



CODE APPLICATIONS AND INTERPRETATIONS:

DATE: July 20, 2017

SUBJECT: Design requirements for roof projections

CODE CYCLE: 2016 California Building Code

CODE AND SECTIONS: Town of Mammoth Lakes M. C. 15.24.040[H], [I]

TOML MC Section 15.24.040 [H] states:

“A roof projection such as a fireplace chase, parapet or similar structure, which could be subjected to sliding snow or ice, shall be designed for these horizontal forces (F_s). The resultant moment produced from F_s shall be applied to the mid-height of the projection.” An equation has been provided to determine F_s :

$$F_s = \frac{F_{v(x)}}{\sqrt{X^2 + Y^3}}$$

TOML MC Section 15.24.040 [I] states:

“Projections shall be protected with an ice splitter or cricket. All ice splitters shall be constructed the full width of the projection base and shall terminate not lower than the midpoint height of the projection.”

The intent of the above code sections is to establish criteria for the structural design of roof projections. In general, this criteria has been applied mostly in new construction, but also serves as criteria for additions, alterations, and repairs. With the recent heavy snow loads that the Town has experienced, there have been several existing roof fireplace chases that experienced significant structural damage. In most cases of failed roof fireplace chases, the entire chase structure became detached from the main roof structure.

It has come to the Town’s attention that applying the above equation in a repair scenario to an existing structure’s failed roof fireplace chase may be problematic. In some cases, the work required to achieve compliance with the above code sections may result in what could be considered burdensome additional work with regard to the chase’s connection to the existing structure.

POLICY AND PROCEDURE FOR PLAN REVIEW FOR ROOF PROJECTION REPAIR PERMIT APPLICATIONS:

For all building permit applications that involve the repair and reconstruction of damaged roof top chases and projections, the criteria as currently set forth in sections 15.24.040[H] and [I] in the Town of Mammoth Lakes Municipal Code shall apply. However, should the application of this code section in the professional judgement of the registered design professional in responsible charge be found to be technically infeasible, an alternative design can be considered on a case-by-case basis.

In such instances, if technical infeasibility can be demonstrated and the alternative design can demonstrate that the proposed assembly can withstand the expected loads to the satisfaction of the Building Official, the alternative design will be considered acceptable.

Building Division staff may be contacted at the contact information provided at the top of this document or at: (760) 965-3635, or tperry@townofmammothlakes.ca.gov.