



VILLE DE LAC-BROME
TOWN OF BROME LAKE

CONSTRUCTION BY-LAW no 598

August 2013

Amended by	By-law 598-1	EEV 2015-10-27
Amended by	By-law 598-2	EEV 2016-09-20
Amended by	By-law 598-3	EEV 2018-01-16
Amended by	By-law 598-4	EEV 2023-06-20

Town of Brome Lake

Town clerk's office

Table of contents

CHAPTER I: DECLARATORY AND INTERPRETIVE PROVISIONS.....	1
SECTION I – DECLARATORY PROVISIONS.....	1
1- Title	1
2- Territory affected	1
3- By-laws replaced	1
4- Priority of application	1
SECTION II: INTERPRETIVE PROVISIONS	1
5- Terminology.....	1
6- Interpretation of the tables	1
7- Specific definitions.....	1
8- Measuring system	4
CHAPTER II: ADMINISTRATIVE PROVISIONS	4
SECTION I : APPLICATION OF THE BY-LAW	4
9- Buildings subject to regulation	4
10- Covered works	4
11- Non-covered buildings or works.....	4
12- Reconstruction	5
13- Acquired rights relating to agricultural businesses (G).....	5
SECTION II: APPLICATION OF THE BY-LAW	5
14- Regulation administration	5
15- Application.....	5
16- Powers of the person in charge of the enforcement.....	5
17- Obligation to allow the inspector to visit.....	6
SECTION III: CONTRAVENTIONS AND SANCTIONS	6
18- Infractions and penalties.....	6
19- Continued infraction.....	6
20- Repeated offences	7
21- Civil recourse.....	7
22- Costs.....	7
CHAPTER III: CONSTRUCTION STANDARDS	7
SECTION I: GENERAL PROVISIONS	7
23- Standards compendiums.....	7
24- Building fortification	10
25- Immunization measures applicable to constructions, works and structures on flood plains ZONES.....	11
26- Special provision for properties located less than 10 m from flood zones (Amended by By-law 598-1)	12
SECTION II : SPECIFIC STANDARDS.....	12
27- For buildings or residential premises	12
28- Retirement homes	12
29- Incomplete building.....	13
30- Unused foundations.....	13
31- Foundations of main buildings	13
32- Water saving	14
33- Removed (amended by By-law 598-4).....	14

CHAPTER IV: CONSTRUCTION STANDARDS	15
SECTION I: GENERAL STANDARDS	15
34- <i>Obligation of the promoter</i>	15
35- <i>Modification to plans and documents</i>	15
36- <i>Rock</i>	15
37- <i>Connection of new roads or streets</i>	16
SECTION II: CONSTRUCTION OF PRIVATE AND PUBLIC STREETS	16
38- <i>General provisions</i>	16
39- <i>Cross profile</i>	16
40- <i>1st class excavation</i>	16
41- <i>2nd class excavation</i>	16
42- <i>Earthworks</i>	17
43- <i>Transitions - general information</i>	17
44- <i>Excavation and crossfill</i>	17
45- <i>Excavation and longitudinal fill</i>	17
46- <i>Soil & rock</i>	18
47- <i>Transversal trench</i>	18
48- <i>Street structure</i>	18
49- <i>Transversal slope ("bulging")</i>	19
50- <i>Street staking</i>	19
51- <i>Retaining device</i>	19
52- <i>Environmental considerations</i>	19
SECTION III : DRAINAGE	19
53- <i>General provisions</i>	20
54- <i>Standards for street drainage layout</i>	20
55- <i>Ditch layout standards for open drainage</i>	20
55.1 <i>Development or maintenance of ditches on the shore of a lake, watercourse or wetland</i>	21
56- <i>Standards for closed drainage ditches</i>	21
57- <i>Mandatory layout when the street and the drainage ditch cross a watercourse</i>	21
58- <i>Authorized culvert length</i>	21
59- <i>Sizing a culvert</i>	22
60- <i>Installation of a culvert</i>	22

CANADA
PROVINCE OF QUEBEC
TOWN OF BROME LAKE

CONSTRUCTION BY-LAW

At a regular Town of Brome Lake Council meeting held at Fulford Hall on August 5, 2013, in accordance with the Law and at which were present: councillors Marta Gubert Gomes, Cynthia Wilkinson, Donald Gagné, Thomas McGovern, Jacques Lecours and Patrick Ouvrard forming quorum under the chairmanship of the Mayor Gilles Decelles s.

BY-LAW no.598

WHEREAS the Town of Brome Lake has the power to revise its by-law regarding the Land Use and Development Plan every five years, by virtue of the Law, in accordance with article 10.3.1 of the Act respecting Land use planning and development;

WHEREAS the Town of Brome Lake decided to undertake this procedure in 2009;

WHEREAS during the meeting held on May 15, 2013, the Municipal Council adopted its first draft by-law replacing the present Zoning By-Law pursuant to articles 110.3.1 and 109.1 of the above mentioned Law;

WHEREAS to implement its new planning program, the Town of Brome Lake must use a special procedure to replace its Zoning by-law as provided for in article 110.10.1 of the above mentioned Law;

WHEREAS during the meeting held July 2, 2013, a notice of motion with dispense of reading was given by Jacques Lecours;

WHEREAS every Councillor had the opportunity to become familiar with said draft by-law, which was available to the public at the Town Hall for consultation;

WHEREAS this by-law was submitted to the citizens for public consultation on June 8, 2013;

WHEREAS at this occasion, the Municipal Council heard people who wished to express themselves on the content of said by-law;

CONSEQUENTLY:

It is proposed by Patrick Ouvrard, seconded by Jacques Lecours and unanimously resolved to adopt By-law no. 598 replacing the Construction By-law no. 358.

CHAPTER I: DECLARATORY AND INTERPRETIVE PROVISIONS

SECTION I – DECLARATORY PROVISIONS

1- TITLE

This by-law is titled the “Construction By-law”.

2- TERRITORY AFFECTED

This by-law applies to the entire territory of the Town of Brome Lake.

3- BY-LAWS REPLACED

This by-law replaces the Construction By-law no. 358 and its amendments.

4- PRIORITY OF APPLICATION

In the event of incompatibility between them, the planning by-laws and the compendiums of construction standards forming part of the present by-law are applied in the following order of precedence: the zoning by-law, the construction by-law and the compendiums of standards.

SECTION II: INTERPRETIVE PROVISIONS

5- TERMINOLOGY

The words and expressions used in this by-law have the meanings here attributed to them, in the following order of priority:

- 1° The present by-law;
- 2° The standards that are an integral part of this by-law;
- 3° The Zoning By-law.

6- INTERPRETATION OF THE TABLES

The appendices, sketches, tables, diagrams, graphic illustrations, symbols and all forms of expression other than the text itself, contained in this by-law or referred to in the by-law, form an integral part of it for any purposes whatsoever. Should there be a contradiction between the text and the tables, diagrams, graphic illustrations, symbols and other forms of expression, the text shall prevail.

7- SPECIFIC DEFINITIONS

Unless the context indicates a different meaning, the following terms are understood to mean as follows:

« **Code de construction du Québec** » - “**Quebec Construction Code**”: The meaning given to it in article 21;

« **Immeuble ou local d'habitation** » - “**Building or living space**”: A building or living space where the services of an intermediate resource or a family-type resource within the meaning of the Act respecting health services and social services are offered;

« **Inspecteur en bâtiment** » - “**Building inspector**”: Official designated by the Municipal Council, in accordance with the Act, also includes the Assistant Building Inspector.

« **Niveau moyen du sol (pour déterminer la hauteur de bâtiment)** » - “**Average ground level (to determine building height)**”: Average level obtained by measuring the final ground levels measured along each exterior wall of a building within a distance of 3 m from the wall, according to readings that take into account any differences in level other than those giving access to the building's vehicular and pedestrian entrance doors;

« **Premier étage** » - “**First Floor**”: Highest floor with a maximum height of 1.4 m above average ground level;

« **Résidences pour personnes âgées** » - “**Residences for the elderly**”: See definition set out in section 118.1, 2nd paragraph, of the Act respecting land use planning and development (LAU);

« **Emprise** » - “**Right-of-way**”: The overall width of the street, including ditches, curbs, sidewalks and other municipal infrastructure and equipment;

« **Accotement** » - “**Shoulder**”: Part of the roadbed between the carriageway and the slope, reserved for the emergency stopping of vehicles and serving as a support for the carriageway;

« **Chaussée** » - “**Carriageway**”: Surface on which vehicles travel, including shoulders;

« **Ligne avant d'un lot ou ligne de rue** » - “**Front lot line or street line**”: means the dividing line between a lot and a street right-of-way;

« **Ligne des hautes eaux** » - “**High-water line**”: Line used to delimit the shoreline of lakes, watercourses and wetlands.

The high-water line of a lake or water body is the natural high-water line, i.e.:

1° At the point where there is a change from a predominance of aquatic plants to a predominance of terrestrial plants, or, if there are no aquatic plants, at the point where the terrestrial plants stop in the direction of the water body. Plants considered aquatic are all hydrophytic plants, including submerged plants, plants with floating leaves, emergent plants and emergent herbaceous and woody plants, characteristic of marshes and swamps open to bodies of water;

2° In the case of a water retention structure, the maximum operating elevation of the hydraulic structure for the upstream portion of the water body. For Brome lake, the maximum operating elevation of the retaining structure is located at elevation 197.28 m;

3° In the case of a legally erected retaining wall, from the top of the structure;

If the high-water line cannot be determined using the above criteria, it can be located as follows:

4° If information is available, to the 2-year flood limit, which is considered equivalent to the line established according to the botanical criteria defined above in point 1°.

The high-water line of a wetland is established where vegetation is not typical of wetlands and soils are not hydromorphic. Wetland boundaries must be established by a qualified professional or technologist. (Amended by By-law 598-3)

« **Milieu humide** » - «**Wetland**»: a site saturated with water or flooded for a sufficiently long period to influence the nature of the soil and the composition of the vegetation. This term covers a wide range of ecosystems, such as ponds, marshes, swamps and peat bogs. These mineral or organic soils are influenced by poor drainage conditions, while the vegetation is essentially composed of species with a preference for wet locations or species tolerant of periodic flooding. For the purposes of this by-law, this term includes any site, regardless of surface area, fed by a water body or with no hydrological connection. (Amended by By-law 598-3)

« **Ponceau** » - «**Culvert**»: Conduit installed to allow water to flow into a drainage system (including ditch, water body, etc.);

« **Rue** » - «**Street**»: Land or structure used for motor vehicle traffic. The term “street” includes any path, road, range or lane, whether private or public, unless otherwise specified;

« **Rue privée** » - «**Private street**»: A roadway that has not been ceded to the Town, but which provides access to properties under its control;

« **Rue publique** » - «**Public street**»: Roadway belonging to the Town or the provincial government;

« **Rue collectrice** » - «**Collector street**»: A roadway into which traffic from local streets flows; a collector street is used both to serve neighboring properties and for through traffic. It usually leads to an arterial or other collector road.

« **Rue locale** » - «**Local street**»: A thoroughfare whose main function is to provide access to the properties bordering it.

8- MEASURING SYSTEM

All dimensions given in these regulations are in the International System (SI).

CHAPTER II: ADMINISTRATIVE PROVISIONS

SECTION I: APPLICATION OF THE BY-LAW

9- BUILDINGS SUBJECT TO REGULATION

This by-law applies to the following buildings:

- 1° Any new building;
- 2° Any enlarged or converted part of an existing building;
- 3° In the case of the partial demolition of a building, to the work to be carried out on the non-demolished part of the building;
- 4° A building that is relocated only with regard to the minimum setbacks required in the zoning by-law and the minimum limiting distances (exposure area) of the Codes;
- 5° A building moved to another lot;
- 6° To parts of a building presenting a dangerous condition;
- 7° A building or part of a building undergoing a change of use.

10-COVERED WORKS

This by-law applies to the following works:

- 1° Any new street, or portion of a new street, of a private or public nature;
- 2° Construction or reconstruction of a drainage system for a new street;
- 3° Installation or replacement of a private culvert

11-NON-COVERED BUILDINGS OR WORKS

This by-law does not apply to the following works:

- 1° Public utility works carried out in a street or on the right-of-way of a thoroughfare;
- 2° Utility poles and towers, television, radio or other telecommunication antennas, with the exception of loads exerted by those located on or attached to a building;

- 3° Hydroelectric dams and structures, or those used to regulate the flow of water or gas;
- 4° Mechanical or other equipment not specifically mentioned in the present requirements;
- 5° Accessory buildings with a ground area equal to or less than 20 m².

12-RECONSTRUCTION

The reconstruction or repair of any building that has been destroyed or rendered unsafe, or that has lost at least half of its value as a result of fire or any other cause, must be carried out in compliance with the municipal by-laws in effect at the time of such reconstruction or repair, and in compliance with any other applicable by-law or Act.

13-ACQUIRED RIGHTS RELATING TO AGRICULTURAL BUSINESSES (G)

For establishments with 100 animal units or less, replacement of the type of livestock operation is permitted provided the same number of animal units is maintained and the same or more favourable management of livestock effluents is applied to odour nuisance, whereas for other establishments, replacement of the type of livestock operation is only possible within the parameters for calculating separation distances. An acquired right is also recognized for the reconstruction of livestock buildings in the event of a disaster, in the same spirit as for the previous case.

SECTION II: APPLICATION OF THE BY-LAW

14-REGULATION ADMINISTRATION

The Town Clerk's Office is responsible for the administration of this by-law.

15-APPLICATION

The building inspector is responsible for enforcing the present by-law, except for article 23,3°, which is the responsibility of the fire chief. In particular, they are authorized to issue a statement of offence for any violation of this by-law.

The Council may, by resolution or by by-law, authorize any other person to issue a statement of offence in respect of any breach of the present by-law.

16-POWERS OF THE PERSON IN CHARGE OF THE ENFORCEMENT

The person responsible for enforcing the by-law shall exercise the powers conferred upon him or her by the present by-law, and in particular:

- 1° May visit and examine, between 7 a.m. and 7 p.m., any immovable or movable property, as well as the interior or exterior of any house, building or structure whatsoever, to verify whether this by-law, other by-laws or Council resolutions are being complied with, or to verify any information or to ascertain any fact necessary for the exercise by the

municipality of the power to issue a permit, to issue a notice of compliance of an application, to grant an authorization or any other form of permission, conferred upon it by an Act or by-law. In a territory declared a permanent agricultural zone by the Act respecting the preservation of agricultural land and agricultural activities (LPTAA), the building inspector may be assisted by an agronomist, a veterinarian, a professional technologist or a land surveyor, in order to gather any information or observe any fact necessary for the application of a separating standard;

2° Can give formal notice to temporarily evacuate any building that could endanger the life of any person;

3° May give formal notice to carry out any repair work it deems necessary for the safety of the building, and recommend any emergency measures to the board;

4° May issue a formal notice to rectify any situation constituting an infringement of the present by-law;

5° May take any measure necessary to stop the construction, occupation or use of a part of a lot, land-site, building or structure that is incompatible with this by-law. (Amended by By-law 598-1)

17-OBLIGATION TO ALLOW THE INSPECTOR TO VISIT

The owner, tenant or occupant of a movable or immovable property, house, or building of any kind must allow the person responsible for applying the by-law to enter any building or site to make inquiries or to inspect, between the hours of 7 am and 7 pm, to ensure that this and other by-laws or resolutions of the municipality are being carried out or respected.

When so requested, the person responsible for applying the by-law who is to carry out an inspection shall establish his identity by exhibiting the certificate issued by the municipality attesting to his position.

SECTION III: CONTRAVENTIONS AND SANCTIONS

18-INFRACTIONS AND PENALTIES

Any person who contravenes this by-law, commits an infraction, and is liable for:

1° for a first infraction, a fine of \$500 to \$1,000 in the case of an individual, or a fine of \$1,000 to \$2,000 in the case of a legal entity; (Amended by By-law 598-1)

2° For a repeated offence, if the offender is an individual, a fine of \$1,000 to \$2,000. If the offender is a legal entity, the fine is \$2,000 to \$4,000. (Amended by By-law 598-1)

19-CONTINUED INFRACTION

If the infraction continues for longer than one day, the penalty is applied for each day or fraction of a day it continues.

20-REPEATED OFFENCES

When the by-law provides a stiffer penalty in the case of a repeated offence, the penalty may not be imposed unless the repeated offence has taken place within two years of the conviction of the offender for an infraction of the same kind as that for which the more severe penalty is being sought.

21-CIVIL RECOURSE

In addition to penal recourse, the town may exercise all other civil recourse available to it to ensure that the provisions of this by-law are observed.

22-COSTS

Costs are added to the fines provided in this by-law. They include the costs related to the execution of the judgment.

CHAPTER III: CONSTRUCTION STANDARDS

SECTION I: GENERAL PROVISIONS

23-STANDARDS COMPENDIUMS

1° Quebec Construction Code (decree)

As indicated by government decree 953-2000, the Construction Code applies to all construction work on a building to which the Building Act applies (and to equipment intended for designated public use), with the exception of certain buildings as indicated in decree 954-2000:

Notwithstanding the above, buildings covered by decrees 953-2000 and 954-2000 are subject to more severe measures by amending the Quebec Construction Code for two purposes as described below:

- a) Article 10.3.1.1 Separation of main uses does not apply;
- b) Article 10.3.2.3 Spatial separation and facade protection is amended and point 1) is replaced by the following:

“1) The provisions of sub-section 3.2.3, concerning spatial separation and facade protection, do not apply to a conversion if it is carried out within the same or lower requirements for facade protection and is an existing part of an exposing façade”.

2° Quebec Construction Code (excluding decree)

The Quebec Construction Code, with the amendments described below, forms an integral part of the present by-law and applies to buildings not covered by decree 954-2000 as follows:

The following amendments have been made to the Quebec Construction Code:

a) In article 1.1.3.2

i) By replacing the definition of “competent authority” with the following definition:

“Competent authority: The Town of Brome Lake Building Inspector.”

b) In article 2.3.1.2

i) By replacing paragraphs 1), 2) and 3) with the following paragraph 1):

“1) Plans must be to scale and show the nature and extent of the work or intended use in sufficient detail to determine whether the completed work and intended use will comply with the Québec Construction Code”.

c) In article 2.3.4.2 by inserting between the words “businesses” and “shall” in paragraph 1), the words “submitted in support of the building permit application”

d) In article 2.3.4.3 by inserting between the words “businesses” and “shall” in paragraph 1), the words “submitted in support of the building permit application”

e) In article 2.3.4.6 by inserting between the words “foundations” and “shall” in paragraph 1), the words “submitted in support of the application for a building or excavation permit”

f) By replacing section 2.5 with the following:

« SECTION 2.5. EQUIVALENTS

2.5.1. General purpose

2.5.1.1. Equivalent materials, devices and equipment

1) The provisions of the Quebec Construction Code do not limit the use of materials, devices, systems, equipment, calculation methods or construction processes not expressly mentioned therein, provided such use is appropriate.

2.5.1.2. Proof of equivalent performance

1) Anyone wishing to use an equivalent to meet one or more requirements of the Quebec Construction Code must prove that the proposed equivalent meets the performance conditions required by the Quebec Construction Code.

2.5.1.3. Equivalence based on tests, evaluations or experience

1) The use of materials, devices, systems, equipment, calculation methods or construction processes not described in the Quebec Construction Code or that do not fully meet the requirements of the Quebec Construction Code is permitted if it can be

demonstrated that this alternative is appropriate based on the results of previous use, testing or evaluation.

2.5.2. Structural equivalents (see Appendix A of the Quebec Construction Code)

2.5.2.1. Structural equivalents

1) Provided that the calculations are carried out by a person competent in the chosen method and that they guarantee safety and performance in compliance with Part 4, buildings and their structural elements covered by Part 4 that cannot be subjected to an analysis using a generally recognized theory may be calculated using one of the following methods:

- a) Evaluation of a full-scale structure or prototype by load testing; or
- b) Analog studies using scale models.

2.5.3. Equivalent testing standards

2.5.3.1. Acceptable standards

1) It is permitted to use test results from standards other than those mentioned in the Quebec Construction Code, provided that these test standards give comparable results.

g) By adding a section 2.6 that reads as follows

« SECTION 2.6. COMPLIANCE TESTING

2.6.1. General purpose

2.6.1.1. Application area

1) The requirements of this section apply to buildings covered by Part 4; those of subsection 2.6.5. apply to all buildings.

2.6.2. Construction conformity examination

2.6.2.1. Construction conformity

1) The designer, or any other duly qualified person, must establish that the construction of a building or part of a building complies with the design.

2.6.3. Conformity check of workshop drawings

2.6.3.1. Design conformity

1) The designer, or any other duly qualified person, must examine the workshop drawings and other related documents and ensure that they conform to the design.

2.6.4. Materials and quality of execution

2.6.4.1. Examination

1) The designer, or any other suitably qualified person, must examine the materials, the quality of execution and the results of material tests at the various stages of construction.

2.6.5. Off-site conformity testing

2.6.5.1. Prefabricated packages

1) When a building, or building component, is assembled off-site and cannot be verified on site, off-site examinations must be performed to verify compliance with the Quebec Construction Code.

h) Section 2.7 “Documents incorporated by reference” of Part 2, and parts 4, 5, 6, 7 and 8 of the Quebec Construction Code do not apply.

3° The National Fire Code (NFC)

The provisions of the National Fire Code of Canada 1995 and its amendments as of the date of coming into force of the present by-law are an integral part of the present by-law, with the exception of section 1.1.3 “Documents incorporated by reference” of Part 1.

4° Future amendments to the Codes

a) For buildings governed by paragraph 1° of this article, future amendments to the Quebec Construction Code made by government decree will apply as of the date of the decree;

b) For buildings governed by paragraphs 2° and 3° of this article, future amendments to the Quebec Construction Code and the National Fire Code will form part of the building by-laws only when accepted by resolution of the council and will come into force on the date set by the said resolution.

All applicants must comply with current building codes. (Amended by By-law 598-4)

24-BUILDING FORTIFICATION

1° Application

Notwithstanding any other provisions of the present by-law, the present section applies to all buildings on town territory, whether new or existing.

2° Prohibition

The use, assembly and maintenance of construction materials to fortify or protect a building against firearm projectiles, explosions, or the impact or force of vehicles or other types of assault is prohibited for buildings assigned to one of the following uses: bed and breakfasts, inns, hotels, motels, boarding houses of all kinds, all establishments related to food or alcoholic beverages, including restaurants, bars, taverns, breweries,

nightclubs, cabarets, sports centers, indoor recreational activities, commercial services, vehicle sales, social clubs, as well as those assigned to any of the residential uses.

Without limiting the generality of the foregoing, the following are particularly prohibited for any building sheltering the uses listed above:

- a) Installation of laminated glass (H-6) or other bullet-proof glass in windows and doors;
- b) The installation of bullet-proof shutters or any other material offering resistance to explosives or shocks inside or outside the building;
- c) The installation of armoured or specially reinforced doors to resist the impact of firearm projectiles;
- d) Installation of an observation tower;
- e) The installation of wire mesh or metal bars on driveways, doors or windows, except those in basements or cellars.

The installation or use of a surveillance camera is permitted provided it does not infringe on a person's privacy as specified in article 36 (3) of the Civil Code of Québec.

In addition, any derogatory building existing on the date of entry into force of the standards enacted in the present article and belonging to the uses and groups of uses listed above, must, within 6 months, undergo repair or reconstruction in order to bring it into compliance with the provisions of the present article.

25-IMMUNIZATION MEASURES APPLICABLE TO CONSTRUCTIONS, WORKS AND STRUCTURES ON FLOOD PLAINS ZONES

Permitted constructions, works and structures must comply with the following immunization rules, adapted to the context of the infrastructure in question:

- 1) no opening (window, window well, access door, garage, etc.) can be reached by the 100-year flood;
- 2) no first floor can be affected by the 100-year flood;
- 3) drainage drains are equipped with non-return valves;
- 4) for any structure or part of a structure below the 100-year flood level, a study is produced demonstrating the ability of the structures to withstand this flood, including calculations relating to:
 - waterproofing;
 - structural stability;
 - necessary reinforcement;
 - pumping capacity to evacuate seepage water; and
 - concrete resistance to compression and tension.

5) fill must be limited to immediate protection around the structure in question and must not be extended to the entire property on which it is planned. The average slope from the top of the fill adjacent to the protected structure to its foot should not be less than 33.3% (ratio 1 vertical: 3 horizontal);

In the application of immunization measures, if the flood plain shown on a map has been determined without having established the recurrence rating of a 100-year flood, this 100-year rating will be replaced by the rating of the highest level reached by the waters of the flood used as a reference for determining the limits of the floodplain, to which, for safety purposes, 30 centimetres will be added.

26-SPECIAL PROVISION FOR PROPERTIES LOCATED LESS THAN 10 M FROM FLOOD ZONES (Amended by By-law 598-1)

In a strip of land within 10 m of the 20-100-year flood level for Brome Lake, the basement of new constructions and any excavation project must be dug so that the lower level of the slab is at least 30 cm above the 20-100-year flood level.

SECTION II : SPECIFIC STANDARDS

27-FOR BUILDINGS OR RESIDENTIAL PREMISES

For a residential building or dwelling, the following provisions apply in addition to all other provisions of the present by-law:

1° A smoke alarm must be installed in each room and on each level of finished floors;

2° When the basement is used for rented rooms, it must have a second means of escape independent of the first, when the first exit serves one or more floor levels;

3° Emergency exits must be visibly identified;

4° ABC-type portable fire extinguishers must be installed in the kitchen(s) on each floor and in the basement occupied by people.

28-RETIREMENT HOMES

For retirement homes, the following provisions apply in addition to all other provisions of the present by-law:

1° Each bedroom must have a minimum surface area of 7 m² and each double bedroom must have a minimum surface area of 12 m². These areas do not include storage space, i.e. built-in wardrobes or closets;

2° No room may be arranged to accommodate more than 2 people;

3° Each room must have an opening giving direct access to daylight with a minimum surface area of 5% of the floor area, in compliance with the requirements of the applicable Codes under article 21, but never less than 0.45 m². Part of this opening must

be openable from the inside without tools or special knowledge. Skylights, roof windows or skylights are not considered to be openings giving direct access to daylight;

4° Each room must have a minimum height of 2.3 m, subject to the requirements of the Codes applicable under Article 21;

5° Each room must be equipped with storage space;

6° One or more rooms serving as living areas must be provided and made available to guests. The room or rooms must have a total surface area of at least 12 m², with at least 1 m² per person. The dining room cannot be used as a living room;

7° An outdoor relaxation area must be set up and made available to people. It must be easily accessible;

8° A complete bathroom including toilet, sink and bath or shower must be available for people on each floor of the dwelling where rooms for rent are used. The dwelling must have a minimum of one (1) bathroom (toilet, sink) for 4 people, including the owner and members of his or her family.

29-INCOMPLETE BUILDING

Any unoccupied or unfinished building must be suitably enclosed or barricaded to prevent access.

30-UNUSED FOUNDATIONS

The unused foundations of a burnt-out, demolished or relocated building with a cellar or basement must be surrounded by a non-open wooden board fence at least 1.5 m high. Any foundation with a cellar or basement not used within 12 months of the date of issue of the building permit, or any foundation not used within 12 months of a fire, demolition or relocation, must be demolished and transported to a site recognized by the Ministry of the Environment, or completely backfilled. The site must also be backfilled and levelled. The surface must be covered with soil to a thickness of at least 300 mm and grassed. No putrescible material or debris may be used for filling.

31-FOUNDATIONS OF MAIN BUILDINGS

All main buildings must be built on permanent, continuous, poured-concrete foundations. Exceptions to this rule are mobile and modular homes, and farm buildings on land under cultivation, with the exception of residences.

Notwithstanding the preceding paragraph, concrete (sonotube) or metal poles screwed into the ground may be used as a foundation for up to 50% of the perimeter of the main building. All such poles (concrete or metal) must be driven into the ground to a minimum depth of 1.83 m (6 ft.) and must be fitted with a polyethylene sheath. Where rock is present at less than 1.83 m (6 ft.), these poles may also be used, provided that special measures are taken to counter the effect of frost. These measures must be validated by an engineer in the case of the main building. Galleries, carports or lean-tos may also use concrete or metal poles. However, these accessory constructions are not taken into

account when calculating the maximum percentage authorized for the perimeter of the main building.

32-WATER SAVING

All dwellings must be equipped with the following water-saving devices:

- 1° Low-flush toilets that discharge a maximum of 6L / flush;
- 2° Faucets and showerheads with a maximum flow rate of 9.5 L / min.

33-REMOVED (Amended by By-law 598-4)

CHAPTER IV: CONSTRUCTION STANDARDS

SECTION I: GENERAL STANDARDS

34-OBLIGATION OF THE PROMOTER

Any promoter:

1. Shall inform himself/herself of the procedures to be followed to obtain approval for a new project, street or development from the Land Use Planning Department and any other person or department designated by the Town.
2. Must submit a preliminary plan prepared by a land surveyor of the project indicating the number of potential lots.
3. Must be available to meet, at their request, with the Planning Advisory Committee or the designated official.
4. Following the recommendations of the Planning Advisory Committee and the Designated Officer, if Council agrees to accept the preliminary plan, the developer must submit for final approval:
 - a) The information required for a subdivision application, as stipulated in article 20 of by-law number 599. However, the surveyor's plan must be provided in electronic form and georeferenced.
 - b) The structure of the road surface, the longitudinal profile of the center of the road with the percentages of changes in slope and the profile of the ditches.
 - c) Natural terrain features such as watercourses, drainage ditches, wetlands, surface rock, wooded areas and erosion, scree and landslide hazard zones;
 - d) Rights-of-way or servitudes for water drainage;
 - e) Location, diameter and type of culverts;
 - f) Soil tests required.
5. Must obtain all necessary permits and certificates of authorization required by provincial and/or federal authorities before carrying out the work.
6. Must submit to the requirements of the designated official to ensure compliance with the spirit of this by-law and all applicable regulations. Failure to do so may result in refusal to accept the street.

35-MODIFICATION TO PLANS AND DOCUMENTS

All modifications to plans and documents, once accepted, must be approved by the designated officer before the modified work is carried out. The designated official may approve modifications only if they comply with the provisions of the present by-law and all applicable regulations.

36-ROCK

During road construction, the developer must indicate on a sketch or plan the location of any rock encountered, including dimensions, depths and distances, and inform the Town accordingly.

37-CONNECTION OF NEW ROADS OR STREETS

a) Roads and existing streets

The developer must ensure that he will not damage existing structures. If he does, he must make the corrections requested by the designated official.

b) Roads or provincial routes

The promoter must obtain the necessary permits from the Ministère des Transports.

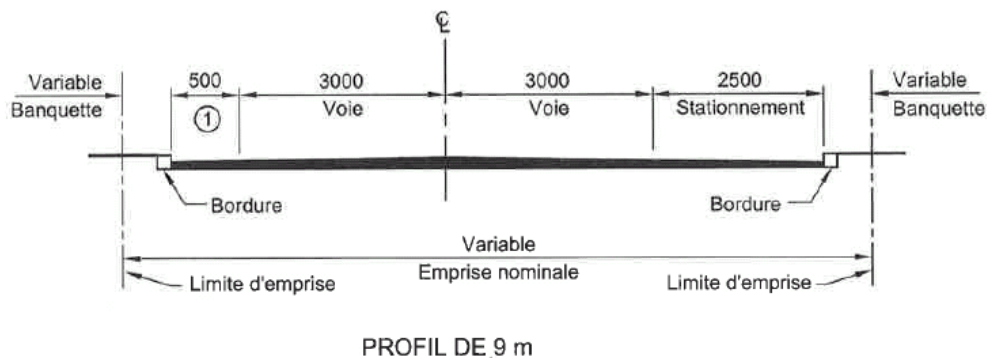
SECTION II: CONSTRUCTION OF PRIVATE AND PUBLIC STREETS

38-GENERAL PROVISIONS

The following articles describe all the works carried out to give the road the shape determined by the plans and longitudinal and cross-sectional profiles, up to the elevation of the substructure line, i.e. earthworks.

39-CROSS PROFILE

The pavement of new streets must have a nine-metre profile, with six metres reserved for traffic, 2.5 metres for parking and an additional 0.5-metre clearance. (Amended by By-law 598-4)



40-1ST CLASS EXCAVATION

First (1st) class excavation is defined as solid rock and loose boulders that cannot be broken or dislodged from their position without the aid of explosives.

41-2ND CLASS EXCAVATION

Second (2nd) class excavated material is any material that can be dislodged by manual or mechanical force. The quality of the excavated material depends on its use as fill. To qualify soils, we need to know the following characteristics:

- 1) Grain size
- 2) Natural water content

- 3) Liquidity and plasticity limits
- 4) Water table level
- 5) Organic matter content

In clayey soils, when the depth of cut exceeds 3 m, a stability study is required to determine the steepness of the excavation slope.

42-EARTHWORKS

Clearing and grubbing must be carried out across the entire width of the street right-of-way.

Stumps and large rocks (300 mm diameter and over) must be removed along the entire width of the street's infrastructure up to 900 mm below its final profile.

Black earth, organic soil and all vegetal material must be removed down to undisturbed soil along the entire width of the base of the street infrastructure. In cases where there are thick deposits of organic matter, a specific geotechnical study should be carried out to determine the procedure to be followed for the installation of street structures.

Generally, organic deposits less than one metre thick should be excavated if the road profile favours low slope and the soil underlying the deposit offers good support capacity.

43-TRANSITIONS - GENERAL INFORMATION

Not all soils behave in the same way under climatic conditions. Some react more strongly to the action of frost, creating more pronounced heave at pavement level than neighboring, less gel-forming soils. To overcome this drawback, it is important to create a transition between these materials that allows for gradual heave without affecting user comfort and safety. In the following paragraphs, transitions are dealt with according to the nature of the materials.

44-EXCAVATION AND CROSSFILL

All roads located on mountain sides, or generally in hilly areas, are likely to have both excavated and filled sections across the road. Standard drawing number 017 in MTQ's Volume II, Road Construction, Chapter 1, provides the main recommendations to be observed in these situations.

To reduce infiltration of water into the pavement body, a ditch at least one metre deep must be cut into the side of the cut.

In this case, at subgrade level, the recommended transverse slope should be 3% to allow for the rapid elimination of runoff water that could enter the shoulders once the road is finished.

45-EXCAVATION AND LONGITUDINAL FILL

In the transition from excavation to fill, soils very often have different properties. To gradate this change and lessen its effect on the road surface, a transition must be made with slopes of 5% up to one meter below the subgrade line. Standard drawing number

018 in MTQ's Volume II, Road Construction, Chapter 1, gives the procedure to be followed.

46-SOIL & ROCK

Soil and rock are very different materials and react very differently under load. The result is usually a transverse crack in the roadway, accompanied by sudden settlement.

To eliminate these disadvantages, a transition must be made in the rock and also in the natural soil if the latter is not a granular material. Standard drawing number 019 in MTQ's Volume II, Road Construction, Chapter 1, shows the transitions that need to be made, depending on the case in question.

47-TRANSVERSAL TRENCH

The excavation of a trench across a road whose legal speed is equal to or less than 50 km/h must be carried out in accordance with standard drawing number 021 of Volume II, Road Construction, Chapter 1, of the MTQ. On roads where the legal speed is greater than 50 mph, the culvert transition requirements of standard drawing number 022 of MTQ's Volume II, Road Construction, Chapter 1, must be respected.

This plan provides the slopes to be respected for excavations and transitions according to the materials encountered. In all cases, excavated material must be used for backfilling, provided it can be perfectly compacted.

48-STREET STRUCTURE

Requirements for public roads

A new public road must have a minimum base, before gravelling, of at least 10 m;

The infrastructure of a public road must be composed as follows:

For the sub-base (fill): Type MG 112 granular borrow material to a minimum thickness of 300 mm. When the road is located in a poorly drained area (black earth, clay), the minimum thickness of the sub-base is 1.2 m over the width of the roadbed and ditches.

For the lower foundation: MG 56 crushed stone to a minimum thickness of 300 mm.

For the upper sub-base: Crushed stone (0-3/4 in.) to a minimum thickness of 15 cm, or 20 cm if the road's lower sub-base is rock pebble.

Requirements for private roads

A new private road must have a minimum base, before gravelling, of 6 m.

For sub-base (fill): Type MG 112 granular borrow material to a minimum thickness of 300 mm. Where the road is located in a poorly drained area (black earth, loam and clay), the minimum thickness of the sub-base is 1.2 m over the width of the base and ditches.

For the lower foundation: MG 56 crushed stone to a minimum thickness of 300 mm.

For the upper foundation: crushed stone or Forde crushed aggregate type MG56 to a minimum thickness of 300 mm.

49-TRANSVERSAL SLOPE (“BULGING”)

Each infrastructure layer must be graded and compacted to obtain a transversal slope (superelevation) of 3% from the center to the ditches, to ensure good lateral drainage. Except on sharp curves, where a different slope may be proposed, as stipulated in MTQ's design standards, Volume I.

50-STREET STAKING

Wood markers must be installed on each side of the street shown on the subdivision plan. The developer must also install construction alignment markers, as directed by the designated official. Once the street has been built, permanent metal markers (bollards) must be installed by a land surveyor at a maximum distance of 150 m from each other, as well as at each street intersection and at each change of alignment (beginning and end of curve, center of radius), if applicable.

The Town reserves the right to verify construction alignments and monuments at any time.

51-RETAINING DEVICE

The Town reserves the right to require, under certain conditions, the installation of a safety element where it deems it necessary.

There are two possible reasons for using a guardrail:

- a) A combination of excessively steep slopes and heights.
- b) The presence of fixed objects in the clearance zone.

52-ENVIRONMENTAL CONSIDERATIONS

During the entire construction period, the developer must use a construction method that limits any environmental impact. All techniques must be applied to minimize sediment transport to a watercourse or water body.

After 24 hours of notice (verbal or written) from a designated official, the contractor must have taken corrective measures and implemented mitigation measures. Otherwise, the Town may implement the required mitigation and remedial measures following written notice, at the developer's expense.

SECTION III : DRAINAGE

53-GENERAL PROVISIONS

A road's performance and longevity depend directly on the quality of the surrounding water drainage. Good drainage design presupposes an excellent knowledge of the hydrology of the region, so that every effort can be made to allow the water basin to flow freely without the road becoming a barrier.

Drainage must be considered by road designers and builders as the most important structure in road construction. If it is not given full attention during construction, the consequences are costly in terms of maintenance.

54-STANDARDS FOR STREET DRAINAGE LAYOUT

A new road must be bordered on both sides by an open or closed drainage system.

55-DITCH LAYOUT STANDARDS FOR OPEN DRAINAGE

Ditches must be dug with a suitable bucket on both sides of the street, with a sufficient slope (minimum 0.5%) to allow surface water to run off freely. These ditches must always be directed towards low points where there are culverts capable of eliminating the inflow of water. Ditches must have a minimum depth of 200 mm below the subgrade line and comply with standard cuts.

Ditches must be laid out in such a way as to prevent gulying and scouring of slopes (shoulders), as well as surface erosion. Ditches must be constructed in accordance with the following provisions:

- a) Cleared and exposed portions of ditches must be seeded (grass resistant to frequent flooding) and mulched at the end of each working day;
- b) Ditches should be constructed with slopes gentler than 2H:1V;
- c) Immediately after final shaping, surfaces should be covered with vegetation or stones, in accordance with the following criteria.

5% less longitudinal slope

- a) When the longitudinal slope of the ditch is less than 5%, the bottom of road ditches must be stabilized and revegetated with herbaceous vegetation immediately after final shaping;
- b) Herbaceous vegetation must be well established, cover the entire ditch surface and provide adequate soil stabilization within 12 months of final shaping;
- c) The revegetation technique must be broadcast seeding covered with mulch, hydroseeding or installation of peat moss in rolls.

5 to 10% longitudinal slope

- a) When the longitudinal slope of the ditch is greater than 5%, the bottom of the ditch must be covered with a layer of crushed stone (100 to 150 mm gauge) at least 200 mm thick over the entire width and height of the ditch.

Longitudinal slope of 10% or more

- a) Where the longitudinal slope of the ditch exceeds 10%, the bottom of the ditch must be covered with a layer of crushed stone (100 to 150 mm gauge) at least 200 mm thick over the entire width and height of the ditch;
- b) In addition, retention dikes made of crushed stone (100 to 200 mm gauge) must be installed. The spacing of these barriers is determined by the slope and height of the dike. The length of the spacing is calculated according to the following equation:

$$L = 100 \times (H/S)$$

Or

L = gap length in cm

H = Dike height in cm

S = Dike slope in cm

55.1 DEVELOPMENT OR MAINTENANCE OF DITCHES ON THE SHORE OF A LAKE, WATERCOURSE OR WETLAND

Wherever the natural slope permits, it is forbidden to build or maintain ditches within 20 m of the high-water mark of a lake, watercourse or wetland. If it is technically necessary to intervene within this 20 m strip, it must be stabilized and revegetated without delay following the intervention. *(Amended by By-law 598-2)*

56-STANDARDS FOR CLOSED DRAINAGE DITCHES

A closed drainage ditch should be designed as a filter trench. The drain must be perforated, set in 50 mm-diameter stone riprap and surrounded by a non-woven geotextile.

The costs of analysis, engineering (including design, monitoring and laboratory fees) and financing of the necessary studies and work are entirely at the expense of the applicants concerned.

It is forbidden to channel any drainage ditch without prior written authorization from the competent authority. Any unauthorized channelization of a drainage ditch will be removed by the Town at the expense of the owner concerned, including restoration of the drainage ditch to its original condition.

57-MANDATORY LAYOUT WHEN THE STREET AND THE DRAINAGE DITCH CROSS A WATERCOURSE

When a street and its drainage ditches cross a watercourse, it is mandatory to build a sedimentation basin 15 metres from the high-water mark.

58-AUTHORIZED CULVERT LENGTH

When stormwater from an area of the town is drained into a drainage ditch, the owner of a drained lot may channel the ditch for the length required to accommodate the driveways authorized for his lot. This culvert length cannot exceed, for each driveway,

the length of the driveway authorized by the Town, to which is added, on each side, a maximum additional length equivalent to three (3) times the culvert diameter. The type, diameter, position, elevation and slope of the culvert must be authorized in writing by the competent authority.

The purchase, installation, maintenance, repair, repositioning or replacement of a driveway culvert, following its removal or destruction, its poor condition or if it is demonstrated by the competent authority that its capacity is insufficient to drain all the stormwater flowing in the drainage ditch, or if it is demonstrated, by the competent authority, that the position of the culvert clearly interferes with the free flow of stormwater by gravity, will be carried out by and at the expense of the riparian owner, who assumes full responsibility at all times.

59-SIZING A CULVERT

A driveway must be equipped with a culvert or pipe of sufficient diameter, as determined by the road inspector, and must at no time obstruct the free flow of water.

Notwithstanding these provisions, when installing a culvert in a watercourse, the standards of the Brome-Missisquoi MRC by-law take precedence.

60-INSTALLATION OF A CULVERT

When installing or replacing a culvert, the following standards apply:

- a. The culvert must extend beyond the base of the backfill to a maximum of 30 cm from the base of the stabilized backfill;
- b. It must be oriented so as to maintain the direction of water flow;
- c. It must be buried to 10% of its diameter to promote stability;
- d. It must be installed in such a way as to avoid creating a drop or slope break;
- e. Backfill must be made of sand or gravel 0 to 20 mm in diameter, with no stones larger than 75 mm in diameter;
- f. The ends of the culvert must be fitted with a minimum of 4 to 8 inches of riprap to a thickness of at least 50 cm and stabilized with an anchoring key;
- g. Notwithstanding provision f, the ends of the culvert may be landscaped with a retaining wall;
- h. The slope must be stabilized with a gentle incline with a minimum ratio of 1.5 for the length and 1 for the height.

Notwithstanding these provisions, when installing a culvert in a watercourse, the standards of the Brome-Missisquoi MRC by-law take precedence.

COMING INTO FORCE

This by-law comes into force in accordance with the law.

Gilles Decelles, Mayor

M^e Edwin John Sullivan, Town Clerk

Certified copy