



BALTIMORE

# spec NEWS

# Felt Tips

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## ELEVATORS

The following is excerpted from Technical Report 1, Baltimore Chapter CSI Technical Studies 1967-68.

Design, construction and installation of elevators is covered in the American Standard Safety Code for Elevators.

**Speed:** Use the following formula, bearing in mind the number will be determined by acceptable waiting and travel time for passenger service. Number of elevators equals  $P$  (number of people)  $\times T$  (trip time)  $\div 60 \times 5 \times E$  (capacity per elevator). A range of 25 to 40 seconds is a normal interval in other than hospital and apartment building passenger service.

**Capacity:** Governed by Code. Rule of thumb - 150 pounds per passenger or minimum of 50 pounds per square foot net inside platform area. Standard passenger capacities range from 1,200 pounds to 4,500 pounds.

**Speed:** Based on travel, number of openings served and range from 75 feet per minute up to 1,500 feet per minute. High speeds cannot be achieved in local service. Up to 100 feet of travel, 100 - 200 fpm speeds adequate.

Machine types available:

**Hydraulic:** Available in packages, low-cost, slow-speed, limited travel, high noise.

**Geared traction - overhead:** Speeds up to 350 feet per minute, worm gear driven.

**Geared traction basement -** Where overhead space is limited or no penthouse desired: requires fancy roping. High initial cost.

**Gearless traction overhead:** Available in speeds from 400 feet a minute up. Always DC type motor. More costly than geared machines but requires much less maintenance.

**Elevator cars:** Best covered by cash allowance or selected as package covering detail of walls, floors, ceiling and ventilation - 2 speed fan suggested.

Additional items which must not be overlooked - inspection fees and permits, guarantee, maintenance provisions, power supply, signal and control power, ventilation of shaft and machine room, pit ladders, 75° bevel on projections more than 2 inches, provisions for temporary use - cleaning and testing.

Major cost factors: Speed, capacity, number of openings, type of machine and method of operation. Overhead traction machines are cheaper than basement traction machines which are used where overhead space is limited and a penthouse cannot be provided.