



## Residential Re-Roof

Re-roofs shall comply with chapter 15 of the California Building Code (CBC), or chapter 9 of the California Residential Code (CRC), the California Energy Code with provisions from the Building Energy Efficiency Standards, City of Downey ordinances, and the manufacturer's installation standards and instructions.



- Roof repairs of less than 10 percent of the roof area or 100 square feet (whichever is less) may be done without a permit.
- If the work is more than 10 percent but less than 50 percent of the roof, a permit is required and the roof recovery or replacement work portion shall meet current code while the remaining roof may stay in its current condition.
- If the work is over 50 percent of the roof, a permit is required and the entire roof must meet current code requirements.

### Permit Issuance

No roof recovering or replacement work shall start without first obtaining a building permit.

- The permit application must contain the following information and description of the work:
  - Specify type of materials to be removed.
  - Specify the type of existing sheathing (i.e. spaced or solid sheathing)
    - Please note, spaced sheathing is not approved for most roofing materials. New sheathing shall be installed over the existing spaced sheathing. When new sheathing is added over the existing space sheathing, it shall be included in the total weight of the roof.
  - Specify new sheathing or overlay.
  - New roof coverings can only be applied over a single layer of existing roofing. If a roof already has two layers of roofing, both existing layers must be removed before the new roof can be installed.
  - If overlaying, provide the number of existing layers, type of material and weight.
  - Specify the type, weight, and number of layers of the underlayment.
  - Specify the number of squares (roof square footage).
  - Specify the weight of tile or roofing material (psf).
  - If applicable, 2 copies of the structural calculations (stamped and signed by Engineer).
  - Provide a copy of the test report such as International Code Council Evaluation Service Report (ICC-ESR).
- The permit may be pulled by:
  - A licensed and insured C-39 contractor;
  - The property owner (Owner/Builder) with the proper verification.
- A "B" General contractor may not pull a permit only for roofing, unless the contractor also holds a specialty C-39 license.
  - A "B" General contractor may contract for projects that include roofing. However, they must subcontract to a C-39 roofing contractor if the roofing is a standalone contract, not included in a larger project that includes two unrelated trades such as re-pipe/re-wire, room addition, or remodeling.
  - Conversely, a 'B' General contractor cannot obtain a re-roof permit by also pulling permits for small incidental work such as a new electrical outlet and hose bib as a "second unrelated trade". This is been clarified by the Contractors State License Board as an attempt to evade licensing requirements.

### Future Unlimited



- The City of Downey will require the following for all re-roofing permits that are applied for by a 'B' General Contractor:
  - Completed application with 'B' General Contractor's license number, expiration date, and Worker's Compensation Insurance policy number.
  - A copy of the signed project contract with the customer.
  - If sub-contracting the work described on the permit, the name, license number, expiration date, and Worker's Compensation Insurance policy number for each sub-contractor.
  - If performing the work themselves, the permit description will include the re-roofing project description, along with the description, in detail, of the two unrelated trades also being performed.
  - A Permit Valuation of all work involved.

## General

- Roof coverings shall be installed per approved manufacturer's installation instructions and applicable provisions. (CBC 1506.1).
- Roof-covering material packages shall bear manufacture's identification marks and approved testing agency labels. (CBC 1506.3).
- Roof re-cover shall not be permitted where any of the following conditions occur: (CRC 908.3.1.1).
  - Where the existing roof covering or roof deck is water soaked or has deteriorated to a point that the existing roof or roof covering is not adequate as a base for additional roofing.
  - Where the existing roof covering is slate, clay, cement, or an asbestos-cement tile.
  - Where the existing roof has two or more applications of any roof covering.
- Underlayment shall be installed in accordance with Table 1507.1.1 (2).
- The downhill side of a roof jack cannot be covered by the shingles.
- A roof cricket or saddle must be installed on the high side of any chimney or penetration such as a skylight that is more than 30" in width. Pre-existing skylights that are flashed in accordance with the manufacturer's design do not require a cricket or saddle added.
- Structural calculations provided by a licensed engineer or architect are required for roof materials weighing over six pounds per square foot (psf) or when new roofing is installed over existing roof covering. Submit these calculations and a dimensioned framing plan for review and approval to the Building Division. A current ICC-ES report or equivalent is required for approval.
  - Please submit the following information:
    - Two sets of stamped and signed engineered calculations to justify the structure will sufficiently carry the new load.
    - If additional framing is required, the details must be included.
- Please note: spaced sheathing is not approved for most roofing materials. New sheathing shall be installed over the existing spaced sheathing. When new sheathing is added over the existing space sheathing, it shall be included in the total weight of the roof.
- Asphalt shingles:** Not more than one overlay of asphalt shingles shall be applied over an existing asphalt roof.
- Built-up roofing:** Roofing shall be completely removed prior to applying the new roof covering, unless the product is specifically approved for this type of application and approved by the Building Official.
- Gravel/Rock Roofing:** Roofing shall be completely removed prior to applying new roof covering. Roofing aggregates shall comply with CBC Standard 1507.10.2 and cementing adhesives with CBC Table 1507.10.2.
- Wood Shake:** (min. Class B): Not more than one overlay of wood shakes shall be applied over an existing asphalt shingle or wood shingle roof (with one layer of 18-inch, Type 30 nonperforated felt interlaced between each layer of shake).

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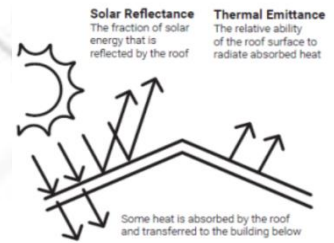
- Wood Shingle:** Not more than one overlay of wood shingles shall be applied over existing wood shingles. Application Over Shakes: New roof covering shall not be applied over an existing wood shake roof.
- Clay or Concrete tile:** Tile installations are allowed only on roofs with a pitch of 3:12 or greater. Tile roofs weighing six psf or more require structural calculations by a licensed engineer or architect.
  - The engineer/architect shall also note that “the entire structure is adequate to sustain the additional loads placed upon it”. Please provide the product specification sheet for verification of the weight and a current ICC-ESR # or equivalent for this product is required for approval.

## Cool Roofs

California’s 2022 California Energy Code requires Cool Roofs to be installed on all existing Non-Residential buildings undergoing roof replacement, recovering, or recoating when any of the following conditions:

- Where more than 50% of the roof is re-roofed, or
- The roof area is more than 2,000 Ft<sup>2</sup>

How a roof reacts to heat from the sun



Adapted from the Cool Roof Rating Council (coolroofs.org)

**What is a Cool Roof?** A cool roof is one that strongly reflects sunlight (solar energy) and also cools itself by efficiently emitting any heat that was absorbed. The roof literally stays cooler and reduces the amount of heat conducted into the building below. Although often light in color, cool roofs come in a wide variety of colors ranging from white to black and including blues, grays, greens, oranges, browns, and tans.

Cool Roof product information is available at this link: [Cool Roof Rated Products](#).

Note: The City of Downey is in climate zone 8 and zone 9 anything North of Vista Del Rio per the California Energy Commission.

This label is required for all Cool Roof roofing products:

	<b>Solar Reflectance</b>	<b>Initial</b> 0.00	<b>Weathered</b> Pending
	<b>Thermal Emittance</b>	0.00	Pending
	Rated Product ID Number	----	
	Licensed Seller ID Number	----	
	Classification	Production Line	
<small>Cool Roof Rating Council ratings are determined for a fixed set of conditions, and may not be appropriate for determining seasonal energy performance. The actual effect of solar reflectance and thermal emittance on building performance may vary.</small>			
<small>Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.</small>			

- For Steep-Sloped Roofs (2:12 slope or greater) [Section §150.2(b)1ii]:** Cool Roof roofing product shall have a minimum aged solar reflectance of 0.20 and a minimum thermal emittance of 0.75, or a minimum SRI of 16. (The lower the SRI value, the hotter the material is likely to become in sunlight. Material with a higher SRI value will stay cooler in sunlight).
  - Exception: Roof area covered by building integrated photovoltaic panels or building integrated solar thermal panels is not required to meet minimum requirements for aged solar reflectance, thermal emittance, or SRI.
- For Low-Sloped Roofs (less than 2:12 slope) [Section §150.2(b)1iii]:** Low-sloped roofs shall be insulated with continuous insulation of R14 or greater, and a cool rated roof product with a minimum aged solar reflectance of 0.63 and minimum thermal emittance of 0.75, or a minimum SRI of 75.
  - For other exceptions see California Energy Code Section §150.2(b)1iii.

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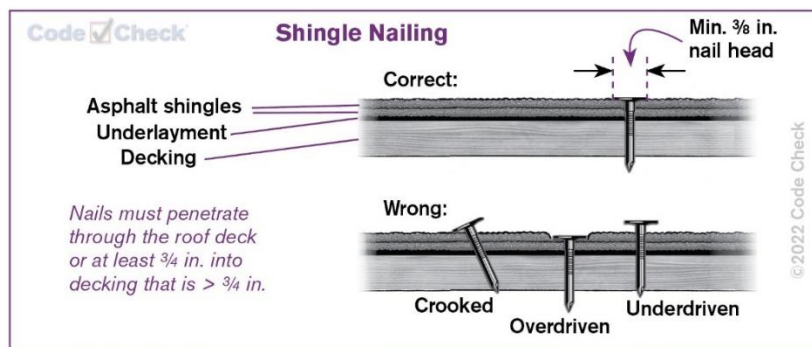




- ❑ Options for other than a “Cool-Roof”: If a cool rated roof assembly is not being used, then a sufficient means of insulation shall be installed to meet the requirements of the California Energy Code Section §150.2(b)1i, see below:
  1. Minimum R-38 ceiling insulation; or
  2. R-2.0, or greater continuous insulation above or below the roof deck; or
  3. Buildings that have no ducts in the attic;
  4. Radiant barrier installed in the attic and not directly above spaced sheathing.
    - Radiant barrier must be installed in compliance with the manufacturer’s installation instructions. When installed as roof sheathing it is not allowable to install radiant barrier directly over spaced sheathing. The spaced sheathing must be removed or a 1x4 shall be installed over each truss/rafter to provide a ¾” air space between the radiant barrier and the skipped sheathing.
    - Radiant barrier shall also be installed at all gable end walls and other vertical surfaces in the attic.

## Inspections

- ❑ **Overlays: installing new roof over existing roof covering**
  - Prior to covering existing roof.
  - After installing batten and insulation system (if applicable).
  - After new roof covering is installed.
- ❑ **Sheathing inspection: To be performed after new sheathing is installed but before it is covered up by roofing material. Or before existing sheathing is covered.**
  - All roof sheathing shall remain exposed for inspection.
    - Roofing materials to be loaded on the roof at the time of roof sheathing inspection.
    - Roof tiles shall be on site at time of roof sheathing inspection.
  - Solid sheathing is required for all roof covering materials except for wood shingle and shake.
  - The heads of fastener’s shall not penetrate the outer layer of sheathing.
  - Sheathing shall be properly gapped 1/8” at edges.
  - All vents for gas fired appliances shall be secured in place to maintain proper clearance to combustibles.
- ❑ **Final roofing inspection: The inspector shall verify that the material is installed in accordance with the applicable code provisions and the terms of the listing. The inspector will verify that the roof covering is a minimum Class B material. Other items checked at this time shall include:**
  - [Smoke detector and carbon monoxide self-certification form](#)
  - Attic ventilation min 1:150 ratio.
  - Cool roofing rating verification, when applicable.
  - Proper installation of flashings and counter flashings at chimneys, skylights, roof-to-wall transitions, “crickets” behind chimneys and as required, as required per manufacturer’s instructions.
  - All vent caps and spark arrester’s re-installed.
  - All new material and exposed wood shall be primed/painted.



### Future Unlimited



## Common re-roof questions

- My roof has a few leaks and I want to patch them. Is a permit required to patch leaks?  
**A: permit is required only if the repair area exceeds 10% of the total roof area.**
- Do I need a permit to re-roof my home?  
**A: Yes**
- May I obtain or "pull" the Building Permit myself?  
**A: State Law allows either the legal property owner or a State of California licensed contractor to pull the permit.**
- I have asphalt shingles on my home. May I re-roof over the existing roofing material?  
**A: Yes, up to a maximum of two layers of asphalt shingles.**
- I have asphalt composition on my home now. I would like to install tile. Is this allowed?  
**A: Yes, provided your roof structure can support the heavier weight of tile. Additional information may be required.**
- I have wood shingles or shakes on my roof now. May I install a different type of material?  
**A: Wood shingles or shakes may be replaced with asphalt composition, tile, or lightweight tile-like material provided your roof structure can support a heavier weight material if required. Additional information such as structural engineering, manufacturers installation instructions, and International Code Council Evaluation Service Report (ICC-ESR), may be required.**
- Do I need to use special nails or fasteners and how should they be spaced?  
**A: Roof sheathing shall be secured to the roof structure using 8d common or 6d deformed shank or common nails. These fasteners shall be spaced at 6-inches on center at all panel edges and at 12- inches on center throughout the remainder of the panel.**

