# DRIVEWAY ACCESS REQUIREMENTS

*Requirements for New and Altered Driveway Access*

Bulletin No. 21-01 | Revised: May 11, 2023

## PURPOSE

The following information is provided to outline the regulations for permits for a new or altered driveway access, sidewalk(s) and crossover(s) to a city highway. The City of Penticton regulates the construction of driveway accesses onto the City's highways to ensure that accesses are installed in suitable locations and result in safe and efficient traffic patterns.

Note that we are here to help you, if you are planning on installing a driveway access, or removing an existing driveway access and constructing a new driveway access.

**Driveway Access**: Whether on a new hillside lot or existing infill property, it is important to recognize that altered and new driveway access to city streets and lanes require permits to ensure minimum design & safety standards are met.

DEVELOPMENT ENGINEERING SERVICES BULLETIN

## REFERENCES & BACKGROUND

- Building Bylaw No. 2021-21 – Part 9, Part 12 & Part 27
- Subdivision & Development Bylaw No. 2004-81 – Section 00400 - Roads
- Transportation Association of Canada – Geometric Design Guide for Canadian Roads.

## IMPLEMENTATION

Prior to a new or altered driveway access, sidewalk(s) and crossover(s) to a city highway, owners/contractors should contact the building department to confirm whether a driveway access building permit is required. When installing or modifying driveway access, which is a part of a subdivision or development process, a building permit may not always be required.

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# DRIVEWAY ACCESS REQUIREMENTS

## DESIGN CRITERIA

This is a guide to designing driveways in order to ensure the design complies with City of Penticton bylaws and TAC's Geometric Design Guide for Canadian Roads. The criteria is as follows:

- Typical grade in boulevard, between edge of pavement and property line is 2%.
- The maximum driveway grade is 20%.
- Driveways with grade changes in excess of 1% must incorporate vertical curves in their design. The formula, length of vertical curve (m) = 0.5 x the algebraic difference in grades (in percent), must be used.
- Driveways to corner lots must be located a minimum of 7 m from the face of curb on the flanking street to the top of the flare where the flanking street is classified local, and 10 m where the flanking street is classified collector.
- Driveways must be a minimum of 0.5 m from a property line, a minimum of 1.0 m from City infrastructure such as hydrants and power poles, and there must be a minimum of 1.0 m between driveway crossovers.
- The sidewalk thickness at the driveway crossover shall be a minimum of 200 mm for a commercial driveway and, 100 mm for a residential driveway.
- Where a garage, or carport, has driveway access from the front yard or exterior side yard to the street, the minimum required distance from the garage, or carport, to the back of the sidewalk (back of curb in absence of sidewalk) shall be 6.0 m.
  - In cases where the minimum building setback allows for the building to be closer than 6.0 m outlined above, the garage (or carport) shall be set back to achieve the required 6.0 m.
- Driveway grades are to be set such that minimum cover over utilities within the boulevard is maintained.
- Driveways are to be designed to not drain onto the City roads. Use of trench drains or cross falling the driveway are typical solutions.
- While not a requirement, it is a recommendation that a good driveway design incorporate a 4.9 m apron out of the garage with the following maximum grades:
  - For driveways sloping up to garage the maximum apron grade: 5%
  - For driveways sloping down from road the maximum apron grade: 8%
- The minimum and maximum width of driveway crossovers within the boulevard area are:

| Land Use Type | Access Type | Min. Width (m) | Max, Width (m) |
|---|---|---|---|
| Residential | One Way | 3 | 4.3 |
| | Two Way | 3 | 7.3 |
| Commercial | One Way | 4.5 | 7.5 |
| | Two Way | 7.2 | 12 |
| Industrial | One Way | 5 | 9 |
| | Two Way | 9 | 15 |

  - Once on private property the driveway widths may be increased above the maximum width.
- The installation of retaining structures within the boulevard is not permitted.
- Driveways onto rural roads may require a culvert at the homeowners cost, please contact Development Engineering Department 250 490 2501 or development@penticton.ca

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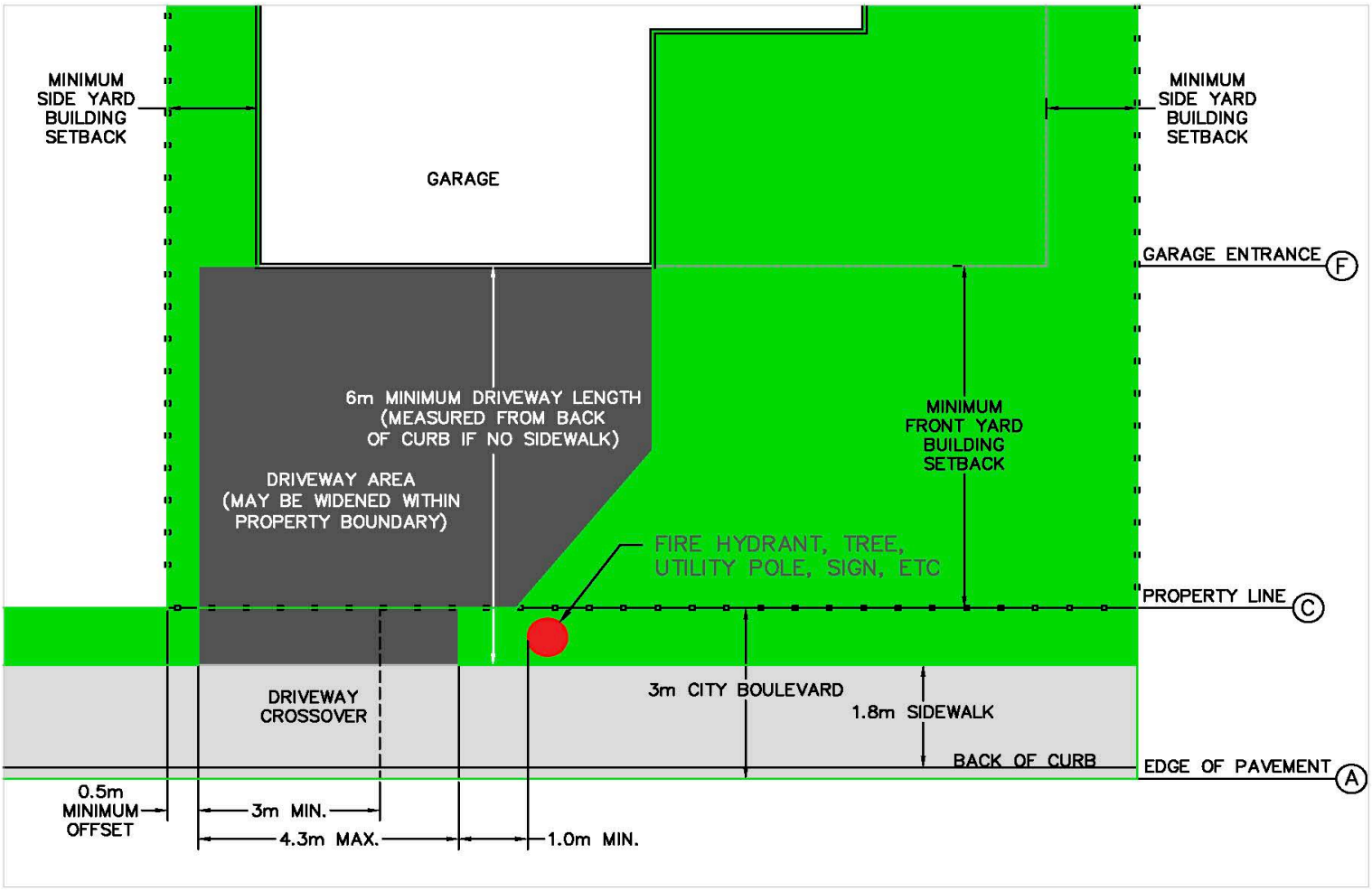
## WORK OVER/ON SIDEWALKS OR ROADS

Please note that works on or over City roads, boulevards or sidewalks will require a road or sidewalk closure permit.

Contact Development Services at 250-490-2501 for more information, see **Construction Road Closure Application**.

## TYPICAL RESIDENTIAL DRIVEWAY PLAN VIEW



# DRIVEWAY ACCESS REQUIREMENTS

## Driveway Long Section Design Table Profile Views

Design requirements for the sample drive way table

Boulevard Width: 3.0 m

Sidewalk width: 1.8 m

Front yard setback: 6.0 m

Minimum driveway length: 7.2 m (3.0-1.8+6.0)

Grade in Garage: 1%

### Vertical Transition Lengths & Elevation Changes

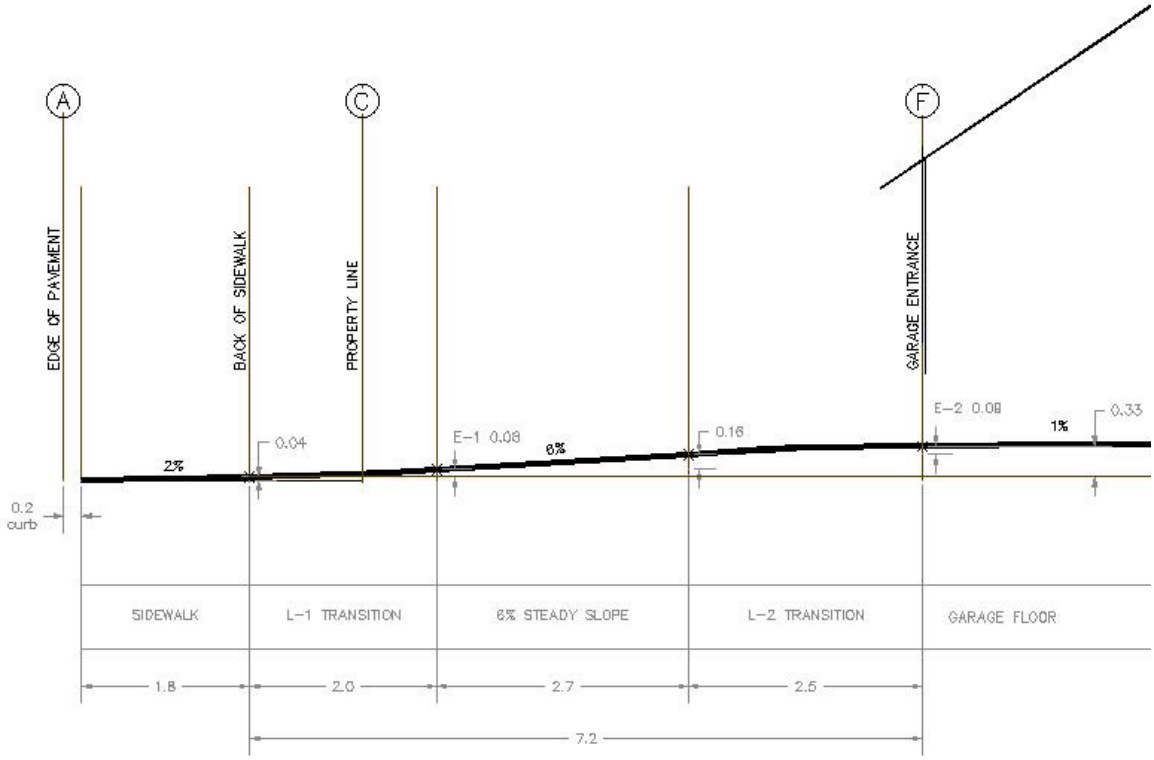
| | | Transition Curve 1 | | | Steady Slope | | Transition Curve 2 | | | | Total Driveway Length | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | (-1) | (E-1) | | | | | (L-2) | (E-2) | | |
| (B) | (D) | (a) | 0.5m x (a) | (B)(L-1)/2 + (D)(L-1)/2 | F | F x D | (A) | (b) | 0.5m x (b) | (D)(L-1)/2 + (A)(L-1)/2 | Horizontal | Vertical |
| Sidewalk / Boulevard | Maximum Driveway | Grade Change | Transition Length | Elevation Change | Length | Elevation Change | Grade in the Garage | Grade Change | Transition Length | Elevation Change | (L-1) + F + (L-2) | (E-1) + (FxD) + (E-2) |
| 2% | 20% | 18% | 9.0 | 0.99 | 0 | 0.00 | 1% | 19% | 9.5 | 1.00 | 18.5 | 1.99 |
| 2% | 19% | 17% | 8.5 | 0.89 | 0 | 0.00 | 1% | 18% | 9.0 | 0.90 | 17.5 | 1.79 |
| 2% | 18% | 16% | 8.0 | 0.80 | 0 | 0.00 | 1% | 17% | 8.5 | 0.81 | 16.5 | 1.61 |
| 2% | 17% | 15% | 7.5 | 0.71 | 0 | 0.00 | 1% | 16% | 8.0 | 0.72 | 15.5 | 1.43 |
| 2% | 16% | 14% | 7.0 | 0.63 | 0 | 0.00 | 1% | 15% | 7.5 | 0.64 | 14.5 | 1.27 |
| 2% | 15% | 13% | 6.5 | 0.55 | 0 | 0.00 | 1% | 14% | 7.0 | 0.56 | 13.5 | 1.11 |
| 2% | 14% | 12% | 6.0 | 0.48 | 0 | 0.00 | 1% | 13% | 6.5 | 0.49 | 12.5 | 0.97 |
| 2% | 13% | 11% | 5.5 | 0.41 | 0 | 0.00 | 1% | 12% | 6.0 | 0.42 | 11.5 | 0.83 |
| 2% | 12% | 10% | 5.0 | 0.35 | 0 | 0.00 | 1% | 11% | 5.5 | 0.36 | 10.5 | 0.71 |
| 2% | 11% | 9% | 4.5 | 0.29 | 0 | 0.00 | 1% | 10% | 5.0 | 0.30 | 9.5 | 0.59 |
| 2% | 10% | 8% | 4.0 | 0.24 | 0 | 0.00 | 1% | 9% | 4.5 | 0.25 | 8.5 | 0.49 |
| 2% | 9% | 7% | 3.5 | 0.19 | 0 | 0.00 | 1% | 8% | 4.0 | 0.20 | 7.5 | 0.39 |
| 2% | 8% | 6% | 3.0 | 0.15 | 0.7 | 0.06 | 1% | 7% | 3.5 | 0.16 | 7.2 | 0.36 |
| 2% | 7.5% | 5.5% | 2.8 | 0.13 | 0 | 0.00 | 1% | 6.5% | 3.3 | 0.14 | 6.0 | 0.27 |
| 2% | 7% | 5% | 2.5 | 0.11 | 1.7 | 0.12 | 1% | 6% | 3.0 | 0.12 | 7.2 | 0.35 |
| 2% | 6% | 4% | 2.0 | 0.08 | 2.7 | 0.16 | 1% | 5% | 2.5 | 0.09 | 7.2 | 0.33 |
| 2% | 5% | 3% | 1.5 | 0.05 | 3.7 | 0.19 | 1% | 4% | 2.0 | 0.06 | 7.2 | 0.30 |
| 2% | 4% | 2% | 1.0 | 0.03 | 4.7 | 0.19 | 1% | 3% | 1.5 | 0.04 | 7.2 | 0.26 |
| 2% | 3% | 1% | 0.5 | 0.01 | 5.7 | 0.17 | 1% | 2% | 1.0 | 0.02 | 7.2 | 0.20 |
| 2% | -3% | -5% | 2.5 | -0.01 | 2.7 | -0.08 | 1% | -4% | 2.0 | -0.02 | 7.2 | -0.11 |
| 2% | -4% | -6% | 3.0 | -0.03 | 1.7 | -0.07 | 1% | -5% | 2.5 | -0.04 | 7.2 | -0.14 |
| 2% | -5% | -7% | 3.5 | -0.05 | 0.7 | -0.04 | 1% | -6% | 3.0 | -0.06 | 7.2 | -0.15 |
| 2% | -6% | -8% | 4.0 | -0.08 | 0 | 0.00 | 1% | -7% | 3.5 | -0.09 | 7.5 | -0.17 |
| 2% | -7% | -9% | 4.5 | -0.11 | 0 | 0.00 | 1% | -8% | 4.0 | -0.12 | 8.5 | -0.23 |
| 2% | -8% | -10% | 5.0 | -0.15 | 0 | 0.00 | 1% | -9% | 4.5 | -0.16 | 9.5 | -0.31 |
| 2% | -9% | -11% | 5.5 | -0.19 | 0 | 0.00 | 1% | -10% | 5.0 | -0.20 | 10.5 | -0.39 |
| 2% | -10% | -12% | 6.0 | -0.24 | 0 | 0.00 | 1% | -11% | 5.5 | -0.25 | 11.5 | -0.49 |
| 2% | -11% | -13% | 6.5 | -0.29 | 0 | 0.00 | 1% | -12% | 6.0 | -0.30 | 12.5 | -0.59 |
| 2% | -12% | -14% | 7.0 | -0.35 | 0 | 0.00 | 1% | -13% | 6.5 | -0.36 | 13.5 | -0.71 |
| 2% | -13% | -15% | 7.5 | -0.41 | 0 | 0.00 | 1% | -14% | 7.0 | -0.42 | 14.5 | -0.83 |
| 2% | -14% | -16% | 8.0 | -0.48 | 0 | 0.00 | 1% | -15% | 7.5 | -0.49 | 15.5 | -0.97 |
| 2% | -15% | -17% | 8.5 | -0.55 | 0 | 0.00 | 1% | -16% | 8.0 | -0.56 | 16.5 | -1.11 |
| 2% | -16% | -18% | 9.0 | -0.63 | 0 | 0.00 | 1% | -17% | 8.5 | -0.64 | 17.5 | -1.27 |
| 2% | -17% | -19% | 9.5 | -0.71 | 0 | 0.00 | 1% | -18% | 9.0 | -0.72 | 18.5 | -1.43 |
| 2% | -18% | -20% | 10.0 | -0.80 | 0 | 0.00 | 1% | -19% | 9.5 | -0.81 | 19.5 | -1.61 |
| 2% | -19% | -21% | 10.5 | -0.89 | 0 | 0.00 | 1% | -20% | 10.0 | -0.90 | 20.5 | -1.79 |
| 2% | -20% | -22% | 11.0 | -0.99 | 0 | 0.00 | 1% | -21% | 10.5 | -1.00 | 21.5 | -1.99 |

All figures are in metres unles shown as a percentage.

# DRIVEWAY ACCESS REQUIREMENTS

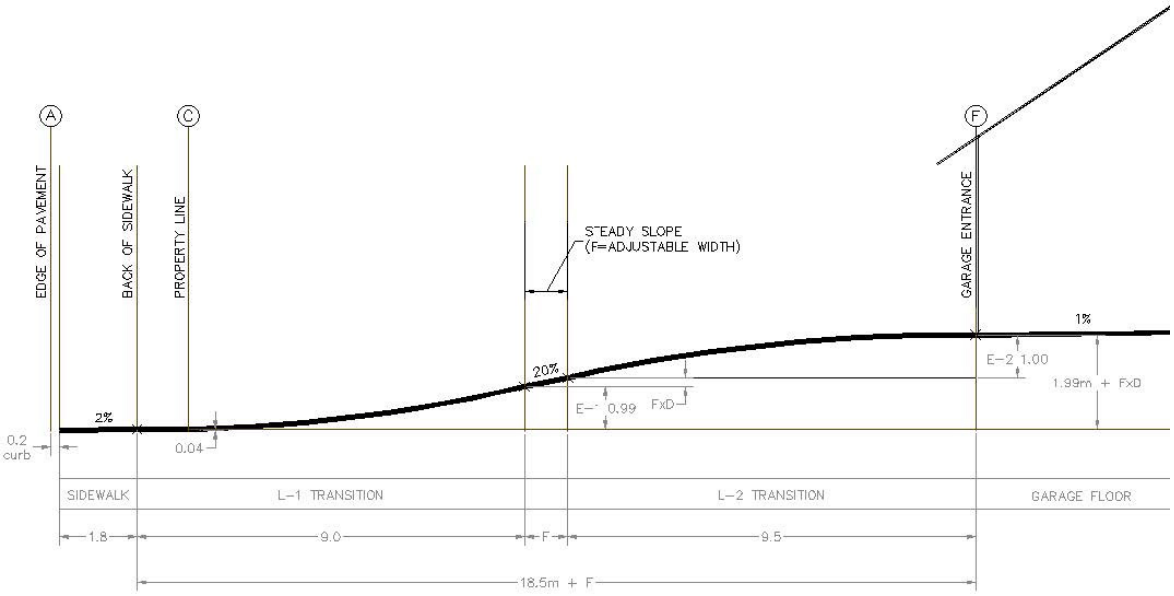
## Example 1

For a driveway grade of 6% and the driveway length to the garage entrance is 7.2 m and the maximum elevation gain is 0.33 m.




## Example 2

For a driveway grade of 20% the minimum driveway length to the garage entrance is 18.5 m and the maximum elevation gain is 1.99 m.



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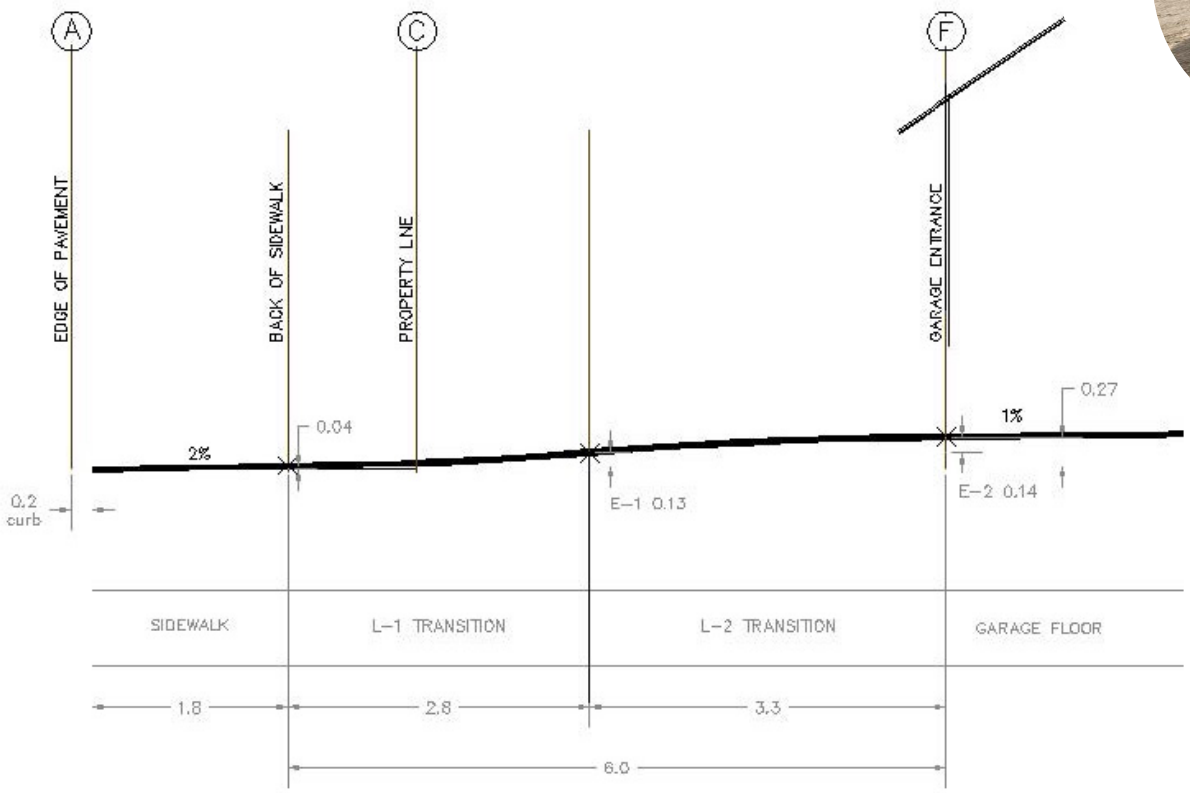
### Example 3

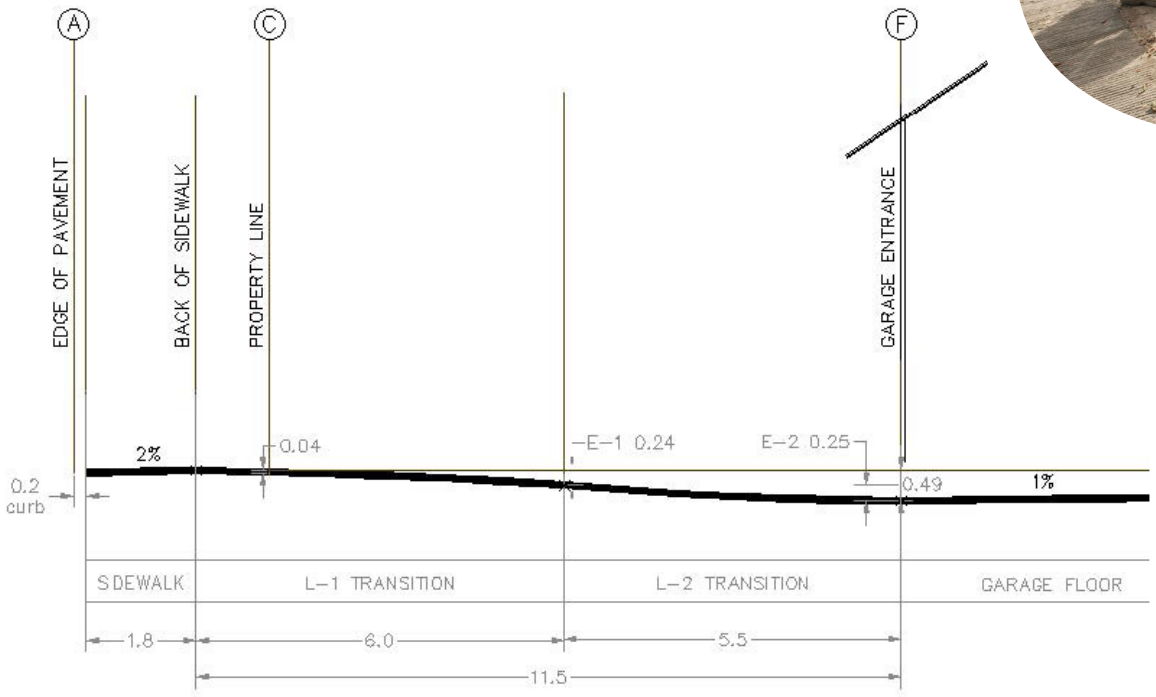
For a 6.0 m minimum driveway length to the garage entrance the maximum elevation gain is 0.27m. For this example the grade used to calculate the transitions is 7.5% and steady slope horizontal distance is 0.0 m.



# DRIVEWAY ACCESS REQUIREMENTS

### Example 4

For a driveway grade of -10% the minimum driveway length to the garage entrance is 11.5 m and the maximum elevation drop is 0.49 m. For this example the steady slope horizontal distance is 0.0 m.




**Have Questions? We're here to help. Please contact the Development Services**
**(250) 490-2501 or development@penticton.ca**
**Located at City Hall on the first floor at 171 Main St, Penticton BC V2A 5A9**