be used.

# **FENESTRATION WORKSHEET**



C Enter	Larger of A or B						ft <sup>2</sup>	Maxim	um Sta	ndard	<b>West</b> Are	а	
B. West	Display Linear Perimeter			FT×6	ft =		ft²	West D	isplay I	Perime	ter Area		
	West Exterior Wall Area			$ft^2 \times 0.4$			ft²	40% of	Gross	West	Facing Ex	cterior Wall Area	; or
B. WEST	WINDOW AREA CALCULATIO	<b>N</b> See §140	).3(a)5 <i>A</i>	\ in the Fi	nergy St	tandard	S	ı	II .	1			
Tag/ID	(e.g., Window-1)	Area	Proposed	Allowed	Proposed	Allowed	Proposed	Allowed	Н	V	H <b>/</b> V	Proposed	Allowed
	Window Type		pə	٥	pə	þ	eq	٥				(R)SHGC	(R)SHGC
													Max
			U-I	Factor	SI	HGC		VT	D	imens	ions	Calc	ulated
					Fenest	ration						Overhang	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
	t fenestration less than 1,000 f												Tuble 1166.
	OWS DETAILS Worksheet §14 ewly installed fenestration sha			NEDC L	al Cambi	:6: +		+h - CEC -	l = £ = l ±	4	farradia	Table 11C A and	Table 11CD
Project Name	2:								Date Pre	pared:			
Fenestr	ration Worksheet												(Page 1 of 3
CERTIFI	ICATE OF COMPLIANCE											N	IRCC-ENV-02-

E. Gross Exterior Wall Area	$ft^2 \times 0.40 =$	ft²	40% of Gross Exterior Wall Area or	
F. Linear Display Perimeter	FT × 6 ft =	ft²	Display Perimeter Area	
G. Enter The Larger of E or F		ft²	Maximum Standard Area	
H. Enter Proposed Window Area		ft <sup>2</sup>	Proposed Window Area	

# **FENESTRATION WORKSHEET**

CEC-NRCC-ENV-02-E (Revised 06/14)



CERTIFICATE OF COMPLIANCE	NRCC-ENV-02-E
Fenestration Worksheet	(Page 2 of 3)
Project Name:	Date Prepared:

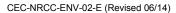
	ACTUAL GROSS			STANDARD ALLOWED	
	ROOF AREA			SKYLIGHT AREA	
A IF Atrium/Skylight Height is $\leq$ 55 ft; <b>or</b>		$ft^2 \times 0.05$	5 =	ft <sup>2</sup>	
B. IF Atrium/Skylight Height is > 55 ft		$ft^2 \times 0.10$	) =	ft <sup>2</sup>	
C. Proposed Skylight Area (from plans)	'		ft <sup>2</sup>		
D. Skylight SSR $\%^{1, 2}$ = Proposed Skylight Area D	ea =	%			

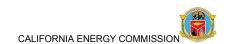
<sup>1.</sup> If the SKYLIGHT SSR % is less than or equal to 5% then choose the appropriate column in Table 140.3-B and C and row in Table 140.3-D.

E. RELOCATABLE PUBLIC SCHOOL BUILDINGS - See Section140.3(a)8 in t	he Energy Standards
Option 1	
☐ For Specific Climate Zone, use Table 140.3-B - Prescriptive Envelope Criteria.	☐ Specific Climate Zone Metal Identification Label – Place two labels on each relocatable school building and indicate on the building plans.
	Indicate location from the building plans:
Option 2	1
☐ For Any (All) Climate Zone, use Table 140.3-D - Prescriptive Envelope Criteria.	☐ Any (All) Climate Zone Metal Identification Label - Place two labels on each relocatable school building and indicate on the building plans.
	Indicate location from the building plans:

<sup>2.</sup> If the SKYLIGHT SSR % is greater than 5% then the Envelope Component Approach may not be used.

## **FENESTRATION WORKSHEET**





CERTIFICATE OF COMPLIANCE	NRCC-ENV-02-E
Fenestration Worksheet	(Page 3 of 3)
Project Name:	Date Prepared:

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:				
DESCRINGIBLE DEDSON'S DECLADATION 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:

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-ENV-02-E
Fenestration Worksheet	(Page 1 of 4)

#### WINDOW DETAILS WORKSHEET

- 1. **Tag/Id** Provide a name or designator for each unique type of fenestration surface. This designator should be used consistently throughout the plan set (elevations, finish schedules, etc.) such as, Window-1, Skylight-1 and etc...to identify each surface. It should also be consistently used on the other forms in the same compliance documentation.
- 2. **Window Tpe** Fixed Window, Operable Window, Curtainwall or Storefront, or Glazed Doors. For Skylights use either Glass Curb Mounted, Glass Deck Mounted or Plastic curb Mounted.
- 3. Surface Area Indicate the total ft<sup>2</sup> of all of the fenestration with the same like characteristics.
- 4. **Fenestration/U-factor/Proposed** Indicate the proposed U-factor for windows from **NRCC-ENV-01-E**, Area weighted average or from Table 140.3-B, C or D, NFRC Label Certificate or the Energy Commission's Default Table U-factors Table 110.6-A.
- 5. **Fenestration/U-factor/Allowed** Indicate the Maximum Allowed U-factor for windows from Table 140.3-B, C or D.
- 6. **Fenestration/SHGC/Proposed** Indicate the proposed SHGC for windows from **NRCC-ENV-01-E**, Area weighted average or from Table 140.3-B, C or D, NFRC Label Certificate or the Energy Commission's Default Table U-factors Table 110.6-A.
- 7. Fenestration/SHGC/Allowed Indicate the Maximum Allowed SHGC for windows from Table 140.3-B, C or D.
- 8. **VT/Proposed** Indicate the proposed VT for windows from NRCC-ENV-01-E, Area weighted average or from Table 140.3-A, B or C, NFRC Label Certificate or the Energy Commission's Default Table U-factors Table 110.6-A.
- 9. **VT/Allowed** Indicate the Maximum Allowed Prescriptive VT for windows from Table 140.3-B, C or D. Note the VT requirement is dependent of window Type in Column 2.

If overhangs are going to be used in the project then the overhangs dimensions and location should be indicated on the building plans for verification by the enforcement agency

- 10. **Overhang/Dimensions/H** Horizontal distance from window out to the bottom of overhang. If an overhang does not exist, then the H is 1.0.
- 11. **Overhang/Dimensions/V** Vertical distance from bottom of window to a plane at the same height as the bottom of lower edge of overhang. If an overhang does not exist, then the V is 1.0.
- 12. **Overhang/Dimensions/H/V** Use OVERHANG FACTOR to determine the factor for each orientation. Measure the horizontal projection of the overhang (H) and the vertical height from the bottom of the glazing to the shading cut-off point of the overhang (V). If an overhang does not exist, then the overhang factor is 1.0.

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-ENV-02-E
Fenestration Worksheet	(Page 2 of 4)

- 13. **Calculated/(R)SHGC** Proposed is calculated by multiplying the Overhang Factor by the proposed SHGC of the window.
- 14. **Calculated/Max(R)SHGC** Allowed is the maximum relative solar heat gain allowed, taken from Standards Tables 140.3-B, C or D for the appropriate window orientation (north or non-north).

### **WEST WINDOW AREA CALCULATIONS**

This calculation determines whether the window area for the building exceeds the allowable maximum for the Envelope Component Approach.

- A. **Gross West Exterior Wall Area** It's the Gross Exterior Wall Area multiplied by 0.40 to determine the maximum allowed 40 percent of fenestration in the West Exterior Wall Area.
- B. **West Display Perimeter** It's the West linear perimeter multiplied by 6 ft to determine the maximum DISPLAY AREA for glazing limits.
- C. Enter the Larger of A or B for the **Maximum Standard Area**.
- D. **Proposed West Window Area** Enter the proposed total area of windows as indicated on the building plans. Note: If the Proposed West Window area is greater than the Maximum Standard West Area of 40% then the Envelope Component Approach may not be used.

### WINDOW AREA CALCULATION (for all other than the West orientation)

- A. **Gross Exterior Wall Area** It's the Gross Exterior Wall Area multiplied by 0.40 to determine the maximum allowed 40 % of fenestration in the Exterior Wall Area.
- B. **Display Perimeter** It's the linear perimeter multiplied by 6 ft to determine the maximum DISPLAY AREA for glazing limits.
- C. Enter the Larger of E or F for the Maximum Standard Area.
- D. **Proposed Window Area** Enter the proposed total area of windows as indicated on the building plans.

Note: If the Proposed Window area is greater than the Maximum Standard Area of 40% then the Envelope Component Approach may not be used.

#### **SKYLIGHT AREA CALCULATION**

This calculation determines whether the skylight area for the building exceeds the allowable maximum for the standard envelope.

A. If the height distance from the floor to the above is less than or equal to 55 ft then multiply the Actual Gross Roof Area by 5 percent (0.05) for the **Standard Allowed Skylight Area.** 

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-ENV-02-E
Fenestration Worksheet	(Page 3 of 4)

- B. If the height distance is greater than 55 ft then multiply Actual Gross Roof Area by 10 percent (0.10) for the **Standard Allowed Skylight Area.**
- C. **Proposed Skylight Areas** The total area of proposed skylights shown on the plans is entered here.
- D. **SKYLIGHT** % If the Proposed Skylight Area is greater than the Standard Allowed Skylight Area then the Envelope Component approach may not be used.

If the **Proposed Skylight Area** is greater than the **Standard Allowed Skylight Area** then the Envelope Component Approach may not be used. The skylight percentage determines the appropriate row for the maximum U-factor allowed TO BE USED IN THE Skylight Details. See Table 140.3 B, C or D.

CERTIFICATE OF COMPLIANCE – USER INSTRUCTIONS	NRCC-ENV-02-E
Fenestration Worksheet	(Page 4 of 4)

## **RELOCATABLE PUBLIC SCHOOL BUILDINGS**

Option 1

Check box if manufactured for specific climate zone.

Check box if metal identification label is provided.

Option 2

Check box if manufactured for all climate zones.

Check box if metal identification label is provided.