

JOB ADDRESS:	SUBDIV #	LOT #
PROJECT DESCRIPTION		
PROJECT VALUATION: \$	SEPTIC SYSTEM: YES <input type="checkbox"/> NO <input type="checkbox"/>	
PERMIT TYPE: BUILDING <input type="checkbox"/> MECHANICAL <input type="checkbox"/> ELECTRICAL <input type="checkbox"/> PLUMBING <input type="checkbox"/> SIGN <input type="checkbox"/> SOLAR <input type="checkbox"/> PANEL UPGRADE Y/N DEMO <input type="checkbox"/> REROOF <input type="checkbox"/> POOL/SPA <input type="checkbox"/> -- Re-locate A/C Y/N		
PATIO COVER:		
LIVING AREA SQ FT:	DECK/PORCHES SQ FT:	GARAGE SQ FT:
PROPERTY OWNER:		
ADDRESS:		
CITY, STATE, ZIP:		PHONE #:
EMAIL:		
CONTRACTOR:		STATE LIC #:
ADDRESS:		
CITY, STATE, ZIP:		PHONE #:
EMAIL:		
ARCH/ENGR:	LIC #	PHONE #
ADDRESS:		
CITY, STATE, ZIP:		
PROJECT MANAGER:		PHONE #:

Permitted work hours:

Operate or perform construction or repair (which creates noise) within or adjacent to a residential land use district except during the following hours:

1. Monday through Friday: 7:30 am to 7:00 pm
2. Saturdays, Sundays & holidays: 9:00 am to 7:00 pm

Initial: _____

ALL PERMITS REQUIRE A FINAL INSPECTION

ALL PERMITS HAVE AN EXPIRATION DATE, 365 DAYS FROM LAST VALID INSPECTION

CITY OF OAKLEY BUILDING PERMIT APPLICATION

LICENSED CONTRACTORS DECLARATION

I hereby affirm that I am licensed under the provisions of Chapter 9 (commencing with section 7000) of the Business & Professions Code, & my license is in full force & effective. Initial: _____

WORKMAN'S COMPENSATION

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Worker's Compensation Insurance, or a certified copy thereof (sec. 3800 lab C) Initial: _____

EXEMPTION FROM WORKER'S COMPENSATION INC

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Worker's Comp Laws of California Initial: _____

NOTICE TO THE APPLICANT: If after making this Certificate of Exemption, you should become subject to the Worker's Compensation provisions of the Labor Code, you must forthwith comply with such provisions or this permit shall be deemed revoked.

OWNER-BUILDER DECLARATION

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec7031.5), Business & Professions Code: Any City or County which requires a permit to construct, altar, improve, demolish or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law (Chapter 9(commencing with Section 7000) of Division 3 of the Business & Professions Code) or that he is exempt there from & the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars(\$500).

- I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business & Professions Code: The Contractor's License Law does not apply to an owner of property who builds or improves thereon, &who does such work himself or through his own employees. Provided that such improvements are not intended or offered for sale. If, however, the building improvement is sold within one year of completion, the owner/builder will have the burden of proving that he did not build or improve for the purpose of sale)
- I, as the owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec 7044 Business & Professions Code: The Contractor's License Law does not apply to an owner of property who builds/improves thereon, & who contracts for such project with a contactor(s) licensed pursuant to the Contractor's License Law)
- I am exempt under Sec. _____ Business & Professions Code for this reason.
Applicant:_____

NOTICE TO APPLICANT I certify that I have read this application & state that the information on the permit is correct. I agree to comply with all City and County ordinances and state laws relating to building construction and hereby authorize representatives of this city to enter upon the above mentioned property for inspection purposes.

SECTION 106.4.4 UNIFORM BUILDING CODE

Expiration: Every permit issued by the Building Official under the provisions of this code shall expire by limitation and become null & void, if the building or work authorized by such permit is not commenced with 180 days from the date of such permit, or if the building or work authorized by such permit is suspended or abandoned at any time after the work is commenced for a period of 180 days.

APPLICANT/AGENT _____

DATE: _____



City of Oakley – Simplified **CF1R-ALT-01-E** form for Reroofing

Permit Number _____ Address _____

This form shall be filled out and signed by the installing contractor. Submit this form along with the permit application to obtain a permit. The original copy is retained by the Building Department. Keep the other copy with your permit.

Fill out the requested information in the Roofing Material Section.

Fill out the Declaration Statement section completely including signature and date.

QUESTIONS? REQUEST ASSISTANCE FROM THE PERMIT TECH. Energy Hotline 1-800-772-3300

Alternatives to Cool Roof if you do not have these features fill out the roofing product information below.

<input type="checkbox"/> Roof Pitch is less than 2:12	<input type="checkbox"/> Area to be reroofed is < 50% of total roof area. Area of roof: _____ Reroof area: _____
<input type="checkbox"/> There is an attic radiant barrier.	
<input type="checkbox"/> There are no ducts in the attic.	
<input type="checkbox"/> Ducts in the attic have been HERS – verified to be sealed to ≤ 6% leakage and insulated to ≥ R-6.	
<input type="checkbox"/> There is at least R-38 ceiling insulation. Insulation Certificate required.	
<input type="checkbox"/> There is at least R-4 insulation above the roof deck. Product information must be submitted for permit issuance.	
<input type="checkbox"/> The installed roofing product has a profile ratio of rise to width of 1 to 5 for 50% or greater of the width of the roofing product. (i.e. Tile)	
<input type="checkbox"/> There is at least a 1.0 inch air-space between the top of the roof deck and the bottom of the roofing product.	

Roofing Products

When the area of exterior roof surface to be replaced exceeds 50% of the existing roof area, or 1,000 sq. ft. Whichever is less, the new roofing area must meet the roofing product “Cool Roof” requirements of 110.8, 150.2 (b) 1 H

CRRC Product Number ¹	Roof Slope		Product Weight		Product Type ²	Aged Reflectance ^{3,4}		Thermal Emittance	S.R.I. ⁵
	<2:12	>2:12	<25lb/ft ²	>25lb/ft ²		<input type="checkbox"/> 4	<input type="checkbox"/> 4		
						<input type="checkbox"/> 4			
						<input type="checkbox"/> 4			

- CRRC-1 label information is available on the package of the roofing product being installed and please attach the CRRC label to this form.*
- Indicate the type of product used for the roof. i.e. single ply roof, asphalt roof, metal roof, etc.*
- If the aged reflectance is not available in the Cool Roof Council’s Rated Product Directory then use the INITIAL Reflectance value from the same directory and use the equation $(0.2+0.7(P_{initial}-0.2))$ to obtain a calculated aged value. Where p is the initial solar reflectance.*
- Check box if the aged reflectance is a calculated value using the equation above.*

*To apply **Liquid Field Applied Coatings**, the coating must be applied across the entire roof surface and meet dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in 110.8-B*

<input type="checkbox"/> Aluminum Pigmented Asphalt Roof Coating	<input type="checkbox"/> Cement Based Roof Coating	<input type="checkbox"/> Other
--	--	--------------------------------

Responsible Party Declaration Statement.

- I certify that the energy features and performance specifications for the building design identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations.
- The building design features identified on this Certificate of Compliance are consistent with the information provided to document this building design on the other applicable compliance forms, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit.

Name:	Signature:
Company:	Date:
Address:	License
City/State/Zip:	Phone:

CERTIFICATE OF INSTALLATION		CF2R-ENV-05-E
Roofing and Cool Roofs		(Page 1 of 2)
Project Name:	Enforcement Agency: City of Oakley	Permit Number:
Dwelling Address:	City: Oakley	Zip Code: 94561

If more than one person has responsibility for installation of the items on this certificate, each person shall prepare and sign a certificate applicable to the portion of construction for which they are responsible. Alternatively, the person with chief responsibility for construction shall prepare and sign this certificate for the entire construction. The signer agrees that all applicable Mandatory Measures were met. Temporary labels are not to be removed before verification by the building inspector.

A. COOL ROOF PRODUCT							
1	2	3	4	5	6	7	8
Installed Brand Name	Liquid Coating Type	Required			Installed		
		Aged Solar Reflectance	Thermal Emittance	SRI	Aged Solar Reflectance	Thermal Emittance	SRI

If using a liquid coating, indicate whether the type is: (a) Aluminum-Pigmented Asphalt Roof Coating, (b) Cement-Based Roof Coating, or (c) Other.

B. RADIANT BARRIER	
1	2
Brand Name	Installation Type

NOTE: Radiant barrier must be installed on gable ends and all other vertical surfaces in the attic.

Installation types are: (1) attached to underside of roof deck, (2) attached to bottom of truss/rafters, (3) attached between truss/rafters, or (4) draped over top of truss/rafters

C. MANDATORY REQUIREMENTS	
Roofing Products	1. Certification & Labeling , Sections 10-113; 110.8(i): Products must be listed with the Cool Roof Rating Council (CRRC) to use the emittance, reflectance or SRI numbers.
	2. Defaults for Noncertified Asphalt Shingles , Section 110.8(i)1A: Asphalt Shingles not listed with the CRRC must use default solar reflectance/thermal emittance values of 0.08/0.75.
	3. Defaults for all Other Noncertified Roofing Products , Section 110.8(i)1B: Products not listed with the CRRC must use the default solar reflectance/thermal emittance values of 0.10/0.75.
	4. No CRRC Testing for aged solar reflectance , Section 110.8(i)2: if aged CRRC numbers are not available then calculate aged solar reflectance from formula: <ul style="list-style-type: none"> • $\rho_{aged} = [0.2 + \beta(\rho_{initial} - 0.2)]$, where $\rho_{initial}$ = initial solar reflectance • soiling resistance: $\beta = 0.65$ for Field-Applied Coating; $\beta = 0.70$ all other roofing products
	5. Solar Reflectance Index (SRI) , Section 110.8(i)3: SRI values must be calculated using form CF1R-PRSC-WS-04, Cool Roof and SRI Worksheet
	6. Liquid Applied Coatings , Section 110.8(i)4: Liquid applied coatings must be applied to the dry mill thickness as required by the manufacturer. The material must meet performance requirements of TABLE 110.8-C.
Radiant Barrier	7. Emittance & Certification , Section 110.8(j): Radiant Barrier shall have an emittance of 0.05 or less, be tested with ASTM C1371 or ASTM E408; certified and listed with Department of Consumer Affairs, Standards for Insulating Material.

Attach CRRC label to this form:

CERTIFICATE OF INSTALLATION		CF2R-ENV-05-E
Roofing and Cool Roofs		(Page 2 of 2)
Project Name:	Enforcement Agency: City of Oakley	Permit Number:
Dwelling Address:	City: Oakley	Zip Code: 94561

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Installation documentation is accurate and complete.

Name:	Signature:
Company:	Date:
Address:	CEA or CEPE or HERS Certification # If Applicable:
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).
- I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.
- I reviewed a copy of the Certificate of Compliance (CF1R) approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF1R that apply to the installation have been met.
- I will ensure that a completed, signed copy of this Certificate of Installation shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy.**

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)

Responsible Person's Name:	Responsible Person's Signature:
CSLB License:	Date Signed:
	Position With Company (Title):



City of Oakley
3231 Main Street
Oakley, CA 94561
Ph. 925-625-7000
Fax. 925-679-1707
www.oakleyinfo.com

Oakley C&D Waste Management Plan

Oakley requires at least 65% diversion (Per CalGreen) of the job-site waste materials from the landfill for the following covered projects:

- Any residential or commercial remodeling or building project where total costs are valued at \$30,000 or greater; or
- Any City-owned or City-sponsored project regardless of permit value; or
- Any residential or commercial demolition project regardless of permit value; or
- Any newly constructed residential building three stories or less, and non-residential occupancies. (CalGreen Sections 4.408 and 5.408); or
- Any residential or commercial roofing or re-roofing project regardless of permit value.

1. Identify the Property Owner/Project Manager:

Permit Holder: _____ **Phone:** _____

Email Address: _____

Mailing Address: _____

Permitted Project Address: _____

City Permit #: _____ **Person Submitting Request:** _____

2. Identify the type of materials to be recycled, salvaged, or disposed from the job-site in Section I on the Waste Management Report on the back of this page.
3. Identify how materials will be handled, who will haul, and what facility the materials will be sent in Section I on the Waste Management Report on the back of this page.
4. Identify how the materials will be diverted in Section I on the Waste Management Report on the back of this page.



Mt. Diablo Resource Recovery

Trusted. Proven. Essential.

EXCLUSIVITY ALERT!

Mt. Diablo Resource Recovery is the exclusive debris box provider for the City of Oakley.



Pursuant to Oakley Municipal Code: 4.20

**ORDER TODAY!
(925) 682-9073**

Mt. Diablo Resource Recovery (MDRR) has an exclusive contract to provide debris box service to businesses, residents, and contractors within the city of Oakley.

www.mdr.com/debris-box

5. If Claiming Infeasibility (Project materials are not reusable or recyclable.) please explain

Applicant Acknowledgement

I certify that I am or are using a Contractor acting as a Self Hauler as defined in Oakley Municipal Code Section 4.20.308. I further agree to not hire or sub out a second Contractor to act as a Self Hauler.

Applicants Signature: _____ Date: _____

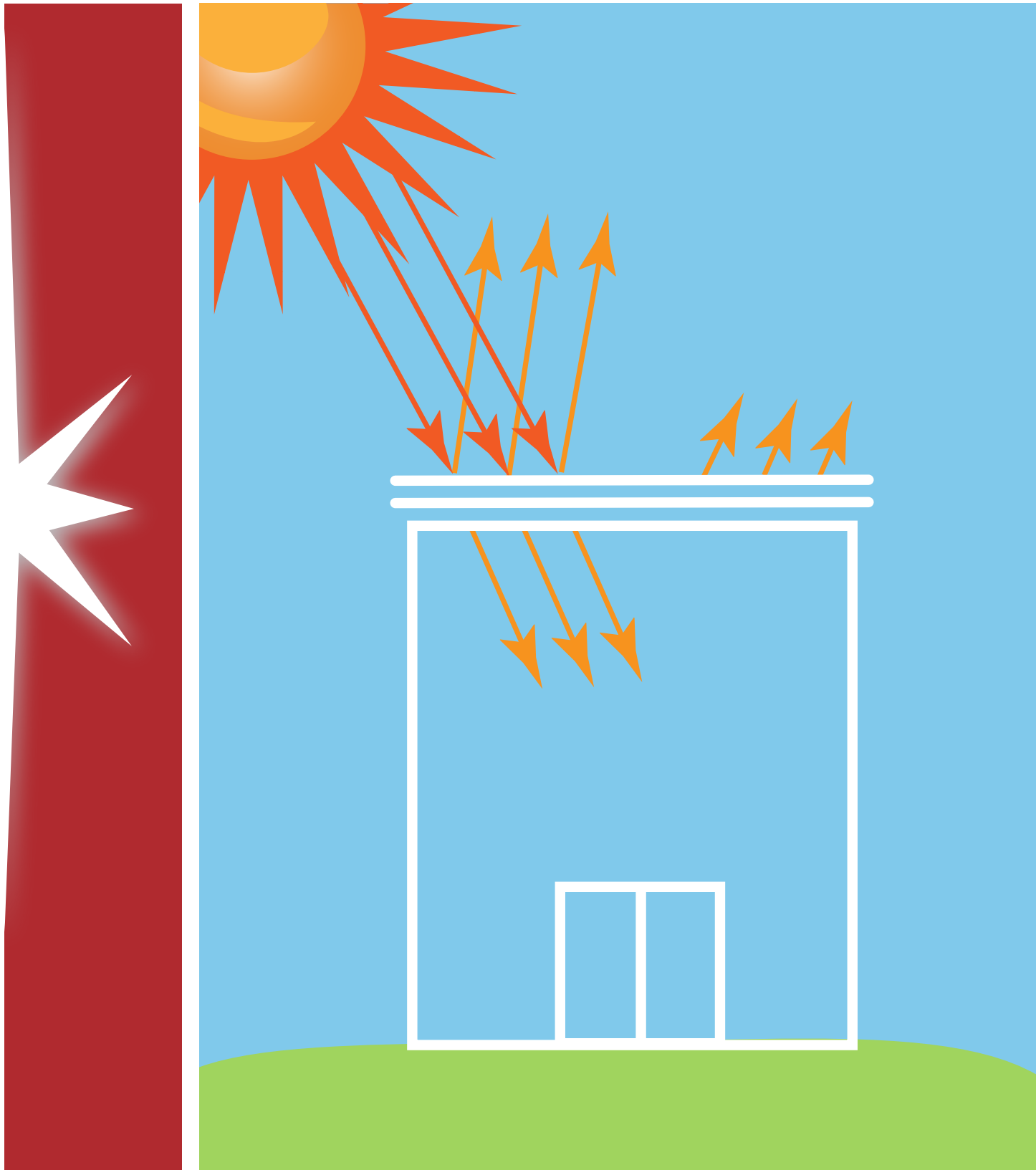
Use of Mount Diablo Resource Recovery Applicant Acknowledgement

I certify that I am using Mount Diablo Resource Recovery as my Construction and Demolition Debris hauler on the above referenced address/addresses.

Applicants Signature: _____ Date: _____

***** Retain all correspondence for submittal with the Final Report. *****

<i>City Use Only</i>	
<input type="checkbox"/>	Approved
<input type="checkbox"/>	Waiver
<input type="checkbox"/>	Not Approved
Reason: _____	
Date: _____ Staff Initials: _____	



What Is a Cool Roof?

A cool roof is a roofing product with high solar reflectance and thermal emittance properties, which help reduce cooling loads by lowering roof temperatures on hot, sunny days. Solar reflectance and thermal emittance are properties of the roofing surface — not of insulation that may be used in conjunction with the roofing material.

Although often light in color, cool roofs come in a wide variety of colors ranging from white to black, including blues, grays, greens, oranges, browns, and tans. Cool roofs also are available in a variety of styles: shingle, shake, tile, membrane, and spray-on liquid coatings.



Relevant Code Sections

California's Title 24, Part 6 Building Energy Efficiency Standards (Energy Code):

- [Section 110.8\(i\)](#) – Mandatory Requirements Roofing Products Solar Reflectance and Thermal Emittance
- [Section 140.1](#) – Performance Approach: Energy Budgets
- [Section 140.2](#) – Prescriptive Compliance Approaches
- [Section 140.3\(a\)1](#) – Prescriptive Requirements for Exterior Roofs and Ceilings
- [Section 141.0\(b\)2B](#) – Alterations to Existing Buildings, Outdoor Lighting, and Internally and Externally Illuminated Signs – Prescriptive Approach
- [Section 141.0\(b\)3](#) – Alterations to Existing Buildings, Outdoor Lighting, and Internally and Externally Illuminated Signs – Performance Approach

Relevant Compliance Forms

[NRCC-ENV-E](#): Envelope Component Approach

[NRCI-ENV-01-E](#): Certificate of Installation for Envelope

Code Triggers

The Energy Code calls for a cool roof when:

- The project is in an affected climate zone. This varies by roof slope. (See Table 1)
- Replacing, recovering or recoating the exterior surface of existing roofs, when altering:
 - 50% of the existing roof surface area OR
 - 2,000 ft² of existing roof surface whichever is less

Aged solar reflectance, thermal emittance and Solar Reflectance Index (SRI) are prescriptive, not mandatory and may be traded off or credit received (depending on climate zone) with the performance approach.

Solar Reflectance Index

The SRI provides an alternative to meeting solar reflectance and thermal emittance Prescriptive requirements for cool roofs. SRI values range from 0 to 100. The higher the SRI, the better the roofing material's ability to reduce heat transfer into the building.

The SRI value is calculated based on:

- The aged solar reflectance and the thermal emittance of the roofing material
- Calculating the SRI value using the NRCC-ENV-E also takes inputs for the roof slope (Note: the roof slope has no effect on the calculation).

The SRI alternative is useful when a particular product exceeds the Energy Code requirement for either the aged solar reflectance or the thermal emittance, but does not meet both requirements. In this case the combination of the aged solar reflectance and the thermal emittance for the product may be sufficient to comply with the SRI requirement.

Qualifying as a Cool Roof

To qualify as a cool roof under the Energy Code, the roofing material must:

- Have a Cool Roof Rating Council (CRRC) rating for reflectance and thermal emittance
- Meet the aged reflectance and thermal emittance – or Solar Reflectance Index (SRI) – values specified in the Energy Code (See Table 1)

Roofing products must be tested and labeled by the CRRC. Being included in the ENERGY STAR® list for cool roofing materials is NOT sufficient to meet the Energy Code.

Aged Solar Reflectance & Thermal Emittance

Specific aged solar reflectance and thermal emittance values must be met or exceeded for some climate zones and roof types (see Table 1). The higher the solar reflectance, the roof surface is able to reduce heat transfer into the building (the more heat is reflected from the roofing material).

Solar reflectance refers to a material’s ability to reflect the sun’s energy back into the atmosphere.

Aged solar reflectance is the solar reflectance of the surface after three years, which typically is lower than the initial reflectance value. If the product is new and the aged solar reflectance value is unavailable, you can calculate the aged value using this formula:

3-year Aged Solar Reflectance = [0.2 + β(ρ_{initial} – 0.2)]	
ρ _{initial}	= Initial Solar Reflectance
β	= Soiling Resistance by product type:
	• Field-Applied Coating β = 0.65
	• Other β = 0.70
Example: If the initial solar reflectance value is 0.8 for a field-applied coating	
3-yr Aged Solar Reflectance	= [0.2 + 0.65 (0.8 – 0.2)]
	= 0.2 + 0.39
	= 0.59



Thermal emittance quantifies how much of the absorbed heat is rejected for a given material. The higher the thermal emittance value, the better the roofing material is at reducing cooling loads.

2019 Nonresidential, High-rise Residential and Hotel/Motel Guest Rooms

The requirements shown in Table 1 apply to buildings demonstrating compliance using the Prescriptive Approach: Energy Code [Section 140.3\(a\)1A](#).

Aged solar reflectance and thermal emittance values noted in Table 1 below must be taken from the CRRC Rated Products Directory.

For guidance regarding Cool Roofs and the Performance approach for alterations, see Energy Code [Section 141.0\(b\)3](#).

Requirements

Roof Style	Climate zone	Either these reflectance and emittance values		Or this SRI value
		Min. 3-yr Aged Solar Reflectance	Min. Thermal Emittance	Min. SRI
Nonresidential				
Low-sloped (Rise-to-run ratio of 2:12 or less; 9.5 degrees or fewer from horizontal)	1 - 16	0.63	0.75	75
Steep-sloped (Rise-to-run ratio greater than 2:12; More than 9.5 degrees from horizontal)	1 - 16	0.20	0.75	16
High-rise Residential, Hotel, Motel				
Low-sloped (Rise-to-run ratio of 2:12 or less; 9.5 degrees or fewer from horizontal)	9 ^A - 11, 13 - 15	0.55	0.75	64
Steep-sloped (Rise-to-run ratio greater than 2:12; More than 9.5 degrees from horizontal)	2 - 15	0.20	0.75	16

A CZ 9 is included for new roofs but excluded for alterations.

Table 1: Nonresidential Cool Roof Requirements per Section 140.3(a)1A

Exceptions for Cool Roof Requirements:

Any roof	The roof area is covered by building-integrated photovoltaic panels or building-integrated solar thermal panels.		
Low-sloped newly constructed and additions; all alterations	Roof constructions with a weight of at least 25 lb/ft ² over the roof membrane. <i>This includes green roofs (roofs that are covered with vegetation) weighing at least 25 lb/ft², though any portion of the roof not covered with vegetation will need to comply with cool roof requirements if not otherwise exempt.</i>		
Low-sloped alterations	Aged solar reflectance <0.63 is allowed provided the maximum roof / ceiling U-factor indicated in Table 141.0-B (below) is not exceeded.		
	Aged Solar Reflectance	U-factor	
		CZ 1, 3-9	CZ 2, 10-16
	0.62 - 0.60	0.075	0.052
	0.59 - 0.55	0.066	0.048
	0.54 - 0.50	0.060	0.044
	0.49 - 0.45	0.055	0.041
	0.44 - 0.40	0.051	0.039
	0.39 - 0.35	0.047	0.037
0.34 - 0.30	0.044	0.035	
0.29 - 0.25	0.042	0.034	
Low-sloped newly constructed and additions. See Table 140.3.	Wood framed roofs in CZ 3 & 5 with a roof assembly U-factor of 0.034 or lower.		

Table 2: Exceptions



Cool roof installation

Insulation Requirements for Roof Alterations (Table 141.0-C)

When roofs are exposed to the roof deck, or to the roof recover boards, the exposed area must be insulated to the values noted in [Table 141.0-C](#) of the Energy Code, as summarized below:



Nonresidential Climate Zones 1, 3–9		Nonres in Climate Zones 2, 10–16; All High-rise Res, Hotel/Motel Buildings	
Continuous Insulation R-value	U-factor	Continuous Insulation R-value	U-factor
R-8	0.082	R-14	0.055

Table 3: Roof Alterations: Insulation Requirements

Exceptions to Roof Insulation Requirements

- If existing roof is insulated with at least R-7 insulation or it has a U-factor less than 0.089, you do not need to increase the insulation.
- If mechanical equipment on the roof will not be lifted as part of the roof replacement, you don't need to add more insulation than the maximum thickness that will allow 8 inches between the roof membrane surface and the top of the base flashing.
- You don't need to add more insulation than the maximum thickness that will allow 8 inches from the roof membrane surface to the top of the base flashing, provided that:
 - The penthouse or parapet walls are finished with an exterior cladding other than the roofing covering membrane material; AND
 - The penthouse or parapet walls have exterior cladding material that must be removed to install the new roof covering membrane to maintain a base flashing height of 8 inches (203 mm); AND
 - The ratio of the replaced roof area to the linear dimension of affected penthouse or parapet walls is:

For nonresidential:

- Climate zones 2, 10 - 16: less than 25 ft² per linear foot
- Climate zones 1, 3 - 9: less than 100 ft² per linear foot

For high-rise residential buildings, hotels or motels:

- All climate zones: less than 25 ft² per linear foot

At drains and other low points, you can use tapered insulation with a thermal resistance (R-Value) less than the value shown in [Table 141.0-C](#) of the Energy Code – if the insulation is increased enough at the high points so the average R-Value is equal to or greater than the value in [Table 141.0-C](#).

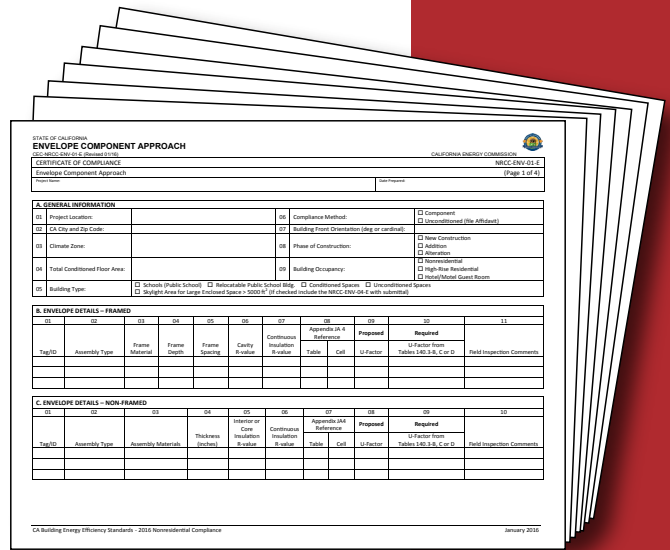


Forms – Which & When

In addition to a Permit, you will need the following.

During Design:

- **NRCC-ENV-E:** Certificate of Compliance for Envelope Component Approach
 - Table F. Roof Assembly Schedule - documentation author lists details of roof reflectance properties and certifies that the roof assembly meets Prescriptive requirements
 - Table G. Rated Roofing Material (Cool Roof) - engineer or contractor lists roof slope and material reflectance, emittance and SRI values to determine roof materials meet Prescriptive requirements
 - Signed by the engineer of record, architect or authority
 - Submitted to the building department by the permit applicant



Why?: To ensure the proposed roofing material meets the Prescriptive requirements, or indicate an exception has been applied.

During Construction:

- **NRCI-ENV-01-E:** Certificate of Installation for Envelope
 - Completed and signed by the installing contractor
 - Made available for final inspection by building department

Why?: To verify the field installation meets or exceeds code.

Product Labeling:

- For all roofs:
 - CRRC label specifying the initial and aged (“weathered”) solar reflectance and thermal emittance
- For liquid-applied roof coatings:
 - CRRC label specifying the initial and aged (“weathered”) solar reflectance and thermal emittance
 - Label stating the product meets the ASTM requirements specified in [Section 110.8\(i\)4](#) of the Energy Code.
- Product labeling must be available for final inspection by building department.
- If roofing products are not certified they shall assume the following default aged solar reflectance/thermal emittance values:

- For asphalt shingles: 0.08/0.75
- For all other roofing products: 0.10/0.75

<p>COOL ROOF RATING COUNCIL ®</p>		Initial	Weathered
	Solar Reflectance	0.00	Pending
	Thermal Emittance	0.00	Pending
	Rated Product ID Number	-----	
Licensed Seller ID Number	-----		
Classification	Production Line		
<p>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.</p> <p>Manufacturer of product stipulates that these ratings were determined in accordance with the applicable Cool Roof Rating Council procedures.</p>			

For More Information

Primary Documents

- Energy Code Section 110.8(i) - Mandatory Requirements - Roofing Products Solar Reflectance and Thermal Emittance: energycodeace.com/site/custom/public/reference-ace-2016/index.html#!Documents/section1108mandatoryrequirementsforinsulationroofingproductsandr.htm#sec110_8_i
- Energy Code Section 140.1 - Performance Approach: Energy Budgets: energycodeace.com/site/custom/public/reference-ace-2016/index.html#!Documents/section1401performanceapproachenergybudgets.htm
- Energy Code Section 140.2 - Prescriptive Compliance Approaches: energycodeace.com/site/custom/public/reference-ace-2016/index.html#!Documents/section1402prescriptiveapproach.htm
- Energy Code Section 140.3(a)1 - Prescriptive Requirements for Exterior Roofs and Ceilings: energycodeace.com/site/custom/public/reference-ace-2016/index.html#!Documents/section1403prescriptiverequirementsforbuildingenvelopes.htm#sec140_3_a1
- Energy Code Section 141.0(b)2B - Alterations to Existing Buildings, Outdoor Lighting, and Internally and Externally Illuminated Signs – Prescriptive Approach energycodeace.com/site/custom/public/reference-ace-2016/index.html#!Documents/sec1410additionsalterationsrepairstoexistingbuildingsthatwillben.htm#sec141_0_b2B
- Energy Code Section 141.0(b)3 - Alterations to Existing Buildings, Outdoor Lighting, and Internally and Externally Illuminated Signs – Performance Approach http://energycodeace.com/site/custom/public/reference-ace-2016/index.html#!Documents/sec1410additionsalterationsrepairstoexistingbuildingsthatwillben.htm#sec141_0_b3B

Compliance Forms

- Nonresidential Compliance Forms energycodeace.com/NonresidentialForms/2019

Cool Roof Products and Specifications

- CRRC Rated Products Directory: coolroofs.org/products/search.php
 - Search for rated roofing products

California Energy Commission Information & Services

- Energy Code Hotline: 1-800-772-3300 (Free) or Title24@energy.ca.gov
- Online Resource Center: energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/online-resource-center
 - The Energy Commission’s main web portal for the Energy Code, including information, documents, and historical information

Additional Resources

- Energy Code Ace: EnergyCodeAce.com

An online “one-stop-shop” providing free resources and training to help appliance and building industry professionals decode and comply with Title 24, Part 6 and Title 20. The site is administered by California’s investor-owned utilities. Please register with the site and select an industry role for your profile in order to receive messages about all our free offerings!



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