

CITY OF SANTA PAULA
BUILDING AND SAFETY DEPARTMENT

April 20, 1998

Reroofing loads & structural requirements. (Revised 8/5/98)

Roofing requirements in the California Building Code are found in Chapter 15. This chapter deals with the application of new roofs and new roofing materials. Reroofing is addressed in the same code in Appendix Chapter 15. This chapter deals with the installation of new roofs over existing roof coverings. Both of these chapters are adopted into the Santa Paula Building Codes and are to be followed for the issuance of permits and the establishment of standards for application and inspection.

Beyond the specific requirements of the above noted code sections, questions have arisen regarding when a structural analysis is needed for reroofing applications or replacement roofing with heavier roofing materials (most commonly roof tile). This policy is intended to clarify the position of the Building and Safety Department in regard to structural requirements for these situations.

1. Code complying roofing or reroofing materials may be installed on any structure without requiring a structural analysis when the total combined load of the roofing materials above the structural sheathing and underlayment does not exceed six (6) pounds per square foot (psf).

Exception:

Per Appendix Chapter 15, Section 1517.2, two overlays of asphalt shingles may be applied over an existing asphalt shingle roof or existing wood shingle roof without requiring a structural review.

2. Structural calculations for vertical and lateral forces by a California licensed Civil Engineer or Architect will be required for all occupancies except as described below, when the total combined installed weight of the finished roofing materials above the structural sheathing and underlayment is more than six (6) pounds per square foot (psf). Structural calculations for vertical loads shall include all roof framing members and supporting beams and headers.

Exception 1:

Like kind replacement of existing roofing materials where no additional loads are being applied to the roof structure.

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Exception 2:

Structural calculations for lateral forces for “R-3” and “U” occupancies may not be required when the total combined installed weight of the finished roofing materials above the structural sheathing and underlayment is more than six (6) pounds per square foot (psf) and where the Architect or Engineer of Record certifies that the existing lateral force resisting elements in the structure are adequate to resist the lateral forces based on his or her visual field inspection and professional review. A structural report by the Architect or Engineer of Record must be submitted addressing the lateral force resisting system and its adequacy for the proposed roof loads. Structural calculations for the vertical loads will, however, be required regardless.

3. Where existing roofs were designed before 1970 and are sheathed with spaced sheathing, the roof system shall be inspected for proper construction requirements. The result of the inspection may require the spaced sheathing to be entirely removed and solid sheathing shall be installed in its place in a code complying manner.

New plywood or structural panels, a minimum of 15/32 inch thickness, shall be applied and laid perpendicularly to the rafters in a staggered pattern with all the panel joints occurring over continuous wood members of the rafters below. The plywood or structural panels shall be nailed with 8d nails spaced 6 inches on center at the panel edges and 12 inches on center at the intermediate supporting rafters, or as otherwise required by design calculations.

Note!

If the existing roof system has space sheathing attached to 2”x 4” rafters without a ridge board, and the rafters are spaced more than 16” on center, will require a roof design be submitted for approval before new roof materials can be attached and roof completed.

If a 2”x 4” roof system is sheathed with roof boards (1”x 6”) and an inspection is being conducted to confirm condition of sheathing, an additional inspection will be conducted for ridge and wall top plate blocking. Rafter ties and purlins will also be inspected and may be required to be installed to stabilize the roof system.

Pre-roofing inspections on refoofs are to be conducted for all buildings built before 1970 of which a permit is pulled. This will be done on all roofs whether the existing roof is removed or if another layer is added to the existing roof. These inspections will be conducted before any work is done, with exception of roof removal.