway chairlifts.	
PART 10 - ROUTINE, PERIODIC AND ACCEPTANCE INSPECTIONS AND TESTS					
35	<p>10.1.4 Qualification of Inspectors. All inspectors shall meet the qualification requirements of ASME QEI-1. Inspectors and inspection supervisors shall be certified by an organization accredited by ASME in accordance with the requirements of ASME QEI-1.</p>	<p>(14) 10.1.4 Qualification of Inspectors. All inspectors shall meet the qualification requirements of ASME QEI-1. Inspectors and inspection supervisors shall be certified in accordance with the requirements of ASME QEI-1 by an accredited, independent organization concerned with personnel certification.</p>		Added wording regarding who certifies inspectors to QEI - 1.	No need to address this.
36	<p>10.3.3.1 Platform Safeties. Types A, B, and C safeties, except those operating on wood guide rails and their governors, shall be tested with rated load in the platform. Test shall be made by tripping the governor by hand at the rated speed. The following operational conditions shall be checked:</p> <p>(a) Type B safeties shall stop the platform with the rated load within the required range of stopping devices for which the governor is tripped.</p> <p>(b) For Type A safeties and Type A safety parts of Type C safeties, there shall be sufficient travel of the safety rollers or dogs remaining after the test to bring the platform and its rated load to rest on safety application at governor tripping speed. A metal tag shall be attached to the safety-releasing carrier in a permanent manner, giving the date of the safety test together with the name of the person or firm who performed the test.</p>		<p>10.3.3.1 Platform Safeties. Types A, B, and C safeties, except those operating on wood guide rails and their governors, shall be tested with rated load in the platform. Inclined platform lifts and inclined stairway chairlifts with Type A nonadjustable safeties complying with para. 9.9.3 shall be permitted to be tested with no load in the platform. A test shall be made by tripping the governor by hand at the rated speed. The following operational conditions shall be checked:</p> <p>(a) Type B safeties shall stop the platform with the rated load within the required range of stopping devices for which the governor is tripped.</p> <p>(b) For Type A safeties and Type A safety parts of Type C safeties, there shall be sufficient travel of the safety rollers or dogs remaining after the test to bring the platform and its rated load to rest on safety application at governor tripping speed. A metal tag shall be attached to the safety-releasing carrier in a permanent manner, giving the date of the safety test together with the name of the person or firm who performed the test.</p>	<p>(17) Added allowance for inclined platform lifts and stairway chairlifts with non-adjustable Type A safeties meeting 9.9.3 to be tested with no load on the platform (or chair as applicable).</p>	

37	<p>10.3.3.2.1 The tripping speed of the governor and the speed at which the governor overspeed switch, where provided, operates shall be tested to determine conformance with the applicable requirements and the adjustable means shall be sealed.</p>		<p>10.3.3.2.1 The tripping speed of the governor and the speed at which the governor overspeed switch, where provided, operates shall be tested to determine conformance with the applicable requirements and the adjustable means shall be sealed. This test is not required for inclined platform lifts and inclined stairway chairlifts with Type A nonadjustable safeties complying with para. 9.9.3. (17)</p>	<p>Added allowance for inclined platform lifts and stairway chairlifts meeting 9.9.3 to not have their governor tripping speed tested and sealed.</p>	
38	<p>10.4.1.1 Platform safeties shall be tested with rated load in the platform. In making the test of platform safeties, the load shall be centered on each quarter of the platform floor symmetrically with respect to the center lines of the platform floor. Counterweight safeties, where provided, shall be tested with no load in the platform.</p> <p>10.4.1.2 The tripping speed of the governor shall be measured by means of a tachometer.</p>		<p>(17) 10.4.1.1 Platform safeties shall be tested with rated load in the platform. Inclined platform lifts and inclined stairway chairlifts with Type A nonadjustable safeties complying with para. 9.9.3 shall be permitted to be tested with no load in the platform. In making the test of platform safeties, the load shall be centered on each quarter of the platform floor symmetrically with respect to the centerlines of the platform floor. Counterweight safeties, where provided, shall be tested with no load in the platform.</p> <p>(17) 10.4.1.2 The tripping speed of the governor shall be measured by means of a tachometer, except for inclined platform lifts and inclined stairway chairlifts with Type A nonadjustable safeties complying with para. 9.9.3.</p>	<p>Added allowance for inclined platform lifts and stairway chairlifts meeting 9.9.3 to not be tested with rated load on the platform (or chair as applicable).</p>	
PART 11 - MAINTENANCE OF PLATFORM LIFTS AND STAIRWAY CHAIRLIFTS					
39	NONE		<p>(17) 11 MAINTENANCE OF PLATFORM LIFTS AND STAIRWAY CHAIRLIFTS</p> <p>Operation and maintenance instructions in this Standard are intended for general applications. The equipment manufacturer and/or installer shall be consulted for specific operating or maintenance instructions.</p> <p>11.1 Written Maintenance Program (WMP/MCP)</p> <p>11.1.1 A WMP shall be provided by the manufacturer, installer, or firm performing the maintenance of the equipment for lifts covered by sections 2 through 7. Logs for lifts covered by sections 5 through 7 do not need to include a record of weekly operational checks as required by para. 11.2.1(f).</p> <p>11.1.1.1 Maintenance shall be performed by lift personnel.</p> <p>11.1.1.2 The WMP shall be available to lift personnel.</p> <p>11.1.2 The WMP for lifts covered by sections 2 through 4 shall include, but is not limited to, the following:</p> <p>(a) routine maintenance and examinations at scheduled intervals in order to ensure that the installation conforms to the requirements of this Standard</p> <p>(b) a log as required by para. 11.2</p> <p>(c) a procedure for checking the operation of the lift to be conducted not less than weekly by authorized</p>	<p>New section for requiring maintenance documents.</p>	<p>Unlike elevators, these conveyances will not have a place to store such documents and these conveyances are often in small buildings not having a maintenance office. Searching for these may cause new unwarranted delays in inspections. These would be the first documents for VPLs, IPLs and SCLs that may have to be part of an inspection. Consider requiring the documents to provided without being inspected.</p>

40			<p>personnel</p> <p>11.1.3 The WMP shall be available at the time of the periodic inspection.</p> <p>11.1.4 The WMP for lifts covered by sections 5 through 7 does not need to include a procedure for weekly operational checks as required by para. 11.1.2(c).</p> <p>11.2 Log</p> <p>11.2.1 A log shall be established by the firm performing the maintenance and maintained by lift personnel including, but not limited to, the following:</p> <ul style="list-style-type: none"> (a) completion date of all maintenance or repair (b) name of person doing the maintenance or repair (c) nature of the maintenance or repair (d) record of all malfunctions (e) record of all accidents occurring on the lift regardless of the nature of the accident (f) a record of the date and time when the operational check as required in (c) was conducted, including the name of the person conducting the check (g) name and telephone number of persons(s) to contact in case of an emergency (h) emergency evacuation procedure <p>11.2.2 Logs for lifts covered by sections 5 through 7 shall include, but are not limited to, paras. 11.2.1(a) through (e), (g) and (h).</p> <p>11.2.3 All logs and records required by para. 11.2.1 shall be retained for a minimum of 5 years.</p>		
41			<p>11.3 On-Site Documentation</p> <p>11.3.1 The on-site documentation shall include, but is not limited to, the following:</p> <ul style="list-style-type: none"> (a) wiring diagram (b) instruction manual containing procedures for performing required examinations and tests (c) manufacturer's operational instructions that include the operation of the manual lowering device, if provided (d) the log as required by para. 11.2.1 	<p>New requirements to provide owners with important documentation.</p>	<p>Consider informing installers and owners of the need for these to be provided to the owner but also consider not making these an inspection item.</p>