



City of Vancouver *Land Use and Development Policies and Guidelines*

Planning, Urban Design and Sustainability Department

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ENHANCED ACCESSIBILITY GUIDELINES

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1.0 Application and Intent

These guidelines are to be used in conjunction with a district schedule of the Zoning and Development By-law or the official development plans which permit single detached houses, single detached houses with secondary suite, and duplexes and duplexes with secondary suite. The guidelines also provide additional direction for new or existing development sites where Council-adopted design guidelines seek streetscape compatibility in evaluating a conditional development application.

These guidelines will be used to assist owners and applicants in designing and incorporating enhanced accessibility for persons with disabilities into new or existing single detached houses, single detached houses with secondary suite, duplexes or duplexes with secondary suite.

Enhanced accessibility encompasses the provision of ramps, lifts or other means of access to enable persons who have a loss, or reduction of functional ability and activity, to gain access to and from a dwelling. The guidelines typically apply to, but are not limited to the provision of ramps from the property line to the main floor of a dwelling and do not encompass all the other elements of enhanced accessibility within the interior of a dwelling. Vertical lifts may also provide access to a dwelling provided the lift is sensitively integrated into the exterior design of the dwelling.

The intent of these guidelines is to:

- (a) highlight key design considerations for the provision of external enhanced accessibility;
- (b) address the key issues of site selection, streetscape analysis and ramp route design; and
- (c) provide examples of both external and internal enhanced accessibility opportunities.

1.1 Regulations and Standards

In addition to these guidelines, other approvals and permits may be required for the design and construction of enhanced accessibility to a single detached house, single detached house with secondary suite duplex or duplex with secondary suite. While technical building code aspects are not referenced in detail, the examples cited in the guidelines are intended to reflect code requirements, and staff will assist in addressing these aspects for each situation.

There can be acceptable alternatives or specific circumstances which are not addressed in these guidelines, but which respond to the design principles. Should further clarification be required, Housing Renovation Centre staff can assist in the review of preliminary design concepts for new, and alterations to existing dwellings which lead to a design solution that works for the specific circumstance, to be followed by the submission of a development application. Housing Renovation Centre staff will also liaise, as required, with the Office of the Chief Building Official staff to ensure Vancouver Building By-law code issues are addressed and flexibility applied, where possible, in regards to code issues.

Where it is determined that it is not feasible to, due to site peculiarities of the proposed development, to comply with specified minimum yards and setbacks, permitted site coverage, impermeability and building depth, staff may recommend relaxations for the provision of enhanced accessibility to a single detached house, single detached house with secondary suite , duplex or duplex with secondary suite having regard to the intent of the respective district schedule, or official development plan, and these guidelines.

2.0 General Design Considerations

Provision of enhanced accessibility for persons with disabilities is not a requirement for single detached houses, single detached houses with secondary suite, duplexes and duplexes with secondary suite. However providing enhanced accessibility, or improved capacity for the future provision, offers the following advantages:

- (a) improves accessibility for residents, friends and relatives;
- (b) makes future adaptability easier;
- (c) facilitates aging in place;
- (d) blends into the streetscape and enhances the privacy of persons with altered ability; and
- (e) maintains the neighbourhood character.

These guidelines encourage functional enhanced accessibility from the street to the dwelling, designed to respect streetscape compatibility. All enhanced accessibility is conditional requiring the approval of the Director of Planning.

There are varied site circumstances (e.g., site size, topography) and built form choices which could involve the provision of either external and/or internal enhanced accessibility, and the guidelines provide direction in how this may be achieved, noting that there may be alternative design solutions which meet the intent of these guidelines.

3.0 The Design Process

- (a) Designing for new, or alterations to existing single detached houses, single detached houses with secondary suite, duplexes and duplexes with secondary suite incorporating enhanced accessibility involves the following:
 - (i) site selection;
 - (ii) streetscape analysis; and
 - (iii) the ramp route design.

3.1 Site Selection

- (a) While the selection of a site for a new single detached house, single detached house with secondary suite, duplex or duplex with secondary suite may depend on numerous factors, it is important to consider site factors for enhanced accessibility from the outset.

3.1.1 Corner Site

- (a) A corner site may provide more flexibility for city sidewalk connection, accessible route and front entrance location. Narrow sites located mid-block and sloping up from the street may be very challenging (see Figures 1 and 2).

Figure 1: Corner Site Provides More Flexibility

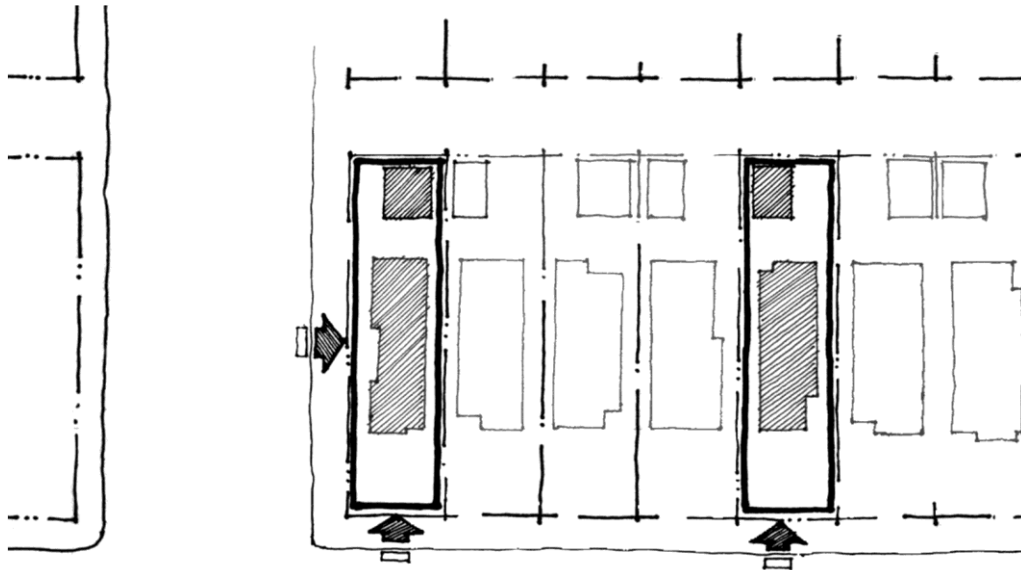
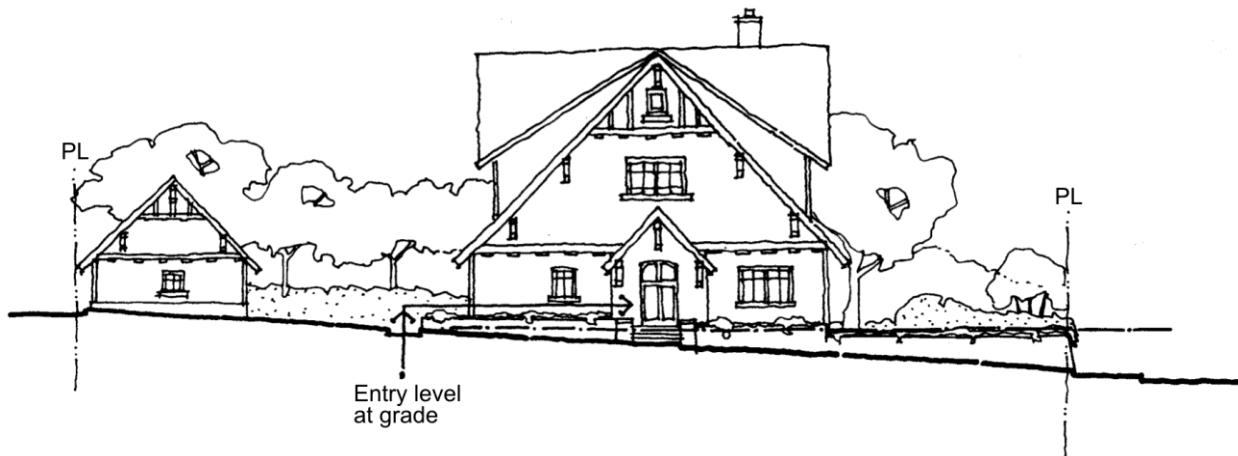


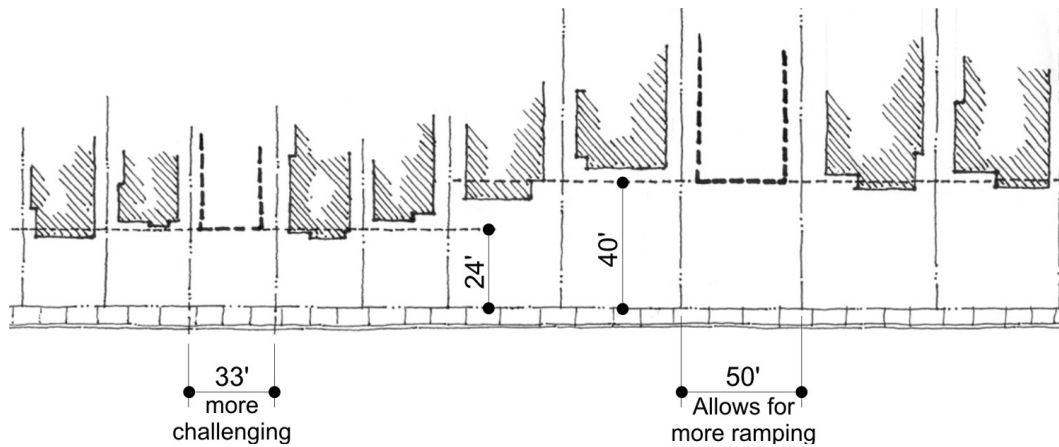
Figure 2: Example of Working with a Sloping, Corner Site



3.1.2 Large, Wide Site

- (a) Larger, wider sites and deeper yard setbacks may allow for greater travel distances and latitude in the layout of more gently sloping walks and/or ramps than do small, narrow sites (see Figure 3).

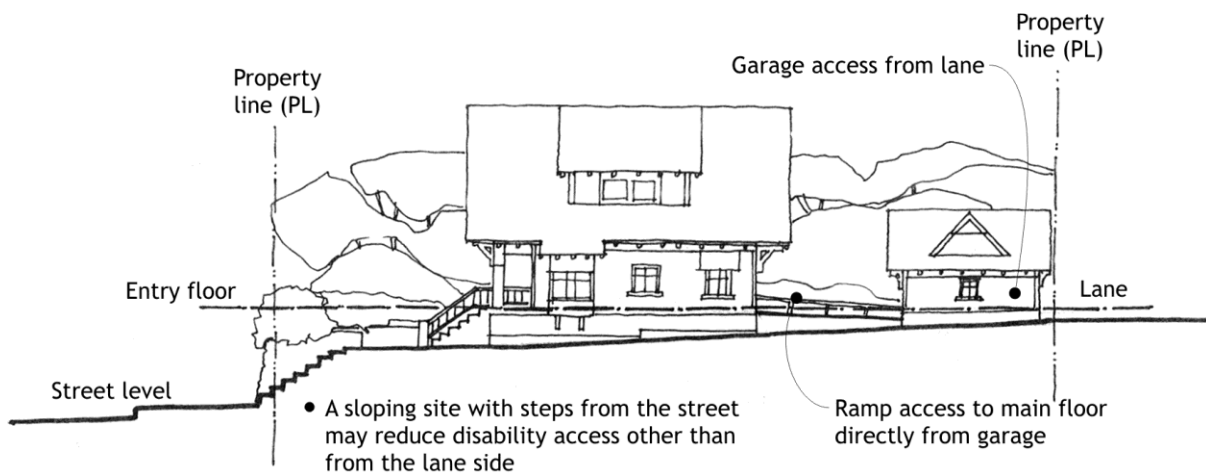
Figure 3: Larger, Wider Sites Preferred



3.1.3 Sloping Site

- (a) A level or very moderately sloping site makes it easier to provide enhanced accessibility to a dwelling (see Figure 4).

Figure 4: A Sloping Site, with Steps from the Street may reduce Enhanced Accessibility other than from the Lane Side



3.2 Streetscape Analysis

3.2.1 External Enhanced Accessibility

3.2.1.1 Sites not subject to Streetscape Compatibility Design Guidelines

- (a) For those sites located in a zoning district where Council-adopted streetscape compatibility design guidelines are not applicable, the enhanced accessibility should still be designed to integrate well with the existing dwelling and minimize adverse impacts on adjacent properties, having regard to the intent of the respective district schedule or official development plan.
- (b) Ramps ideally should be visually integrated with the landscaping or the dwelling. A short ramp may be possible if the entry level of the dwelling is located 0.6 m or less above grade. A ramp may be located parallel to the dwelling front facade and may be made less noticeable with a landscape buffer. Dense, multi-layered planting can provide an effective screen for a ramp (see Figures 5 and 6).

Figure 5: Example of an Existing Dwelling with a Raised Front Entry - Front View

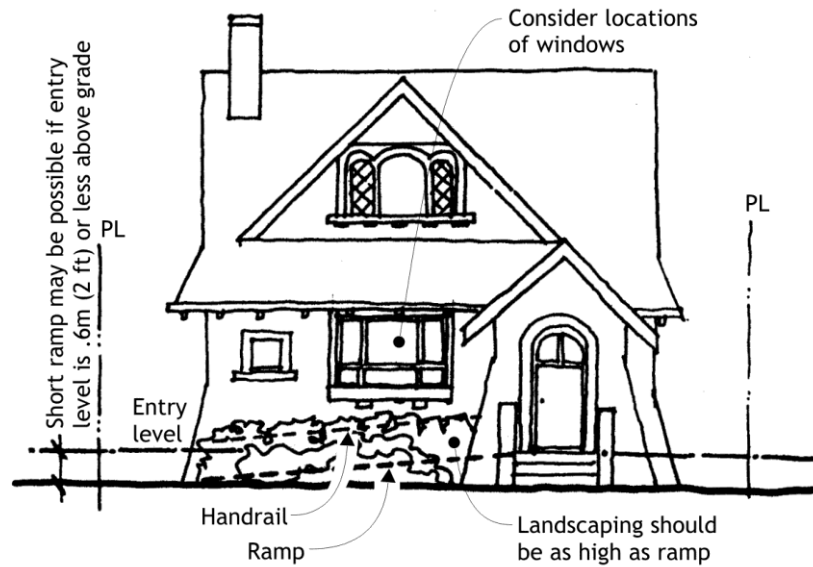
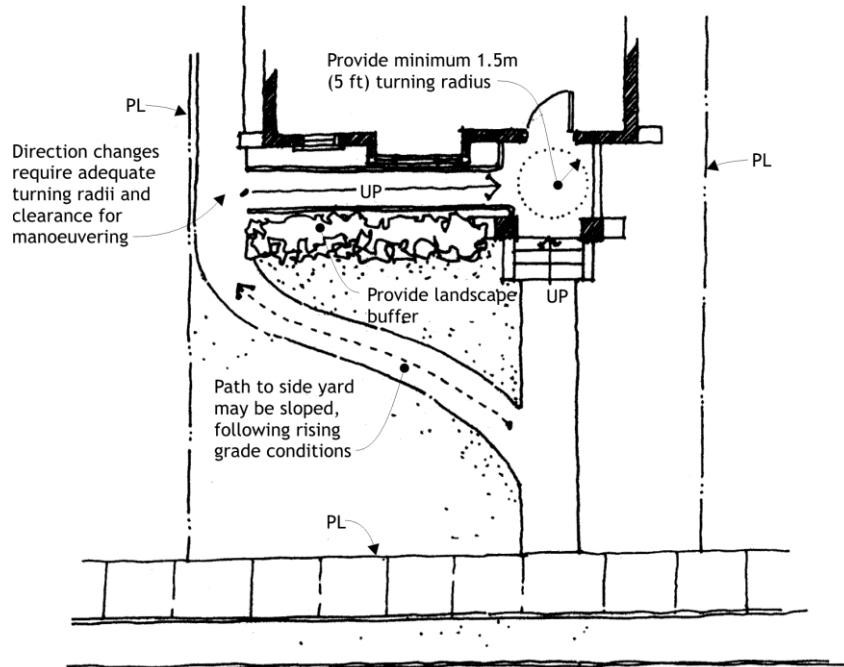


Figure 6: Example of an Existing Dwelling with a Raised Front Entry - Plan View



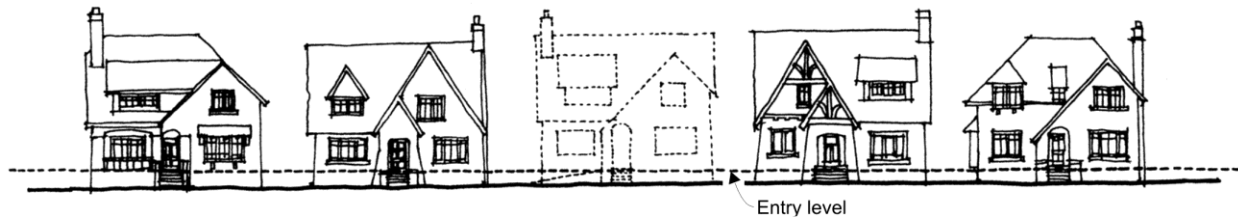
3.2.1.2 Sites subject to Streetscape Compatibility Design Guidelines

- (a) For sites located in zoning districts where applicants are seeking approval for discretionary increases and relaxations provided under the regulations, or approval for conditional uses, and the objective is to maintain streetscape compatibility with adjoining properties, the following should be considered.

3.2.2 Entry Levels and Entrances Options

- (a) Where development applications for single detached house(s), single detached houses with secondary suite, duplexes or duplexes with secondary suite seek to maintain streetscape compatibility, design guidelines call for the entry level to be similar to those of adjoining properties. For ease of enhanced accessibility, one option is to choose a site where neighbouring entry levels are close to natural grade. Another option is where the predominant entry to a dwelling is raised and requires the integration of ramps with the dwelling (see Figure 7).

Figure 7: A Streetscape with Typically Raised Entries Presents a More Challenging Context for a New Dwelling Incorporating Enhanced Accessibility



- (b) In this case, wherever possible, ramps visible in the front yard should be located close to the principal entry door and be parallel to the front facade of the dwelling.
- (c) The principal entry door should be located on the front elevation, visible from the street. Porches may incorporate carefully integrated ramps (see Figures 8 and 9).

Figure 8: Integrating Enhanced Accessibility with Front Entrances

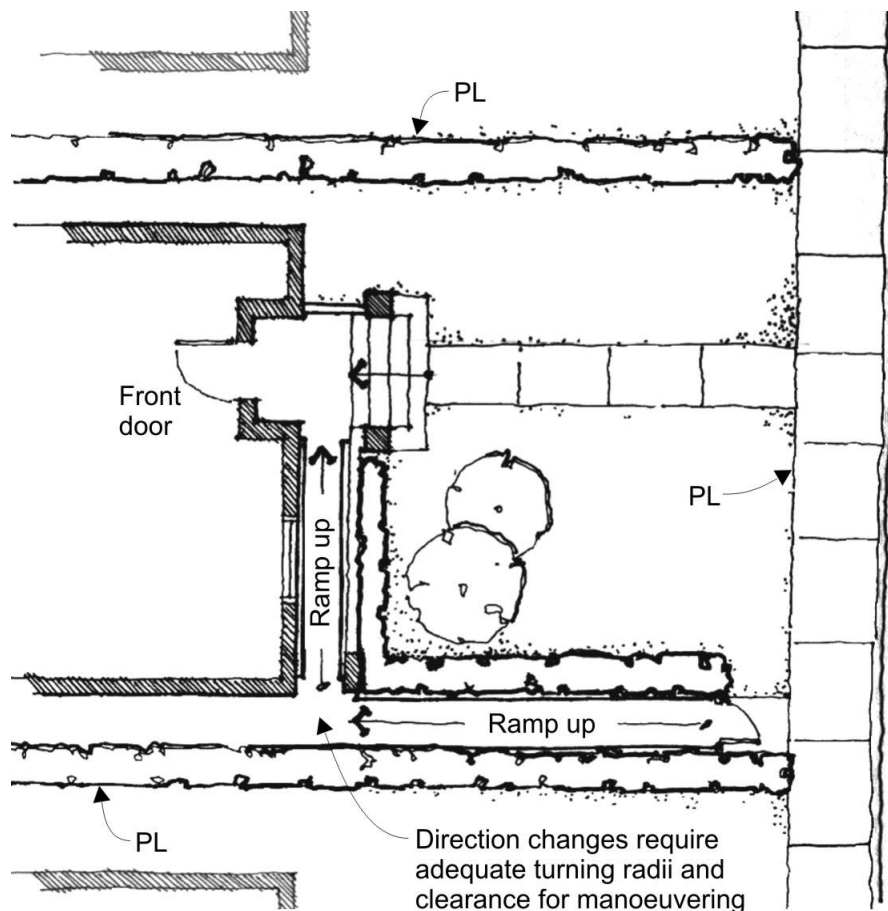
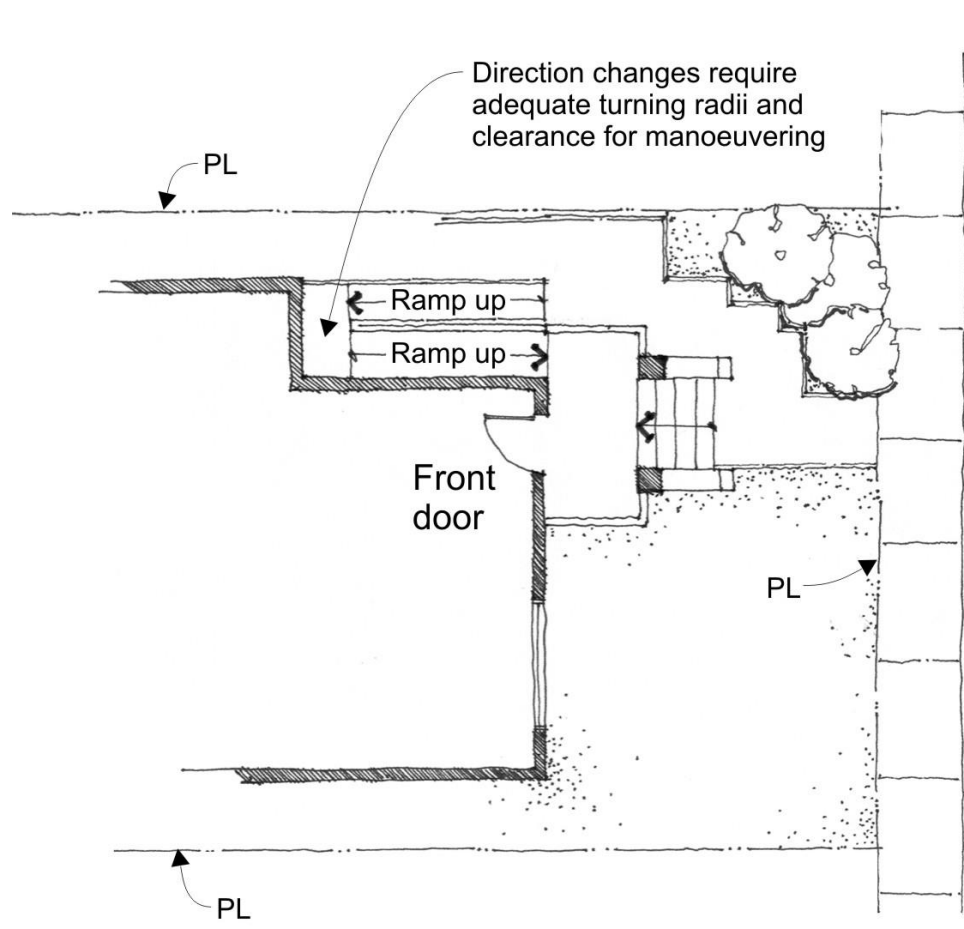


Figure 9: Integrating Enhanced Accessibility with Front Entrances



3.2.3 Raised Porch Expression

- (a) Where the streetscape context is characterized with dwellings with a raised porch expression, it may be possible to integrate ramps into a new or existing dwelling provided the principal entry door is not located too high above grade. The porch wall may provide an opportunity to provide a false front and visually screen the ramping system, having consideration for the impact on adjacent properties (see Figures 10 and 11).
- (b) Exterior materials and architectural detailing should be compatible with the established neighbourhood character. Non-typical materials such as metal pipe rail and poured-in-place concrete needed for ramps should be carefully integrated and designed.

Figure 10: Integrating a Ramp into an Existing Porch - Front and Side View

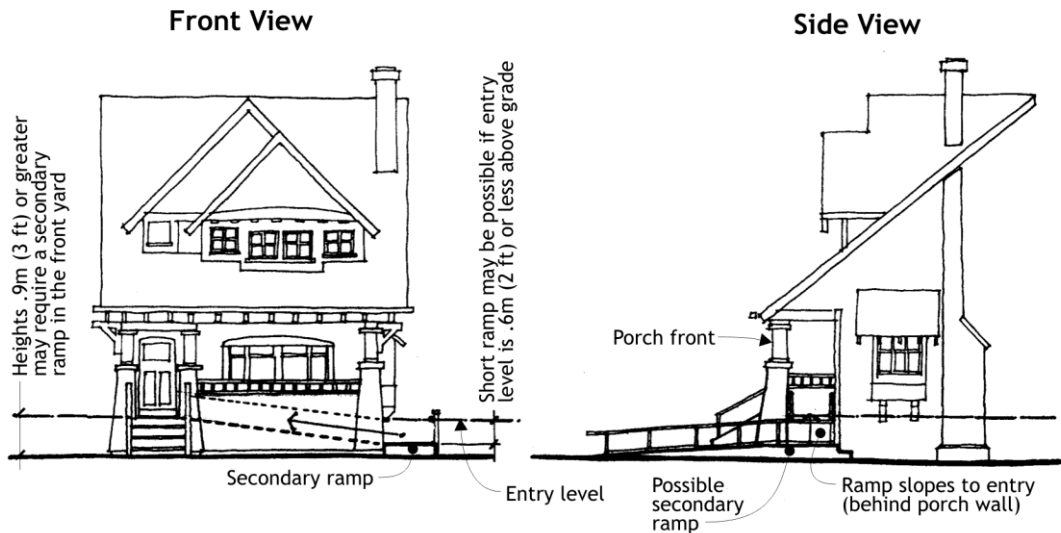
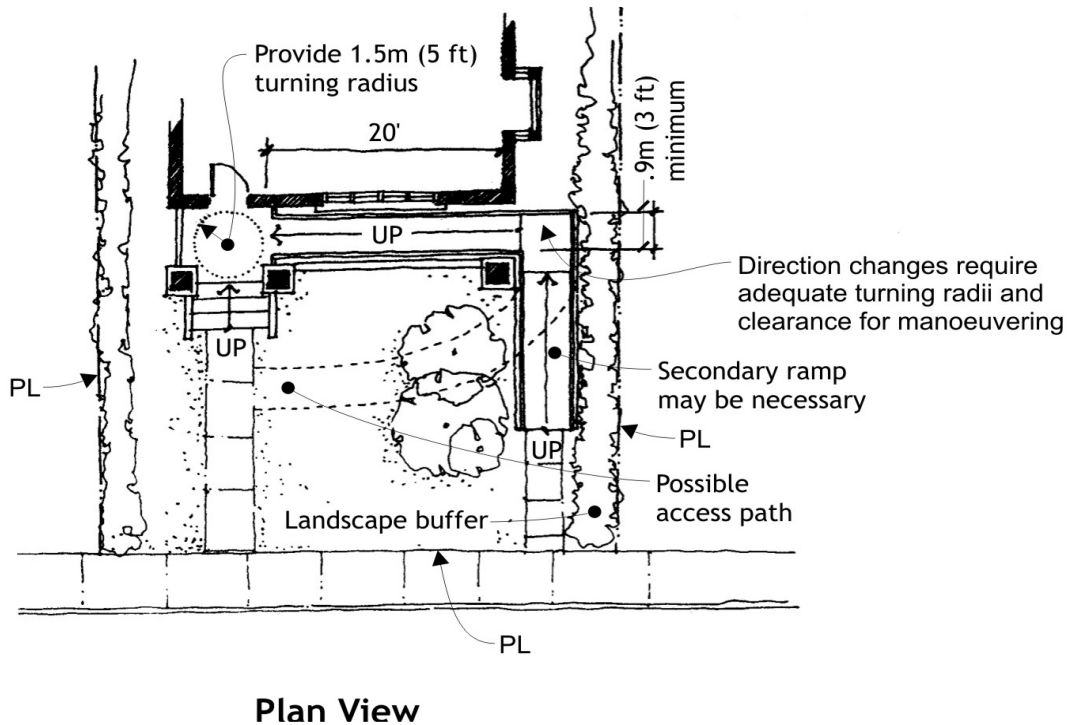


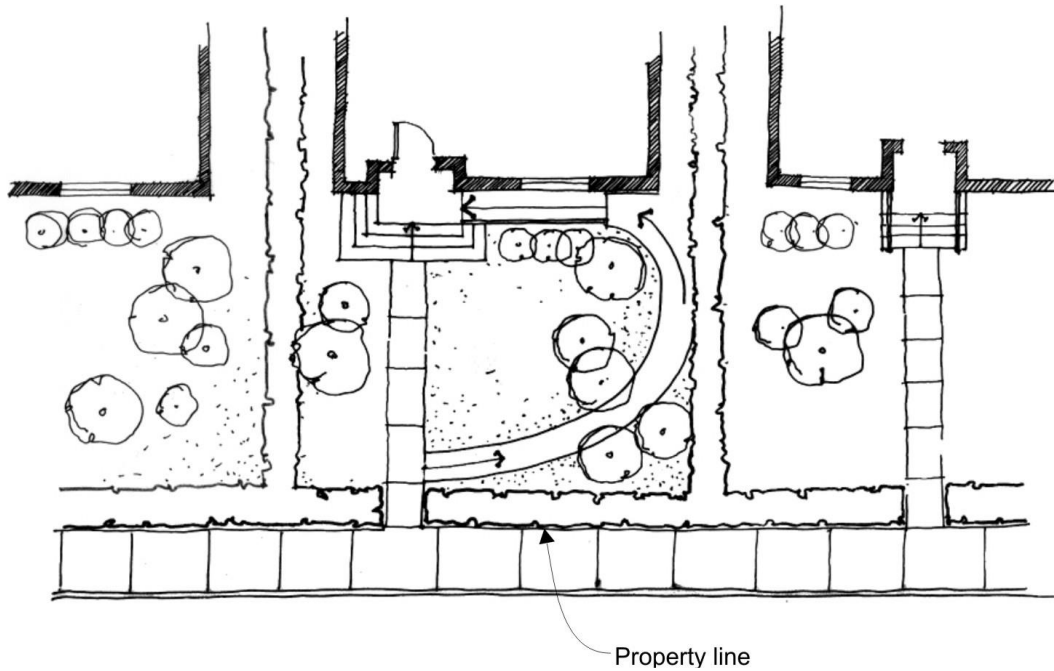
Figure 11: Integrating a Ramp into an Existing Porch - Plan View



3.2.4 Landscaping

- (a) Where possible, existing mature trees should be preserved on the site and integrated into the access route. Hedges may visually soften the access route and retaining walls are discouraged unless part of the existing streetscape, or designed with extensive landscape screening to reduce the visual impacts of the structure. Where possible, the foot and enhanced accessibility route may be combined in a single walkway, and walkway grade differences up to 46 cm may be blended with gently graded contours (see Figure 12).

Figure 12: A Gently Sloping Second Walkway With Integrated Ramp



3.2.5 Internal Enhanced Accessibility

- (a) In some circumstances it may be more practical and cost effective to provide a design solution whereby the provision and integration of the enhanced accessibility is located somewhere within the dwelling itself (see Figures 13 and 14).
- (b) Such a design solution may warrant regulatory relaxations (e.g., setbacks) and where it is determined that it is not possible, due to site peculiarities of the proposed development, to comply with specified minimum yards and setbacks, permitted site coverage, impermeability and building depth, staff may recommend relaxations where appropriate; and
- (c) The enclosed internal space should be designed to be sympathetic to the existing character of the dwelling. Consideration should be given to roof slopes, finished materials and windows to match those in the existing dwelling.

Figure 13: Example of an Existing Dwelling with an Enclosed Ramp System - Plan View

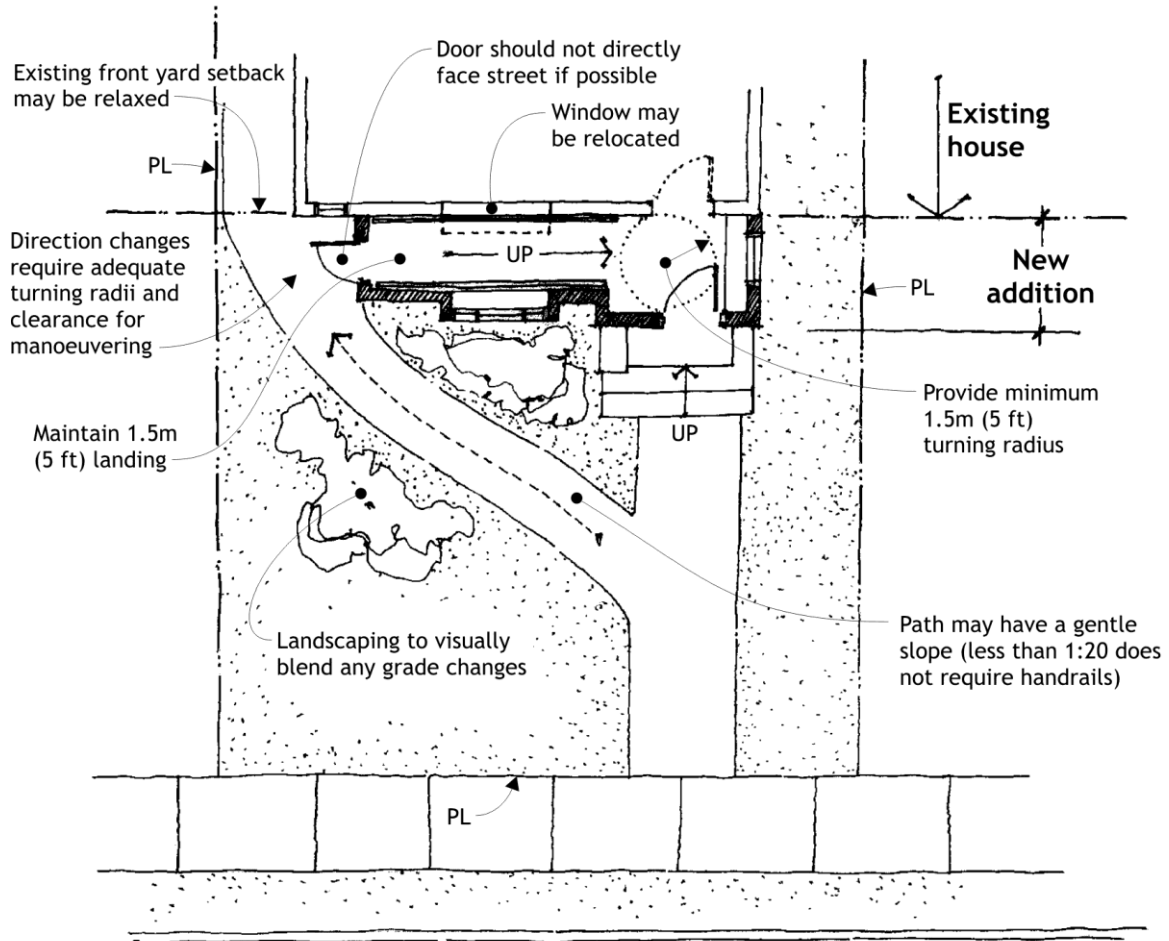
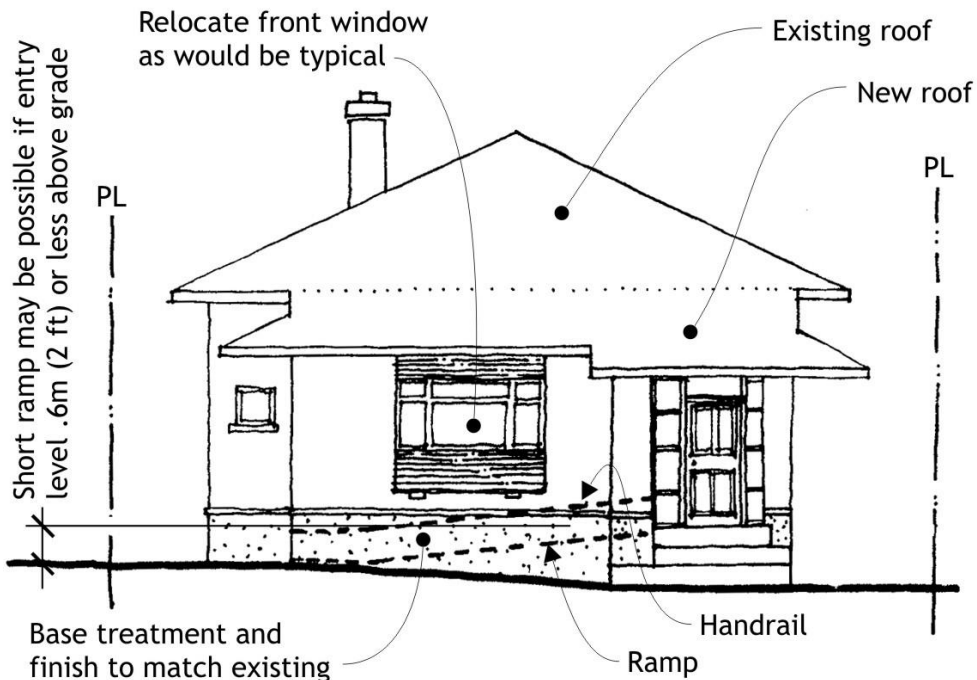


Figure 14: Example of an Existing Dwelling with an Enclosed Ramp System - Front View



3.3 The Ramp Route Design

- (a) Ramp routes should be well integrated into the landscape and architectural elements of the design. For detailed information on technical building code requirements for ramps, refer to the latest version of the Vancouver Building By-law.

3.3.1 Guidelines Pertaining to the Vancouver Building By-law

General Considerations

- (a) A ramp is not required where the gradient of the access route is less than 1:20;
- (b) Access routes should be at least 915 mm wide, even surfaced and skid resistant. Where wider routes are necessary, they should be carefully integrated into the landscape. However, ramps having a gradient exceeding 1:12 should be designed such that handrails are provided on both sides with a distance of 890 mm to 940 mm between handrails;
- (c) A level access route is ideal. A gently sloping walkway (1:20 or less) does not require handrails and may typically be blended into front yard contours if the change in grade is 46 cm or less. A combined walkway and ramp may work for grade changes between 46 cm and 92 cm;
- (d) Handrails should be placed 865 mm to 965 mm above the ramp surface. 1:12 ramps need a landing every 9.15 m. Direction changes require adequate turning radii and clearance for manoeuvring. However, where a ramp has a gradient more than 1:12, an intermediate handrail should be provided between the ramp surface and the handrail, and should be located at the 865 mm to 965 mm height level. This handrail will assist persons in their use of steeper ramps; and
- (e) Heights greater than 92 cm may necessitate a mechanically operated vertical lift which should be sensitively integrated into the exterior design of the dwelling.

4.0 Retain a Design Professional

Council-adopted guidelines, as part of conditional development applications, seek a higher design standard than for outright development applications where guidelines do not apply. Incorporating enhanced accessibility adds a further level of design complexity. If solutions are not readily apparent, owners are encouraged to consider a design professional who has experience working with design guidelines and may assist in the following ways:

- (a) site selection based on access feasibility;
- (b) knowledge and experience with zoning and building regulations; and
- (c) design and problem solving expertise in the field of enhanced accessibility design.