

## DETERMINATION OF GRADE

### PURPOSE

This interpretation provides clarification concerning the requirements for grade to be maintained as it extends away from the exterior wall.

### DISCUSSION

The rules provided by the Alberta Building Code 2014 (ABC 2014) for the determination of grade along the plane of the building face are very prescriptive. This is necessary since the establishment of grade allows for the determination of building height. Building height is the determinant for the application of many other requirements in the ABC 2104 including:

- a) the classification of the building into Part 9, Part 3 or as a high building;
- b) the type of construction required and the rating of fire separations between storeys; and,
- c) the necessity for fire detection systems, fire suppression systems, etc.

Although the rules for determining grade along the face of the building are comprehensive, the ABC 2014 is less clear concerning the requirements for grade to be maintained as it extends away from the exterior wall.

As the criterion used to establish building height, grade also plays a major role in providing access for fire fighters to a building. Grade around a building which is excessively sloped may produce an exposing building face that impedes fire fighter access to a building in an emergency.

Where a building is required to face a street, excessive slope may hinder or prevent the setting up of firefighting equipment. Article 3.2.5.5. requires access routes to be designed so that they are no closer than 3 m from the building face and Article 3.2.5.6. requires that access routes are to be at least 6 m wide. It is expected the access route would be at or near grade.

Finished ground level that is flat or has minimal slope may not provide effective surface drainage thus creating structural or water penetration problems for the building.

### CODE REFERENCES

1. Sentence 1.4.1.2.(1) of Division A states:

**Grade** means the lowest of the average levels of finished ground adjoining each exterior wall of a *building*, except that localized depressions need not be considered in the determination of average levels of finished ground. (See *First storey* and Appendix A.)

**Street** means any highway, road, boulevard, square or other improved thoroughfare 9 m or more in width, that has been dedicated or deeded for public use and is accessible to fire department vehicles and equipment.

Unless stated otherwise, all Code references in this STANDATA are to Division B of the Alberta Building Code 2014.

Issue of this STANDATA is authorized by  
the Provincial Building Administrator

[Original Signed]  
Paul Chang



**INTERPRETATION**

1. Where a building is required to face a street and the exposing building face has a limiting distance greater than 0.6 m, grade is to extend
  - a. not less than 9 m from the exterior face of the wall, or
  - b. to a public thoroughfare, access route or property line, whichever distance is less.

To allow for effective surface drainage, the finished ground level may slope a maximum of

- a. 1 in 8 over the first 2 m, and
  - b. 1 in 10 over the remaining 7 m.
2. Where a building is not required to face a street and the exposing building face has a limiting distance greater than 0.6 m, grade is to extend
    - a. not less than 1.2 m from the exterior face of the wall, or
    - b. to a public thoroughfare, access route, property line or adjacent building, whichever distance is less.

**This INTERPRETATION is applicable throughout the province of Alberta.**