



STEEP SLOPE DEVELOPMENT SERVICING GUIDELINES

When subdividing land in steep slope areas for *one-family residential* development, use the following primary and secondary responses:

1. Primary Response:

In order to create livable attractive communities and reduce retaining wall heights, development on steep slopes should first examine lot size, building typologies and land use based solutions that do not adversely affect the efficient servicing of the area.

- a. Increase the **lot depth** to absorb the slope over a greater distance, thus reducing the number and height of retaining walls. The maximum retaining wall height is 2.4 metres.
- b. Utilize **slope adaptive building typologies**, such as homes with double and / or over height basements, so that the home retains a greater portion of the hillside, thus reducing the reliance on retaining walls.
- c. An **alternative land use** may be considered, such as two-family residential use or townhouses. The following criteria will be used to assess the merit of a land use change (which requires an amendment to the Official Community Plan):
 - i. A technical review, including the assessment of park, road, servicing and infrastructure requirements;
 - ii. Consider the character of the neighbourhood and adjacent land uses (multi-family uses should transition appropriately from single-family uses;
 - iii. The natural slope exceeds 18% and / or more than three 2.4 metre tall retaining walls are required (after applying slope adaptive building typologies) within a one-family residential lot.
 - iv. The parcel size meets the minimum lot size requirements of the applicable two-family residential or townhouse zone; and
 - v. Maintain vehicle and pedestrian connectivity.

2. Secondary Response:

Prior to staff considering **engineered solutions** that are more costly to the City, the developer must first consider the Primary Responses. Engineered solutions are not to transfer any unreasonable risk or burden to the City or individual property owner. In cases where engineered solutions are required, the following guidelines apply:

A. Underground Utilities:

- i. Underground utilities should be located within road right-of-ways; and
- ii. When unavoidable, underground utilities may be located within a SROW or private easement, provided adequate access and safety are appropriately considered.

**B. Rear Yard Servicing:**

- i. Maintainable –services are to be installed at a shallow depth (where practical, below 1.2m) to facilitate operation and maintenance by the City. Also walls are to be designed by a Professional Engineer such that the sewer pipes can be repaired and / or replaced safely by open excavation and without damage or disturbance to the retaining walls. Where the depth of the utility is below 1.2m, the wall design and location must consider the need for shoring during maintenance.
- ii. Accessible –rear and side yard accessibility, accessible manhole locations, the maintenance plan (including the excavator size) must be taken into consideration and be acceptable to the GM of Engineering; and
- iii. Unencumbered - services must be located outside the geo-grid, at no time shall the construction or maintenance of the rear yard services impact the geo-grid or retaining wall, and the associated ROW (approx. 3 m. wide) cannot include the retaining wall.

C. Modified Road Network:

A modified road network may be considered subject to the developer demonstrating that the modified road network meets the following criteria:

- i. Safety – provision of acceptable slopes, horizontal and vertical curvature, and unobstructed sight lines;
- ii. Maintains consistency with street hierarchy;
- iii. Provides street connectivity;
- iv. Provides for on-street parking; and
- v. Promotes walkable block lengths.

D. Unpaired Driveways:

Unpaired driveways may be considered if there is no loss to on-street parking (i.e., minimum lot width of 14.4 metres is required).

E. Single Loaded Lots:

Single loaded lots may be considered if the following criteria are addressed:

- i. The maintenance of the lower wall / yard / boulevard area is resolved; and
- ii. A “friendly” streetscape is created (i.e., the combined height of the retaining wall and fence fronting the lower (rear) street is kept to a minimum).

F. Location:

- i. Retaining walls, including the footing and structure, must be located on private property and no wall or footing shall extend into the ‘Road’ Right-of-way.