Proposed Revision to A17.1, Requirement 6.1.4 and 6.2.4:

6.1.4 Rated Speed

6.1.4.1 Limits of Speed

6.1.4.1.1 The rated speed shall be not more than 0.5 m/s (100 ft/min), measured along the centerline of the steps in the direction of travel. The speed attained by an escalator after start-up shall not be intentionally varied, except as permitted by 6.1.4.1.2.

6.1.4.1.2 Variation of the escalator speed after start-up shall be permitted provided the escalator installation conforms to all of the following:
(a) The acceleration and deceleration rates shall not exceed 0.3 m/s² (1.0 ft/s²).
(b) The rated speed is not exceeded.
(c) The minimum speed shall be not less than 0.05 m/s (10 ft/min).
(d) The speed shall not automatically vary during inspection operation.
(e) Passenger detection means shall be provided at both landings of the escalator such that:

1) Detection of any approaching passenger shall cause the escalator to accelerate to, or maintain the, full escalator speed conforming to 6.1.4.1.1(a) through (d).
2) Detection of any approaching passenger shall occur sufficiently in advance of boarding to cause the escalator to attain full operating speed before a passenger walking at normal speed [1.35 m/s (270 fpm)] reaches the comb plate.
3) Passenger detection means shall remain active at the egress landing to detect any passenger approaching against the direction of escalator travel and shall cause the escalator to accelerate to full rated speed and sound the alarm (6.1.6.3.1) at the approaching landing before the passenger reaches the combplate.

(f) Automatic deceleration shall not occur before a period of time has elapsed, since the last passenger detection that is greater than 3 times the amount of time necessary to transfer a passenger between landings.
(g) Means shall be provided to detect failure of the passenger detection means and shall cause the escalator to operate at full rated speed only.

6.2.4 Rated Speed

6.2.4.1 Limits of Speed

6.2.4.1.1 The maximum speed of a treadway shall depend on the maximum slope at any point on the treadway. The speed shall not exceed the value determined by Table 6.2.4. The speed attained by a moving walk after startup shall not be intentionally varied, except as permitted by 6.2.4.1.2.

6.2.4.1.2 Variation of the moving walk speed after start-up shall be permitted provided the moving walk installation conforms to all of the following:
(a) The acceleration and deceleration rates shall not exceed 0.3 m/s² (1.0 ft/s²).
(b) The rated speed is not exceeded.
(c) The minimum speed shall be not less than 0.05 m/s (10 ft/min).
(d) The speed shall not automatically vary during inspection operation.
(e) Passenger detection means shall be provided at both landings of the moving walk such that:

1) Detection of any approaching passenger shall cause the moving walk to accelerate to, or maintain the, full moving walk speed conforming to 6.2.4.1(a) through (d).
2) Detection of any approaching passenger shall occur sufficiently in advance of boarding to cause the moving walk to attain full operating speed before a passenger walking at normal speed [1.35 m/s (270 fpm)] reaches the comb plate.
3) Passenger detection means shall remain active at the egress landing to detect any passenger approaching against the direction of moving walk travel and shall cause the

moving walk to accelerate to full rated speed and sound the alarm (6.2.6.3.1) at the approaching landing before the passenger reaches the combplate.

(f) Automatic deceleration shall not occur before a period of time has elapsed, since the last passenger detection that is greater than 3 times the amount of time necessary to transfer a passenger between landings.

(g) Means shall be provided to detect failure of the passenger detection means and shall cause the moving walk to operate at full rated speed only.

Rationale: *In the interest of energy conservation and sustainability related to wear and tear on people-moving equipment paramount in today's world, building and end use equipment owners are requesting the ability to operate equipment at reduced speeds during slack times of passenger usage. Provided that passenger safety is not compromised and is mitigated, the code should not stand in the way of such operational improvements especially in view of today's advancements in drives and controls technologies. Consequently, the escalator and walk speed rule has been revised to permit such operation within the guidelines and requirements resulting from the hazard analysis performed on such operation.*

*Note: Regarding 6.1.4.1(e)(2) and 6.2.4.1(e)(2) and "normal walking speed,***:** *from previous ballots see "Pedestrian Planning and Design", John J. Fruin, Ph.D. pgs 39 – 42. This section of the book deals with pedestrian walking speeds and states "average free-flow walking speed for all males, females, and the combination of all pedestrians in the surveys, were 270, 254, and 265 feet per minute, respectively."*