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**DEPARTMENT OF PUBLIC SAFETY
DIVISION OF FIRE SAFETY**

MEMORANDUM 007

LAYOUT DRAWINGS

To: Elevator Contractors, Inspectors, Mechanics, and Inspection Companies
From: Gus Guadamuz, Deputy Chief Elevator Inspector
Date: July 8, 2020

Prior to the installation or construction of any elevator equipment, a permit shall be obtained from the department. The applicant shall require the submission of detailed plans and specifications. Due to continual request of information it has become necessary to clarify what the minimum of information is to be submitted for plan review and to be readily available at the installation location for examination.

On June 3, 2020 the Elevator Safety Board approved a resolution as follows:

All submitted plan review layout drawings for new elevator installations, at a minimum, are to include the following information per the following sections of A17.1 code.

A17.1 Section 2.28 Layout Drawings (Electric Elevators)

2.28.1 Information required on Layout Drawings

Elevator layout Drawings shall, in addition to other data, indicate the following:

- (a) The maximum bracket spacing (see Section 2.23)
- (b) the estimated maximum vertical forces on the guide rails on application of the safety or other retarding device (see Section 2.23 and 2.19.3)
- (c) in the case of freight elevators for Class B or C loading (see 2.16.2.2), the horizontal forces in a post-wise direction of the guide rail faces on the application of the safety device (Section 2.23)
- (d) The size and linear weight of any rail reinforcement, where provided (see Section 2.23)
- (e) The total static and impact loads imposed on machinery and sheave beams, supports, and floors or foundations (see 2.9)
- (f) The impact load on buffer supports due to buffer engagement at the maximum permissible speed and load (see 8.2.3)
- (g) Where compensation tie-down is applied (see 2.21.4.2), the load on the compensation tie-down supports
- (h) The total static and dynamic loads from the governor, ropes, and tension system
- (i) The horizontal forces on the building structure stipulated by 2.11.11.8 and 2.11.11.9
- (j) The maximum upward movement (see 2.4.6)

A17.1 Section 3.28 Layout Data (Hydraulic Elevators)

3.28.1 Information Required on Layout Drawing

Elevator layout drawings shall, in addition to other data, indicate the following:

- (a) Required clearances and basic dimensions
- (b) The bracket spacing (see section 3.23)
- (c) The estimated maximum vertical forces on the guide rails on application of the safety, where provided (see Section 3.23)
- (d) In the case of freight elevators for Class B or Class C loading (see 2.16.2.2), the horizontal forces on the guide-rail faces during loading and unloading, and the estimated maximum horizontal forces in a post-wise direction on the guide-rail faces on the application of the safety device, where provided (see Section 3.23)
- (e) The size and weight per meter (foot) of any rail reinforcement, where provided (see Section 3.23)
- (f) The impact loads imposed on machinery and sheave beams, supports, and floors or foundations (see Section 2.9)
- (g) The impact load on buffer supports due to buffer engagement at the maximum permissible load and operating speed in the down direction (see 8.2.3)
- (h) The net vertical load from the elevator system, which included the total car weight and rated load; plunger, cylinder, and oil; and any structural supports
- (i) The outside diameter and wall thickness of the cylinder, and oil; and any structural supports
- (j) The total static and dynamic loads from the governor, ropes, and tension system
- (k) Rated speed and operating speed in the down direction
- (l) The minimum “grade” of pipe (ASTM or recognized standard) required to fulfill the installation requirements for pressure piping, or in lieu of a specific “grade” of pipe, the minimum tensile strength of pipe to be used for the installation (see Section 3.19)
- (m) The horizontal forces on the building structure stipulated by 2.11.11.8
- (n) The length of the plunger and cylinder
- (o) The clearance between the bottom of the plunger and the bottom head of the cylinder as required by 3.18.3.3

A17.1 Section 2.11.18 Installation Instructions

- (a) Instructions detailing the application and installation of door listed/certified panels and entrance hardware shall be provided.
- (b) Where frames are used, instructions detailing the listed/certified frame-to-wall interface shall be provided.

The acceptance inspection witnessing includes the review of layout drawings, testing data information, labeling and specifications to verify the installation conforms to the applicable State Codes and Regulations. Any changes, errors or omissions must be reported to the department for review.

Gus Guadamuz
Deputy Chief Elevator Inspector