

JOB COPY

Title 24 Report for:
Single Family Custom Home
3917 May Street
Sacramento, CA 95838

CITY OF SACRAMENTO
DOWNTOWN PERMIT
CENTER
FEB 01 2006

RECEIVED



This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Building Inspection Division.

System Designer:
El Dorado Holding Company
6806 Fallsbrook Court, Suite 1
Granite Bay, CA 95746
(916) 676-2800

None of this plan and specification SHALL NOT be held to permit or approve the same under any ordinance or State Law.

Report Prepared By:

Steve Wisniewski
Optimized Energy & Facilities Consulting
941 Washington Blvd., Suite 310
Roseville, CA 95678
(916) 300-6409

Job Number:

05257

Date:

1/18/2006

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.

Certificate Of Compliance : Residential

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

Single Family Custom Home

1/18/2006

Project Title

Date

3917 May Street Sacramento

Project Address

Building Permit #

Optimized Energy & Facilities Consulting

(916) 300-6409

Plan Check/Date

Documentation Author

Telephone

Field Check/Date

EnergyPro

12

Compliance Method

Climate Zone

TDV Energy Use (kBtu/sf-yr)	Standard Design	Proposed Design	Compliance Margin
Space Heating	16.05	16.07	-0.02
Space Cooling	9.25	9.29	-0.04
Fans	2.12	2.34	-0.22
Domestic Hot Water	13.68	12.86	0.82
Pumps	0.00	0.00	0.00
Totals	41.11	40.57	0.54

Not Valid for permit applications submitted on or after 01/23/06 because Energy Budget is based on SEER 10.

Percent better than Standard: 1.3%

BUILDING COMPLIES - NO HERS VERIFICATION REQUIRED

Building Type: Single Family Addition
 Multi Family Existing + Add/Alt

Total Conditioned Floor Area: 1,570 ft²
 Existing Floor Area: n/a ft²
 Raised Floor Area: 0 ft²
 Slab on Grade Area: 1,570 ft²
 Average Ceiling Height: 8.0 ft
 Number of Dwelling Units: 1.00
 Number of Stories: 1

Building Front Orientation: (E) 90 deg

Fuel Type: Natural Gas

Fenestration:
 Area: 212 ft² Avg. U: 0.35
 Ratio: 13.5% Avg. SHGC: 0.35

BUILDING ZONE INFORMATION

Zone Name	Floor Area	Volume	# of Units	Zone Type	Thermostat Type	Vent Hgt.	Vent Area
HVAC System	1,570	12,560	1.00	Conditioned	Setback	2	n/a

OPAQUE SURFACES

Type	Frame	Area	U-Fac.	Insulation Cav.	Cont.	Act. Azm.	Tilt	Gains Y/N	Condition Status	JA IV Reference	Location / Comments
Roof	Wood	1,570	0.025	R-38	R-0.0	0	0	X	New	01-A18	1F
Wall	Wood	378	0.102	R-13	R-0.0	0	90	X	New	09-A3	1F
Wall	Wood	239	0.102	R-13	R-0.0	90	90	X	New	09-A3	1F
Door	None	20	0.500	None	R-0.0	90	90	X	New	28-A4	1F
Door	None	20	0.500	None	R-0.0	90	90	X	New	28-A4	1F
Wall	Wood	380	0.102	R-13	R-0.0	180	90	X	New	09-A3	1F
Wall	Wood	146	0.102	R-13	R-0.0	270	90	X	New	09-A3	1F
Wall	Wood	100	0.074	R-19	R-0.0	270	90	X	New	09-A5	1F

Run Initiation Time: 01/18/06 13:37:23

Run Code: 1137620243

EnergyPro 4.0 by EnergySoft

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

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FENESTRATION SURFACES

#	Type	Area	U-Factor ¹	SHGC ²	True		Cond. Stat.	Glazing Type	Location/Comments
					Azm.	Tilt			
1	Window Right (N)	16.0	0.350 NFRC 0.35 NFRC	0.35 NFRC	0	90	New	Double Vinyl Low E (1)	1F
2	Window Right (N)	12.0	0.350 NFRC 0.35 NFRC	0.35 NFRC	0	90	New	Double Vinyl Low E (1)	1F
3	Window Right (N)	20.0	0.350 NFRC 0.35 NFRC	0.35 NFRC	0	90	New	Double Vinyl Low E (1)	1F
4	Window Right (N)	17.8	0.350 NFRC 0.35 NFRC	0.35 NFRC	0	90	New	Double Vinyl Low E (1)	1F
5	Window Front (E)	25.0	0.350 NFRC 0.35 NFRC	0.35 NFRC	90	90	New	Double Vinyl Low E (1)	1F
6	Window Left (S)	3.0	0.350 NFRC 0.35 NFRC	0.35 NFRC	180	90	New	Double Vinyl Low E (1)	1F
7	Window Left (S)	20.0	0.350 NFRC 0.35 NFRC	0.35 NFRC	180	90	New	Double Vinyl Low E (1)	1F
8	Window Left (S)	20.0	0.350 NFRC 0.35 NFRC	0.35 NFRC	180	90	New	Double Vinyl Low E (1)	1F
9	Window Left (S)	20.0	0.350 NFRC 0.35 NFRC	0.35 NFRC	180	90	New	Double Vinyl Low E (1)	1F
10	Window Rear (W)	40.0	0.350 NFRC 0.35 NFRC	0.35 NFRC	270	90	New	Double Vinyl Low E (1)	1F
11	Window Rear (W)	18.0	0.350 NFRC 0.35 NFRC	0.35 NFRC	270	90	New	Double Vinyl Low E (1)	1F

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												
2	Bug Screen	0.76												
3	Bug Screen	0.76												
4	Bug Screen	0.76	6.7	2.7	11.0	1.5	4.0	9.5						
5	Bug Screen	0.76	5.0	5.0	5.0	1.5	11.0	5.0						
6	Bug Screen	0.76												
7	Bug Screen	0.76												
8	Bug Screen	0.76												
9	Bug Screen	0.76												
10	Bug Screen	0.76												
11	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	187	None	No Insulation	26-A1	New	1F

Certificate Of Compliance : Residential

(Part 3 of 3)

CF-1R

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HVAC SYSTEMS

Location	Heating Type	Minimum Eff	Cooling Type	Minimum Eff	Condition Status	Thermostat Type
HVAC System	Central Furnace	90% 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	4.2	New	No

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

WATER HEATING SYSTEMS

System Name	Water Heater Type	Distribution	# in Syst.	Rated ¹ Input (Btu/hr)	Tank Cap. (gal)	Condition Status	Energy Factor or RE ¹	Standby ¹ Loss (%)	Tank Insul. R-Value Ext.
Standard Gas 50 Gal (.62)	Small Gas	No Pipe Insulation	1	40,000	50	New	0.62	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	

¹ 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: El Dorado Holding Company
 Address: 6806 Fallsbrook Court, Suite 1
Granite Bay, CA 95746
 Telephone: (916) 676-2800
 Lic. #: _____

Documentation Author

Name: Steve Wisniewski
 Title/Firm: Optimized Energy & Facilities Consulting
 Address: 941 Washington Blvd., Suite 310
Roseville, CA 95678
 Telephone: (916) 300-6409

(signature)

(date)

(signature)

(date)

Enforcement Agency

Name: _____
 Title/Firm: _____
 Address: _____
 Telephone: _____

(signature/stamp)

(date)

Run Initiation Time: 01/18/06 13:37:23	Run Code: 1137620243
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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
Not Valid for permit applications submitted on or after 01/23/06 because Energy Budget is based on SEER 10.		
The Roof "R-38 Roof Attic (Radiant Barrier)" includes credit for a Radiant Barrier installed per Section 3.3.3 of the Residential Manual.		

HERS Required Verification

Items in this section require field testing and/or verification by a certified home energy rater under the supervision of a CEC-approved HERS provider using CEC approved testing and/or verification methods and must be reported on the CF-4R installation certificate.

	Plan	Field

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 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.			ENFORCE- MENT
	N/A	DESIGNER		
Building Envelope Measures				
* § 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	
b. outside air intake with damper and control, flue damper and control	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
2. No continuous burning gas pilot lights allowed.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
§ 150(f): Air retarding wrap installed to comply with § 151 meets requirements specified in the ACM Residential Manual.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
§ 150(g): Vapor barriers mandatory in Climate Zones 14 and 16 only.	<input checked="" 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 checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	
Space Conditioning, Water Heating and Plumbing System Measures				
§ 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
§ 150(i): Setback thermostat on all applicable heating and/or cooling systems.	<input type="checkbox"/>	<input checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
7. Solar water-heating systems/collectors are certified by the Solar Rating and Certification Corporation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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
Space Conditioning, Water Heating and Plumbing System Measures: (continued)				
§ 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Exhaust fan systems have back draft or automatic dampers.	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Flexible ducts cannot have porous inner cores.	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Cover for outdoor pools or outdoor spas.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Pool system has directional inlets and a circulation pump time switch.	<input checked="" type="checkbox"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
§ 118 (i): Cool Roof material meets specified criteria	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lighting Measures				
§ 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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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"/>	<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 checked="" type="checkbox"/>	<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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Residential Kitchen Lighting Worksheet

WS-5R

Single Family Custom Home
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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
FLUORESCENT 24" STRIP FIXTURE	Yes <input checked="checked" type="checkbox"/>	No <input type="checkbox"/>	39.0	x 3 =	117	or
FLUORESCENT 48" STRIP FIXTURE	Yes <input checked="checked" type="checkbox"/>	No <input type="checkbox"/>	32.0	x 1 =	32	or
RECESSED FLUORESCENT CAN LIGHT	Yes <input checked="checked" type="checkbox"/>	No <input type="checkbox"/>	74.0	x 9 =	666	or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
	Yes <input type="checkbox"/>	No <input type="checkbox"/>		x =		or
			Total A:		815	B: 0

COMPLIES IF A ≥ B YES NO

ENGEL INSULATION, INC.

CALIFORNIA CONTRACTOR'S LICENSE #745646

460 Roseville Road • Roseville, CA 95678

(916) 786-2088 / (916) 786-2064

THIS IS TO CERTIFY THAT INSULATION HAS BEEN INSTALLED IN CONFORMANCE WITH CURRENT ENERGY REGULATIONS, CALIFORNIA ADMINISTRATIVE CODE, TITLE 24, STATE OF CALIFORNIA, IN THE BUILDING LOCATED AT:

TRACT D. P. CONSTRUCTION LOT _____
STREET 3917 MAY STREET CITY SACRAMENTO, CA

EXTERIOR WALLS:

MANUFACTURER CT THICKNESS 3 1/2 R-VALUE 13

CEILING AREA: BATTS under platform

MANUFACTURER CT THICKNESS 10 R-VALUE 30

CEILINGS: BLOWN IN

MANUFACTURER INSUL SAFE 4 THICKNESS 1 3/4 R-VALUE 38

SQUARE FOOTAGE 1500 NUMBER OF BAGS USED 34

FLOOR AREA: N/A

MANUFACTURER _____ THICKNESS _____ R-VALUE _____

EXTERIOR KNEEWALL: N/A

MANUFACTURER _____ THICKNESS _____ R-VALUE _____

INTERIOR KNEEWALL: N/A

MANUFACTURER _____ THICKNESS _____ R-VALUE _____

APPLIED CAULK & SEALANT TO ALL EXTERIOR
OPENINGS & PENETRATIONS

YES NO _____

GENERAL CONTRACTOR _____

CALIFORNIA CONTRACTORS
LICENSE # _____ DATE _____

SIGNATURE

TITLE

Mary Manganiano BOOKKEEPER 8.4.2006
INSULATION CONT. SIGNATURE TITLE DATE