

Envelope Component Approach

NRCC-ENV-E (Created 11/19)

Nonresidential forms can be found here: energycodeace.com/nonresidentialforms

Before starting the NRCC-ENV-E on a project, make sure to use a compatible PDF viewer, such as Adobe Acrobat Reader 2017.



CALIFORNIA ENERGY COMMISSION

NRCC-ENV-E

CERTIFICATE OF COMPLIANCE
This document is used to demonstrate compliance with mandatory requirements in §110.8(g) and §120.7(b) for newly constructed buildings, and §141.0(b)1 for alterations, related to roof, wall and floor assemblies. It is also used to demonstrate compliance with prescriptive requirements in §140.3 for newly constructed buildings, and §141.0 for additions and alterations, related to roof, wall, floor, door, fenestration and daylighting requirements.

Project Name: Episode 3 Title: NRCC-ENV-E Commercial Re-roof
 Project Address: 1234 Any Pl
 Report Page: Page 1 of 6
 Date Prepared: 2020-08-21

A. GENERAL INFORMATION

01	Project Location (city)	San Jose	05	# of Stories (Habitable Above Grade)	1
02	Zipcode	95131	06	Total Conditioned Floor Area (ft²)	12,000
03	Climate Zone	4	07	Total Unconditioned Floor Area (ft²)	0
04	Occupancy Types Within Project (select all that apply): If one occupancy constitutes ≥ 80% of the conditioned floor area, the entire building envelope may be designed to comply with the provisions of that occupancy per §100.0(f). All Nonresidential, including Relocatable Public School Building <input checked="" type="checkbox"/> certified for use in one climate zone Occupancy: A / B / E / F / H / M / S / U	Relocatable Public School Building <input type="checkbox"/> use in all climate zones Occupancy: E	08	Project includes unconditioned enclosed space(s) > 5,000ft² under a roof with a ceiling height of at least 15ft. ¹	Hotel/Motel Guest Rooms <input type="checkbox"/> Occupancy: R-1

Requirements in the form won't show up until Climate Zone is chosen, since envelope requirements depend on Climate Zone.

Hover over these ? in the NRCC dynamic form to get helpful tips when filling out the form.

¹FOOTNOTE: Enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft in climate zones 2 through 15 are required to meet the minimum daylighting requirements defined in §140.3(c). Compliance with §140.3(c) is documented in Table L. This is the only prescriptive requirement which applies to unconditioned spaces.

B. PROJECT SCOPE

Selections in table B will trigger other applicable tables throughout this form. It's important to select all Component Types that are included in the project scope.

My project consists of (check all that apply)

Component Types	
<input type="checkbox"/> New Construction or Newly Conditioned Space	01
<input type="checkbox"/> One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft	<input type="checkbox"/> Roof
<input type="checkbox"/> Addition of conditioned space	<input type="checkbox"/> Walls <input type="checkbox"/> Floors
<input type="checkbox"/> One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft	<input type="checkbox"/> Roof <input type="checkbox"/> Exterior Doors <input type="checkbox"/> Fenestration/Glazed Door ¹
<input checked="" type="checkbox"/> Alteration of conditioned space	<input checked="" type="checkbox"/> Roof Assembly <input checked="" type="checkbox"/> Roofing Material
<input type="checkbox"/> One or more enclosed spaces > 5,000 ft² directly under roof with ceiling height > 15ft and lighting system installed for the first time	<input type="checkbox"/> Walls <input type="checkbox"/> Floors <input type="checkbox"/> Exterior Doors NA for Alts. <input type="checkbox"/> Fenestration

¹FOOTNOTE: Doors that are more than 25% glass in area are considered Glazed Doors and should be documented on Table K with fenestration.

In this Alteration example, it is important to check off all components that will be altered. Since this is a roof Alteration example, both roof assembly and roofing material should be selected.

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C. COMPLIANCE RESULTS

Table C will be consistent on all forms and shows what the compliance results are as the form is filled out.

Table Instructions: If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Roof Assembly	Opaque Envelope Components				Daylighting Spaces > 5,000 ft²	Compliance Results	
	Roofing Materials	Walls	Floors	Doors			
01 (See Table F)	02 (See Table G)	03 (See Table H)	04 (See Table I)	05 (See Table J)	06 (See Table K)	07 (See Table L)	08
Yes	Yes						COMPLIES

Grey cells show that these tables were not triggered by the selections in Table B.

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

No exceptional conditions apply to this project.

E. ADDITIONAL REMARKS

Be sure to enter any additional remarks here for the building official or installer to see.

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

The existing roofing will be removed and exposed to the roof deck, the exposed area will be insulated with R-8 rigid foam insulation per Table 141.0-C.

F. ROOF ASSEMBLY SCHEDULE

Select which type of roof assembly is going to be installed. Multiple roof types can be checked if there's more than one type in a project.

Table Instructions: Complete this table to demonstrate compliance with prescriptive roof assembly requirements in §140.3(a)1B for new construction or additions, or §141.0(b)2Biii for alterations.

01 Indicate roof types included in the project: Framed SIPs Span Deck & Concrete Metal Panels Metal Building

Framed Roof Assemblies	01	02	03	04	05
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If any of the roof assemblies do not meet the Energy Code requirements, select this option for an area-weighted U-Factor to see if the project has an overall U-Factor that complies.

Include Framed Roof Assemblies in Area-Weighted Average U-factor Calculation¹

If you are unsure about where a requirement is in the Energy Code, look for a referenced section with a link to the code language.

Tag / Plan Detail ID	Name / Description	Status	Exception to Roof Insulation Requirements in §141.0(b)2Biii (Alts. Only)	Occupancy Type
Roof	Existing	Altered	None of these exceptions apply	Nonresidential/ Relocatable 1 CZ

Be sure to enter a tag and name/description for the roof that makes it easy for the building official to find in the drawings.

Be sure to verify if any of the exceptions apply to the altered roof. If one of the exceptions does, then the roof is exempt from complying.

Table Continued

Reset Add Row Remove Last

Add multiple roof assemblies, remove last or reset the table with these selections.

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07	08	09	10	11	12	13	14	15	16
Tag / Plan Detail ID	How Design U-factor was determined	Roof Type & Frame Material	Frame Spacing & Depth	Cavity Insulation per Design	Continuous Insulation per Design	Thermal Performance Unit	Required Thermal Performance ²	U-factor per Design	Net Area ³ (ft ²)
Roof		Rafter- Wood	24" OC & 2x8 framing	None	R-8	R-value	8	per JA4 per Software/ Other	

If U-factor was selected for thermal performance, the grayed-out cells would be active and the option for roof type, frame spacing, depth and insulation values are dependent on how the U-factor was determined.

¹ FOOTNOTE: If any individual assembly is non-compliant, assemblies may show compliance using an area-weighted calculation. Metal building roofs may have other roof types. The area-weighted compliance option is not available for alterations demonstrating compliance with R-values in Table 141.0-C.

² If "R-value" is shown in cell 13 as the Thermal Performance Unit, the R-value shown here is for continuous insulation per Table 141.0-C.

³ Roof area minus any fenestration/skylight area.

Check back in table C to see if table F complies!

If "U-factor Trade-off" is selected as the compliance method in column 07, you'll need to select the range the roof's U-factor falls within here.

G. RATED ROOFING MATERIAL (COOL ROOF)

Table Instructions: Complete this table to demonstrate compliance with prescriptive roof material requirements in §140.3(a)1A for new construction or additions, or §141.0(b)2B for alterations.

01	02	03	04	05	06	07
Tag / Plan Detail ID	Name / Description / Location	Status	Occupancy Type	Roof Slope	Roof Material	Compliance Method
Roof	Roofing	Altered	Nonresidential/ Relocatable 1 CZ	≤ 2:12 (Low)	Single-Ply	U-factor Trade-off per Table 141.0-B
<p>Be sure to enter a tag and name/description/location for the roofing material that makes it easy for the building official to find in the drawings.</p> <p>Minimum material performance is based on the selections made in columns 03-07.</p>						
				08	09	10
				Required Minimum Material Performance	Designed Material Performance	U-factor of Assembly
				Reflectance	Emittance	0.0471-0.051
				0.4	0.75	
				SRI	SRI	
				08	09	10
				Reset	Add Row	Remove Last

¹ FOOTNOTE: If Solar Reflectance (Initial) is indicated in column 07, enter the Initial Reflectance here and the form will convert it to a "Calculated Aged Solar Reflectance" when determining compliance.

Check back to table C to see if table G complies!

H. WALL ASSEMBLY SCHEDULE

This Section Does Not Apply

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I. FLOOR ASSEMBLY SCHEDULE ?
This Section Does Not Apply
 These sections do not apply based on the selections made in Table B.

J. EXTERIOR DOOR SCHEDULE ?
This Section Does Not Apply

K. FENESTRATION AND GLAZED DOOR SCHEDULE ?
This Section Does Not Apply

L. DAYLIGHT IN LARGE ENCLOSED SPACES ?
This Section Does Not Apply

M. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION ?
 Check to make sure the inputs made in this form have triggered the correct forms to be filled out.
 Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation to be added to Table D Exceptional Conditions. These documents must be provided to the building inspector during construction and can be found online at <http://www.energy.ca.gov/2015publications/CEC-400-2015-033/appendices/forms/NRCI>

YES	NO	Form/Title	Field Inspector	
			Pass	Fail
<input checked="" type="radio"/>	<input type="radio"/>	NRCC-ENV-01-E - Must be submitted for all buildings.	<input type="checkbox"/>	<input type="checkbox"/>

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N. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

Table Instructions: Selections have been made based on information provided in previous tables of this document. If any selection needs to be changed, form user must provide an explanation to be added to Table D Exceptional Conditions. These documents must be provided to the building inspector during construction and can be found online at <http://www.energy.ca.gov/2015publications/CEC-400-2015-033/appendices/forms/NRCA/>. Individuals who perform the field testing and verification work, and provide the information required for completion of the fenestration Certificate of Acceptance documentation are not required to be licensed professionals. However, the person who signs the Certificate of Acceptance document to certify compliance with the acceptance requirements shall be licensed as specified in Standards Section [10-103\(a\)4](#) and [NA7.3.1](#).

YES	NO		Form/Title	Field Inspector	
				Pass	Fail
<input type="radio"/>	<input checked="" type="radio"/>		NRCA-ENV-02-F - Must be submitted for all new, added or altered fenestration.	<input type="checkbox"/>	<input type="checkbox"/>
			NRCA-ENV-03-F - Daylighting design indoor lighting power adjustment factors (PAF). Note: The requirement for this NRCA is indicated on the NRCC-LTI (prescriptive) or NRCC-PRF (performance) because it is only relevant if a PAF is used for clerestories, daylight redirection devices or horizontal slats.		

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Print to PDF to then sign a static copy of the form and send to the client. Be sure to save a copy of the dynamic form if any edits need to be made.



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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Company:	Signature Date:
Address:	CEA/ HERS Certification Identification (if applicable):
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
- The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
- I will ensure that a completed signed copy of this Certificate of Compliance shall be 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 completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

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

For more training on the NRCC forms, visit Energy Code Ace for Decoding Talks:

2019 Dynamic Form Introduction Series: youtube.com/playlist?list=PLVH9EjkDaO5IMvxVJg2oDwq2B3wJTQ1

Decoding NRCC: Let's Talk 2019 Nonresidential Dynamic Forms Handout and Recording: energycodeace.com/content/training-ace/courseId=35705