



| Building Services – Policy | |
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| Subject: Grading and Drainage | Policy No. BS19-006 |
| Effective Date: January 4 th , 2023 Revised January 19 th , 2023 | Replaces: None |
| Approved by: Jacob Forget, Chief Building Official | Type of Policy: Internal & External |

Scope

This document outlines the criteria when applying for a Building Permit, as well as the associated review, inspection and approval protocols for grading and drainage on private properties.

Application

The requirements below apply to all new residential construction where the development of lands is located within urban and rural settlement areas that are less than 1 acre in size. This policy does not apply to renovations and accessory buildings. At the discretion of the Chief Building Official, this policy may apply to additions that have a fixed foundation and increase the existing structures footprint by more than 30%.

Conflict

In the event of a conflict between the provisions of this policy and any other development agreement or Bylaw, the most restrictive provision will prevail. Lots within a subdivision agreement shall comply with the subdivision grading and drainage plan.

Submission Requirements

Upon applying for a building permit, the application shall be accompanied by a grading and lot drainage plan designed by a qualified person. Where the grading and lot drainage plans are not being provided at the time of a building permit application or has not been completed as per the requirement of this policy, the building permit application shall be deemed incomplete.

Qualified Person

Means a Professional Engineer, an Ontario Land Surveyor, a Certified Engineer Technician, Environmental Technologist, Engineer in training, a Landscape Architect or a company providing these services, experiences in lot grading and drainage designs. The qualified person must possess a current accreditation to practice in their profession and valid professional liability i.e., errors and omissions insurance.



Grading and Drainage Plan

The grading and drainage plan submitted for review shall incorporate the following:

- the legal description of the property including dimensions and civic number;
- benchmarks related to geodetic datum.
- existing contours, based on field elevations, for the area drained. These contours should include sufficient points from the adjacent land to fully delineate the drainage area.
- surface condition of the lot (clay, topsoil, sod, landscaped, etc.)
- existing and proposed drainage works.
- existing and proposed locations and elevations of:
 - o lot corners
 - o existing buildings
 - o proposed buildings
 - o road centerline at intersections and changes in gradient
 - o first floor
 - o swales
 - o septic system components (tank, drain field, seepage pit, pump tank)
 - o drilled or dug wells
 - o proposed or existing municipal services
- arrows indicating the proposed flow direction of surface water
- location of the proposed and/or existing public and private access and the dimensions;
- the proposed grading and drainage of the subject site;
- the total footprint of the building/addition as well as the total lot coverage
- dimensions between buildings and the property lines.

Drainage and Grading plans shall incorporate where applicable:

- drainage to be directed away from all structures.
- a minimum surface slope of 2% from all structures.
- If swales are being proposed to control surface water flows, they must be constructed as follows:
 - o Minimum gradient of 1.5% on grassed swales,
 - o Shared drainage swales should generally allow for a 10% slope
 - o Preferred maximum side slopes of 3:1 (H:V)
 - o Minimum depth of 150 mm
 - o Maximum depth of 500 mm
 - o Minimum width of 1 000 mm
- The position of the swale, including side slopes, must be at a minimum 500 mm inside the lot unless it is a shared swale, wherein it must be located on the common lot line.



As-Builts

Drawings of the final grading and drainage will be required to be submitted and reviewed for approval by the Chief Building Official. The as-built shall be accompanied by a certification note.

Certification Note

Means a declaration signed and sealed by a qualified person and included on the grading and drainage plan that stipulates:

- I have reviewed the plans for the (applicable Construction Activities to be added) at (applicable municipal address to be added) and have prepared this grading and drainage plan to indicate the compatibility of the proposal to existing adjacent properties and municipal services. It is my professional opinion that adherence to the proposed grades as shown will produce adequate surface drainage and proper facility of the municipal services without any detrimental effect to the existing drainage patterns, adjacent properties and Township assets or services.

Tolerances

Final as built grading plans that are +/- 100 mm of the original submitted grading and drainage plan are within the acceptable tolerance range.

Final as built grading plans outside of this tolerance will require a deviation from the originally proposed grading and drainage design plan.

Deviation

If the owner or applicant requires a deviation from the originally proposed grading design plan, they shall submit a certified revised grading plan to the Chief Building Official for review and approval.

The revised grading design plan in addition to all of items required for the proposed grading and drainage plan shall also indicate changes to original proposed grades utilizing asterisks next to the elevations that are outside of the permitted tolerances.

The certification notes accompanying the final as built deviation request shall elaborate on the reasoning behind the proposed deviations to the original submission.