This is intended to provide uniform application of the codes by the plan check staff and to help the public apply the codes correctly.

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**PLAN DETAILS**

- **1.** Indicate the length of the bottom runby. *(ASME A17.1 Rule 107.1b; 107.1c & 107.1 d)*
- **2.** Provide guards between adjacent pits. *(ASME A17.1 Rule 106.1c)*
- **3.** Show the height of travel.
- **4.** Show horizontal refuge area on the bottom of the pit. *(ASME A17.1 Rule 107.1a)*
- **5.** Show height of refuge area on the bottom of the pit. *(ASME A17.1 Rule 107.1a)*
- **6.** Show means to prevent accumulation of water in the pit. *(ASME A17.1 Rule 106b(3) and 106b(4))*
- **7.** Show bottom car clearance. *(ASME A17.1 Rule 107.1a)*
- **8.** Show top car clearance. *(ASME A17.1 Rule 107.1e and 107.1f)*
- **9.** Show horizontal refuge area above the car enclosure. *(ASME A17.1 Rule 107.1k)*
- **10.** Show height of refuge area above the car enclosure. *(ASME A17.1 Rule 107.1k)*
- **11.** Show location of electric disconnect switch. *(NEC 620-51(c))*
- **12.** Show work space for controller (18 in. minimum) *(NEC 620-5; 110-16)*
- **13.** Show the dimension of the inside width of the car. *(Title 8 § 3041(e); ASME A17.1 Rule 1300.1)*
- **14.** Show the dimension of the inside depth of the car. *(Title 8 § 3041(e); ASME A17.1 Rule 1300.1)*
- **15.** Show the dimensions of the car door. *(Title 8 § 3041(e))*
- **16.** Show the buffers. *(ASME A17.1 Rule 201.1a; 201.3b; 201.4j )*
- **17.** Provide a design detail of the rail brackets. *(ASME A17.1 Rule 2005.b; 2403.7)*
- **18.** Show spacing of rail brackets. *(ASME A17.1 Fig. 200.4a(1))*
- **19.** Show location of tiebrackets. *(ASME A17.1 Fig. 2403.2)*
- **20.** Show roping system. *(ASME A17.1 Rule 212.3)*
21. Show the clearance between the car and the counterweight assembly. *(ASME A17.1 Fig. 2402.1a)*

22. Show the clearance between the counterweight assembly and the hoistway enclosure or separator beams. *(ASME A17.1 Fig. 2402.1a)*

**CALCULATIONS**

1. If this is a high-rise building, submit calculations to verify that the anchorage of drive and suspension systems conform to Section 91.403.10; 91.1632.2 of the Los Angeles Building Code.

2. Provide seismic calculations for the car rail brackets. They shall be designed to withstand the force imposed by the weight of the car, plus 40% the rated load when subject to a horizontal seismic force of 0.5 gravity or the force calculated in accordance with Section 9.403.10; 91.1632.2 of the Los Angeles Building Code, whichever is greater. Furthermore, the calculations shall show that the deflection does not exceed $\frac{c}{16}$ of an inch. *(ASME A17.1 Fig. 2005.b)*

3. Calculate the factor of safety of ropes. *(ASME A17.1 Rule 212.3)*

4. Provide seismic calculations for the anchorage of the controller in accordance with Section 9.403.10; 91.1632.2 of the Los Angeles Building Code.

5. Provide calculations for the sheaves. The factor of safety, based on the ultimate strength of the material shall be 8 for steel and bronze, and 10 for cast iron. *(ASME A17.1 Rule 208.3)*

6. Provide calculations for the sheave fastening to the building. *(ASME A17.1 Rule 105.3)*

7. Provide calculations for the sheave beams. Stresses shall not exceed 80% of those permitted by AISC Specifications for Design, Fabrication and Erection of Structural Steel for Buildings. The deflection shall not exceed $\frac{1}{1666}$ of the span. *(ASME A17.1 Rule 105.4)*

8. Provide calculations for the machine beams. Stresses shall not exceed 80% of those permitted by AISC Specifications for Design, Fabrication and Erection of Structural Steel for Buildings. The deflection shall not exceed $\frac{1}{1666}$ of the span. *(ASME A17.1 Rule 105.4)*

**NOTES ON PLANS**

1. State whether the elevator is for passengers or for freight. *(ASME A17.1 Rule 214.1)*

2. State class of loading for freight elevators. *(ASME A17.1 Rule 207.2b)*

3. State rated speed. *(ASME A17.1 Rule 212.3; 201.3a; 201.4a)*

4. State the height of the building.

5. Is this a medical emergency elevator? *(Title 8 § 3031e)*

6. If this is not a medical emergency elevator, is there a medical emergency elevator in this building? *(Title 8 § 3031e)*
1. State height of machinery room. *(ASME A17.1 Rule 101.4)*

2. State the weight of the car.

3. State the rated load of the car. *(ASME A17.1 Rule 207.0a; 13001)*

4. Is the car door single door or a center opening door? *(Title 8 § 3022.(d)(1))*

5. State the weights of hoistway door and the car door. *(Title 8 § 3022.(d)(1))*

6. State the door travel time. *(Title 8 § 3022.(d)(1))*

7. State the type of buffers (oil or spring) *(ASME A17.1 Rule 201.3a; 201.3b)*

8. State the make and model of the buffers. *(Title 8 § 3108 (f) and 3121.1)*

9. State the capacity of the buffers. *(ASME A17.1 Rule 201.3b; 201.4j)*

10. State the buffer stroke. *(ASME A17.1 Rule 201.3a; 201.3b)*

11. State the size of the car guide rails. *(ASME A17.1 Fig. 200.4a(1); 200.4a(2))*

12. State the thickness of the fishplates that connect the rails. *(ASME A17.1 Rule 2403.6(5))*

13. State the vertical maximum distance between car rail brackets. *(ASME A17.1 Rule 2005.b)*

14. State the vertical maximum distance between counterweight rail brackets. *(ASME A17.1 Fig. 2403.2)*

15. State distance of intermediate tiebrackets for the counterweight rails.

16. State type and size of car ropes. *(ASME A17.1 Fig. 2403.2)*

17. State number of car ropes. *(ASME A17.1 Rule 212.4)*

18. State car roping ratio. *(ASME A17.1 Rule 212.3)*

19. State maximum braking strength of one car rope. *(ASME A17.1 Rule 212.3)*

20. State type and size of counterweight ropes. *(ASME A17.1 Rule 214.4)*

21. State number of counterweight ropes. *(ASME A17.1 Rule 214.4)*

22. State counterweight roping ratio. *(ASME A17.1 Rule 212.3)*

23. Is there usable space below the pit? *(ASME A17.1 Rule 109.1(a))*

24. State number and type of car safeties. *(ASME A17.1 Rule 205.1; 205.2)*

25. State model and manufacturer of car safeties. *(Title 8 § 3035)*

26. What is the state approval number of the car safeties? *(Title 8 § 3035)*

27. State number and type of counterweight safeties (Required only if there is usable space below the pit). *(ASME A17.1 Rule 109.1(a))*

28. State model and manufacturer of counterweight safeties (Required only if there is usable
What is the state approval number of the counterweight safeties? (Required only if there is usable space below the pit). *(Title 8 § 3035)*

The following are design examples:
Roping System 1:1

Roping System 2:1