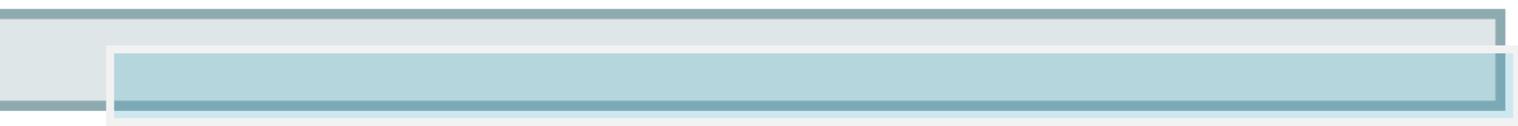


# Beaumont

## Lot Grading Guidelines

**Beaumont**  
*Life is Better*

Updated: 2019-01-14



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# LOT GRADING OVERVIEW

## INTRODUCTION

Beaumont's lot grading approval process applies to all single family residential lots. Lots must be graded in accordance with Beaumont's Surface Drainage Bylaw 732-08/732-01-10, Beaumont's General Design Standards and the approved grading plan for the area.

## PURPOSE

The purpose of lot grading is to ensure all properties (public and private) have met the surface drainage requirements set out in the area lot grading plan in order to prevent flooding and other water-related damages. Proper lot grading will ensure surface runoff drains away from all structures and will control drainage discharge points and the rate of flow entering the public roads and storm sewer system.

## DEFINITIONS

**Lot Grading:** Lot grading consists of sloping the land within a lot to direct the flow of surface water away from a building's foundation. Proper grading ensures water is discharged towards a suitable outlet safely and according to the approved lot grading plan without negatively affecting adjacent properties.

**Lot Grading Plan:** Lot grading plans are required for all new developments and show the drainage relationship between adjacent properties included within the plan. They specify design elevations, surface gradients, lot types, swale locations and other drainage information required for grading.

**Lot Grading Certificate:** An approved lot grading certificate details the existing elevations and the design elevations on a lot. These certificates are required to determine whether the grade of a lot will be approved or denied. Beaumont will accept lot grading certificates signed and certified by a registered Alberta Land Surveyor or Professional Engineer / Professional Technologist.

**Rough Grade:** Is the base and first step towards establishment of approved lot grades with native material (clay).

**Final Grade:** Is the second step for approved lot grades (typically topsoil / sod).

## LOT GRADING REQUIREMENTS

The following requirements must be met in order to receive rough and final grade approval as well as approval on the final damage inspection.

## DESIGN GRADES AND EXISTING GRADES

The approved lot grading plan shows the approved design grades for each lot. These elevations are detailed on the lot grading certificate along with the existing elevations. The existing elevations must be within the tolerances shown below at each respective stage of grading in order to be approved. For example, if a rough grade certificate shows the design grade at 32.30 and the existing grade is at 32.16, the difference of -0.14m is within the allowable tolerance and therefore would be acceptable.

## ACCEPTABLE AS-BUILT TOLERANCES

GRADE	TOLERANCE (metric)	TOLERANCE (imperial)
Rough Grade	-0.07 m to -0.20 m	-2.75 in to -8.00 in
Final Grade, on topsoil	-0.01 m to -0.10 m	-0.50 in to -4.00 in
Final Grade, on landscaping	-0.05 m to +0.05 m	-2.00 in to +2.00 in

*\*The Lot Grading Inspector has the discretion to accept elevations that are outside of tolerance.*

*\*Any proposed changes to the grading plan must be approved by Beaumont before the applicator undertakes the changes.*

## MINIMUM GRADE FROM FOUNDATION WALLS

In order to greatly reduce the risk of water entering basements during periods of heavy precipitation, a sloped surface is required to effectively drain water away from foundation walls; these areas include beneath decks and steps. There should be no clay chunks or voids under decks, steps or concrete walkways / driveway.

SURFACE TYPE	MINIMUM GRADE REQUIREMENT FROM FOUNDATION WALLS
Landscape Material (clay, topsoil)	For the first 2 metres 10% slope OR min. 0.2m drop from foundation wall to property line
Impervious Surface (concrete)	0.75% slope

## DRAINAGE SWALES

Drainage swales are shallow-sided sloped ditches intended to transport surface runoff and are usually located along common property lines. Swales on a common property line should provide a minimum of 30 cm (12 in) of unobstructed width within each property.

Due to the topography of some neighbourhoods, approved lot-to-lot drainage may occur and on some lots, an easement or right-of-way is registered to allow for the construction of a concrete or grass drainage swale. Easements are shown on the approved lot grading plan and must be displayed on the lot grading certificate.

In order to convey runoff to the nearest street, lane, dry pond or storm water management facility, grading of swales is required to be in accordance with the overall drainage plan for the area.

## EXTREME GRADE DIFFERENTIAL

Substantial grade differences can occur when grading homes with walk-out basements or an uneven overall landscape. Grading on these types of homes may require a retaining wall or other form of stabilization. Retaining structures are required on areas with slopes of 25% or more. At the time the plot plan is submitted, slopes between 20 and 25% are marked for possible retaining walls and the walls are confirmed at the time of home completion. Where a retaining wall exceeds 1.0 meter in height, an engineer's stamped drawing, including a proposed lot drainage plan, shall be submitted.

## WINDOW WELLS

Depending on location, window wells may be required on some basement windows. The following requirements must be met:

- If there is a distance of 15 cm (6 in) or greater between the bottom of the window and the top of final grade, a window well would not be needed. Any window under this tolerance would require a window well.

- The bottom of the window well must be completely in the clay (no daylighting out).
- The top of the window well must be a minimum 25-30 cm (10 - 13 in) higher than rough grade and 15 cm (6 in) higher than final grade. If these distances cannot be met, a window well extension will be required.
- Washed rock is required and must be added uniformly 5 cm to 10 cm (2in to 4 in) to the entire window well.

## DOWNSPOUTS/SPLASH PADS

Downspouts help convey roof leader discharge away from the foundation walls to help prevent infiltration and erosion. The downspouts outlet is to be a minimum 1m away from the foundation wall and directed towards the drainage swale along the common property line. The outlet must also be a minimum of 1.5 m away from the property line of adjacent lots and 3 m away from Beaumont's Right-Of-Way. Downspouts must discharge on top of the final grade.

Where downspouts are not installed (or setback requirements cannot be achieved), splash pads are recommended and are an acceptable substitution. Splash pads help to minimize soil erosion.

Section 15(a) of Beaumont's Surface Drainage Bylaw 732-08 states *No Owner shall permit roof drainage or pumped subsurface Drainage from a Building to be discharged directly onto a pervious ground surface within one (1) meter of the building for all buildings that have a basement or a level below the finished ground surfaces.*

Section 15(b) of Beaumont's Surface Drainage Bylaw 732-001-10 states *No Owner shall permit roof drainage or pumped subsurface Drainage from a Building to be discharged within 1500mm of an adjacent lot or within 3000mm of Beaumont's Right-of-Way.*

## FENCES

The height of the bottom of fence rail is to be 5cm (2.0 in) above final grade elevation.

## INSPECTION PROCESS

### GENERAL

Grading approval is given in two stages:

- Rough Grade
  - The first stage of the grading process and is the responsibility of the home builder
  - A Damage Agreement Inspection will also take place during the Rough Grade stage
  - Rough grade inspections will not occur until final occupancy has been granted by the building inspections department. NO EXCEPTIONS.
  - As per the builders Performance / Damage Agreement rough grade approval must be completed within 18 months of the date that final occupancy was granted.
    - Failure to apply for rough grade approval or approval to bypass grading from Beaumont could result in a fee as per Beaumont's Surface Drainage Bylaw 732-08.
- Final Grade
  - The second stage of the grading process and is typically the responsibility of the homeowner.

- This process must be initiated within one year of the date of Rough Grade approval.
  - Failure to apply for final grade approval from Beaumont could result in a fee as per Beaumont's Surface Drainage Bylaw 732-08
- When topsoil is spread and compacted, your lot is ready for inspection
- Final grade inspections are recommended to take place before sod has been laid in the event that modifications are required
- If rock or wood chips are part of your landscaping plan, the rough grade (clay base) must be raised before laying decorative materials; rock and wood chips cannot be laid at the same elevation as topsoil since water will not flow over these materials.
- In both stages it is the responsibility for the designated party to ensure that all lot grading requirements are met.

## INSPECTION SEASON AND TIME LINES

Typically the inspection season runs from June 1 to October 15. These dates are weather and condition dependent. Any application received after October 1 may not get an inspection before the season closes.

- Rough grade inspections are typically completed within 2-3 weeks once an inspection has been requested and the rough grade certificate has been received.
- Final grade inspections are typically done within 4-5 business days.
- Inspection timelines are weather and volume dependent, and can vary from season to season. All times are given as estimates only.
- Inspections (properties) are typically inspected in the order that they are received in.

## ROUGH GRADE APPROVAL PROCESS

- 1) The lot is pre-graded and a survey is requested from either an Alberta Land Surveyor or a Professional Engineer / Professional Technologist who will prepare a plan of as-built grades (lot grading certificate).
- 2) The certificate is submitted to the Lot Grading Inspector along with a written request by the builder (usually via email) to inspect the property. Once the Lot Grading Inspector receives both the certificate and the inspection request, the property will then be added to the inspection list.
- 3) The Lot Grading Inspector will visit the property to conduct an inspection of the rough grade. The CC valve, third pipe, sidewalk and curb inspections will also be done. (see the Damage Agreement Approval section for more information)
- 4) The grading report will be sent to the builder via email and a door hanger will be left at the property for the homeowner. The lot grading report will outline the rough grade inspection and whether or not it was approved or if deficiencies exist.
- 5) If deficiencies exist on the lot grading report, the builder must correct them before the date stated on the inspection report and request a re-inspection from the Lot Grading Inspector. If the Lot Grading Inspector has requested proof of elevations, the re-inspection will not take place until that information has been received.
- 6) Once approved a Rough Grading Approval Letter and Certificate will be sent to the homeowner via mail.

#### **IMPORTANT NOTE:**

- After the first re-inspection, if the Inspector is called out for subsequent re-inspections and deficiencies have not been corrected, a re-inspection fee will be levied against the builder and inspections will cease until the fee has been paid.
- If the builder does not contact the Lot Grading Inspector for re-inspection by the date outlined on the grading report, Beaumont has the right to assume that the deficiencies were never corrected and the damage deposit monies will be forfeited.
- It is the builder's responsibility to communicate with the homeowner about the status of their property and not to proceed to final grade until rough grade has been approved.

### **APPLICATION TO BYPASS ROUGH GRADING**

The Lot Grading Department may waive the requirement for an approval of rough grade when the establishment of final grading of a lot is conducted by the same person who is responsible for the rough grading. The builder can apply for an Application to Bypass Rough Grading Inspection. This application must be filled out and submitted for approval at least five business days prior to the date any grading work is undertaken.

### **DAMAGE AGREEMENT APPROVAL PROCESS**

The damage agreement approval process is broken down into 3 parts:

1. Performance / Damage Agreement Form
  - a. Completed with the Building Permit application
2. Initial Inspection
  - a. Completed before any activity has taken place on the property
    - i. For the initial inspection if the inspection is not complete by the permit issuance date or prior to the start of construction, the applicant assumes all responsibility for any and all damages and waives their right to inspect
  - b. Ensure the sidewalks and curbs are cleaned off prior to the inspection time. If surfaces are not clean, the inspector reserves the right to postpone or cancel the inspection
3. Final Inspection
  - a. Takes place at the time of the first grading inspection
  - b. The final damage inspection report will be sent to the builder via email. The inspection report will outline whether or not the CC valve and third pipe was approved or if deficiencies exist, as well as if any damages were noted to the sidewalks or curbs
  - c. If deficiencies exist on the damage agreement report, the builder must correct them before the date stated on the inspection report and request a re-inspection from the Lot Grading Inspector.
  - d. After the first re-inspection, if the Inspector is called out for subsequent re-inspections and deficiencies have not been corrected, a re-inspection fee will be levied against the builder and inspections will cease until the fee has been paid.
  - e. If the builder does not contact the Lot Grading Inspector by the date outlined on the damage inspection report, Beaumont has the right to assume that the deficiencies were never corrected and the damage deposit monies will be forfeited.
  - f. Beaumont will undertake the repairs / replacement at a time when conditions permit.

- i. If sufficient funds are not available through the damage deposit, the applicant will be invoiced for the balance.
- g. If no deficiencies exist and the grading has been approved the damage deposit will be refunded
  - i. Beaumont will only issue the damage deposit refund to the name on the application form. No Exceptions.
  - ii. Beaumont needs to be informed of any address changes.
  - iii. Allow 4-6 weeks for cheques to be processed and mailed out

## CURB COCK (CC) VALVE

The curb stop (CC) valve is typically located in the front or side yard of a home, it controls the home's water supply. These valves are put in at the time of subdivision development and can often be damaged during the building process. In order to receive approval on the CC portion of the final damage inspection the following requirements must be met:

- The valve must be operational at the time of inspection.
- It must be installed at final grade elevation which is normally around 15 cm (6 in) above the approved rough grade elevation.
- The cap must be a 5-sided bolt head.
- If the CC Valve is in a landscaped area the green PVC casing must be removed and backfilled around the cap.

## EMERGENCY SUMP PUMP DISCHARGE (THIRD PIPE) INSTALLATION

The sump pump discharge collection system on a home is dedicated to collection of weeping tile system water and to properly discharge the flow away from the property. An auxiliary surface discharge must be installed to provide overflow in case the storm drainage system cannot accommodate flows due to capacity, freezing or other problems. To pass the third pipe portion of the final damage inspection the following requirements must be met:

- The third pipe needs to be attached at a 45° downward angle perpendicular to the foundation of the home
- The third pipe needs to be installed a minimum of 15 cm (6 in) above the final grade elevation
- The third pipe material above the rough grade must be ABS pipe.

Section 6.5.2 of Beaumont's General Design Standards states *there shall be no roof leaders (downspouts), garage drains, sanitary lines or any other plumbing systems connected to the sump pump/weeping tile system.*

## SIDEWALK AND CURB CONDITIONS

Since sidewalks and curbs are poured at the time of subdivision development, they can become damaged during building construction. At the time that the building permit is taken out, builders are required to undertake an initial inspection of the sidewalks and curbs. When the rough grade is inspected, the final damage inspection is completed by the Lot Grading Inspector to address any new damages not indicated on the initial damage inspection.

***\*The builder is not allowed to hire a contractor to fix any sidewalk or curb damages that were noted at the time of inspection.***

## FINAL GRADE APPROVAL PROCESS

- 1) Final grade cannot commence until rough grade has been approved by Beaumont.
- 2) After the homeowner receives their rough grading approval letter, topsoil should be spread and a request must be sent to either an Alberta Land Surveyor or a Professional Engineer / Professional Technologist to prepare a plan of as-built grades (lot grading certificate).
- 3) The homeowner submits their certificate along with a final grade inspection fee (payable at Administration Office via cash, cheque or debit). When both documents are received by the Lot Grading Inspector, the lot is automatically put on the inspection list.
- 4) The Lot Grading Inspector conducts a site inspection to verify the elevations shown on the certificate.
- 5) A door hanger is left at the home indicating whether the lot was approved or if deficiencies exist.
- 6) If deficiencies exist, the homeowner must correct them before the date stated on the inspection report and request a re-inspection from the Lot Grading Inspector. If the Lot Grading Inspector has requested proof of elevations, the re-inspection will not take place until that information has been received.
- 7) If no deficiencies exist a Final Grading Approval Letter and Certificate will be sent to the homeowner via mail. Once final grade has been approved, it is the property owners' responsibility to maintain the surface grading.

### IMPORTANT NOTE:

- To obtain the status of your rough grade please contact your builder.
- After the first re-inspection, if the Inspector is called out for subsequent re-inspections and deficiencies have not been corrected, a re-inspection fee will be levied against the homeowner and inspections will cease until the fee has been paid.
- Failure to apply for final grade approval from Beaumont could result in a fee as per Beaumont's Surface Drainage Bylaw 732-08

## LOT GRADING INSPECTION FEES

Inspection fees are subject to change from year to year. Refer to Appendix A for inspection fee chart. Fees must be paid before any inspections can take place.

## MORE INFORMATION

Any questions can be directed to Lot Grading.

### **BEAUMONT LOT GRADING**

Please direct mail to:  
5600-49 Street  
Beaumont, AB T4X 1A1  
Phone: (780) 929-4314  
Fax: (780) 929-4305  
E-mail: [lotgrading@beaumont.ab.ca](mailto:lotgrading@beaumont.ab.ca)  
Web Address: [www.beaumont.ab.ca](http://www.beaumont.ab.ca)

## APPENDIX A: INSPECTION FEE CHART

**SCHEDULE V –Continued**  
**PLANNING, DEVELOPMENT & BUILDING PERMIT FEES**  
**Section C – Miscellaneous Building and Development Fees**  
Effective January 1, 2019

Item	2019 Fees	
	Building	Development
Grading Inspection Fee: Single Detached Housing Rough Final & RE-inspection		\$159.00 each
Semi-Detached Housing (Duplex, Triplex) Rough Final & RE-inspection		\$159.00 / each unit
Multiple Family Housing (4-Plax & Greater, Condos) Rough Final & RE-inspection		

<sup>1</sup> GST to be applied

<sup>2</sup> The indicated Lot Grading Inspection Fee is payable for each separate Building Permit application