**Section 370.600 General Considerations**

a) Safety

Safety Features Relative to Location

1) Railings and Gratings

A) Manually cleaned channels shall be protected by guard railings and deck gratings, with adequate provisions for removal or opening to facilitate raking.

B) Mechanically cleaned channels shall be protected by guard railings and deck gratings. Consideration should also be given to temporary access arrangements to facilitate maintenance and repair.

2) Mechanical Devices

A) Mechanical screening equipment shall have adequate removable enclosures to protect personnel against accidental contact with moving parts and to prevent dripping in multi-level installations.

B) A positive means of locking out each mechanical device shall be provided.

3) Units and Equipment in Deep Pits

Manually cleaned screens located in pits deeper than 4 feet shall be provided with stairway access, adequate lighting and ventiliation, and convenient and adequate means for removing screenings. Access ladders may be used instead of steps in pits less than 4 feet deep. Hoisting or lifting equipment shall be used where necessitated by the depth of the pit or the amount of material to be removed.

4) In Buildings

Units and equipment installed in buildings where other equipment or offices are located shall be isolated from the rest of the building, and shall be provided with separate outside entrances and separate and independent means of ventilation.

5) Ventilation

A) Adequate ventilation shall be provided for installations described in subsections (a)(3) and (4). Ventilation may either be continuous or intermittent. If continuous, ventilation shall provide at least 12 complete air changes per hour; if intermittent, ventilation shall provide at least 30 complete air changes per hour.

B) Where the pit is deeper than 4 feet mechanical ventilation is required, and the air shall be forced into the screen pit area rather than exhausted from the screen pit. The maximum distance from the fresh air discharge and the working deck floor shall be 24 inches. Dampers should not be used on fresh air ducts. Obstructions in air ducts should be avoided to prevent clogging. Air intake screens (bird and insect) shall be located so as to be easily accessible for cleaning.

C) Switches for operation of ventilation equipment should be marked and located at the entrance to the screen pit area. All intermittently operated ventilating equipment shall be interconnected with the respective lighting system. Consideration should be given to automatic controls where intermittent operation is used. The manual lighting-ventilation switch shall override the automatic controls.

D) The fan wheel shall be fabricated from non-sparking material. Refer to Section 370.610(a)(3)(C) for motor and electrical requirements.

6) Electrical Fixtures

Electrical fixtures and controls in enclosed places where gas may accumulate shall comply with Section 370.610(a)(3)(C).

b) Communition

Communition or other in-stream shredding of sewage solids shall be followed by primary settling or fine screening devices to remove the shredded stringy materials prior to the activated sludge process to minimize operational problems associated with reaglomeration of stringy materials.

c) Channels

Channels shall be equipped with the necessary gates to divert flow from any one unit. Provisions must also be made for dewatering each unit. Channels preceding and following screens shall be shaped and filleted as necessary to eliminate settling of solids.

(Source: Amended at 21 Ill. Reg. 12444, effective August 28, 1997)