

CITY OF SACRAMENTO  
New City Hall, 915 I St., 3rd Floor, Sacramento, CA 95814

Permit No: 0614192  
Insp Area: 3  
Thos Bros: 318C5

Site Address: 5875 WILKINSON ST SAC  
Parcel No: 027-0252-033

Sub-Type: NSFR  
Housing (Y/N): N

CONTRACTOR  
OWNER BUILDER

OWNER  
LEONID GRYMAYLO  
7732 TENNIS CT  
ANTELOPE, CA 95824

ARCHITECT

Nature of Work: NEW, 1 STORY SFR; LIV. SP. = 1466sf, ATTACHED GARAGE = 372sf, COV. PORCH = 75sf - DESIGN REVIEW AREA - PAPERLESS

CONSTRUCTION LENDING AGENCY: I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

PAID  
CITY OF SACRAMENTO

Lender's Name \_\_\_\_\_ Lender's Address \_\_\_\_\_

OCT 02 2006

LICENSED CONTRACTORS DECLARATION: I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

NEW CITY HALL

License Class \_\_\_\_\_ License Number 0 \_\_\_\_\_ Date \_\_\_\_\_ Contractor Signature \_\_\_\_\_

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and 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 (\$500.00);

I, as a 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 and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

\_\_\_\_ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

\_\_\_\_ I am exempt under Sec. \_\_\_\_\_ B & PC for this reason: \_\_\_\_\_

Date 10/2/06 Owner Signature Leonid Grymaylo

IN ISSUING THIS BUILDING PERMIT, the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 10/2/06 Applicant/Agent Signature Leonid Grymaylo

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:  
\_\_\_\_ I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

\_\_\_\_ I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier \_\_\_\_\_ Policy Number \_\_\_\_\_ Exp Date \_\_\_\_\_

\_\_\_\_ (This section need not be completed if the permit is for \$100 or less) 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 workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date \_\_\_\_\_ Applicant Signature \_\_\_\_\_

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.



# TITLE 24 REPORT

## Title 24 Report for:

Wilkinson St.  
5875 Wilkinson St.  
Sacramento, CA 95824

CITY OF SACRAMENTO  
DOWNTOWN PERMIT  
CENTER

SEP 13 2006

RECEIVED

## Project Designer:

Olenka Builders  
6525 32nd Street Suite-A  
North Highlands, CA 95660  
(916)339-1267

## Report Prepared By:

Alex Martynovskiy  
OLENKA BUILDERS  
6525 32nd Street, #A  
N. Highlands, CA 95660  
(916) 339-1267

ISSUED  
CITY OF SACRAMENTO  
SEP 12 2006  
DOWNTOWN PERMIT  
CENTER

## Job Number:

347

## Date:

9/11/2006

The EnergyPro computer program has been used to perform the calculations summarized in this compliance report. This program has approval and is authorized by the California Energy Commission for use with both the Residential and Nonresidential 2005 Building Energy Efficiency Standards.  
This program developed by EnergySoft, LLC - [www.energysoft.com](http://www.energysoft.com).

# Certificate Of Compliance : Residential

(Part 1 of 3) **CF-1R**

9/11/2006

Wilkinson St  
 Project Title  
 5875 Wilkinson St Sacramento  
 Project Address  
 OLENKA BUILDERS  
 Documentation Author  
 EnergyPro  
 Compliance Method

(916) 339-1267  
 Telephone  
 12  
 Climate Zone

Date
Building Permit #
Plan Check/Date
Field Check/Date

TDV Energy Use (kBtu/sf-yr)	Standard Design	Proposed Design	Compliance Margin
Space Heating	17.84	16.74	1.10
Space Cooling	8.40	6.85	1.54
Fans	2.18	1.89	0.29
Domestic Hot Water	14.27	12.66	1.60
Pumps	0.00	0.00	0.00
<b>Totals</b>	<b>42.68</b>	<b>38.15</b>	<b>4.53</b>
			<b>10.6%</b>

Percent better than Standard:

## BUILDING COMPLIES - NO HERS VERIFICATION REQUIRED

Building Type:  Single Family  Addition  
 Multi Family  Existing + Add/Alt  
 Building Front Orientation: (W) 270 deg  
 Fuel Type: Natural Gas  
 Fenestration:  
 Area: 158 ft<sup>2</sup> Avg. U: 0.35  
 Ratio: 10.8% Avg. SHGC: 0.28

Total Conditioned Floor Area: 1,466 ft<sup>2</sup>  
 Existing Floor Area: n/a ft<sup>2</sup>  
 Raised Floor Area: 0 ft<sup>2</sup>  
 Slab on Grade Area: 1,466 ft<sup>2</sup>  
 Average Ceiling Height: 9.0 ft  
 Number of Dwelling Units: 1  
 Number of Stories: 1

BUILDING ZONE INFORMATION			# of Units	Zone Type	Thermostat Type	Vent Hgt.	Area
Zone Name	Floor Area	Volume					
HVAC System	1,466	13,194	1.00	Conditioned	Setback	2	n/a

OPAQUE SURFACES		Insulation		Act.		Gains		Condition		JA IV Reference		Location / Comments	
Type	Frame	Area	U-Fac.	Cav.	Cont.	Azm.	Tilt	Y	N	Status	Reference	Location	Comments
Wall	Wood	230	0.060	R-13	R-7.9	270	90	X		New	09-A3	1st Floor	
Door	None	20	0.500	None	R-0.0	270	90	X		New	28-A4	1st Floor	
Wall	Wood	501	0.060	R-13	R-7.9	0	90	X		New	09-A3	1st Floor	
Door	None	18	0.500	None	R-0.0	0	90	X		New	28-A4	1st Floor	
Wall	Wood	213	0.060	R-13	R-7.9	90	90	X		New	09-A3	1st Floor	
Wall	Wood	502	0.060	R-13	R-7.9	180	90	X		New	09-A3	1st Floor	
Roof	Wood	1,759	0.023	R-38	R-1.0	270	0	X		New	01-A18	1st Floor	

# Certificate Of Compliance : Residential

(Part 3 of 3) **CF-1R**

Wilkinson St.  
Project Title

9/11/2006  
Date

## HVAC SYSTEMS

Location	Heating Type	Minimum Eff	Cooling Type	Minimum Eff	Condition Status	Thermostat Type
HVAC System	Central Furnace	80% AFUE	Split Air Conditioner	13.0 SEER	New	Setback

## HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Condition Status	Ducts Tested?
HVAC System	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 <sup>1</sup> Input (Btu/hr)	Tank Cap. (gal)	Condition Status	Energy Factor or RE <sup>1</sup>	Standby <sup>1</sup> Loss (%)	Tank Insul. R-Value Ext.
Standard Gas 50 gal or Less	Small Gas	Point of Use	1	40,000	50	New	0.58	n/a	n/a

## Multi-Family Central Water Heating Details

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

<sup>1</sup> For small gas storage (rated input <= 75000 Btu/hr), electric resistance and heat pump water heaters, list energy factor. For large gas storage water heaters (rated input > 75000 Btu/hr), list Rated Input, Recovery Efficiency and Standby Loss. For instantaneous gas water heaters, list Rated Input, and Recovery Efficiency.

## 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 them. 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: Olenka Builders  
 Address: 6525 32nd Street Suite-A  
North Highlands, CA 95660  
 Telephone: (916)339-1267

Lic. #: \_\_\_\_\_  
Alex Martynovskiy 9/11/06  
 (signature) (date)

### Documentation Author

Name: Alex Martynovskiy  
 Title/Firm: OLENKA BUILDERS  
 Address: 6525 32nd Street, #A  
N. Highlands, CA 95660  
 Telephone: (916) 339-1267

Alex Martynovskiy 9/11/06  
 (signature) (date)

### Enforcement Agency

Name: \_\_\_\_\_  
 Title/Firm: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 Telephone: \_\_\_\_\_

\_\_\_\_\_  
 (signature/stamp) (date)

# Mandatory Measures Summary: Residential (Page 2 of 2) MF-1R

**NOTE:** Lowrise residential buildings subject to the Standards must contain these measures regardless of the compliance approach used. More stringent compliance requirements from the Certificate of Compliance supercede the items marked with an asterisk (\*) below. When this checklist is incorporated into the permit documents, the features noted shall be considered by all parties as minimum component performance specifications for the mandatory measures whether they are shown elsewhere in the documents or on this checklist only.

DESCRIPTION	Instructions: Check or initial applicable boxes when completed or check N/A if not applicable.		
	N/A	DESIGNER	ENFORCE- MENT
<b>Space Conditioning, Water Heating and Plumbing System Measures: (continued)</b>			
§ 150(m): Ducts and Fans			
1. All ducts and plenums installed, sealed and insulated to meet the requirements of the CMC Sections 601, 602, 603, 604, 605, and Standard 6-5; supply-air and return-air ducts and plenums are insulated to a minimum installed level of R-4.2 or enclosed entirely in conditioned space. Openings shall be sealed with mastic, tape or other duct-closure system that meets the applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets the requirements of UL 723. If mastic or tape is used to seal openings greater than 1/4 inch, the combination of mastic and either mesh or tape shall be used.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Building cavities, support platforms for air handlers, and plenums defined or constructed with materials other than sealed sheet metal, duct board or flexible duct shall not be used for conveying conditioned air. Building cavities and support platforms may contain ducts. Ducts installed in cavities and support platforms shall not be compressed to cause reductions in the cross-sectional area of the ducts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Joints and seams of duct systems and their components shall not be sealed with cloth back rubber adhesive duct tapes unless such tape is used in combination with mastic and draw bands.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Exhaust fan systems have back draft or automatic dampers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Gravity ventilating systems serving conditioned space have either automatic or readily accessible, manually operating dampers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Protection of Insulation. Insulation shall be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind. Cellular foam insulation shall be protected as above or painted with a coating that is water retardant and provides shielding from solar radiation that can cause degradation of the material.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Flexible ducts cannot have porous inner cores.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 114: Pool and Spa Heating Systems and Equipment			
1. A thermal efficiency that complies with the Appliance Efficiency Regulations, on-off switch mounted outside of the heater, weatherproof operating instructions, no electric resistance heating and no pilot light.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. System is installed with:			
a. At least 36" of pipe between filter and heater for future solar heating.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cover for outdoor pools or outdoor spas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Pool system has directional inlets and a circulation pump time switch.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 115: Gas fired fan-type central furnaces, pool heaters, spa heaters or household cooking appliances have no continuously burning pilot light. (Exception: Non-electrical cooking appliances with pilot < 150 Btu/hr)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 118 (i): Cool Roof material meets specified criteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Lighting Measures</b>			
§ 150(k)1: HIGH EFFICACY LUMINAIRES OTHER THAN OUTDOOR HID: contain only high efficacy lamps as outlined in Table 150-C, and do not contain a medium screw base socket (E24/E26). Ballasts for lamps 13 Watts or greater are electric and have an output frequency no less than 20 kHz.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 150(k)1: HIGH EFFICACY LUMINAIRES - OUTDOOR HID: contain only high efficacy lamps as outlined in Table 150-C, luminaire has factory installed HID ballast.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 150(k)2: Permanently installed luminaires in kitchens shall be high efficacy luminaires. Up to 50% of the Wattage, as determined in Section 130(c), of permanently installed luminaires in kitchens may be in luminaires that are not high efficacy luminaires, provided that these luminaires are controlled by switches separate from those controlling the high efficacy luminaires.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 150(k)3: Permanently installed luminaires in bathrooms, garages, laundry rooms, utility rooms shall be high efficacy luminaires. OR are controlled by an occupant sensor(s) certified to comply with Section 119(d).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 150(k)4: Permanently installed luminaires located other than in kitchens, bathrooms, garages, laundry rooms, and utility rooms shall be high efficacy luminaires (except closets less than 70 ft) OR are controlled by a dimmer switch OR are controlled by an occupant sensor that complies with Section 119(d) that does not turn on automatically or have an always on option.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 150(k)5: Luminaires that are recessed into insulated ceilings are approved for zero clearance insulation cover (IC) and are certified to ASTM E283 and labeled as air tight (AT) to less than 2.0 CFM at 75 Pascals.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 150(k)6: Luminaires providing outdoor lighting and permanently mounted to a residential building or to other buildings on the same lot shall be high efficacy luminaires (not including lighting around swimming pools/water features or other Article 680 locations) OR are controlled by occupant sensors with integral photo control certified to comply with Section 119(d).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 150(k)7: Lighting for parking lots for 8 or more vehicles shall have lighting that complies with Sections 130, 132, and 147. Lighting for parking garages for 8 or more vehicles shall have lighting that complies with Section 130, 131, and 146.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 150(k)8: Permanently installed lighting in the enclosed, non-dwelling spaces of low-rise residential buildings with four or more dwelling units shall be high efficacy luminaires OR are controlled by occupant sensor(s) certified to comply with Section 119(d).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



# RESIDENTIAL ROOM COOLING LOAD SUMMARY

Project Title <b>Wilkinson St.</b>		Date <b>9/11/2006</b>
<b>Room Information</b>		<b>Design Conditions</b>
Room Name:	<b>1st Floor</b>	Outdoor Dry Bulb Temperature: <b>100°F</b>
Floor Area:	<b>1,466 sf</b>	Outdoor Web Bulb Temperature: <b>71°F</b>
Indoor Dry Bulb Temperature:	<b>78°F</b>	Outdoor Daily Range: <b>32°F</b>

Opaque Surfaces	Orientation	Area	U-Factor	CLTD <sup>1</sup>	Btu/hr
R-13 Wall w/1" EPS Exterior	(W)	230.0	0.0596	23.0	315
Wood Door	(W)	20.0	0.5000	23.0	230
R-13 Wall w/1" EPS Exterior	(N)	501.0	0.0596	13.0	388
Wood Door	(N)	18.0	0.5000	13.0	117
R-13 Wall w/1" EPS Exterior	(E)	213.0	0.0596	23.0	292
R-13 Wall w/1" EPS Exterior	(S)	502.0	0.0596	16.0	479
R-38 Roof Attic	(W)	1,759.0	0.0235	47.0	1,941
<b>Page Total</b>					<b>3,761</b>

Items shown with an asterisk (\*) denote conduction through an interior surface to another room.  
1. Cooling Load Temperature Difference (CLTD)

Fenestration	Orientation	Shaded		Unshaded		Btu/hr
		Area	GLF	Area	GLF	
Window	(W)	18.8	15.0	1.2	31.6	319
Window	(N)	0.0	15.0	32.0	15.0	479
Window	(E)	0.0	15.0	57.0	31.6	1,800
Window	(S)	0.0	15.0	49.0	20.1	983
<b>Page Total</b>						<b>3,581</b>

### Internal Gain

Occupants	4	x	Occupants	x	230	Btuh/occ.	=	920	
Equipment	1	x	Dwelling Units	x	1,600	Watts/sqft	=	1,600	
Infiltration:	1.077	x	0.99	x	103.44	x	22	=	2,420
	Air Sensible		CFM		ELA		ΔT		

**TOTAL HOURLY SENSIBLE HEAT GAIN FOR ROOM** 12,283

### Latent Gain

Occupants	4	x	Occupants	x	200	Btuh/occ.	=	800	
Infiltration:	4,827	x	0.99	x	103.44	x	-0.00087	=	-430
	Air Latent		CFM		ELA		ΔW		

**TOTAL HOURLY LATENT HEAT GAIN FOR ROOM** 370



# ENERGY USE AND COST SUMMARY

PROJECT NAME

Wilkinson St.

ECON-1

Rate:

DATE

9/11/2006

	STANDARD			PROPOSED			MARGIN		
	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)	Energy Use (kWh)	Peak Demand (kW)	Cost (\$)
Jan	29	0		28	0		1	0	
Feb	19	0		19	0		0	0	
Mar	14	0		14	0		0	0	
Apr	8	0		8	0		0	0	
May	16	2		7	2		0	0	
Jun	76	3		47	3		10	0	
Jul	150	3		120	3		29	0	
Aug	139	3		115	3		30	0	
Sep	62	3		44	3		24	0	
Oct	5	1		2	0		18	0	
Nov	10	0		9	0		2	1	
Dec	26	0		2	0		1	0	
Year	554	3	\$	437	3	\$	117	0	\$

Rate:

	STANDARD			PROPOSED			MARGIN		
	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)	Energy Use (therms)	Peak Demand (kBtu/hr)	Cost (\$)
Jan	92	47		86	48		6	-1	
Feb	67	44		63	45		4	-1	
Mar	55	38		51	39		4	-1	
Apr	38	34		36	35		2	-1	
May	19	8		17	8		2	0	
Jun	18	5		16	4		2	1	
Jul	18	5		16	4		2	1	
Aug	18	5		16	4		2	1	
Sep	17	5		15	4		2	1	
Oct	20	22		17	23		2	0	
Nov	44	36		38	37		5	0	
Dec	84	43		77	44		7	-1	
Year	488	47	\$	447	48	\$	41	-1	\$

Annual Totals	Energy	Demand	Cost	Cost/sqft	Virtual Rate
Electricity	437 kWh	3 kW	\$ 0	0.00/sqft	\$ 0.00/kWh
Natural Gas	447 therms	48 kBtu/hr	\$ 0	0.00/sqft	\$ 0.00/therm
<b>Total</b>			<b>\$ 0</b>	<b>0.00/sqft</b>	

The values shown here are based upon the results of an EnergyPro Compliance energy analysis that uses Title 24 profiles as specified in the Residential ACM manual.



# HVAC SYSTEM HEATING AND COOLING LOADS SUMMARY

PROJECT NAME Wilkinson St.	DATE 9/11/2006
SYSTEM NAME HVAC System	FLOOR AREA 1,466

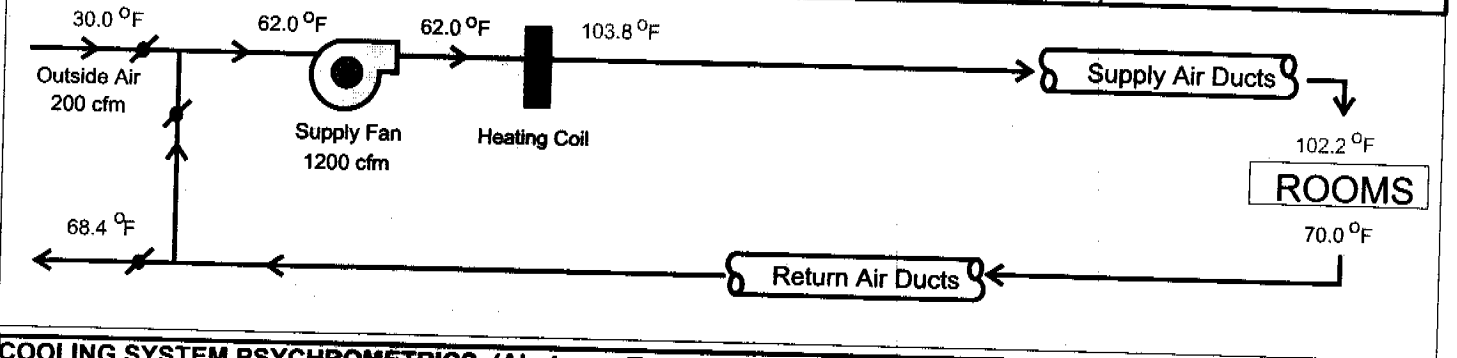
ENGINEERING CHECKS	
Number of Systems	1
<b>Heating System</b>	
Output per System	54,000
Total Output (Btuh)	54,000
Output (Btuh/sqft)	36.8
<b>Cooling System</b>	
Output per System	35,000
Total Output (Btuh)	35,000
Total Output (Tons)	2.9
Total Output (Btuh/sqft)	23.9
Total Output (sqft/Ton)	502.6
<b>Air System</b>	
CFM per System	1,200
Airflow (cfm)	1,200
Airflow (cfm/sqft)	0.82
Airflow (cfm/Ton)	411.4
Outside Air (%)	16.7
Outside Air (cfm/sqft)	0.14

Note: values above given at ARI conditions

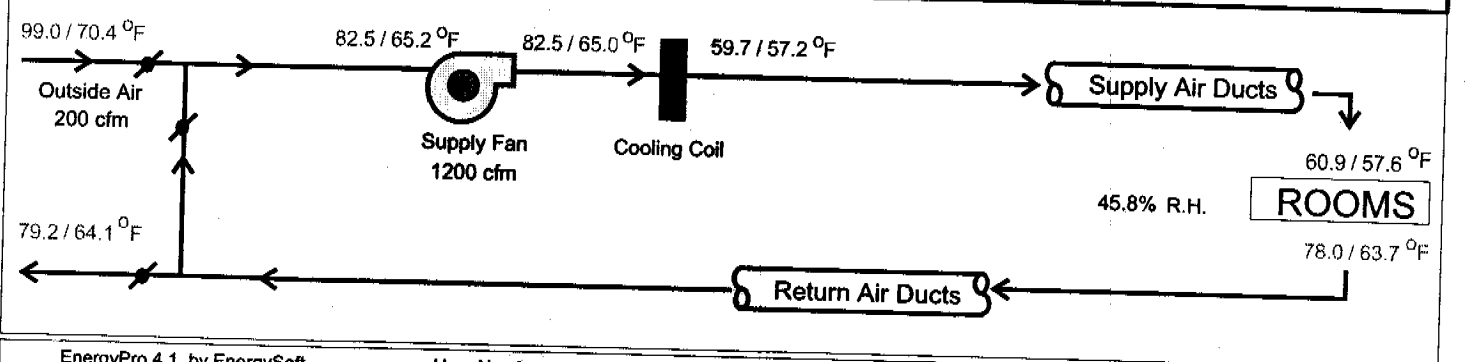
	COIL COOLING PEAK			COIL HTG. PEAK	
	CFM	Sensible	Latent	CFM	Sensible
Total Room Loads	668	12,283	370	518	17,930
Return Vented Lighting		0			
Return Air Ducts		1,543			2,095
Return Fan		0			0
Ventilation	200	4,274	-2	200	8,264
Supply Fan		0			0
Supply Air Ducts		1,543			2,095
<b>TOTAL SYSTEM LOAD</b>		<b>19,642</b>	<b>368</b>		<b>30,384</b>

HVAC EQUIPMENT SELECTION			
Bryant 550AN036-E/311JAV036070	29,477	3,708	54,000
Total Adjusted System Output (Adjusted for Peak Design Conditions)			
	29,477	3,708	54,000
TIME OF SYSTEM PEAK			
	Aug 2 pm		Jan 12 am

## HEATING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Heating Peak)



## COOLING SYSTEM PSYCHROMETRICS (Airstream Temperatures at Time of Cooling Peak)



# Mandatory Measures Summary: Residential (Page 1 of 2) MF-1R

**NOTE:** Lowrise residential buildings subject to the Standards must contain these measures regardless of the compliance approach used. More stringent compliance requirements from the Certificate of Compliance supersede the items marked with an asterisk (\*) below. When this checklist is incorporated into the permit documents, the features noted shall be considered by all parties as minimum component performance specifications for the mandatory measures whether they are shown elsewhere in the documents or on this checklist only.

DESCRIPTION	Instructions: Check or initial applicable boxes when completed or check N/A if not applicable.		
	N/A	DESIGNER	ENFORCE- MENT
<b>Building Envelope Measures</b>			
* § 150(a): Minimum R-19 in wood ceiling insulation or equivalent U-factor in metal frame ceiling.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 150(b): Loose fill insulation manufacturer's labeled R-Value: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
* § 150(c): Minimum R-13 wall insulation in wood framed walls or equivalent U-factor in metal frame walls (does not apply to exterior mass walls).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
* § 150(d): Minimum R-13 raised floor insulation in framed floors or equivalent U-factor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 150(e): Installation of Fireplaces, Decorative Gas Appliances and Gas Logs.			
1. Masonry and factory-built fireplaces have:			
a. closable metal or glass door covering the entire opening of the firebox	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. outside air intake with damper and control, flue damper and control	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. No continuous burning gas pilot lights allowed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 150(f): Air retarding wrap installed to comply with § 151 meets requirements specified in the ACM Residential Manual.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 150(g): Vapor barriers mandatory in Climate Zones 14 and 16 only.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 150(i): Slab edge insulation - water absorption rate for the insulation alone without facings no greater than 0.3%, water vapor permeance rate no greater than 2.0 perm/inch.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 118: Insulation specified or installed meets insulation installation quality standards. Indicate type and include CF-6R Form: _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 116-17: Fenestration Products, Exterior Doors, and Infiltration/Exfiltration Controls.			
1. Doors and windows between conditioned and unconditioned spaces designed to limit air leakage.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Fenestration products (except field fabricated) have label with certified U-Factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration certification.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Exterior doors and windows weatherstripped; all joints and penetrations caulked and sealed.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Space Conditioning, Water Heating and Plumbing System Measures</b>			
§ 110-13: HVAC equipment, water heaters, showerheads and faucets certified by the Energy Commission.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 150(h): Heating and/or cooling loads calculated in accordance with ASHRAE, SMACNA or ACCA.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
§ 150(i): Setback thermostat on all applicable heating and/or cooling systems.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 150(j): Water system pipe and tank insulation and cooling systems line insulation.			
1. Storage gas water heaters rated with an Energy Factor less than 0.58 must be externally wrapped with insulation having an installed thermal resistance of R-12 or greater.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Back-up tanks for solar systems, unfired storage tanks, or other indirect hot water tanks have R-12 external insulation or R-16 internal insulation and indicated on the exterior of the tank showing the R-value.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. The following piping is insulated according to Table 150-A/B or Equation 150-A Insulation Thickness:			
1. First 5 feet of hot and cold water pipes closest to water heater tank, non-recirculating systems, and entire length of recirculating sections of hot water pipes shall be insulated to Table 150B.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Cooling system piping (suction, chilled water, or brine lines), piping insulated between heating source and indirect hot water tank shall be insulated to Table 150-B and Equation 150-A.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Steam hydronic heating systems or hot water systems > 15 psi, meet requirements of Table 123-A.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Insulation must be protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Insulation for chilled water piping and refrigerant suction piping includes a vapor retardant or is enclosed entirely in conditioned space.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Solar water-heating systems/collectors are certified by the Solar Rating and Certification Corporation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Certificate Of Compliance : Residential

(Part 2 of 3) **CF-1R**

Wilkinson St.

9/11/2006

Project Title

Date

## FENESTRATION SURFACES

#	Type	Area	U-Factor <sup>1</sup>	SHGC <sup>2</sup>	True Azm.	Tilt	Cond. Stat.	Glazing Type	Location/ Comments
1.	Window Front (W)	20.0	0.350 NERC 0.28	NFRC	270	90	New	Windford VINYL	1st Floor
2.	Window Left (N)	32.0	0.350 NFRC 0.28	NFRC	0	90	New	Windford VINYL	1st Floor
3.	Window Rear (E)	57.0	0.350 NFRC 0.28	NFRC	90	90	New	Windford VINYL	1st Floor
4.	Window Right (S)	49.0	0.350 NFRC 0.28	NFRC	180	90	New	Windford VINYL	1st Floor

1. Indicate source either from NFRC or Table 116A.

2. Indicate source either from NFRC or Table 116B.

## INTERIOR AND EXTERIOR SHADING

#	Exterior Shade Type	SHGC	Window		Overhang				Left Fin			Right Fin		
			Hgt.	Wd.	Len.	Hgt.	LExt.	RExt.	Dist.	Len.	Hgt.	Dist.	Len.	Hgt.
1	Bug Screen	0.76	5.0	4.0	6.0	0.1	6.0	6.0						
2	Bug Screen	0.76												
3	Bug Screen	0.76												
4	Bug Screen	0.76												

## THERMAL MASS FOR HIGH MASS DESIGN

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

## PERIMETER LOSSES

Type	Length	R-Val.	Insulation Location	JA IV Reference	Condition Status	Location/ Comments
Slab Perimeter	144	None	No Insulation	26-A1	New	1st Floor
Slab Perimeter	43	None	No Insulation	26-A1	New	1st Floor

Run Initiation Time: 09/11/06 12:07:57

Run Code: 1158001677

EnergyPro 4.1 by EnergySoft

User Number: 5661

Job Number: 347

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