Certificate Of Compliance Residential (Part 4 of 4) CF-1R

Fort Bragg ADU — Project Title
7/3/2009 — Date

Special Features and Modeling Assumptions

The local enforcement agency should pay special attention to the items specified in this checklist. These items require special written justification and documentation, and special verification to be used with the performance approach. The local enforcement agency determines the adequacy of the justification, and may reject a building or design that otherwise complies based on the adequacy of the special justification and documentation submitted.

	Plan	Field
Compliance using the Four Cardinal Orientation approach has been used. Project can be built in any Orientation.		

HERS Required Verification

Items in this section require field testing and/or verification by a certified home energy rater under the supervision of a HERS provider using approved testing and/or verification methods.

	Plan	Field

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HVAC SYSTEMS

Location	Heating Type	Minimum Eff	Cooling Type	Minimum Eff	Condition Status	Thermostat Type
Pellet Stove	Central Furnace	78% AFUE	No Cooling	13.0 SEER	New	Setback

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Condition Status	Ducts Tested?
Pellet Stove	Ducted	Ducted	Attic	6.0	New	No

Hydronic Piping System Name	Pipe Length	Pipe Diameter	Insul. Thick.

WATER HEATING SYSTEMS

System Name	Water Heater Type	Distribution	# in Syst.	Rated Input (Btu/hr)	Tank Cap. (gal)	Condition Status	Energy Factor or RE	Standby Loss (%)	Tank Insul. R-Value Ext.
Continuum Instantanious or Equal	Instant Gas	All Pipes Ins	1	180,000	0	New	0.82	500	n/a

Multi-Family Central Water Heating Details

Hot Water Pump Control	#	HP	Type	Hot Water Piping Length (ft) In Plenum	Outside	Buried	Add 1/2" Insulation

REMARKS

COMPLIANCE STATEMENT

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 and 6 of the California Code of Regulations, and the administrative regulations to implement the this certificate has been signed by the individual with overall design responsibility. The undersigned recognizes that compliance using duct design, duct sealing, verification of refrigerant charge and TXVs, Insulation Installation quality, and building envelope sealing require Installer testing and certification and field verification by an approved HERS rater.

Designer or Owner (per Business & Professions Code)
Name:
Title/Firm: Boone Low Ratliff Architects
Address: 157 Van Ness Ave, Santa Cruz, CA 95060
Telephone: 831-423-1316 Lic. #:
(signature) (date)

Documentation Author
Name: Andrew Williams, CEPE
Title/Firm: BLOCK ENERGY DESIGN
Address: 150 Felker St. Ste. H, Santa Cruz, CA 95060
Telephone: (831) 454-9956
Andrew Williams 7/3/09
(signature) (date)

Enforcement Agency
Name:
Title/Firm:
Address:
Telephone:
(signature) (date)

Run Initiation Time: 07/03/09 17:26:12 **Run Code: 1246667172**

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FENESTRATION SURFACES

#	Type	Area	U-Factor[1]	SHGC[2]	True Azm.	Tilt	Cond. Stat.	Glazing Type	Location/ Comments
1	Window Front (N)	50.0	0.390 NFRC	0.37 NFRC	0	90	New	Milgard Classic Low-E Vinyl	First Floor
2	Window Left (E)	15.0	0.390 NFRC	0.37 NFRC	90	90	New	Milgard Classic Low-E Vinyl	First Floor
3	Window Rear (S)	12.0	0.390 NFRC	0.37 NFRC	180	90	New	Milgard Classic Low-E Vinyl	First Floor
4	Window Rear (S)	7.5	0.390 NFRC	0.37 NFRC	180	90	New	Milgard Classic Low-E Vinyl	First Floor
5	Window Right (W)	13.0	0.390 NFRC	0.37 NFRC	270	90	New	Milgard Classic Low-E Vinyl	First Floor
6	Window Right (W)	40.0	0.390 NFRC	0.37 NFRC	270	90	New	Milgard Classic Low-E Vinyl	First Floor

1. Indicate source either from NFRC or Table 116A. 2. Include source either from NFRC or Table 116B.

INTERIOR AND EXTERIOR SHADING

#	Exterior Shade Type	SHGC	Window Hgt.	Window Wd.	Overhang Len.	Overhang Hgt.	Overhang LExt.	Overhang RExt.	Left Fin Dist.	Left Fin Len.	Left Fin Hgt.	Right Fin Dist.	Right Fin Len.	Right Fin Hgt.
1	Bug Screen	0.76												
2	Bug Screen	0.76												
3	Bug Screen	0.76												
4	Bug Screen	0.76	3.0	2.5	2.0	0.1	0.5	3.0						
5	Bug Screen	0.76	3.6	3.6	2.0	0.1	4.0	4.0						
6	Bug Screen	0.76	6.6	6.0	2.0	0.1	4.0	4.0						

THERMAL MASS FOR HIGH MASS DESIGN

Type	Area (sf)	Thick. (in.)	Heat Cap.	Cond.	Inside R-Val.	JA IV Reference	Condition Status	Location/ Comments

PERIMETER LOSSES

Type	Length	R-Val.	Insulation Location	JA IV Reference	Condition Status	Location/ Comments

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Fort Bragg ADU — Project Title
7/3/2009 — Date
(Prototype) Fort Bragg — Project Address
Building Permit #
BLOCK ENERGY DESIGN — Documentation Author
(831) 454-9956 — Telephone
Plan Check/Date
EnergyPro — Compliance Method
CA Climate Zone 01 — Climate Zone
Field Check/Date

TDV (kBtu/sf-yr)	Standard Design	Facing North	Margin	Facing East	Margin	Facing South	Margin	Facing West	Margin
Space Heating	19.94	27.53	-7.59	26.86	-6.92	25.97	-6.02	26.55	-6.61
Space Cooling	2.09	0.42	1.67	0.64	1.45	0.83	1.26	0.73	1.36
Fans	1.28	1.35	-0.07	1.36	-0.08	1.34	-0.06	1.35	-0.07
Domestic Hot Water	30.81	24.45	6.36	24.45	6.36	24.45	6.36	24.45	6.36
Pumps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Totals	54.12	53.75	0.37	53.31	0.81	52.59	1.53	53.09	1.04
Percent better than Standard:			0.7%		1.5%		2.8%		1.9%

BUILDING COMPLIES - NO HERS VERIFICATION REQUIRED

Building Type: ☒ Single Family ☐ Multi Family ☐ Addition ☐ Existing + Add/Alt
Building Front Orientation: All Four Orientations
Fuel Type: Natural Gas
Fenestration:
Area: 138 ft² **Avg. U:** 0.39
Ratio: 25.3% **Avg. SHGC:** 0.37

Total Conditioned Floor Area: 544 ft²
Existing Floor Area: n/a ft²
Raised Floor Area: 544 ft²
Slab on Grade Area: 0 ft²
Average Ceiling Height: 8.0 ft
Number of Dwelling Units: 1.00
Number of Stories: 1

BUILDING ZONE INFORMATION

Zone Name	Floor Area	Volume	# of Units	Zone Type	Thermostat Type	Vent Hgt.	Vent Area
Pellet Stove	544	4,352	1.00	Conditioned	Setback	2	n/a

OPAQUE SURFACES

Type	Frame	Area	U-Fac.	Insulation Cav.	Insulation Cont.	Act. Azm.	Tilt	Gains Y	Gains N	JA IV Reference	Location / Comments
Roof	Wood	192	0.032	R-30	R-0.0	0	0	X	New	01-A7	First Floor
Roof	Wood	396	0.036	R-30	R-0.0	0	0	X	New	02-A9	First Floor
Floor	Wood	544	0.037	R-19	R-0.0	0	180	X	New	20-A4	First Floor
Wall	Wood	174	0.095	R-15	R-0.0	0	90	X	New	09-A4	First Floor
Wall	Wood	141	0.095	R-15	R-0.0	90	90	X	New	09-A4	First Floor
Door	None	20	0.500	None	R-0.0	90	90	X	New	28-A4	First Floor
Wall	Wood	204	0.095	R-15	R-0.0	180	90	X	New	09-A4	First Floor
Wall	Wood	123	0.095	R-15	R-0.0	270	90	X	New	09-A4	First Floor

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Residential Kitchen Lighting Worksheet WS-5R

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At least 50% of the total rated wattage of permanently installed luminaires in kitchens must be in luminaires that are high efficacy luminaires as defined in Table 150-C. Luminaires that are not high efficacy must be switched separately.

Kitchen Lighting Schedule. **Provide the following information for all luminaires to be installed in kitchens.**

Luminaire Type	High Efficacy?	Watts	Quantity	High Efficacy Watts	Other Watts
(1) 26w Compact Fluorescent Triple 4 Pin	Yes ☒ No ☐	28.0	x 2 =	56	or
SWL ED Puck Light	Yes ☒ No ☐	5.0	x 5 =	25	or
	Yes ☐ No ☐		x =		or
	Yes ☐ No ☐		x =		or
	Yes ☐ No ☐		x =