

REQUIREMENTS FOR ELEVATOR PIT DRAINS

SUBJECT: Drainage of Water from Elevator Pits

This bulletin has been jointly developed by Safety Services and the Plumbing Technical Council and Elevator Technical Council to inform the plumbing industry of the requirements associated with the installation of **Pit Drains** located in “**Elevator pits**”.

Installers are reminded that the **National Plumbing Code of Canada 1995 (NPC)** and the **CAN/CSA-B44-2000 Safety Codes for Elevators** both have requirements for the drainage of water from Elevator pits.

The requirements in the **NPC** that must be considered when an elevator pit drain is installed are

Sentence 4.4.3.(2) - Where the discharge from a *fixture* may contain oil or gasoline, an oil interceptor shall be installed. (**Note:** To correctly size an oil interceptor contact the Elevator manufacturer to provide calculations regarding the maximum amount of oil that can escape from the hydraulic system.)

Sentence 4.5.5.(1) – Provision shall be made for maintaining the *trap* seal of a floor drain by,

- (a) the use of a *trap* seal primer,
- (b) using the drain as a receptacle for an *indirect connected* drinking fountain, or
- (c) other equally effective means. (See Appendix A.)

Sentence 4.6.3.(1) – Piping that is too low to drain into a *building sewer* by gravity shall be drained into a sump.

Sentence 4.6.3.(3) – Equipment such as a pump or ejector that can lift the contents of the sump or tank and discharge it into the *building drain* or *building sewer* shall be installed.

Sentence 4.6.3.(6) – The discharge from every *sewage* sump shall be equipped with a union, a *check valve* and a shut-off valve installed in the sequence in the direction of discharge.

Sentence 4.6.4.(2) – Where a *building drain* or a *branch* may be subject to *backflow*, a gate valve or a *backwater valve* shall be installed on every *fixture drain* connected to them when the *fixture* is located below the level of the adjoining street.



In addition, the requirements in the CSA-B44 **Safety Codes for Elevators** that must also be considered are

Clause 2.1.2.2 Construction at Bottom of Hoistway

Pits extending to the ground shall have non-combustible floors, and shall be designed to prevent entry of ground water into the pit. The pit floor of any hoistway not extending to the ground shall be of construction having a fire-resistance rating at least equal to that required for the hoistway enclosure.

Clause 2.2.2.3 – Permanent provisions shall be made to prevent accumulation of groundwater in the pit (See 2.1.2.2).

Clause 2.2.2.4 – Drains and sump pumps, where provided, shall comply with the applicable plumbing codes, and they shall be provided with a positive means to prevent water, gases, and odors from entering the hoistway.

Clause 2.2.2.5 – In elevators provided with Firefighters' Emergency Operation a drain or sump pump shall be provided.

Clause 2.2.2.7 – In jurisdictions enforcing the Alberta Building Code (ABC) sump pumps and their control equipment shall not be installed in any elevator pit.

The purpose of this notice is to ensure that **Designers** and **Installers** are aware of the provisions in the applicable Codes for the drainage of water from Elevator pits. The objectives of these Code requirements are for Health, Safety and Accessibility.

The diagrams on the following page illustrate arrangements that have been accepted by Safety Services, Alberta Elevating Devices and Amusement Rides Safety Association (AEDARSA) and the Safety Codes Council's Plumbing Technical Council and Elevator Technical Council.

ACCEPTABLE METHODS FOR DRAINING OF ELEVATOR PITS

