EnergyPro 5.0 by EnergySoft User Number: 6249 RunCode: 2010-02-19T09:06:2 ID: 10-218

PERFORMANCE	CERTIFICATE:	Reside	ntial	(Part 2 of 5)	CF-1R
Project Name Liang Remodel		Building Type	☑ Single Family □ Multi Family	☐ Addition Alone ☑ Existing+ Addition/Alteration	Date 2/19/2010
SPECIAL FEATU	IDEC INCRECTI			<u> </u>	2/10/2010
The enforcement agency si	hould pay special attention	n to the items :	specified in this ch	ecklist. These items require speci nce approach. The enforcement a	ial written
determines the adequacy of the special justification and	f the justification, and may	/ reject a build	ing or design that	otherwise complies based on the	adequacy of
The HVAC System Furnace do			tion is not necessary.		
HERS REQUIRE	uire field testing and/or v	verification b	y a certified HER	S Rater. The inspector must	receive a
	uire field testing and/or v	verification b	y a certified HER v for final to be g	S Rater. The inspector must iven.	receive a
Items in this section requ	uire field testing and/or v	verification b	y a certified HER v for final to be g	S Rater. The inspector must iven.	receive a
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Items in this section requ	uire field testing and/or v	verification b	y a certified HER v for final to be g	iven.	receive a

CERTIFICATI	E OF	CC	MP	LIAN	CE:	Resi	den	tial			(	Part 5	of §	5)	CF-1R
Project Name					В	uilding Ty						on Alone		· .	Date
Liang Remodel								J Mu	ılti Famil	у 🗵	Existi	ng+ Additi	on/Al	teration	2/19/2010
BUILDING ZONE I	NFOR	MATI	ON						Floor A	roo /ft²					
System Name			Zo	ne Nam	е	N	ew	E	rioor A	Alte		Removed	Π,	/olume	Year Built
HVAC System			loor								435			3,480	
		2nd	Floor						1,086				+	8,688	1977
								-					+		
					Totals	3	0	)	1,086		435		0		
HVAC SYSTEMS		<u> </u>				- F"			_						
System Name HVAC System		Qty.		ating Typ at Furnace		in. Eff. % <i>AFUE</i>			ng Type		lin. Eff	. The R Setback		stat Type	Status Existing
TVAC Gystein			Contro	n i amed	,,,,	W AI OL	740 00	Joinig		,,	OLL	.r. Gelback			LAISTING
							-								
HVAC DISTRIBUT	ON														1
System Na	ıme			Heating		Coolina		Г	ouct Loc	ation		Duct R-Valu	9	Ducts Tested?	Status
HVAC System			Du	cted	Duc		Attic		ling Ins, v				4.2		Existing
WATER HEATING	SYST	EMS													
								R	ated	Tank	Ene	rov Sta	ndby	Ext. Tank	
Custom Nama	Otre		Turn		Die	tribution		lr /B	put (tuh)	Cap.	Fac or I	tor Los	s or Not	Insul. F	<b>-</b>
System Name Standard Gas 50 gal or L	Qty. .e. 1		Typ all Gas		No Pipe			(=	40,000	(gal) <i>50</i>	0.5		lioι √a	Value n/a	Status Existing
					,				,						
MIII TI EAMII V W	ATED	HE V.	TING	DETAIL	•				LUVDE	ONIC	HEV.	TING SV	etc:	M PIPINO	
MULTI-FAMILY WA	AIER	пеа	HNG		∟ <b>o</b> /ater Pip	ina Len	ath		חנטה	ONIC	ПЕА	I IING ST	SIE	PIPING	<del>z</del>
			트		(ft)			<u>u</u>							
			Eff. Premium					Add ½" Insulation					ipe	Pipe	Insul.
Control	Qty.	HP	# # E	Plenun	n Outs	ide Bu	ried	ĂΞ	s	ystem	Name		ngth		
									-					+	
									l					1	

MANDATORY MEA	SURES SUMN	MARY: Residential	(Page 1 of 3)	MF-1R
Project Name			,	Date
Liang Remodel	diama ambiant to the Ct	andondo must acceptuacido all accide	andra manadatani manadani bata	2/19/2010
the compliance approach used 1R-ALT Form) shall supersede into the permit documents, and specifications whether they are Form with plans.	More stringent energy the items marked with the applicable features shown elsewhere in th	andards must comply with all applic measures listed on the Certificate an asterisk (*) below. This Mandat s shall be considered by all parties ne documents or in this summary. S	of Compliance (CF-1R, CF-1R ory Measures Summary shall b as minimum component perfori	-ADD, or CF- e incorporated mance
Building Envelope Measur	es:			
§116(a)4: Fenestration product Coefficient (SHGC), and infiltra	s (except field-fabricate tion that meets the req	* , ,	e certified U-Factor, certified So	lar Heat Gain
		ed; all joints and penetrations are ca		
§118(a): Insulation specified or §118(i): The thermal emittance installation of a Cool Roof is sp	and solar reflectance v	ards for Insulating Material. Indicate values of the cool roofing material n form.	e type and include on CF-6R Fo neets the requirements of §118	orm. (i) when the
*§150(a): Minimum R-19 insula				
<u> </u>		acturer's installed design labeled R	R-Value.	
*§150(c): Minimum R-13 insula				
*§150(d): Minimum R-13 insula		· · · · · · · · · · · · · · · · · · ·		
• • .		alled according to ASTM E1677-950	(2000) when specified on the C	F-1R Form.
§150(g): Mandatory Vapor barr			a secretar than 6 66/t	
		material alone without facings is neeted from physical damage and U		or permeance
Fireplaces, Decorative Ga				
		closable metal or glass door coveri	ing the entire opening of the fire	ebox.
§150(e)1B: Masonry or factory-	built fireplaces have a	combustion outside air intake, whic	ch is at least six square inches i	
	oilot lights and the use	nd tight-fitting damper and or a com of indoor air for cooling a firebox ja		nted to the
Space Conditioning, Wate				
§110-§113: HVAC equipment, <sup>,</sup> Commission.	water heaters, showerh	neads, faucets and all other regulat	ed appliances are certified by the	he Energy
§113(c)5: Water heating recircu valve, backflow prevention, pur	np isolation valve, and	ultiple dwelling units and High-Rise recirculation loop connection requi	rements of §113(c)5.	
		for natural gas: fan-type central furr on with pilot lights that consume les		
§150(h): Heating and/or cooling	loads are calculated in	n accordance with ASHRAE, SMAC	CNA or ACCA.	
	eaters rated with an Er	ats that meet the setback requirement nergy Factor no greater than the feat of R-12 or greater.		ernally wrapped
§150(j)1B: Unfired storage tank	s, such as storage tanl	ks or backup tanks for solar water-l sulation where the internal insulation		
recirculating sections of hot wa	ter pipes are insulated	st to water heater tank, non-recircu per Standards Table 150-B. ', or brine lines),and piping insulate		
water tank shall be insulated to	Table 150-B and Equa			
§150(j)3A: Insulation is protecte	ed from damage, includ water piping and refrig	ding that due to sunlight, moisture, e perant suction lines includes a vapo	equipment maintenance, and w or retardant or is enclosed entire	ind. ely in
	ystems and/or collector	rs are certified by the Solar Rating :	and Certification Corporation.	
w w - w	,			
Registration Number:	Regis	stration Date/Time:	HERS Provider:	
EnergyPro 5.0 by EnergySoft	User Number: 6249	RunCode: 2010-02-19T09:06:23		Page 8 of 10

PERFORMAN	CE CERTI	FICATE			· · · · · · · · · · · · · · · · · · ·	3 of 5)	CF-1R
Project Name Liang Remodel			Building Type	☑ Single Family □ Multi Family			Date 2/19/2010
ANNUAL ENERGY	USE SUMMAF	RΥ	1				
TDV //LDt/ft²	Standard	Proposed	Margin				
(KBtu/It -yr)							
Space Heating	73.66	75.71	-2.05				
Space Cooling	17.76	12.90	4.86				
Fans	8.19	6.96	1.24				
Domestic Hot Water		21.44	0.00				
Pumps	0.00	0.00	0.00	·		*	
Totals		117.00	4.05				
Percent Better Than			3.3 %				
BUILDI	NG COM	PLIES	- NO HEI	RS VERIFI	CATION	•	
Puilding Front Orient	totion:	(M)	) 270 deg	Ext. Walls/R	oof Wall /		nestration Area
Building Front Orient Number of Dwelling		(44)	1.00	EXI. Walls/H (W)	ooi wall/	472	Area 108
Fuel Available at Site		Nat	tural Gas	(N)		408	16
Raised Floor Area:	<b>.</b>		1.086	(E)		472	118
Slab on Grade Area:			0	(S)		408	0
Average Ceiling Heig			8.0	Roof		651	8
	rage U-Factor:		0.55		-	TOTAL:	250
	rage SHGC:		0.67	E	enestration/CFA		16.5 %
STATEMENT OF	- COMPLIAI	NCE					
STATEMENT OF This certificate of cor to comply with Title 2 Efficiency Standards	mpliance lists t 24, Parts 1 the	he building Administrat	ive Regulation		ded		
This certificate of cor to comply with Title 2 Efficiency Standards The documentation a	mpliance lists t 24, Parts 1 the of the Californ author hereby o	he building Administrat ia Code of	ive Regulation Regulations.	and Part 6 the			
This certificate of cor to comply with Title 2 Efficiency Standards The documentation a	mpliance lists t 24, Parts 1 the of the Californ author hereby of <b>Author</b>	he building Administrat ia Code of certifies that	ive Regulation Regulations.	and Part 6 the		BEC	
This certificate of cor to comply with Title 2 Efficiency Standards The documentation a	mpliance lists t 24, Parts 1 the of the Californ author hereby o	he building Administrat ia Code of certifies that	ive Regulation Regulations. t the document	and Part 6 the		BEC	19/2010
This certificate of cor to comply with Title 2 Efficiency Standards The documentation a	mpliance lists t 24, Parts 1 the of the Californ author hereby of <b>Author</b> <i>Energy Calculation</i>	he building Administrat ia Code of certifies that	ive Regulation Regulations.	and Part 6 the		BEC	(19/2010
This certificate of corto comply with Title 2 Efficiency Standards The documentation a <b>Documentation</b> Company Carstairs E  Address P.O. Box 4	mpliance lists to 24, Parts 1 the coff the Californ author hereby continued to the continue	he building Administrat ia Code of certifies that	ive Regulation: Regulations. I the document	and Part 6 the ation is accurate	and complete.	O5 2 M	
This certificate of corto comply with Title 2 Efficiency Standards The documentation a Documentation Company Carstairs E	mpliance lists to 24, Parts 1 the cof the Californ author hereby of Author Energy Calculations Table Dispo, CA 93403 Verall design rements is consistent at the consistency of refrigera	he building Administrat ia Code of certifies that s esponsibility stent with the d with this ant charge,	ive Regulations.  Regulations.  I the document  Name Timothy Phone (805) 90 I hereby certified other complicated insulation instal	ation is accurate  Carstairs 4-9048 es that the proposence forms and vion, and recogniz	signed sed building desvorksheets, with the compliant building enver	sign representent the specification	Date ed in this set ions, and t design,
This certificate of corto comply with Title 2 Efficiency Standards  The documentation at Documentation at Company Carstairs E Address P.O. Box 4 City/State/Zip San Luis Company The individual with or of construction documentally with any other calculduct sealing, verificatins taller testing and company at the company of	mpliance lists to 24, Parts 1 the coffice Californ author hereby consists of the Californ author hereby Calculations (736) author CA 93403 overall design rements is consistent ations submitted to of refrigeracertification and there (per Bustines) and the consists of the	he building Administrat ia Code of certifies that s esponsibility stent with the d with this ant charge, d field verific	ive Regulations. Regulations. It the document  Name Timothy Phone (805) 90 I hereby certificate other complicate insulation instactation by an ap-	and Part 6 the ation is accurate  Carstairs 14-9048 es that the proposence forms and vion, and recogniz llation quality, arproved HERS ra	signed sed building desvorksheets, with the compliant building enver	sign representent the specification	Date ed in this set ions, and t design,
This certificate of corto comply with Title 2 Efficiency Standards The documentation a  Documentation Company Carstairs E Address P.O. Box 4 City/State/Zip San Luis O The individual with or of construction docur with any other calculduct sealing, verificatinstaller testing and of Company Charles Ct	mpliance lists to 24, Parts 1 the cof the Californ author hereby of Author Energy Calculation.  1736  Obispo, CA 93403  Verall design rements is consistations submitted tion of refrigeral certification and ther (per Bushan)	he building Administrat ia Code of certifies that s esponsibility stent with the d with this ant charge, d field verific	ive Regulations. Regulations. It the document  Name Timothy Phone (805) 90 If hereby certified the other complicate insulation installation by an approfessions Control (1998). It is a substantial to the control (1998). It is a substantial t	and Part 6 the ation is accurate  Carstairs 4-9048 es that the proposence forms and vion, and recogniz llation quality, arproved HERS racode)	signed sed building desvorksheets, with the compliant building enver	sign representent the specification	Date ed in this set ions, and t design,
This certificate of corto comply with Title 2 Efficiency Standards  The documentation at Documentation at Company Carstairs E Address P.O. Box 4 City/State/Zip San Luis Company The individual with or of construction documentally with any other calculduct sealing, verificatins taller testing and company at the company of	mpliance lists to 24, Parts 1 the cof the Californ author hereby continued author hereby continued author energy Calculations (736) author Calculations (736) authors submitted tion of refrigerations of refrigeration of refrigeration (1987) authors (1988) author	he building Administrat ia Code of certifies that s esponsibility stent with the d with this ant charge, d field verific	ive Regulations. Regulations. It the document  Name Timothy Phone (805) 90 I hereby certificate other complicate insulation instactation by an ap-	cand Part 6 the ation is accurate  Carstairs 14-9048 Es that the proposition, and recognizillation quality, arproved HERS raicode)	signed sed building desvorksheets, with the compliant building enver	sign representent the specification	Date ed in this set ions, and t design,

MANDATORY MEASURES SUMMARY: Residential	(Page 2 of 3)	MF-1F
Project Name Liang Remodel		Date 2/19/201
§150(m)1: All air-distribution system ducts and plenums installed, are sealed and insulate 601, 602, 603, 604, 605 and Standard 6-5; supply-air and return-air ducts and plenums at 4.2 or enclosed entirely in conditioned space. Openings shall be sealed with mastic, tape applicable requirements of UL 181, UL 181A, or UL 181B or aerosol sealant that meets thused to seal openings greater than 1/4 inch, the combination of mastic and either mesh of \$150(m)1: Building cavities, support platforms for air handlers, and plenums defined or cosheet metal, duct board or flexible duct shall not be used for conveying conditioned air. But contain ducts. Ducts installed in cavities and support platforms shall not be compressed to find the ducts.  §150(m)2D: Joints and seams of duct systems and their components shall not be sealed unless such tape is used in combination with mastic and draw bands.	re insulated to a minimum inst or other duct-closure system to be requirements of UL 723. If r r tape shall be used onstructed with materials other uilding cavities and support plate o cause reductions in the cros	alled level of R that meets the mastic or tape i r than sealed atforms may as-sectional are
§150(m)7: Exhaust fan systems have back draft or automatic dampers. §150(m)8: Gravity ventilating systems serving conditioned space have either automatic or dampers.	•	
§150(m)9: Insulation shall be protected from damage, including that due to sunlight, mois Cellular foam insulation shall be protected as above or painted with a coating that is wate radiation that can cause degradation of the material.	ture, equipment maintenance, r retardant and provides shiek	, and wind. ding from solar
§150(m)10: Flexible ducts cannot have porous inner cores. §150(o): All dwelling units shall meet the requirements of ANSI/ASHRAE Standard 62.2-2 Quality in Low-Rise Residential Buildings. Window operation is not a permissible method required in Section 4 of that Standard.	2007 Ventilation and Acceptab of providing the Whole Buildin	ele Indoor Air ng Ventilation
Pool and Spa Heating Systems and Equipment Measures: §114(a): Any pool or spa heating system shall be certified to have: a thermal efficiency th		
Regulations; an on-off switch mounted outside of the heater; a permanent weatherproof p shall not use electric resistance heating or a pilot light.  §114(b)1: Any pool or spa heating equipment shall be installed with at least 36" of pipe be and return lines, or built-up connections for future solar heating.  §114(b)2: Outdoor pools or spas that have a heat pump or gas heater shall have a cover.  §114(b)3: Pools shall have directional inlets that adequately mix the pool water, and a timprogrammed to run only during off-peak electric demand periods.	etween filter and heater, or dec	dicated suction
§150(p): Residential pool systems or equipment meet the pump sizing, flow rate, piping, f	ilters, and valve requirements.	of \$150(n)
Residential Lighting Measures:	mers, and varve requirements	or 3/100(p).
§150(k)1: High efficacy luminaires or LED Light Engine with Integral Heat Sink has an efficant contained in Table 150-C and is not a low efficacy luminaire as specified by §150(k)2. §150(k)3: The wattage of permanently installed luminaires shall be determined as specified	ŕ	efficacies
§150(k)4: Ballasts for fluorescent lamps rated 13 Watts or greater shall be electronic and		y no less than
20 kHz. §150(k)5: Permanently installed night lights and night lights integral to a permanently installed night lights and night lights integral to a permanently installed night lights and night lights integral to a permanently installed night lights and night lights integral to a permanently installed night lights and night lights integral to a permanently installed night lights and night lights integral to a permanently installed night lights and night lights integral to a permanently installed night lights and night lights integral to a permanently installed night lights and night lights integral to a permanently installed night lights and night lights integral to a permanently installed night lights and night lights integral to a permanently installed night lights and night lights a	nall not contain a line-voltage s	socket or line-
§150(k)6: Lighting integral to exhaust fans, in rooms other than kitchens, shall meet the a	pplicable requirements of §15	0(k).
§150(k)7: All switching devices and controls shall meet the requirements of §150(k)7. §150(k)8: A minimum of 50 percent of the total rated wattage of permanently installed ligh EXCEPTION: Up to 50 watts for dwelling units less than or equal to 2,500 ft₂ or 100 watts exempt from the 50% high efficacy requirement when: all low efficacy luminaires in the kit sensor, dimmer, energy management system (EMCS), or a multi-scene programmable of luminaries in garages, laundry rooms, closets greater than 70 square feet, and utility room manual-on occupant sensor. §150(k)9: Permanently installed lighting that is internal to cabinets shall use no more than	for dwelling units larger than a tchen are controlled by a manu- ontrol system; and all permanens are high efficacy and control	2,500 ftz may bual on occupar ently installed olled by a
illuminated cabinet.	-	
Registration Number: Registration Date/Time:	HERS Provider:	
	TIET OF TOTIGOT.	

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CE	RTIF	ICA	TE (	OF C	OMPI	LIAN	CE:	Resid	enti	al			(Par	t 4 of	5)	С	F
	ct Name g <i>Rem</i>		ı				Ві	uilding Typ	e 🗵 S	Single Multi F			dition Ald sting+ A		Alteratio	Dat 2/1	
	_		ACE D	ETAI	•											2/1	3/1
Surf		ONI	U-	EIAII		Insulatio	· ·		Ī	1	1		aint Ann	ondiv	1		_
Typ		rea	Factor	Cavity				or Frame	Azm	Tilt	Status	J	oint App 4	enaix	Loc	ation/Cor	mm
Wall	be F	113	0.356	,	Exterio	TIAIII	milenc	лгаше	270		Existing	121			1st Flo		11111
Wall		167	0.356		+	+	+		180			4.3.1			1st Flo		
Door		17	0.500				_		180		New	4.5.1			1st Flo		
Wall		144	0.356		+	+	+		90		Existing				1st Flo		
Wall		168	0.356						0		Existing	4.3.1			1st Flo		
Floor		435	0.037	R-19					0	180	New	4.4.1			1st Flo	or	
Floor		651	0.238	None					0	180	Existing	4.4.2	?-A1		2nd Fl	oor	
Wall		231	0.356	None					270		Existing				2nd Fl		
Door		20	0.500						270		Existing				2nd Fl		
Wall		224	0.356			-	-		180		Existing				2nd Fl		
Wall		210	0.356		-				90		Existing				2nd Fl		
Wall		224	0.356						0		Existing	_			2nd Fl		
Roof		643	0.079	K-11	1	+	+		0	(	Existing	4.2.1	-A2		2nd Fl	oor	
					+	+	+										
					+	+	+										
FEN	ESTR/	OITA	N SUR	FACE	DETAIL	S											
ID	Туре		Area		actor 1		IGC <sup>2</sup>	Azm	Statu	IS	Gla	zing 1	Type		Locati	on/Comr	ner
1	Window		53.3		Default		Default		Remov		ingle Metal			1 st	Floor	011 001111	1101
2	Window		33.3		Default		Default		New		ench Door				Floor		
3	Window	,	6.0		Default	0.67	Default		New		ouble Non		Clear		Floor		
4	Window		8.0		Default	0.67	Default		Altered		ouble Non				Floor		
5	Existing	,		1.190	Default	0.83	Default			S	ingle Metal	Clear	-	pre	-altered	for above	
6	Window	/	16.0	0.550	Default	0.67	Default	0	Alterec	d D	ouble Non	Metal	Clear	1st	Floor		
7	Existing				Default		Default				ingle Metal					for above	
8	Window	_	68.6		Default		Default	270	Altered		ouble Non				l Floor		
9	Existing	_			Default		Default				ngle Metal			, ,		for above	
10	Window		110.4		Default		Default	90	Altered	_	ouble Non				l Floor	f t	
11	Existing Skyligh		8.0		Default Default		Default Default	- 0	New		ingle Metal ouble Non				-anterea 1 Floor	for above	_
12	Gryngri	<u> </u>	0.0	0.000	Dolaun	0.07	Delaun	-	14000		JULIU I VOII	MOLGI	Olean	2/10	771001		
	(1) U-F (2) SH(							lards, NFF lards, NFF									
		_	ADING			Table III	iii Stano	iaius, iviri	ic = Lai	Jeleu v	alue						
LAI	LINIOI	OH	ADING	DETA	ILO	Wind	OW		Overha	ana			Left Fir			Right F	in
ID	Exte	rior Sl	hade Ty	ne .	SHGC	Hgt	Wd			LExt	RExt	Dist	Len	Hgt	Dist	Len	Ϊ.
1	Bug Sc		iluuu iy	PO	0.76	1.9.	774	LOII	·9• ·	LLA	TTEXT	D 101	Lon		Diot	LOII	
2	Bug Sa				0.76												
3	Bug Sa				0.76												$\vdash$
4	Bug Sc				0.76			†									
5	Bug Sc				0.76												
6	Bug Sc				0.76												
7	Bug Sc				0.76												
8	Bug Sc.				0.76												
9	Bug Sc				0.76												-
10	Bug Sc				0.76												-
11 12	Bug Sa None	9911			0.76 1.00												-
12	MONE				7.00												+
	1																
										- 1							
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EnergyPro 5.0 by EnergySoft User Number: 6249 RunCode: 2010-02-19709:06:2 ID: 10-218

Sale   2/19/20:   Special   11: Permanently Installed luminaires located in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, closets, and utility rooms shall be high efficacy luminaires exhibits and utility or owns shall be high efficacy luminaires which that complies with the applicable requirements of \$119. EXCEPTION 2: Lighting in detached storage building less than 1000 square feet located on a residential site is not required to comply with \$150(k)12: Luminaires recessed into insulated callings shall be listed for zero clearance insulation contact (IC) by Underwriters Laboratories or other nationally recognized testing/rating laboratory; and have a label that certifies the luminaire is airight with air leakage less then 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283; and be sealed with a gasket or caulk between the luminaire providing outdoor lighting, including lighting for private patios in low-rise residential building or to other buildings on this same lot shall be high officacy. EXCEPTION 1: Permanently installed outdoor low officacy luminaires shall be allowed provided that they are controlled by a manual ontoff switch, a motion sensor not having an override or bypass switch that disables the motion sensor and one of the following controls: a photocontrol on thaving an override or bypass switch that disables the motion sensor not loaving an intermediate of the photocontrol. QR an astronomical time clock not having an override or bypass switch that disables the motion sensing function provided that the motion sensor is automatically reactivated within sk hours. EXCEPTION 3: Permanently installed luminaires in Callot having an override or bypass switch that disables the astronomical time clock not having an override or bypass switch that disables the astronomical time clock of an energy management control system (EMCS) not having an override or bypass switch that allows the luminaire to be always. DetCEPTION: Permanently installed luminaires in Callotinaire to	Project Name		MARY: Residential	(Page 3 of 3)	MF-1R
§150(k)11: Permanently installed luminaires located in rooms or areas other than in kitchens, bathrooms, garages, laundry rooms, closets, and utility rooms shall be high efficacy luminaires. EXCEPTION 1: Permanently installed low efficacy luminaires shall be allowed provided they are controlled by either a dimmer switch that complies with the applicable requirements of §119, or by a manua on occupant sensor that complies with the applicable requirements of §119. EXCEPTION 2: Lighting in detached storage building less than 1000 square feet located on a residential site is not required to comply with §150(k)11.  §150(k)12: Luminaires recessed into insulated ceilings shall be listed for zero clearance insulation contact (IC) by Underwriters Laboratories or other nationally recognized testing/rating laboratory; and have a label that certifies the luminaire is airtight with air leakage less then 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283; and be sealed with a gasket or caulk between the luminaire housing and ceiling.  §150(k)12: Luminaires providing outdoor lighting, including lighting for private patios in low-rise residential buildings with four or more dwelling units, entrances, balconies, and porches, which are permanently mounted to a residential building or to other buildings on the same lot shall be high efficacy. EXCEPTION 1: Permanently installed outdoor low efficacy luminaires shall be allowed provided that they are controlled by a manual on/off switch, a motion sensor not having an override or bypass switch that disables the photocontrol; OR an astronomical time clock not having an override or bypass switch that disables the photocontrol; OR an astronomical time clock not having an override or bypass switch that disables the photocontrol; OR an astronomical time clock not having an override or bypass switch that disables the photocontrol; OR an astronomical time clock not having an override or bypass switch that disables the photocontrol; OR an astronomical time clock not having an ove	to a second of all				
Tosets, and utility rooms shall be high efficacy lumnaires. EXCEPTION 1: Permanently installed low efficacy luminaires shall be allowed provided they are controlled by either a dimmer switch that complies with the applicable requirements of §119, or by a manual on occupant sensor that complies with the applicable requirements of §119. Lighting in detached storage building less than 1000 square feet located on a residential site is not required to comply with §150(k)11.  §150(k)12: Luminaires recessed into insulated ceilings shall be listed for zero clearance insulation contact (IC) by Underwriters Laboratories or other nationally recognized testing/rating laboratory; and have a label that certifies the luminaire is airtight with air leakage less then 2.0 CFM at 75 Pascals when tested in accordance with ASTM E283; and be sealed with a gasket or caulk between the luminaire housing and ceiling.  §150(k)13: Luminaires providing outdoor lighting, including lighting for private patios in low-rise residential buildings with four or more dwelling units, entrances, balconies, and porches, which are permanently mounted to a residential building or to other buildings on the same lot shall be high efficacy. EXCEPTION 1: Permanently installed outdoor low efficacy luminaires shall be allowed provided that they are controlled by a manual on/off switch, a motion sensor not having an override or bypass switch that disables the photocontrol; OR an astronomical time clock not having an override or bypass switch that disables the photocontrol; OR an astronomical time clock not having an override or bypass switch that disables the astronomical time clock; OR an energy managemer control system (EMCS) not having an override or bypass switch that disables the astronomical time clock; OR an energy managemer control system (EMCS) not having an override or bypass switch that disables the astronomical time clock; OR an energy managemer control system (EMCS) not having an override or bypass switch that disables the astronomical time clock;	lang Kemodel				2/19/201
	§150(k)11: Permanently insta closets, and utility rooms sha allowed provided they are coron occupant sensor that compthan 1000 square feet located §150(k)12: Luminaires recess Laboratories or other national leakage less then 2.0 CFM at the luminaire housing and cei §150(k)13: Luminaires provid dwelling units, entrances, ball same lot shall be high efficact they are controlled by a manuand one of the following contrastronomical time clock not hontrol system (EMCS) not hold in the control system (EMCS) in the luminaires used to comply with sensing function provided that luminaires in or around swimbe high efficacy luminaires. §150(k)14: Internally illuminaires §150(k)15: Lighting for parking requirements in Sections 130 requirements of Sections 130 requirements of Sections 130 frequirements of Sections 140 frequi	Il be high efficacy luimnantrolled by either a dimmiplies with the applicable of on a residential site is used into insulated ceiling lly recognized testing/rat (75 Pascals when tested liling). In goutdoor lighting, includents, and porches, whey EXCEPTION 1: Permiplial on/off switch, a motion role: a photocontrol not having an override or bypaving and 145.  It is a statistically bypaving and 147. Ligital of the process of the original of the original of the original or bypaving and 147. Ligital of the original or bypaving and 146.  It is a statistical or bypaving and 146.  It is a statistical or bypaving and 147. Ligital or bypaving and 148.  It is a statistical or bypaving and 149.  It is a statistical or bypaving and 149.	ires. EXCEPTION 1: Permanently inser switch that complies with the application of requirements of §119. EXCEPTION 3 not required to comply with §150(k) 11 is shall be listed for zero clearance insign laboratory; and have a label that of in accordance with ASTM E283; and uding lighting for private patios in low ich are permanently mounted to a resamently installed outdoor low efficacy in sensor not having an override or by aving an override or by aving an override or by assistent that disables the astronomass switch that disables the astronomass switch that allows the luminaire to 13 may be controlled by a temporary utomatically reactivated within six house, or other location subject to Article 6 comply with Section 148; OR not conting to §130(d).  a total of for 8 or more vehicles per sinting for parking garages for 8 or more period. Permanently installed low efficiency.	stalled low efficacy luminaires cable requirements of §119, of 2: Lighting in detached storagit. Sulation contact (IC) by Under certifies the lumiunaire is airtig to be sealed with a gasket or corrise residential buildings with sidential building or to other build by a switch that disables the photocontrol; nical time clock; OR an energing to be always on EXCEPTION 2 override switch which bypassurs. EXCEPTION 3: Permaner 1880 of the California Electric Carin a screw-base socket, and title shall comply with the applicate vehicles shall comply with four ficacy luminaires shall be allowed.	dry rooms, shall be or by a manual e building less writers ght with air caulk between four or more uildings on the rovided that motion senso OR an y managemen 2: Outdoor ses the motion nity installed code need not consume no cable he applicable or more
EnergyPro 5.0 by EnergySoft User Number: 6249 RunCode: 2010-02-19T09:06:23 ID: 10-218 Page 10 of	Registration Number:	Reci	stration Date/Time:	HERS Provider:	

Liang Remodel 2200 Pinecrest Drive

Carstairs Enerqy Calculations

DATE:

JOB NO:

DRAWN BY: T.C

CHECKED BY:

SCALE:

SHEET NO:

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