

On May 9, 1990, The City of Winnipeg amended Building By-law No. 4555/87 to include a new SECTION 23 dealing with SUBSURFACE DRAINAGE. This section will require sump pits and pumps in all new buildings having a subsurface drainage system (weeping tile). This regulation will be applied to all qualifying buildings for which a Building Permit becomes validated on or after **September 1, 1990**.

Section 23 reads as follows:

SUBSECTION 23.1. GENERAL

23.1.1. Where buildings are provided with a subsurface drainage system, the system shall be constructed so that the drainage is directed to a sump pit equipped with a pump and discharged to the outside of the building in conformance with Subsection 23.4

23.1.2. For buildings other than those having a basement area of less than 185 m² (2000 sq.ft.) the system including weeping tile, sump pits, pumps and other associated equipment, shall be designed and constructed in accordance with good design practise, such that the water level in the pit is normally maintained below the lowest level of the weeping tile entering the pit and in the case of power failure the pit is large enough to contain water collected from the weeping tile for a period of at least one (1) hour.

SUBSECTION 23.2. SUMP PUMPS

23.2.1. Sump pumps shall be:

- (a) automatically controlled and set to maintain the water level below the lowest draintile entering the pit;
- (b) of the centrifugal impeller type;
- (c) installed with their inlets located at least 30mm (1¹/₈") above the bottom of the sump pit;
- (d) a submersible pump; and
- (e) capable of discharging a minimum flow of 0.75 L/S at 3.6 m head.

23.2.2. The sump pump motor shall:

- (a) be connected to an electrical circuit that supplies no other outlets or equipment;
- (b) be designed for up to 10 start/stop cycles per hour;
- (c) be equipped with a self-resetting thermal overload protection switch;
- (d) have a rating of at least 0.19 kw;
- (e) have an rpm rating not exceeding 3500
- (f) have a minimum service factor of 1.10;
- (g) be rated for continuous duty; and
- (h) be CSA approved.

SUBSECTION 23.3. SUMP PITS

23.3.1. Sump pits shall:

- (a) have walls and bottoms constructed of concrete, polyethylene, polypropylene, fiberglass or other suitable materials;
- (b) be provided with a sealed cover adequate to support the occupancy floor load;
- (c) for building with a basement area of 185 m² (2000 sq. ft.) or less have a minimum floor area of 0.46 m² (4.9 sq. ft.) and a minimum depth of 0.8 m (30 in.);
- (d) the cover of the sump pit must be screwed down, locked or fastened in a manner acceptable to the authority having jurisdiction.

SUBSECTION 23.4. DISCHARGE

23.4.1. The discharge pipe system from the sump pump shall:

- (a) be constructed of materials installed in conformance with the Code;
- (b) have a minimum internal diameter of 30mm (1¹/₈")
- (c) have a check valve installed near the connection to the pump to prevent backflow into the sump pit;
- (d) have a union joint installed near the pump to facilitate pump removal and inspection if metallic piping is used; and
- (e) be graded or otherwise protected to prevent the freezing of water in the system.

23.4.2. (1) Where in the opinion of the Commissioner of Works and Operations, the landscaped area around the building is adequate to dispose of subsurface drainage without causing a nuisance to adjoining properties, the discharge from the sump pump shall be directed to the outside of the building and discharged on to a splash pad as specified in the City of Winnipeg Lot Grading By-law No. 4569/87.

(2) Where in the opinion of the Commissioner of Works and Operations, the landscaped area around the building is inadequate to dispose of subsurface drainage and/or where such drainage may result in a nuisance to other properties, the type of system and point of discharge shall be acceptable to said Commissioner

23.4.3. Discharge from buildings on river lots shall be in accordance with the requirements of the Winnipeg Rivers and Streams Authority No. 1.

23.4.4. Piping shall be so located so as not to present a hazard.

SUBSECTION 23.5. FLOOR DRAINS

23.5.1. With regard to a floor drain connected to a sanitary sewer, a solid pipe shall extend from the floor drain trap to the finished floor level with no interconnection between the floor drain and the sump pit.

IMPORTANT NOTE:

The size and depth of the sump pit indicated in Subsection 23.3. only applies to building having a basement area of 185 m² (2000 sq. ft.) or less. For buildings with basement areas exceeding 185m² (2000 sq. ft.) it incumbent upon the designer, contractor and/or owner to ensure that the pit is in compliance with Article 23.1.2. of Section 23.



PLANNING, PROPERTY
AND DEVELOPMENT
DEPARTMENT



For more information regarding sump pumps and pits please contact:

Plan Examination Branch

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Housing Inspection Branch

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or



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at your service.**

Every effort has been made to ensure the accuracy of information contained in this booklet. However, in the event of a discrepancy between this booklet and the governing City of Winnipeg By-law, the By-law will take precedence.

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Sump Pits & Pumps

***The Winnipeg Building
By-law No. 4555/87***

