

TITLE 24 2013 CALGREEN 2013

A VERY BRIEF OVERVIEW

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DEFINITION:

Title 24: The 24th title within the California Code of Regulations. Title 24 is reserved for state regulations that are building standards published by the California Building Standards Commission. Title 24 is given the name of California Building Standards Code by Health and Safety Code Section 18902. It is sometimes referred to as the State Building Standards Code.

TITLE 24 HAS MANY CHAPTERS:

- RESIDENTIAL CODE => CHAPTER 2.5
- ELECTRICAL CODE => CHAPTER 3
- MECHANICAL CODE => CHAPTER 4
- PLUMBING CODE => CHAPTER 5
- ENERGY CODE => CHAPTER 6**
- FIRE CODE => CHAPTER 9
- GREEN BUILDING CODE => CHAPTER 11**

THIS IS NOT A COMPLETE LISTING

- **ENERGY CODE is TITLE 24, CHAPTER 6**

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- **GREEN BUILDING CODE IS TITLE 24, CHAPTER 11**

- **KNOWN AS 'CALGREEN'**

TITLE 24 OR T-24: SHORTHAND REFERENCE TO A
BUILDING ENERGY ANALYSIS REPORT.

A T-24 REPORT HAS TWO VERSIONS:

- *PRESCRIPTIVE*
- *PERFORMANCE*

ELEMENTS of TITLE 24 OR T-24:

- FEATURES INCLUDE:

- SITING

- FENESTRATION

- INSULATION

- AREA OF EXTERNAL WALLS AND ROOFS

- EFFICIENCY OF THE HVAC, LIGHTING, AND WATER HEATING SYSTEMS

ENERGY CODE COMPLIANCE INCLUDES THE WHOLE HOUSE, WHICH IS DIFFICULT FOR A SMALL REMODEL OR ADDITION.

A PRESCRIPTIVE REPORT IS LIKE A RECIPE:

- MEET THE REQUIREMENTS OF EACH MEASURE
- NO FLEXIBILITY
- THERE IS NO ABILITY TO TRADE OFF

PERFORMANCE REPORT:

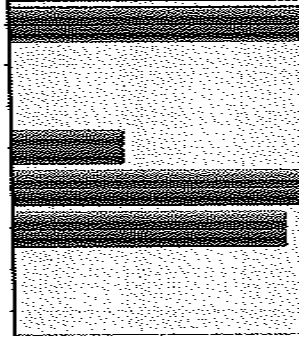
- COMBINES ALL THE ENERGY FEATURES
- PRESENTS THIS AS A PERCENTAGE OF STANDARD
- COMMON APPROACH WAS 15% OVER STANDARD

=>THIS ALLOWS TRADEOFFS

FOR EXAMPLE, A HOMEOWNER WITH A GOOD VIEW COULD CHOOSE TO HAVE VERY LARGE WINDOWS (INEFFICIENT) AND WOULD OFFSET THEM WITH HIGHER THAN AVERAGE EFFICIENCY SOMEWHERE ELSE, MAYBE WITH THE FURNACE, OR INSULATION.

	94.73	36.69	56.04
	50.77	63.02	-12.25
	0.00	0.00	0.00
	0.00	0.00	0.00
Water	19.25	19.25	0.00
	64.20	64.20	0.00
	47.57	47.57	0.00
	0.00	0.00	0.00
	0.00	0.00	0.00
TOTALS	286.32	237.35	48.97
than Standard		17.1 %	(17.1 % excluding process)

- Fans
- Heat Rej
- Pumps
- DHW
- Lighting
- Receptacle
- Process
- Process Ltg



BUILDING COMPLIES

FORMATION

ation	(S) 190 deg	Conditioned Floor Area	6,500
ies	2	Unconditioned Floor Area	0
tems	4	Conditioned Footprint Area	4,845
es	8	Natural Gas Available On Site	Yes

	Orientation		Gross Area		Glazing Area		G
	(S)	(W)	sqft.	sqft.	sqft.	sqft.	
	(S)	(W)	2,250	1,250	1,260	410	
	(N)	(E)	2,720	1,000	0	0	
Total			7,220	2,745	1,670	0	

Lighting Power Density	Standard	1.035	W/sqft.	Proposed	1.035	W/sqft.	Prescripti Comparis LTG-1C f
	Envelope TDV Energy	237,304		277,180			

PERFORMANCE CERTIFICATE: Residential

Project Name
1440 Montero Ave Addition

Building Type Single Family
 Multi Family

ANNUAL ENERGY USE SUMMARY

TDV (kBtu/ft ² -yr)	Standard	Proposed	Margin
Space Heating	32.68	35.23	-2.55
Space Cooling	15.17	7.96	7.21
Fans	4.99	3.06	1.93
Domestic Hot Water	15.22	10.06	5.15
Pumps	0.00	0.00	0.00
Totals	68.06	56.31	11.75
Percent Better Than Standard:			17.3 %

BUILDING COMPLIES - NO HERS VERIFICATION

Building Front Orientation:	(S) 180 deg	Ext. Walls/Roof
Number of Dwelling Units:	1.00	(S)
Fuel Available at Site:	Natural Gas	(W)
Raised Floor Area:	1,343	(N)
Slab on Grade Area:	782	(E)
Average Ceiling Height:	8.4	Roof
Fenestration Average U-Factor:	1.09	
Average SHGC:	0.81	Fenestration

REMARKS

R1- Include GPR-1 and specs on Polaris PG10 50-130-2NV water heater

STATEMENT OF COMPLIANCE

This certificate of compliance lists the building features and specifications needed to comply with Title 24, Parts 1 the Administrative Regulations and Part 6 the Efficiency Standards of the California Code of Regulations.

OTHER T-24 FORMS

- LIGHTING
- MECHANICAL
- ENVELOPE
- CF1R – CERTIFICATE OF COMPLIANCE

2010 CALGREEN: NEW CONSTRUCTION

2010 CALGREEN only applied to NEW construction.

Jurisdictions adopted green bldg. ordinances, requiring

- T-24 better than standard, 15%
- Green point check list, rated or verified
- Calgreen Tiers 1 or 2.

RESIDENTIAL CALGREEN:

- Applies to NEW construction
- Applies to ADDITIONS/ALTERATIONS that increase the conditioned area, volume or size

The CALGREEN measures only apply to the area affected by the current work being performed

NON-RESIDENTIAL CALGREEN:

- *APPLIES TO NEW NON-RES BUILDINGS, or*
- *ADDITIONS: 1,000 SQ FT or more, or*
- *ALTERATIONS: VALUE \$200,000 or more*

Includes Mandatory Green Building Measures

COMPLIANCE STRATEGIES:

REQUIRE SIGNATURES BY SEVERAL PARTIES:

DOCUMENTATION AUTHOR
DESIGNER OR OWNER
CONTRACTOR

COMPLIANCE STRATEGIES:

REQUIRE DOCUMENTATION TO BE INCLUDED ON THE PLANS

BURLINGAME DOES THIS FOR T-24, CALGREEN AND GREEN POINTS

COMPLIANCE STRATEGIES:

REQUIRE 8.5" BY 11" COPIES, STAPLE TO FRONT OF PLANS

BURLINGAME DOES THIS FOR T-24, CALGREEN AND GREEN POINTS

COMPLIANCE STRATEGIES:

REQUIRE APPLICANTS TO FILL IN A CHECKLIST, **AND** INDICATE WHERE EACH ITEM IS ADDRESSED ON THE PLANS

WORK-AROUND FOR ARCHITECTS: COPY OUR FORM, AND SCAN IT ONTO THE PLANS, AS 'BOILERPLATE'

T-24 REPORTS OFTEN CONTAIN SIMILAR LISTS BURIED IN THE REPORT



2013 CALIFORNIA GREEN BUILDING CODE RESIDENTIAL CHECKLIST

New residential buildings must be designed to include the Green Building mandatory measures specified in this checklist. These Green Building mandatory measures also apply to additions or alterations of existing residential buildings where the addition or alteration increases the buildings conditioned area, volume, or size. These requirements apply only to the specific area of addition or alteration.

Building Permit Number: _____

Site Address: _____

***In the column labeled "Plan Reference"
specify where each Measure can be found on the plans.***

Green Building Measure	Plan Reference
SITE DEVELOPMENT (2013 CGC §4.106)	
A plan has been developed, and will be implemented, to manage storm water drainage during construction. CGC §4.106.2 & §4.106.3	
ENERGY EFFICIENCY (2013 CGC §4.2 and the 2013 California Building Energy Efficiency Standards)	
2013 Energy Code performance compliance documentation must be provided in 8-1/2" X 11" format and must be replicated on the plans.	
Walls with 2 X 6 and larger framing require R-19 insulation §150.0 (c) 2	
Hot water piping insulation §150.0 (j) 2 A ii	
Lighting – new mandatory requirements for indoor rooms. §150.0 (k)	
Duct insulation (R-6) required §150.0 (m) 1	
Duct leakage testing – 6% w/o air handler and 4% with air handler §150.0 (m) 11	
Return duct design/fan power, airflow testing, and grill sizing requirements §150.0(m)13	
Water heating – 120 volt receptacle < 3 ft., Cat III or IV vent, and gas supply line capacity of at least 200,000 Btu / hour §150.0 (n)	
New third-party HERS verification for ventilation and indoor air quality §150.0 (o)	
New mandatory U-factor (0.58) for fenestration and skylights §150.0 (q)	
Luminaire efficiency levels 2013 California Energy Code Table 150.0 B	
Refrigerant charge verification for ducted package units, mini-splits, and other units §150.1 (c) 7	
Radiant barrier now required in Climate Zone 3 §150.1 (c) 2	
Reduce U-factor (0.32) and SHGC (0.25) for high performance windows §150.1 (c) 3 A	

CATEGORIES ON OUR CHECKLIST

- SITE DEVELOPMENT
- ENERGY EFFICIENCY
- WATER EFFICIENCY AND CONSERVATION
- DURABILITY, REDUCED MAINTENANCE
- MAINTENANCE AND OPERATION
- FIREPLACES
- POLLUTANT CONTROL
- INTERIOR MOISTURE
- INDOOR AIR QUALITY AND EXHAUST
- ENVIRONMENTAL COMFORT
- HVAC INSPECTOR QUALIFICATION

NET RESULT IS THAT WE ARE STILL NEVER SURE THAT THE CONTRACTOR WILL DIG INTO THE DETAILS OF CALGREEN.

BURDEN FALLS TO THE INSPECTORS, IN THE FIELD, TO VERIFY COMPLIANCE.

IT IS NOT THEIR HIGHEST PRIORITY