Lot Grading

Developers are required to provide an overall lot grading plan for each new development. The purpose of this section is to outline the general design requirements for the overall lot grading for new developments in the City of Pickering. Any proposal to deviate from the minimum requirements shall be discussed with, and approved by, Engineering Services prior to making a formal submission.

This document shall be read in conjunction with the City of Pickering Development Services Design Standards, herein referred to as City Standards, as well as all applicable Ontario Provincial Standard Drawings (OPSD), and Ontario Provincial Standard Specifications (OPSS). Where conflicts occur, City Standards shall govern.

1.0 General Provisions

1.1 Storm drainage must be self-contained within the developing property. There must be no adverse impacts to adjacent lands. Consideration may be provided for the flows from grassed rear yards of residential lots backing onto open space at the discretion of the Director, Engineering Services.

1.2 An undisturbed strip and/or flat area having a width of 0.6 metres shall be provided within the boundary limits adjacent to other properties, developed or undeveloped, in order that the existing boundary elevations shall be maintained. Swales will not be permitted in this area. No filling up to, or onto private lands shall be tolerated unless the abutting owner furnishes written permission.

1.3 Positive surface drainage at a minimum of 2.0% must be provided away from all buildings.

1.4 The use of rear yard catchbasins must be minimized.

1.5 Municipal boulevards and other grassed surfaces shall have a minimum slope of 2.0% and a maximum slope of 5.0%. Reverse graded boulevards may be used at overland flow outlets subject to City approval.

1.6 Sidewalks are to have a cross fall of 2.0%.

2.0 Front yards

2.1 Front yards shall be graded to drain towards the street.

2.2 No front yard catch basins shall be allowed without approval from the Director, Engineering Services.

2.3 All lots with a frontage of 12.0 metres or less must have their downspouts connected to the storm sewer unless otherwise directed by the Director, Engineering Services.

2.4 The front house grade is to be set a minimum of 0.3 metres higher than the high lot corner at the street line.

3.0 Residential Driveways

3.1 Driveways shall have a minimum slope of 2.0% and a maximum slope of 8.0% towards the road. Reverse driveways sloping towards the garage are not permitted.

3.2 Driveways should not be used as outlets for any swales. Where driveways abut each other at the property line, a shallow swale or depression between the driveways is encouraged to prevent “sheet flow” on the driveways.

3.3 The driveway edge is not permitted to cross the projected lot line at the curb or edge of pavement.

3.4 Roof water leaders shall not discharge directly on a driveway.

4.0 Side Yards

4.1 A minimum 0.6 metre wide apron sloping at a grade of 2.0% away from the foundation wall shall be constructed along one side of the building to allow proper access to the rear yard.

4.2 Where the side yard distance between buildings is 1.2 metres or less, the area shall be graded with a swale, at a minimum grade of 2.0% and a minimum depth of 150 millimetres, to be covered with 20 millimetres clear stone to a depth of 100 millimetres. This standard may be applied where the side-yard distances exceed 1.2 metres at the discretion of the Director, Engineering Services.

5.0 Rear Yards

5.1 Lot grading aprons at the rear of the house shall extend a minimum of 5.0 metres from the rear of the house and have a slope between 2.0% and 5.0% away from the house. The area of the lot grading apron should be maximized.

5.2 A 3:1 slope may be used in areas where a maximum 5.0% slope cannot be achieved.

5.3 Slopes between lots shall be located in the lower lot with the top of the slope at the lot line. Slopes within the lot shall maintain 1.0 metre clearance at a grade of 2.0% - 5.0% from the toe of the slope to the property line.

5.4 The maximum average slope of rear yard surfaces shall be 15.0%. The average slope shall be measured:

5.4.1 from the rear of the house to the rear of the lot; or

5.4.2 from the rear of the house to the centre line of the rear swale; and

5.4.3 from the side lot line to side lot line.

Where the lot is irregular in shape, the shortest distance calculated in 5.4 shall be used.

Where the rear yard is over 30.0 metres in depth, 5.4.1 and 5.4.2 cannot be applied.

5.5 Rear yard catchbasins are to be constructed in a minimum 3.0 metre wide easement. Easements less than 3.0 metres wide require approval from the Director, Engineering Services. Any catchbasin leads constructed within easements less than 3.0 metres wide are to be concrete encased as per City Standard Drawing P-408. The centre line of the catchbasin top is to be a minimum of 0.9 metres from any lot line and/or line up with the centre line of the rear yard swale. All catchbasin leads are to be constructed entirely within the easement, within one lot and with no bends in the leads under any circumstances.

6.0 Drainage Swales

6.1 Storm water runoff is to be confined in defined swales located as far from any building as possible. Sheet flow across property lines will not be permitted without approval from the City and express written consent of the adjacent property owner if applicable.

6.2 Preferred swale depth is to be 250 millimetres. with a minimum of 150 millimetres. and maximum of 450 millimetres.

6.3 Swales shall have a minimum slope of 2.0%.

6.4 Side yard swales shall be located on the common lot line between two new lots unless the side yard is adjacent to an existing developed lot, in which case the swale is to be fully constructed within the lot.

6.5 The flow in a side yard swale shall be that from the lesser of three backyards or 550 square metres.

6.6 The flow in rear yard swales shall be that from a maximum of ten backyards depending on lot size and grade. The maximum length of rear yard swales shall be 60.0 metres. The maximum area contributing to the rear yard swale shall be 0.4 hectares. The maximum flow in rear yard swales, which may be discharged onto the road allowance, shall be the lesser of three backyards or 550 square metres. A rear yard catchbasin will be required if any of the above maximum criteria is exceeded.

6.7 The maximum side slope for any swale shall be 3:1.

6.8 Swales located more than 1.5 metres from the rear lot line will not be permitted without approval from the Director, Engineering Services.

7.0 Retaining Walls

7.1 The use of retaining walls along development limits and within stormwater management facility blocks will not be permitted. Any deviation from this criteria must be approved by the Director, Engineering Services.

7.2 The use of retaining walls within individual lots will only be allowed as a substitute for a 3:1 slope shown on the approved Subdivision Lot Grading Plan or approved Land Division Preliminary Grading Plan. These retaining walls need not be shown on these plans, only on the Individual Lot Grading or Infill Grading Plan.

7.3 At the discretion of the Director, Engineering Services, a retaining wall may be considered where there is not enough space for 3:1 grading slope.

7.4 Any retaining wall 1.0 metre or more in height must be designed by, and the installation certified by, a Professional Engineer. A minimum 1.2 metre high chain link fence or approved equivalent shall be erected on top of the wall.

7.5 Retaining walls shall be designed and constructed entirely on one property so that tie backs or wall footings do not cross property lines.

7.6 A minimum setback of 0.5 metres shall be maintained from the tiebacks to the foundation of any structure.

7.7 General notice will be incorporated in the subdivision agreement advising the future property owners of the presence of retaining walls on the affected properties and their responsibilities for maintenance and impact on useable land within their property.

7.8 The Developer shall be responsible for obtaining from the Chief Building Official, any building permits required for the construction of retaining walls associated with the development. The certification noted in the Appendices is not required where the retaining wall is deemed to be a designated structure requiring a building permit. Instead, general review by a Professional Engineer will be required in accordance with the Ontario Building Code.