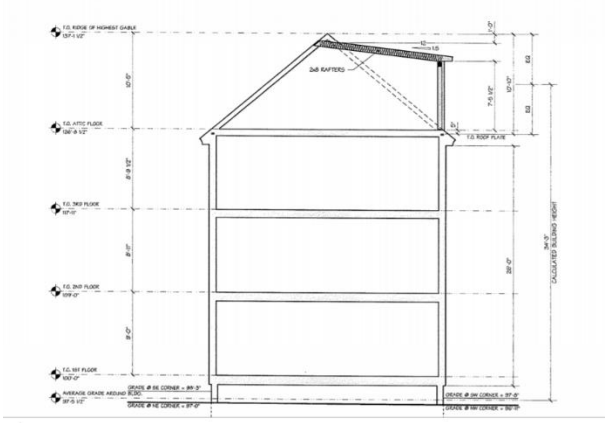
Department of Permitting and Inspections
Zoning Division
149 Church Street
Burlington, VT 05401
http://www.burlingtonvt.gov/PZ/
Telephone: (802) 865-7188
(802) 865-7195 (FAX)

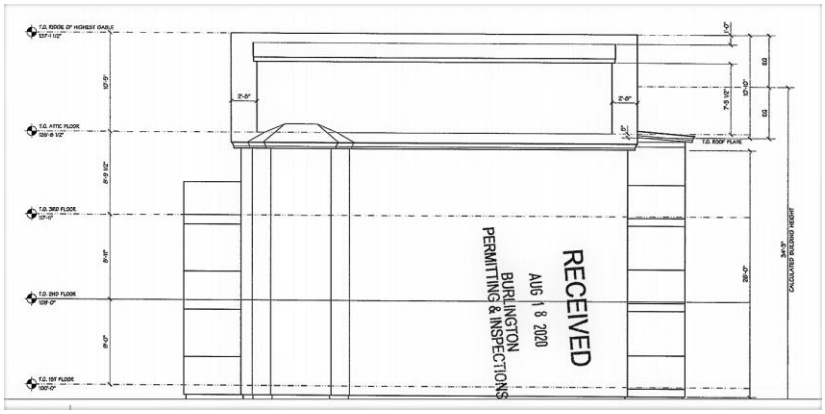
William Ward, Director
Charlene Orton, Code Compliance Officer
Theodore Miles, Interim Code Compliance Officer
Scott Gustin, AICP, CFM, Principal Planner
Mary O'Neil, AICP, Principal Planner
Ryan Morrison, Associate Planner
Layne Darfler, Planning Technician
Alison Davis, Zoning Clerk

MEMORANDUM

To: Planning Commission Ordinance Committee
From: Mary O'Neil, AICP, Principal Planner
Date: December 3, 2020
RE: Calculating building height with dormers

A recent decision by the Development Review Board considered the proposed increase in living space with the addition of a full shed dormer on an existing 3 ½ story residential building. Although the measurement to the mid-line of the rise of the gable roof met the 35' limitation, the Board identified an increase in perceivable building mass and actual height of the proposed dormer and determined that the addition of a full shed dormer **increased building height beyond allowable limits** for the zoning district. The zoning permit application had been administratively denied; the decision upheld on subsequent appeal to the DRB.

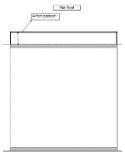




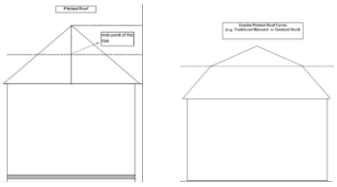
The Comprehensive Development Ordinance offers no guidance on measurement of building height when dormers are proposed.

Section 5.2.6, Article 5 directs building height calculation based on four scenarios:

A. **Flat roof**; (*the highest point of the decking of a flat or flat-topped mansard roof. A parapet no taller than four (4) feet shall not be considered part of a flat roof for the purposes of measuring building height*)



B. **Pitched or double pitched roof** *(gable, shed, Gambrel, traditional Mansard) (the midpoint of the rise between the roofplate and the ridge of the highest gable of a pitched or hipped roof. A double-pitched roof (e.g. gambrel or double-pitched mansard) shall be measured to the roofplate of the highest pitch)*



C. **Curved roof** *(a point two thirds (2/3) the vertical distance from the point at which an exterior wall varies from a 100% slope and to highest point of the roof)*

and

D. **Other roof forms**. (*Building height shall be measured as determined by the administrative officer in a manner that most closely reflects the intent of subsections (a) through (c).)*

Not previously considered is the addition of roof dormers, and how they may influence the real or perceived height of a structure. In the subject example, the zoning administrative officer determined that measuring to the mid-rise of the gable on the host roof was inappropriate as it did not reflect the increased building mass (and height) of the additional story created by the full shed dormer. The permit was therefore denied.

It may be helpful to first understand the different types of dormers.

A dormer, by definition is a roofed structure, often containing a window that projects vertically beyond the plane of a pitched roof. Dormers are commonly used to increase the usable space in a half story and to create window openings in a roof plane. Some common examples of dormers include:

A dog-house dormer;

A shed dormer (partial, half, full);

and

A Nantucket dormer (think two dog-house dormers connected by a shed)

Recognizing that the addition of a dormer will increase living area (sometimes to the point of establishing an entire new level of habitable space), combined with the potential and perceivable increase in building mass, some communities regulate building height by defined regulations around the size of dormers. Ordinances include prescriptive standards for dormer size and placement to limit building mass and height; others utilize roof pitch and percentage of new massing across the roof plane. Other communities simply measure roof height based on the mid-point of the rise of the dormer roof.

The **City of South Burlington** includes language that limits the size and number of roof dormers; linking them to roof height:

3.07 Height of Structures

A. General Provisions. Structures in all districts shall comply with the height standards presented below in this section. Maximum allowable building heights are illustrated in Figure 3-1, Height of Structures.

B. Stories. The requirements of Table C-2, Dimensional Standards, shall apply.

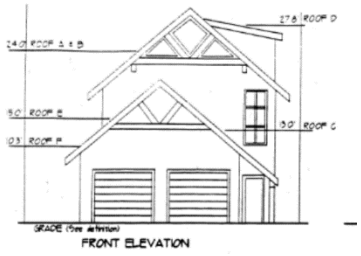
(1) Where a roofline story is placed on a building that contains or is planned to contain the maximum permitted number of stories below the roofline, the following conditions shall apply:

(a) dormers on such story shall not exceed the height of the roof peak, and

(b) the total width of the dormers on any single side does not exceed thirty-three percent (33%) of the horizontal distance of the roof line along that side. Vertical extensions that exceed thirty-three percent (33%) of the horizontal width (i.e., step dormers) are permitted, but are limited to a maximum height of five (5) feet above the average height of the principal roof structure and shall not exceed fifty percent (50%) of the horizontal width of any side.

Sommerville, Massachusetts tightly regulates dormer size, and limits them to no more than 50% of the horizontal eave length of the roof.
(see attachment.)

Whisler, California illustrates that the addition of a shed dormer with a low slope will spur a different calculation of overall roof height reflecting a higher roof.



Given the recent decision of the DRB, Burlington's ordinance must consider the visible impact of building dormers as they relate to building height.

Recommendation: Limiting dormers across a percentage of eave length (50% is a popular tipping point) before recalculating building height to the mid-point of the rise of the shed roof* when it occupies more than 50% of the eave length is a reasonable path. This would reflect the decision by the DRB that acknowledges roof dormers, by degree, increase visible and functional building height.

- Or intersection of a shed dormer with the host roof