

CANADA  
MUNICIPALITY OF PONTIAC  
PROVINCE OF QUÉBEC

**BY-LAW 27-13**

**BY-LAW No. 27-13 AMENDING SUBDIVISION BY-LAW No. 178-01 TO INCORPORATE NEW STANDARDS FOR AREAS PRONE TO LANDSLIDES**

**WHEREAS** by-law no. 154-11 amending the MRC des Collines-de-l'Outaouais' Land Use and Development Plan to integrate new standards for areas prone to landslides came into force in June 2011;

**WHEREAS** in accordance with the provisions of the Act Respecting Land Use Planning and Development, any municipality, which is part of the MRC, is required within six months of the coming into force of a by-law amending the Land Use and Development Plan to change its urban planning by-laws to bring them into compliance with the amended Plan;

**WHEREAS** a notice of motion was filed by Councillor Inès Pontiroli at the special meeting of March 4th 2014;

**WHEREAS** the by-law was submitted to the Special Meeting of March 4th 2014;

**CONSEQUENTLY** it is resolved that by-law no. 27-13 be adopted by council, as follows:

Moved by: Inès Pontiroli  
Seconded by: R. Denis Dubé

**ARTICLE 1**

Subdivision By-law no. 178-01 is amended to add after chapter 3, the new chapter 4 that follows.

**"CHAPTER 4 – AREAS PRONE TO LANDSLIDES"**

**4.1 Normative framework for control of land use in areas prone to landslides**

The activities planned in areas prone to landslides shown in Appendix "B" of by-law no. 44-97 enacting the revised MRC des Collines-de-l'Outaouais' Land Use and Development Plan, which were transferred to map no. ZMM-01-01 titled "Municipality of Pontiac Mass Movement Zones" should be carried out in accordance with the "*Normative framework for control of land use in areas prone to landslides*," that follows.

Each of the activities mentioned in the framework is generally prohibited at the top and at the base of banks and buffer strips whose width is specified in the table. Despite these activities being prohibited, they could be allowed subject to the production of a geotechnical report. This report must comply with the requirements set out in the table titled "*Normative framework for control of land use in areas prone to landslides – Geotechnical report*" in subsection 4.2 of this by-law.

NORMATIVE FRAMEWORK FOR CONTROL OF LAND USE IN AREAS PRONE TO LANDSLIDES			
TYPE OF ACTIVITY PLANNED	ZONE		
	Class I	Class II	Class III
	<b>High risk area (red zone)</b> <b>Medium risk area (yellow zone)</b> <b>Bank 5 metres or higher with a slope angle of more than 20° (36%)</b> <b>Bank 5 metres or higher with a slope angle of 14° (25%) or more but less than 20° (36%) with a watercourse at the base</b>	<b>Medium risk area (yellow zone)</b> <b>Bank 5 metres or higher with a slope angle of 14° (25%) or more but less than 20° (36%) without a watercourse at the base</b>	<b>Low risk area (green zone)</b>
<b>All activities listed below</b>	Prohibited in the bank	Prohibited in the bank	
<b>CONSTRUCTION OF AN INFRASTRUCTURE</b> (street right of way)	Prohibited: <ul style="list-style-type: none"> <li>At the <b>top</b> of a bank, in a buffer strip <b>twice</b> as wide as the height of the bank, up to <b>40 metres</b>.</li> <li>At the <b>base</b> of a bank, in a buffer strip <b>15 metres</b> wide.</li> </ul>	Prohibited: <ul style="list-style-type: none"> <li>At the <b>top</b> of a bank, in a buffer strip <b>as wide</b> as the height of the bank, up to <b>20 metres</b>.</li> <li>At the <b>base</b> of a bank, in a buffer strip <b>10 metres</b> wide.</li> </ul>	*

\* Because of the inaccuracy of the delimitation of the zones to which Class I and Class II standards apply on map no. ZMM-01-01 " Municipality of Pontiac Mass Movement Zones" appended to this by-law, some activities could seem to be located in zones to which Class III standards apply, when they should be subject to Class I or Class II standards. Therefore, it is important that this be verified by taking measurements on the parcel of land or with a land survey.

NORMATIVE FRAMEWORK FOR CONTROL OF LAND USE IN AREAS PRONE TO LANDSLIDES			
TYPE OF ACTIVITY PLANNED	ZONE		
	Class I	Class II	Class III
	<b>High risk area (red zone)</b> <b>Medium risk area (yellow zone)</b> Bank 5 metres or higher with a slope angle of more than 20° (36%) Bank 5 metres or higher with a slope angle of 14° (25%) or more but less than 20° (36%) with a watercourse at the base	<b>Medium risk area (yellow zone)</b> Bank 5 metres or higher with a slope angle of 14° (25%) or more but less than 20° (36%) without a watercourse at the base	<b>Low risk area (green zone)</b>
<b>SUBDIVISION INTENDED FOR A MAIN BUILDING OR FOR A WITHOUT A BUILDING OPEN TO THE PUBLIC USE</b> (campground or trailer campground, etc.) <b>LOCATED IN AN AREA PRONE TO LANDSLIDES</b>	Prohibited: <ul style="list-style-type: none"> <li>At the <b>top</b> of a bank, in a buffer strip <b>twice</b> as wide as the height of the bank, up to <b>40 metres</b>.</li> <li>At the <b>base</b> of a bank <b>40 metres</b> high or less, in a buffer strip <b>twice</b> as wide as the height of the bank, up to <b>40 metres</b>.</li> <li>At the <b>base</b> of a bank higher than <b>40 metres</b>, in a buffer strip <b>as wide</b> as the height of the bank, up to <b>60 metres</b>.</li> </ul>	No standard	Prohibited

## **4.2 Geotechnical report**

Although the table in subsection 4.1 of this by-law provides a list of activities that are prohibited; these activities could be allowed subject to the presentation of a geotechnical report which complies with the requirements set out in the table that follows. This report must be prepared by a member of the *Ordre des ingénieurs du Québec* (corporation of engineers) specifically trained in geotechnics.

To be valid, the geotechnical assessment must have been conducted after the coming into force of this by-law, which integrates the new governmental normative framework. In addition, the report must be produced in the 5-year period preceding the date of the application for a permit or a certificate. This period is reduced to 1 year in the case of a watercourse on a site located within the limits of an area prone to landslides when the report recommends that work be done to ensure the stability of the site and the safety of the study area. The 1-year period is returned to 5 years if all the work specifically recommended for the activity indicated in the application for a permit or a certificate is done within 12-months of the presentation of this report.

NORMATIVE FRAMEWORK FOR CONTROL OF LAND USE IN AREAS PRONE TO LANDSLIDES GEOTECHNICAL REPORT				
GROUP	ACTIVITY	GOAL	CONCLUSION	RECOMMENDATION
1	<p><b>LOCATED IN ALL AREAS, EXCEPT IN BUFFER STRIPS AT THE BASE OF A BANK 5 METRES OR HIGHER WITH A SLOPE ANGLE OF MORE THAN 20° (36%) LOCATED IN MEDIUM RISK AREAS (SEE GROUP 1A), AS WELL AS IN MEDIUM RISK AREAS WHERE A BANK IS 5 METRES OR HIGHER WITH A SLOPE ANGLE OF 14° (25%) OR MORE BUT LESS THAN 20° (36%) WITHOUT A WATERCOURSE AT THE BASE (SEE GROUP 2)</b></p> <p><b>CONSTRUCTION OF AN INFRASTRUCTURE<sup>1</sup></b> (street right of way)</p>	<ul style="list-style-type: none"> <li>• Assess current site stability conditions.</li> <li>• Check for signs of impending instability (such as cracks, cracks with vertical displacement and bulging) and for landslides on the site.</li> <li>• Assess the impact of the planned activities on the stability of the site.</li> <li>• Propose protective measures (group 3), if required.</li> </ul>	<p>The report must confirm that:</p> <ul style="list-style-type: none"> <li>• The proposed activity is not threatened by a landslide.</li> <li>• The proposed activity will not act as a trigger by destabilizing the site and the adjacent parcels of land.</li> <li>• The proposed activity will not constitute an aggravating factor by unduly reducing the safety factors associated to it.</li> </ul>	<p>The report must include the following recommendations:</p> <ul style="list-style-type: none"> <li>• The precautions to be taken and, if need be, the protective measures<sup>2</sup> required to maintain the stability of the site and the safety of the study area, at all times.</li> </ul>

<sup>1</sup> All provincial road network development and improvement work that requires a geotechnical assessment before a permit is delivered can be carried out based on the geotechnical reports (advice, assessment, report, recommendation, etc.) produced by the *Service de la géotechnique et de la géologie* (geotechnics and geology branch) of the *ministère des Transports* (MTQ) (Department of Transport) or one of the MTQ's authorized agent, because they meet the requirements stated above and comply with the normative framework.

<sup>2</sup> If protective measures are recommended, a geotechnical assessment that meets the criteria for Group 3 must be conducted before the activity is allowed.

NORMATIVE FRAMEWORK FOR CONTROL OF LAND USE IN AREAS PRONE TO LANDSLIDES GEOTECHNICAL REPORT				
GROUP	ACTIVITY	GOAL	CONCLUSION	RECOMMENDATION
1A	<p><b>LOCATED IN BUFFER STRIPS AT THE BASE OF BANKS 5 METRES OR HIGHER WITH A SLOPE ANGLE OF MORE THAN 20° (36%) THAT ARE SITUATED IN MEDIUM RISK AREAS</b></p> <p><b>CONSTRUCTION OF AN INFRASTRUCTURE<sup>3</sup></b> (street right of way)</p>	<ul style="list-style-type: none"> <li>• Check for signs of impending instability (such as cracks, cracks with vertical displacement and bulging) and for landslides on the site.</li> <li>• Assess if the activity is protected against possible landslide debris.</li> <li>• Assess the impact of the planned activities on the stability of the site.</li> <li>• Propose protective measures (group 3), if required.</li> </ul>	<p>The report must confirm that:</p> <ul style="list-style-type: none"> <li>• The proposed activity is protected against possible landslide debris because of the natural topography of the site or the proposed activity will be protected from possible debris by protective measures.</li> <li>• The proposed activity will not act as a trigger by destabilizing the site and the adjacent parcels of land.</li> <li>• The proposed activity and its subsequent use will not constitute aggravating factors by unduly reducing the safety factors associated to this activity.</li> </ul>	<p>The report must include the following recommendations:</p> <ul style="list-style-type: none"> <li>• The precautions to be taken and, if need be, the protective measures<sup>4</sup> required to maintain the stability of the site and the safety of the study area, at all times.</li> </ul>

<sup>3</sup> All provincial road network development and improvement work that requires a geotechnical assessment before a permit is delivered can be carried out based on the geotechnical reports (advice, assessment, report, recommendation, etc.) produced by the *Service de la géotechnique et de la géologie* (geotechnics and geology branch) of the *ministère des Transports* (MTQ) (Department of Transport) or one of the MTQ's authorized agent, because they meet the requirements stated above and comply with the normative framework.

<sup>4</sup> If protective measures are recommended, a geotechnical assessment that meets the criteria for Group 3 must be conducted before the activity is allowed.

NORMATIVE FRAMEWORK FOR CONTROL OF LAND USE IN AREAS PRONE TO LANDSLIDES GEOTECHNICAL REPORT				
GROUP	ACTIVITY	GOAL	CONCLUSION	RECOMMENDATION
2	<p><b>ACTIVITY LOCATED IN MEDIUM RISK AREAS WHOSE BANK IS 5 METRES HIGH OR MORE WITH A SLOPE ANGLE OF 14° (25%) OR MORE BUT LESS THAN 20° (36%) WITHOUT A WATERCOURSE AT THE BASE</b></p> <p><b>CONSTRUCTION OF AN INFRASTRUCTURE<sup>5</sup></b> (street right of way)</p>	<ul style="list-style-type: none"> <li>Assess the impact of the planned activities on the stability of the site.</li> </ul>	<p>The report must confirm that:</p> <ul style="list-style-type: none"> <li>The proposed activity will not act as a trigger by destabilizing the site and the adjacent parcels of land.</li> <li>The proposed activity and its subsequent use will not constitute aggravating factors by unduly reducing the safety factors associated to this activity.</li> </ul>	<p>The report must include the following recommendations:</p> <ul style="list-style-type: none"> <li>The precautions to be taken and, if need be, the protective measures<sup>6</sup> required to maintain the current stability of the site.</li> </ul>

<sup>5</sup> All provincial road network development and improvement work that requires a geotechnical assessment before a permit is delivered can be carried out based on the geotechnical reports (advice, assessment, report, recommendation, etc.) produced by the *Service de la géotechnique et de la géologie* (geotechnics and geology branch) of the *ministère des Transports* (MTQ) (Department of Transport) or one of the MTQ's authorized agent, because they meet the requirements stated above and comply with the normative framework.

<sup>6</sup> If protective measures are recommended, a geotechnical assessment that meets the criteria for Group 3 must be conducted before the activity is allowed.

NORMATIVE FRAMEWORK FOR CONTROL OF LAND USE IN AREAS PRONE TO LANDSLIDES GEOTECHNICAL REPORT				
GROUP	ACTIVITY	GOAL	CONCLUSION	RECOMMENDATION
3	<b>PROTECTIVE MEASURE</b> (riprap counterweight, reshaping, drainage blanket, dike, protection barricade, diversion barricade, etc.)	<ul style="list-style-type: none"> <li>Assess the impact of the protective measures on the safety of the site.</li> </ul>	<p><b>In the case of stabilization work</b> (riprap counterweight, reshaping, drainage blanket, etc.) the report must confirm that:</p> <ul style="list-style-type: none"> <li>The stabilization method chosen is appropriate for the site; the stability of the slope has been improved in keeping with good practice.</li> </ul> <p><b>In the case of passive protective measures</b> (dike, protection barricade, diversion barricade, etc.), the report must confirm that:</p> <ul style="list-style-type: none"> <li>The work done protects the future activity.</li> </ul> <p><b>In both cases, the report must confirm that:</b></p> <ul style="list-style-type: none"> <li>The activity will not be damaged by a landslide.</li> <li>The proposed activity will not act as a trigger by destabilizing the site and the adjacent parcels of land.</li> <li>The proposed activity and its subsequent use will not constitute aggravating factors by unduly reducing the safety factors associated to this activity.</li> </ul>	<p>The report must include the following recommendations:</p> <ul style="list-style-type: none"> <li>The processes and timeframe required to carry out the work.</li> <li>The precautions to be taken to maintain the stability of the site and the safety of the study area at all times, after the protective measures are carried through.</li> </ul>



NORMATIVE FRAMEWORK FOR CONTROL OF LAND USE IN AREAS PRONE TO LANDSLIDES GEOTECHNICAL REPORT				
GROUP	ACTIVITY	GOAL	CONCLUSION	RECOMMENDATION
4	<b>SUBDIVISION INTENDED FOR A MAIN BUILDING OR FOR A WITHOUT A BUILDING OPEN TO THE PUBLIC USE</b> (campground or trailer campground, etc.) <b>LOCATED IN AN AREA PRONE TO LANDSLIDES</b>	<ul style="list-style-type: none"><li>Assess current site stability conditions.</li></ul>	The report must confirm that: <ul style="list-style-type: none"><li>It is safe to construct buildings or a campground on the lot.</li></ul>	The report must include the following recommendations: <ul style="list-style-type: none"><li>The precautions to be taken and, if need be, the protective measures<sup>7</sup> required to maintain the current stability of the site.</li></ul>

<sup>7</sup> If protective measures are recommended, a geotechnical assessment that meets the criteria for Group 3 must be conducted before the activity is allowed.

#### 4.3 Areas subject to hypothetical landslide risk

In areas subject to hypothetical landslide risk (gray zone), shown in Appendix "B" of by-law no. 44-97 enacting the revised MRC des Collines-de-l'Outaouais' Land Use and Development Plan, which were transferred to map no. ZMM-01-01 titled "Municipality of Pontiac Mass Movement Zones," all that is required is a certificate prepared by a member of the *Ordre des ingénieurs du Québec* (corporation of engineers) specifically trained in geotechnics indicating that the parcel of land is suitable for the proposed structure considering its pedological, hydrological and geological characteristics.

#### ARTICLE 2

Subdivision By-law no. 178-01 is amended to change the number of **CHAPTER 4 – REPEAL PROVISIONS** to number 5. This chapter will now read as follows: **CHAPTER 5 – REPEAL PROVISIONS**.

#### ARTICLE 3

Subdivision By-law no. 178-01 is amended to change the number of **CHAPTER 5 – COMING INTO FORCE** to number 6. This chapter will now read as follows: **CHAPTER 6 – COMING INTO FORCE**.

#### ARTICLE 4

This by-law will come into force upon completion of the formalities required by law.

Carried

  
MAYOR

  
ASSISTANT DIRECTOR GENERAL

Notice of motion: March 4, 2014

Adoption of by-law: April 8, 2014

Coming into force: