



CITY OF OAKLEY BUILDING PERMIT APPLICATION

JOB ADDRESS: _____ SUBDIV # _____ LOT # _____

PROJECT DESCRIPTION _____

PROJECT VALUATION: \$ _____ SEPTIC SYSTEM: YES NO

PERMIT TYPE: BUILDING MECHANICAL ELECTRICAL PLUMBING SIGN
SOLAR PANEL UPGRADE Y/N DEMO REROOF POOL/SPA -- 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: _____



CERTIFICATE OF COMPLIANCE	CF1R-ALT-03-E
Alterations - HVAC CZ 1, 3 to 7 and 16 (formerly CF-1R-ALT-HVAC)	(Page 1 of 1)

Site Address:		Enforcement Agency: City of Oakley		Date Prepared:	Permit#:
Equipment Type		Equipment Efficiency		New: Ducting, <i>Plenums, Lineset</i> Required R-value	Conditioned Floor Area (sq ft)
<input type="checkbox"/> Packaged System	<input type="checkbox"/> Evaporator Coil	____ AFUE	____ COP	<input type="checkbox"/> R-6 (CZ 1,3-7) Ducts	Served by system _____ sq ft
<input type="checkbox"/> Split System	<input type="checkbox"/> Condensing Unit	____ SEER	____ HSPF	<input type="checkbox"/> R-8 ¹ (CZ 16) Ducts	
<input type="checkbox"/> Furnace	<input type="checkbox"/> Lineset	____ EER		<input type="checkbox"/> R-6 (all CZ's) Plenums	
				<input type="checkbox"/> R-5 or R7.5 Lineset ³	<input type="checkbox"/> Setback <i>(If not already present, must be installed)</i>

HERS VERIFICATION SUMMARY Installer determines work to be completed and matches to one of the options below. At permit application this form is allowed to be filled out by hand. For final inspection all forms are to be registered (no hand filled forms allowed) and a copy left on site.

<input type="checkbox"/> 1. HVAC Changeout/Repair Can include new ducting	Required Compliance Documents to be left on site for Final:
All Equipment, Condenser Unit, Evaporator Coil, Air Handler/Furnace	CF1R-ALT-02-E CF2R: MECH-01, MECH-20-HERS CF3R: MECH-20-HERS

Installer Requirement: Duct leakage ($\leq 15\%$ or, $\leq 10\%$ to outside, or seal all accessible leaks)
 Exempted from duct leakage testing if:
 1. Duct system registered with HERS provider as previously sealed, or 2. There is less than 40 linear feet of duct in unconditioned space, or 3. Existing duct systems are constructed, insulated or sealed with asbestos (list manufacture date of building _____)

<input type="checkbox"/> 2. New HVAC System	Required Compliance Documents to be left on site for Final:
All new equipment and All New Ducts ²	CF1R-ALT-02-E CF2R-MECH-01, MECH-20-HERS, MECH-22-HERS, MECH-(23 or 24)-HERS CF3R-MECH-20-HERS, MECH-22-HERS, MECH-(23 or 24)-HERS ²

Installer Requirement: Duct leakage $\leq 6\%$, Fan Efficacy (.58W/CFM), Air Flow ≥ 350 CFM/ton (or Standards Table 150.0-C / D alternative)

<input type="checkbox"/> 3. All New Ducts with Replacement	Required Compliance Documents to be left on site for Final:
Includes replacing or installing All New Ducts ² and one or more of the following: Condenser Unit, Evaporator Coil, Furnace	CF1R-ALT-02-E CF2R-MECH-01, MECH-20-HERS, MECH-(23 or 24)-HERS CF3R-MECH-20-HERS, MECH-(23 or 24)-HERS

Installer Requirement: Duct leakage $\leq 6\%$, Air Flow ≥ 350 CFM/ton (or Standards Table 150.0-C / D alternative)
 Exempted from duct leakage testing | existing duct systems are constructed, insulated or sealed with asbestos.

<input type="checkbox"/> 4. New Ducting over 40 feet	Required Compliance Documents to be left on site for Final:
Adding or replacing ducts in unconditioned space but less than All New Ducts ²	CF1R-ALT-02-E CF2R: MECH-20-HERS CF3R: MECH-20-HERS

Installer Required to: Duct leakage ($\leq 15\%$ or, $\leq 10\%$ to outside, or seal all accessible leaks)
 Exempted from duct leakage testing | existing duct systems are constructed, insulated or sealed with asbestos.

¹ All new ducting R-8 required when more than 40 ft installed and R-6 when less than 40 ft installed. This includes in walls, between floors etc.
² A New Duct system is when the duct system is constructed of at least 75 percent new duct material, and up to 25 percent may consist of reused parts from the dwelling unit's existing duct system (e.g., registers, grilles, boots, air handler, plenums, duct material).
³ R-5 (1" thick insulation) for linesets 1" and less. R-7.5 (1.5" thick insulation) for linesets over 1 inch. Most mfg will require Suction line Diameter with insulation as the following 1.5-2T-2 $\frac{3}{8}$ ", 2.5-3T-2 $\frac{3}{8}$ ", 3.5 to 4T-2 $\frac{3}{8}$ ", 5T-4 $\frac{3}{8}$ "

Contractor (Documentation Author's /Responsible Designer'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 California Business and Professions Code to accept responsibility for the information on this document.
- That the energy features and performance specifications for the design identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations (CCR).
- That 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 CCR.
- 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.

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

What is a Residential HVAC Alteration?

A residential HVAC alteration is any change to a home's space-conditioning system that is regulated by the 2019 California's Building Energy Efficiency Standards (Energy Code), Title 24, Part 6 which include systems that provide heating or cooling within or associated with conditioned spaces in a home. Title 24, Part 6 includes requirements for alterations affecting residential space-conditioning systems, which are generally categorized in the following three groups:

- Altered or Replaced Duct Systems
- Altered Space-Conditioning System
- Entirely New or Complete Replacement Space-Conditioning System

Why?

As much as half of the energy used in a typical home goes to heating and cooling. Ensuring that HVAC systems are as efficient as possible can result in significant energy savings.

Relevant Code Sections

2019 California Building Energy Efficiency Standards, Title 24, Part 6:

- [Section 110.2](#) – Mandatory Requirements for Space-Conditioning Equipment
- [Section 150.0](#) – Mandatory Features and Devices
 - 150.0(h) – Space-Conditioning Equipment
 - 150.0(i) – Thermostats
 - 150.0(m) – Air-Distribution and Ventilation System Ducts, Plenums, and Fans
 - 150.0(j) – Suction Line Insulation
- [Section 150.1](#) – Performance and Prescriptive Compliance Approaches for Newly Constructed Residential Buildings
- [Section 150.2](#) – Energy Efficiency Standards for Additions and Alterations to Existing Low-Rise Residential Buildings
 - 150.2(b)1C – New or Complete Replacement Space - Conditioning System
 - 150.2(b)1D – Altered Duct Systems - Duct Sealing
 - 150.2(b)1E – Altered Space-Conditioning System - Duct Sealing
 - 150.2(b)1F – Altered Space-Conditioning System - Mechanical Cooling
 - 150.2(b)1G – Water-Heating System
- [Residential Compliance Manual, Chapter 4](#) – HVAC Building Requirements

What is an Altered Duct System?

- Extension of Existing Ducts
 - >40 ft of extended duct system
 - any altered ducts in garage spaces
- Entirely New or Replacement Ducts
 - ≥75% of new duct system
 - Up to 25% existing duct system components may be reused, if accessible and can be sealed

Note: ≤40 ft of altered or extended duct does not trigger compliance documentation or duct leakage testing, unless it is in the garage. If ≤40 ft and not in garage, it must meet mandatory R-6 insulation only.

Table 150.2-A Duct Insulation R-Value

Climate Zone	1 through 10, 12 & 13	11, 14 through 16
Duct R-Value	R-6	R-8

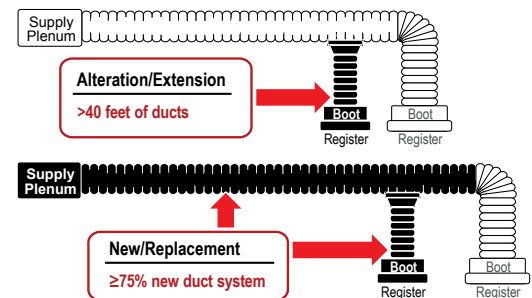


Figure 1: Altered or Replaced Duct Systems (Duct Sealing): §150.2(b)1D

What is an Altered Space-Conditioning System?

If the alteration is not a complete replacement of the space conditioning system but one or more of the following components is installed or replaced, it is considered an Altered Space-Conditioning System.

- Any refrigerant-containing component, including:
 - Cooling coil
 - Condenser coil
 - Compressor Refrigerant piping
 - Refrigerant metering device
 - Outdoor condensing unit

OR

- Air handler

Acceptable fuel types for replacement space-conditioning systems include:

- Natural gas
- Liquefied petroleum gas
- The fuel type of the system being replaced

If the fuel type of the system being replaced is gas, the replacement space-conditioning system may be a heat pump.

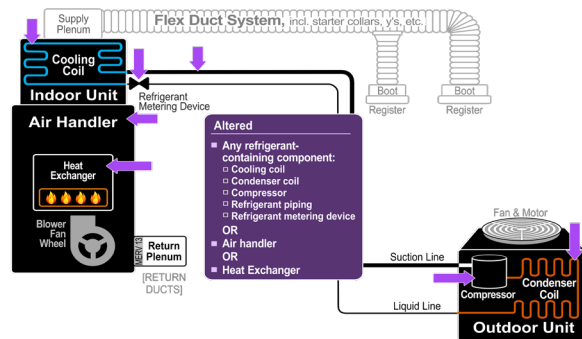


Figure 2: Altered Space-Conditioning System: §150.2(b)1E,F

Replacing other components is considered a repair - not an alteration. For example, replacing the blower wheel fan, but not the heat exchanger or air handler in the furnace, is a repair. Repairs do not trigger Title 24, Part 6 code requirements.

What is Entirely New versus Complete Replacement of a Space-Conditioning System?

When all of the following are installed or replaced:

- All the system heating/cooling components
- >75% new duct material

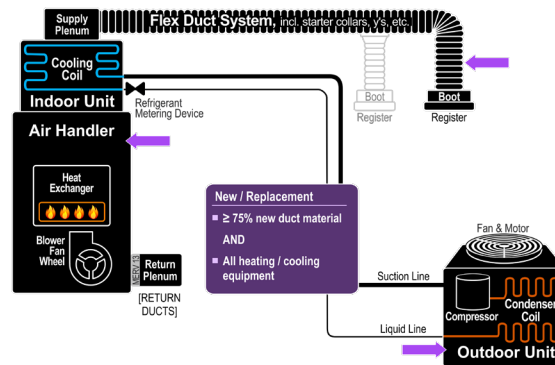


Figure 3: Entirely New or Complete Replacement Space-Conditioning System: §150.2(b)1C

Setback Thermostats: §110.2

Only altered or new/replacement cooling systems trigger installation of setback thermostat. It is not required for heating-system-only replacements, unless the entire heating system including ducts is replaced, per Sections 150.0(i) and 150.2(b)C.

Equipment Efficiency: §110.2

Most heating and cooling equipment installed in California homes is regulated by the National Appliance Efficiency Conservation Act (NAECA) and/or the California Appliance Efficiency Regulations (Title 20).

Duct Sealing and Testing (HERS measure)

Duct Sealing and Testing (HERS measure) is required for both altered duct systems and new/replacement duct systems.

- **Extension of Existing Ducts >40 ft:** The measured leakage must be ≤15% of system air handler air flow. (There are alternatives to meeting the maximum 15% leakage. Consult your Building Department or Section 150.2(b)1Diib).
- **Altered Space Conditioning System:** The measured leakage must be ≤15% of system air handler air flow. (There are alternatives to meeting the maximum 15% leakage. Consult your Building Department or Section 150.2(b)1E). In addition, the system must have a cooling coil airflow >300 CFM per ton of nominal cooling capacity or >250 CFM per ton of nominal cooling capacity for small duct high velocity systems and verified by the HERS Rater. Refrigerant Charge verification is Prescriptively required for Climate Zones 2 and 8-15.
- **New/Replacement Space Conditioning System:** The Duct Sealing and Testing (HERS measure) must demonstrate a leakage rate ≤5% of the system air handler airflow. In addition, verification of Cooling Coil Airflow and Fan Watt Draw (HERS measure) is required. Refrigerant Charge verification is Prescriptively required for Climate Zones 2 and 8-15.
- **Altered Ducts in Garage Spaces:** The measured leakage must be ≤6% of system air handler air flow. If measured leakage is not possible an alternative would be to have all accessible leaks sealed and verified through visual inspection and smoke tested by a certified HERS Rater.

Forms: Which & When

In addition to a permit, typically HVAC alterations require the following:

- **CF1R: Certificate of Compliance: Alteration to an HVAC System**
 - **CF1R-ALT-02-E**
 - Completed and signed by the installing contractor
 - Must be registered with a HERS Provider prior to permit application
- **CF2R-MCH-01 (Tables a-e): Certificate of Installation for Space Conditioning Systems, Ducts and Fans**
 - Completed and signed by the installing contractor, and made available for final inspection by building department
 - Must be registered with a HERS Provider prior to final inspection
- **CF3R-MCH Forms: Certificate of Verification**
 - **CF3R-MCH-20*-H: Certificate of Verification for Duct Leakage Diagnostic Test**
 - Completed by the HERS rater and made available for final inspection by building department
 - Must be registered with a HERS Provider prior to final inspection
 - **CF3R-MCH-22*-H: Certificate of Verification for Fan Efficacy**
 - Completed by the HERS rater and made available for final inspection by building department
 - Must be registered with a HERS Provider prior to final inspection
 - **CF3R-MCH-23*-H: Certificate of Verification for Airflow Rate**
 - Completed by the HERS rater and made available for final inspection by building department
 - Must be registered with a HERS Provider prior to final inspection
 - **CF3R-MCH-25*-H: Certificate of Verification Refrigerant Charge**
 - Completed by the HERS rater and made available for final inspection by building department
 - Must be registered with a HERS Provider prior to final inspection

* Correct version (e.g., "a," "b" and "c") varies depending upon the project scope and approach used to demonstrate compliance

ALTERATIONS TO SPACE CONDITIONING SYSTEMS
CERTIFICATE OF COMPLIANCE
 Alterations to Space Conditioning Systems

A. General Information
 CF1R-ALT-02-E requires multiple space conditioning systems contained within a single dwelling unit. When multiple dwelling units must be addressed, use the CF1R-ALT-02-E documents for each dwelling unit.

B. Space Conditioning (SC) System Information
 CF1R-ALT-02-E requires SC systems to be installed in accordance with the following requirements:

SC System Description (Include Make/Model)	SC System Type	SC System Capacity (BTU/hr)	SC System Efficiency (SEER)	SC System Location	SC System Installation Date	SC System Alteration Type

C. Extension of Existing Duct System, Greater Than 40 Feet (Section 100.2.2.10.1)
 CF1R-ALT-02-E requires that any duct system extension greater than 40 feet must be installed in accordance with the following requirements:

SPACE CONDITIONING SYSTEMS, DUCTS, AND FANS
CERTIFICATE OF INSTALLATION
 Space Conditioning Systems, Ducts and Fans

A. General Information
 CF2R-MCH-01 requires that all space conditioning systems, ducts, and fans be installed in accordance with the following requirements:

B. Design Space Conditioning (SC) System Component Specifications
 CF2R-MCH-01 requires that all space conditioning systems be installed in accordance with the following requirements:

Zone	SC System Description (Include Make/Model)	SC System Type	SC System Capacity (BTU/hr)	SC System Efficiency (SEER)	SC System Location	SC System Installation Date	SC System Alteration Type

MCH-01a - Space Conditioning Systems Ducts and Fans - For use with performance Certificate of Compliance

DUCT LEAKAGE DIAGNOSTIC TEST
CERTIFICATE OF VERIFICATION
 Duct Leakage Diagnostic Test

A. System Information
 CF3R-MCH-20a requires that all duct systems be installed in accordance with the following requirements:

B. MCH-20a - Complete New Duct System
 CF3R-MCH-20a requires that all duct systems be installed in accordance with the following requirements:

C. MCH-20b - Complete New Duct System
 CF3R-MCH-20b requires that all duct systems be installed in accordance with the following requirements:

For More Information

Primary Sources

- Energy Code Section 110.2 – Mandatory Requirements for Space-Conditioning Equipment
energycodeace.com/site/custom/public/reference-ace-2019/Documents/section1102mandatoryrequirementsforspaceconditioningequipment.htm
- Energy Code Section 150.0 – Mandatory Features and Devices
energycodeace.com/site/custom/public/reference-ace-2019/index.html#!Documents/section1500mandatoryfeaturesanddevices.htm
- Energy Code Section 150.1 – Performance and Prescriptive Compliance Approaches for Newly Constructed Residential Buildings
energycodeace.com/site/custom/public/reference-ace-2019/Documents/section1501performanceandprescriptivecomplianceapproachesforlowr.htm
- Energy Code Section 150.2 – Energy Efficiency Standards for Additions and Alterations to Existing Low-Rise Residential Buildings
energycodeace.com/site/custom/public/reference-ace-2019/index.html#!Documents/section1502energyefficiencystandardsforadditionsandalterationsto.htm
- Energy Code Residential Compliance Manual, Chapter 4 – HVAC Building Requirements
energycodeace.com/site/custom/public/reference-ace-2019/Documents/4buildinghvacrequirements.htm

Compliance Forms

- Residential Compliance Forms
energycodeace.com/ResidentialForms/2019

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.

Of special interest:

Trigger Sheets

energycodeace.com/content/resources-trigger-sheets/

- Residential HVAC Alterations 2019

Please register with the site and select an industry role for your profile in order to receive messages about all our free offerings!



This program is funded by California utility customers and administered by Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), Southern California Edison Company (SCE), and Southern California Gas Company (SoCalGas) under the auspices of the California Public Utilities Commission.
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