Residential Home or Addition - Site Alteration Permit Application Grading and Servicing Plan Requirements

Site Alteration Permits for residential homes or additions require the submission of a Grading and Servicing Plan. Our Site Alteration Bylaw requires that an Ontario Land Surveyor or Professional Engineer prepare this Plan. The following is a summary list of information that is to be included the Grading and Servicing Plan.

Plan Title Block

- Standard General Pool Notes
- Lot and Registered Plan Number
- Municipal Address
- North Arrow and Drawing Metric Scale
- Geodetic Benchmark Reference
- Ontario Land Surveyor or Professional Engineer Certification and Stamp

Existing Conditions Information

- Legal Boundary and Dimensions
- Municipal Easements
- Surveyed Elevation to Define Drainage
- Structures for Demolition
- Significant Features – Trees, watercourse, Valley
- TRCA Fill Line and Flood Line
- Municipal Road Centerline and Elevations
- Location and Elevation of Adjacent Property to Define Drainage Patterns including structures
- Location/Size of Watermains and Sewers (Obtain as Built Drawings from the City)
- Location of Wells or Septic System
- Concrete Curb Location and Elevation
- Location of Sidewalk, Ditch, Culverts, Streetlights
- Location of Utilities

Drainage and Servicing Design

- Drainage Contained within Property
- Maintain Existing Drainage Patterns
- Side Yard and Rear Yard Containment Swales
- Perforated Sub Drain for Swale < 2.0%
- Driveway Grade 2 to 5 % - 7.5 % max.
- Water Box Outside Driveway
- Service Connections Outside Driveway
- Max. Driveway Width – Single 4.25m - Double 6.0m
- Min. Swale Depth is 0.15m
- No structures, Extensive Landscaping and Retaining Walls permitted within the Municipal Easement(s)
- Transition Slopes: 3:1 max. (1.2m max. height)
- No Transition Slopes within Side Yard

- Match Existing Grade along Property Boundary
- Maintain External Drainage Patterns
- Direct Roof Down Spouts to Front Yard
- 2% to 5% Gradient Away from Foundation
- 5.0m min. Usable Rear Yard Depth (2 to 5% gradient)
- Locate Retaining Walls on Private Property
- Sump Pump Required when Gravity Storm Service is not Possible

Proposed Conditions Information

- Dwelling Location Including Decks, Walkway
- Front, Side and Rear Yard Set Backs
- Finished Floor Elevation
- Top of Foundation Elevation
- Entrance Location and Risers
- Elevation at Foundation Wall
- Swale Elevations at Building Corners / High Points
- Side Yard and Rear Yard Swale Gradient
- Easements for Rear or Front Yard CB (if applicable)
- Rear or Front Yard CB Location / Elevation (if applicable)
- Driveway Width Gradient and Elevations
- Retaining Wall Location (if applicable)
- Retaining Walls 1.0M in height or greater require a structural design and detail stamped by a Professional Engineer
- Retaining Wall Top and Bottom Elevations
- Retaining Wall Type, Detail and max. Height
- Location of Window Wells and Drains
- Location of 3:1 Transition Slope
- Location / Direction of Down Spouts
- Size / Location of Existing and Proposed Service Connections
- Invert Elevation of Service Connections at Main
- Invert Elevation of Service Connection at Property
- Lot Corner Elevations and at Grade Change
- Provide Side Yard Cross-Sections, Complete with Proposed and Existing Elevations
- Sediment Control – Silt Fencing, Catch Basin Sediment Trap
- Service Connections as per City Standard M-2A

Tree Requirements

General Notes

The drawing must include the surveyed location, size (diameter at breast height (DBH)) and required Tree Protection Zone (TPZ) of all existing trees. **This must be done for all trees located on the subject property and within 6 meters of construction activity including those located on adjacent properties.**

All construction activity, including changes to drainage patterns, swales, retaining walls, or any area to be used for the purposes of construction, grading and excavation, storage of construction materials/equipment, movement of machinery, paving, demolition/replacement of accessory structures etc. that would impact the tree must be outside of the TPZ. If an applicant wishes to preserve the existing trees on the property and not be required to obtain a Tree Permit, the TPZ for all trees must be maintained. **Injury to a tree includes any encroachment of construction activities into the TPZ.**

Tree Protection Zones

The TPZ is measured as a radius from the edge of the tree trunk and is dependent on DBH measured as the diameter of the trunk 1.4 meters above the ground.

Trunk Diameter DBH	Minimum Protection Distance Required
<10 cm	1.8 m
11 – 40 cm	2.4 m
41 – 50 cm	3.0 m
51 – 60 cm	3.6 m
61 – 70 cm	4.2 m
71 – 80 cm	4.8 m
81 – 90 cm	5.4 m
91 – 100 cm	6.0 m

*diameter measured at 1.4 m above ground

Tree Removals and Injuries

When removal or injury of a tree(s) with a DBH of 20 cm or greater is proposed, a Tree Permit for Injury or Removal must be obtained. This is a separate application completed online at the following link: Tree Cutting Permit - City of Richmond Hill.

When existing trees 20cm DBH or greater are to be injured or removed, an Arborist Report conducted by a certified Arborist is required to accompany the Site Alteration Permit Application and Tree Permit Application. **Where an Arborist Report has been prepared, the applicant must ensure the Grading Plan is coordinated with the recommendations in the Arborist Report (including but not limited to the location of Tree Protection Fencing, tree DBH's and size of TPZ's).**

Boundary Trees

When removal or injury of a tree(s) with a DBH of 20 cm or greater is proposed on an **adjacent property**, written consent from the adjacent property owner for the injury or removal is required as per the Ontario Forestry Act. A copy of the consent must be provided to staff.

Tree Injury

Existing trees that will be injured (i.e. where Construction Activity is proposed within the TPZ) should be shown with Tree Protection Fencing on the drawing. No construction activities are to be located within the Tree Protection Fencing.

As per the definition of construction activities, noted above, the Construction Access Route must be shown on the Grading Plan to determine whether any injury to existing trees will occur.

Legend and Symbols

Existing trees proposed for removal must be shown with an “X” on the Grading Plan. The symbol is to be included in the drawing legend as “Existing Tree to be Removed”.

The City of Richmond Hill standard Tree Protection Fencing Detail must be included on the Grading Plan and the Tree Protection Fencing must be included in the legend.

Tree Replacement Plantings

Replacement plantings are required when a tree 20cm DBH or greater has been removed. The location of the replacement plantings must be shown on the final Grading Plan.

DBH of Tree to be Removed	# of Replacement Trees Required
0-20 cm	0
20-30 cm	1
31-40 cm	2
41-50 cm	3
51-100 cm	4
>100 cm	5