INDOOR AIR QUALITY AND MECHANICAL VENTILATION

CALIFORNIA ENERGY COMMISSION

CEC-LMCV-MCH-27-H

SAMPLE FORM – NOT VALID FOR SUBMISSION TO BUILDING DEPARTMENTS

CERTIFICATE OF VERIFICATION

Note: This table completed by HERS Registry.

Project Name:	Enforcement Agency:
Dwelling Address:	Permit Number:
City and Zip Code:	Permit Application Date:

Title 24, Part 6, Section 160.2(b)2 **Ventilation and Indoor Air Quality for Attached Dwelling Units.** All dwelling units shall meet the requirements of ANSI/ASHRAE Standard 62.2-2019 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings subject to the amendments specified by Title 24, Part 6, Section 160.2(b)2

A. Whole-Dwelling Mechanical Ventilation - General Information

01	Dwelling Unit Name	
02	Building Type	·0· ·N·
03	Project Scope	Co 1 v
04	Total Conditioned Floor Area of Dwelling Unit (For addition projects the conditioned floor area equals existing area plus addition area)	ista rea
05	Number of Bedrooms in Dwelling Unit (For addition projects the number of bedrooms equals the existing bedrooms plus addition bedrooms)	do ster
06	Ventilation System Type	
07	Ventilation Operation Schedule	.0.0
Note:	0	

Non-dwelling units do not meet the definition for a dwelling unit as defined in Section 100.1(b). Non-dwelling units are not designed to provide independent living facilities and do not provide permanent provisions for living, sleeping, eating, cooking and sanitation.

MCH-27b – Multifamily Ventilation

B. Ventilation - Total Ventilation Rate

A mechanical supply system, exhaust system, or combination thereof shall provide whole-dwelling ventilation with outdoor air each hour at no less than the rate in 160.2(b)2Aiv

01 Total Required Ventilation rate, (Q_{tot})

C. Installed Ventilation - Total Ventilation Rate

A mechanical supply system, exhaust system, or combination thereof shall provide whole-dwelling ventilation with outdoor air each hour at no less than the rate in 160.2(b)2Aiv

01	02	03	04	05
0			Installed Mechanical	Equivalent Continuous
Fan Name	Fan Location	Runtime (Min/Hr)	Ventilation Rate (CFM)	Ventilation (CFM)
06	Total Installed Equivalent Continuous Ventilation (CFM)			

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C2. HRV or ERV serving Individual Dwelling Unit

- Heat or Energy Recovery Systems must have a fan efficacy of ≤ 1.0 W/cfm in all climate zones (Section 160.2(b)2Biii).
- Heat or Energy Recovery Systems must prescriptively have a fan efficacy of ≤ 0.6 W/cfm and a ٠ minimum sensible heat recovery of 67% in climate zones 1, 2, and 11-16 (Section 170.2(c) 3Biya).

01	02	03	04
Manufacturer Make	Manufacturer Model Number	Fan Efficacy Performance Rating (W/CFM)	Sensible Recovery Efficiency (%)
			0

D. Additional Envelope Requirements

01 Envelope Leakage

E. Additional Central Ventilation System Balancing Requirements

Maximum Ventilation Flow (CFM) 01

F. Compliance Statement

01

G. Determination of HERS Verification Compliance

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Verification documentation is accurate and comp	olete.
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1. I certify that this Certificate of Verification documentation is accurate and complete.		
Documentation Author Name:	Documentation Author Signature:	
Company:	Date Signed:	
	с 	
Address:	CEA/HERS Certification Information (if applicable):	
City/State/Zip:	Phone:	
	A.	

RESPONSIBLE PERSON'S DECLARATION STATEMENT

- 2. I certify the following under penalty of perjury, under the laws of the State of California:
 - 1. The information provided on this Certificate of Verification is true and correct.
 - 2. I am the certified HERS Rater who performed the verification identified and reported on this Certificate of Verification (responsible rater).
 - 3. The installed features, materials, components, manufactured devices, or system performance diagnostic results that require HERS verification identified on this Certificate of Verification comply with the applicable requirements in Reference Appendices RA2, RA3, and the requirements specified on the Certificate of Compliance for the building approved by the enforcement agency.
 - 4. The information reported on applicable sections of the Certificate(s) of Installation (LMCI) signed and submitted by the person(s) responsible for the construction or installation conforms to the requirements specified on the Certificate(s) of Compliance (LMCC) approved by the enforcement agency.
 - 5. I understand that a registered copy of this Certificate of Verification 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, and I will take the necessary steps to ensure this requirement is accomplished.
 - 6. I understand that a registered copy of this Certificate of Verification is required to be included with the documentation the builder provides to the building.

BUILDER OR INSTALLER INFORMATION AS SHOWN ON THE CERTIFICATE OF INSTALLATION

Company Name (Installing Subcontractor, General Contractor, or Builder/Owner):		
Responsible Builder or Installer Name:	CSLB License:	

HERS PROVIDER DATA REGISTRY INFORMATION

Sample Group Number (if applicable):	Dwelling Test Status in Sample Group (if applicable):
101.	

HERS RATER INFORMATION

HERS Rater Company Name:	
Responsible Rater Name:	Responsible Rater Signature:
Responsible Rater Certification Number w/ this HERS Provider:	Date Signed:

For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300

LMCV-MCH-27b-H User Instructions

Section A. General Information

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- 1 Building Unit Name: This field is filled out automatically. It is referenced from the LMCI-MCH-01, which must be completed prior to this document. This is the unique identifier for this dwelling unit. Needed mostly for multifamily dwelling units. Ventilation is calculated and provided for each dwelling unit individually.
- 2 Building Type: This field is filled out automatically. It is referenced from the LMCC. Values are "Multifamily". User is allowed to overwrite imported value with "Non-dwelling unit" selection.
- 3 Project Scope: This field is filled out automatically. It is referenced from the LMCC.
 - If parent document is the LMCC-PRF-01, values are "Newly Constructed", "Newly Constructed (Addition Alone)" and "Addition and /or Alteration"
 - If parent document is CF1R-NCB-01, values are "Newly Constructed" and "Newly Constructed (Addition Alone)"
 - If parent document is CF1R-ADD-01, values are "ADU Addition < 300 ft²"," ADU Addition > 300 to < 400 ft²"," ADU Addition > 400 to < 700 ft²" and "ADU Addition > 700 to < 1000 ft²".
- 4 Total Conditioned Floor Area of Dwelling Unit: This field is filled out automatically. It is referenced from the LMCI-MCH-01.
- 5 Number of Bedrooms in Dwelling Unit: This field is filled out automatically. It is referenced from the LMCI-MCH-01.
- 6 Ventilation system Type: This may be filled out automatically or be user input.
 - If parent document is the LMCC-PRF-01, the value will be filled out automatically.
 - If building type is equal to Non-dwelling unit, an N/A value will be filled out automatically.
 - If parent document is the CF1R-NCB or CF1R-ADD, user selects from list of Supply, Exhaust, Balanced, Balanced – ERV, Balanced – HRV, Central Fan Integrated (CFI), Central Ventilation System – Supply and Central Ventilation System – Exhaust and Central Ventilation System Balanced.
 - Ventilation operation schedule: This may be filled out automatically or be user input.
 - If building type is equal to Non-dwelling unit, an N/A value will be filled out automatically.
 - User selects from list of Continuous, Short-Term Average, Scheduled and Real-time Control.
 - Note if "Ventilation System Type" (A11) = Central Fan Integrated & "Ventilation Operation Schedule" (A12) = Continuous; then user will not be allowed to proceed.

Section B. Whole Building Continuous Ventilation – Total Ventilation Rate Method

1 This value is automatically calculated using equation 160.2-B from the Energy Standards.

Section C. Installed Ventilation – Total Ventilation Rate Method

- 1. User input text identifying the fan name for each installed ventilation fan.
- 2. User input text identifying the fan location for each installed ventilation fan.
- 3. Runtime (Min/Hr): This value may be filled out automatically or be user input.
 - If ventilation operation schedule from section A = "continuous", then value of 60 will be automatically entered.
 - If ventilation operation schedule from section A = "short term average", then user enter value of less than or equal to 60 for each installed ventilation fan.
- 4. User to enter CFM value from test procedures described in RA3.7.4 for each installed ventilation fan.

CERTIFICATE OF VERIFICATION – USER INSTRUCTIONS	LMCV-MCH-27-H
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- 5. Equivalent continuous ventilation CFM is automatically calculated for each ventilation fan.
- 6. Total installed equivalent continuous ventilation CFM is automatically calculated based on the installed ventilation fans.

Section C2. HRV or ERV serving Individual Dwelling Unit

- 1. User input manufacturer make of the installed equipment from the manufacturer nameplate.
- 2. User input model number of the installed equipment from the manufacturer nameplate.
- 3. User input the fan efficacy performance rating (W/CFM) for the installed equipment as determined by RA3.7.4.4.
- 4. User input the sensible recovery efficiency performance rating (%) for the installed equipment as determined by RA3.7.4.4.

Section D. Additional Envelope Requirements

1. Envelope Leakage: This field is filled out automatically. It is referenced from the LMCI-MCH-24, which must be completed prior to this document.

Section E. Additional Central Ventilation System Balancing Requirements

1. Maximum Ventilation Flow (CFM): This field is filled out automatically calculated.

Section F. Compliance Statement

1. This field is filled out automatically.

Section G. Determination of HERS Verification Compliance

1. This field is filled out automatically based on all verification protocol requirements in this document showing compliance.

Documentation Declaration Statements

- 1. The person who prepared the LMCV will sign and complete the fields for their name, company (if applicable), address, phone number, certification information (if applicable), date and signature.
- 2. The person who is assuming responsibility for the project being built to comply with Title 24, Part 6, will complete the fields (if applicable) for their company, responsible builder or installer name, CSLB license number, sample group number, dwelling test status in sample group, HERS Rater company name, HERS Rater name, HERS Rater signature, HERS Rater certification number and date signed.