Section 6.2. Planning

(See Part 10)

6.2.1. General

6.2.1.1. Good Engineering Practice

(See Note A-6.2.1.1.)

1) Heating, ventilating and air-conditioning systems, including mechanical refrigeration equipment, shall be designed, constructed and installed in conformance with good engineering practice such as that described in, but not limited to,

a) the ASHRAE Handbooks and Standards,

b) the HRAI Digest,

c) the Hydronics Institute Manuals,

d) the NFPA Standards,

e) the SMACNA Manuals,

f) the Industrial Ventilation Manual published by the ACGIH,

g) CSA B214, "Installation Code for Hydronic Heating Systems,"

h) CAN/CSA-Z317.2, "Special Requirements for Heating, Ventilation, and Air-Conditioning (HVAC) Systems in Health Care Facilities,"

i) EPA 625/R-92/016, "Radon Prevention in the Design and Construction of Schools and Other Large Buildings," and Rev. 12717

j) ASHRAE Guideline 12, "Minimizing the Risk of Legionellosis Associated with Building Water Systems."

6.2.1.2. Outdoor Design Conditions

1) The outdoor conditions to be used in designing heating, ventilating and air-conditioning systems shall be determined in conformance with Subsection 1.1.3. (See Note A-6.2.1.2.(1).) Rev. 12683

2) Reserved.

3) Reserved.

6.2.1.3. Expansion, Contraction and System Pressure

1) Heating and cooling systems shall be designed to allow for expansion and contraction of the heat transfer fluid and to maintain the system pressure within the rated working pressure limits of all components of the system.

6.2.1.4. Structural Movement

(See Note A-6.2.1.4.)

1) Mechanical systems and equipment shall be designed and installed to accommodate the maximum relative structural movement provided for in the construction of the *building*.

6.2.1.5. Installation Standards

1) Except as provided in Articles 6.9.4.2. and 6.3.1.5., the installation of heating and air-conditioning equipment, including mechanical refrigeration equipment, and including provisions for mounting, clearances and air supply, shall conform to

a) the Safety Standards Act and the following of its regulations:

i) the Gas Safety Regulation,

ii) the Electrical Safety Regulation, and

iii) the Power Engineers, Boiler, Pressure Vessel and Refrigeration Safety Regulation,

b) CSA B139, "Installation Code for Oil-Burning Equipment," and

c) CSA B365, "Installation Code for Solid-Fuel-Burning Appliances and Equipment."

d) **Reserved,**

e) **Reserved.**

2) For the purposes of Clause (1)(c), a solid-fuel burning boiler accepted for use under section 10 of the Safety Standards Act satisfies section 3.1 of CAN/CSA-B365, "Installation Code for Solid-Fuel-Burning Appliances and Equipment."

6.2.1.6. Installation – General

1) Equipment requiring periodic maintenance and forming part of a heating, ventilating or air-conditioning system shall be installed with provision for access for inspection, maintenance, repair and cleaning. (See Note A-6.2.1.6.(1).)

2) Mechanical equipment shall be provided with guards so as to prevent injury.

3) Heating, ventilating or air-conditioning systems shall be protected from freezing if they may be adversely affected by freezing temperatures.

6.2.1.7. Asbestos

1) Asbestos shall not be used in HVAC systems and equipment.

6.2.2. Incinerators

6.2.2.1. Applicable Standard

1) The design, construction, installation and *alteration* of every indoor incinerator shall conform to NFPA82, "Incinerators and Waste and Linen Handling Systems and Equipment."

6.2.3. Solid Fuel Storage

6.2.3.1. Solid Fuel Storage Bins

1) A storage bin for solid fuel shall not be located above a sewer opening or drain opening.

2) Storage bins for solid fuel shall be designed and constructed so that the air temperature in the bin or the surface temperature of any part of the floor or walls is below 50°C.