B

Type

X

Plans

BLD11-2886

Permit Number

2335

Street Number

WILLOW CREEK RD

Street Name

JEN

Community Code

097-210-006

APN

PRMD County of Sonoma

S.C. Repro 3/10

COUNTY OF SONOMA - PERMIT AND RESOURCE MANAGEMENT DEPARTMENT

2550 Ventura Avenue, Santa Rosa, CA 95403 (707) 565-1900 FAX (707) 565-1103

Please Print Your Name: CHURCH HILDRETH **Date Applied:** 7/14/11

INFORMATION WITHIN HEAVY LINE TO BE COMPLETED BY APPLICANT

SITE LOCATION INFORMATION - PRINT CLEARLY

Site Address: 2335 WILLOW CREEK RD City: JENNER ZIP: 95450

Cross-Street: Hwy #1 APN: 097-210-006 Project Phone #: 707 865-9327 Project Fax #: ( ) SAME

Directions: LEFT AT INDIAN REST. / 4 MILES Email address: NA Unit # Lot #

Describe Project: ADDITION & ~~REMODEL~~ TO EXISTING RES. 2ND STORY Living Area 4614 1,122 NEW Garage Deck 2057 Contract Price: 975K

OWNER NAME AND ADDRESS			APPLICANT NAME AND ADDRESS		
Name: PAUL MATTHEWS + MARIA CARDAMONE			CHURCH HILDRETH		
Mailing Address:			Mailing Address: 1197 E. WASHINGTON		
City:	State:	ZIP:	City: PET.	State: CA	ZIP: 94952
Day Ph: ( )	Fax: ( )		Day Ph: 707 778 7232	Fax: 707 778 1096	

CONTRACTOR INFORMATION			OTHER PERSONS (ARCHITECT, ENGINEER, ETC.)		
Company Name: LANE CONSTRUCTION			Name: TERRY O'REILLY c/o WHITCHURCH		
Address: 401 TUCKER ST			Address: 610 9TH ST.		
City: HEALDSBURG	State: CA	ZIP: 95448	City: FORTUNA	State: CA.	ZIP: 95540
Day Ph: 707 235 5780	Fax: 707 431-1677		Day Ph: 707 725 6926	Fax: ( ) 725 2959	
			License No:	Exp. Date:	

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 worker's compensation, as provided for by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued.

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

Carrier ____

Policy No. ____

(This section need not be completed if the permit is for one hundred dollars ($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 worker's compensation laws of California, and agree that if I should become subject to the worker's compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Exp. Date: ____ Applicant: ____

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 FEES.

CONSTRUCTION LENDING DECLARATION

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.).

Lenders Name ____

Lenders Address ____

BR, SR, VOH

FOR DEPARTMENT USE

Zoning TPCC B6-160/640ac File No. Acres 246

Existing Use/Structures SFD, garage

Proposed Use/Structures remodel + addition to (E) SFD

Zoning Min. Yard Requirements: Front 30 Left 10 Right 10 Back 20

NOTE: Fire Safe Standards require all parcels greater than 1 Acre to have a min. 30' setback unless mitigated. ☐ Mitigation Required ☐ Address subject to change

Approval for Permit Issuance: By: ____ Date: ____

Approval for Occupancy: By: Scott J. Humpe[illegible] Date: 7/14/11.

Conditions: No Coastal Permit Required

Sewer Connection: ☐ Available ☐ Fees Paid

Approved by: ____ Date: ____

Road Encroachment: ☐ Fees Paid N/R.

Approved by: C. Ozanich Date: 07/14/2011

Septic System Permit/Clearance #: SE011-0394

Approved by: [signature] Date: 11/18/11

Flood Zone: ☐ Yes ☑ No 100 Year Flood Elevation: ____

Site Review: BLD11-0547

Drainage Review N/R

Approved by: C. Ozanich Date: 07/14/2011

Fire: Approved by: S Mosivchak Date: 12-6-11

Code Enforcement Violation ☐ Yes ☑ No Violation # ____

This permit is limited to ____ days.

Work Authorized: 4614 sf SFD, remodel addition + rebuild, 2057 sf deck

OWNER-BUILDER DECLARATION

I hereby affirm under penalty of perjury that I am exempt from the Contractor's 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 Contractor's License Law (Chapter 9 (commencing with Section 7000) of Division 3 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).):

☐ I, as 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 Professions 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 or 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 or 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 & P.C. for this reason ____

By my signature below I acknowledge that, except for my personal residence in which I must have resided for at least one year prior to completion of the improvements covered by this permit, I cannot legally sell a structure that I have built as an owner-builder if it has not been constructed in its entirety by licensed contractors. I understand that a copy of the applicable law, Section 7044 of the Business and Professions Code, is available upon request when this application is submitted or at the following website: http://www.leginfo.ca.gov/calaw.html.

7/14/11 [signature]

Date Signature of Property Owner or Authorized Agent

LICENSED CONTRACTOR'S 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.

Lic. Class ____ Lic. No. ____

Exp. Date ____ Contractor ____

ASBESTOS DECLARATION

Written asbestos notification pursuant to Part 61 of Title 40 of the Code of Federal Regulations is required when asbestos exists in buildings, or portions thereof, undergoing demolition. I hereby declare that demolition authorized by this permit is from construction that (☐ does) (☐ does not) contain asbestos, or that ☐ no demolition is authorized by this permit.

I certify that I have read this application and affirm under penalty of perjury that the above information is correct. I agree to comply with all local Ordinances and State laws relating to building construction. I hereby authorize representatives of the County of Sonoma to enter upon the above-mentioned property for inspection purposes. I, after making the Certificate of Exemption for the Worker's Compensation provision of the Labor Code, I should become subject to such provisions, I will forthwith comply. In the event I do not comply with the Workman's Compensation law, this permit shall be deemed revoked.

[signature] AGR

PERMITTEE SIGNATURE

1197 E. WASHINGTON PET. 94952

ADDRESS CITY ZIP

☐ Contractor ☐ Owner ☑ Other Licensed Professional

☑ Plans Approved	☐ Post FIRM	☐ Alquist Priolo Report Available
☐ No Plans Subject to Field Inspection	☐ Pre FIRM	☐ Geotechnical report Available

Plancheck Checked By	Date:	Type of Construction	Occupancy	No. of Stories	No. of Bedrooms
B. Waters	12/8/11	VB	R3	2	3

Permit Cleared for Issuance By	Date:	Auto. Fire Sprinklers Req'd	No of Units	Certificate of Occupancy
[signature]	12/15/11	Yes		

PAYMENT REC'D

Machine Space for Permit Fee $____

JAN 03 2012

PERMIT AND RESOURCE MANAGEMENT DEPARTMENT COUNTY OF SONOMA

7-29-13 RP

JOB ADDRESS: 2335 WILLOW CREEK RD JENNER

PERMIT NUMBER: BLD11-2886

INSPECTION AREA: 7

THIS PERMIT SHALL EXPIRE IN THREE(3) YEARS FROM DATE FEES ARE PAID UNLESS OTHERWISE NOTED BY CODE ENFORCEMENT

Distribution: White - File Canary - Applicant Blue - Assessor Cardstock - Inspector

cmuller s:\handouts\cis\CIS-007.cdr Revised: 01/29/2009

131) SPECIAL INSPECTION REQUIRED	☐ YES	☒ NO	IF YES, SEE ADDITIONAL SHEET

INSPECTION RECORD	DATE	NAME	REMARKS
101) ROUGH GRADING			
103) FOUNDATION			
FORMS/SETBACK			(103) 4-26-12 Partial N & W side complete, all the footings & piers RP
FOOTING 4-26-12 RP			
WALLS			
106) UFER GROUND # 4 cu	4-26-12	RP	
104) CAISSONS/PIERS			
105) SLAB			
107) UNDERGROUND UTILITIES			
110) MASONRY			
109) RETAINING WALLS			
113) FIREPLACE			
FOOTING			
HEARTH/PROTECTION			
THROAT			
114) CHIMNEY			
120) UNDERFLOOR/UNDERSLAB			
115) HYDRONICS			
116) U/F ELECTRICAL	12-19-12	RP	
117) U/F MECHANICAL			
118) U/F PLUMBING	4-26-12	RP	(140, 118) 2nd story over living Rm 8-9-12 MW
119) U/F FRAMING			(Par 119) Stage U/F OK 8-9-12 MW
139) U/F INSULATION			
126) SHEAR WALLS			(126) 8-20-12 Lower Shear RP
☐ INTERIOR ☐ EXTERIOR	9-12-12	RP	
127) DIAPHRAGMS			
☑ ROOF 9-26-12 MW ☐ FLOOR			
134) SIDING/SHEATHING			
125) HOLD DOWNS	12-19-12	RP	
132) CLOSE-IN	12-19-12	RP	(132, 122, 124, 128) 9-20-12 Mech rm OK
122) ROUGH ELECTRICAL			(142) OK. @ Mech. Rm. 9-5-12 SA
123) ROUGH MECHANICAL			
124) ROUGH PLUMBING	12-19-12	RP	
128) ROUGH FRAME			
160) SMOKE DETECTORS			
139) INSULATION			
142) WALLBOARD PNR	1-14-13	RP	
143) FIREWALLS			
135) STUCCO/PLASTER			Note (199) Final
☐ LATH 7-2-13 MW ☐ SCRATCH			OK to final in office with Septic approval
137) ROOFING			
130) TUB/SHOWER PAN	1-29-13	RP	
162) FIRE DAMPERS/DOORS			
164) SUSPENDED CEILING			
☐ ROUGH ELEC. ☐ ROUGH MECH.			(153) 8-28-12 Gas line between tank & energy. RP
165) EXITING - RAMPS/STAIRS			
163) HANDRAILS/GUARDRAILS			
CORRIDORS/DOORS			
166) ACCESSIBILITY COMPLIANCE			
144) WATER TANKS			
☐ SLAB ☐ WALLS			
170) TEMPORARY OCCUPANCY			
171) TEMPORARY ELECTRICAL			
172) TEMPORARY GAS			
174) ELECTRIC METER AUTHORIZATION			
152) PANEL BOARDS/SERVICE			
189) SEPTIC ELECTRIC FINAL	7-2-13	MW	
175) GAS METER AUTHORIZATION			
153) GAS PRESSURE TEST see note	7-9-13	RP	
HOUSE 1-14-13 RP YARD			
190) MANUF. HOME FOUNDATION			
191) MANUF. HOME INSTALLATION			
CONTINUITY			
STAIRS/SKIRTS			
RIDGE BOLTING			
193) MANUF. HOME COND. FINAL			
SWIMMING POOLS			
194) PRE-GUNITE			
195) PRE-DECK			
196) PRE-PLASTER/FENCE			
197) VINYL/FIBERGLASS POOL EXCAVATION			
102) GRADING FINAL			
176) ELECTRICAL FINAL	7-9-13	RP	
177) MECHANICAL FINAL			
178) PLUMBING FINAL			
199) FINAL (see note)	7-29-13	RP	
OCCUPANCY (OK TO OCCUPY)			

650) SUSMP INSPECTION		
651) NPDES EROSION COMPLIANCE		
652) NPDES SEDIMENT COMPLIANCE		
653) NPDES DOCS/SWPPP		
FIRE INSPECTION REQUIRED ☐ Yes ☐ No	DATE	NAME
759) KNOX BOX		
760) PROPANE TANK HOLD DOWNS		
770) SPRINKLER FINAL		
771) ABOVEGROUND HYDROSTATIC		
772) UNDERGROUND HYDROSTATIC		
773) UNDERGROUND FLUSH		
774) THRUST BLOCKS		
775) PIPE WELD		
776) HYDRANTS/APPLIANCES		
777) PUMP ACCEPTANCE		
778) WATER SUPPLY/TANK		
779) ALARM SYSTEM		
780) HOOD & DUCT SYSTEM		
781) ABOVEGROUND TANK/DISPENSER		
198) FIRE FINAL		

CLEARANCES:

FIRE ☐ Local ☐ County

HEALTH DEPARTMENT

ZONING

SANITATION

PERMIT # BU11-2885

PLAN RETENTION REQUIRED?
☐ Yes ☐ No

SITE EVALUATION SHEET

Address 2335 Willow Creek Rd **PC#** BLD11-2886

Inspector REX PETERSEN **Date** 8-29-11

The proposed construction appears to be located in: 097-210-006

Flood Hazard:	[ ] FIRM Flood Zone (ASFH) BFE = _____ft. NAVD. Lowest finish floor at 12 above BFE = _____ft. NAVD. [ ] Design for moving water is recommended Section _____ is _____ Ft/sec Section _____ is _____ Ft/sec [ ] Area subject to flooding (not on adopted FIRM). [ ] Project is on flood zone major damage list. [ ] Flood Prone Urban Area defined by Ordinance #4906.	[ ] Portions of property in flood zone but project site not in flood zone. [ ] Building is in FIRM Floodway. [ ] Main building on site is Post-FIRM. [ ] Sensitive drainage area, review by drainage section recommended. [ ] Appears to be a "substantial improvement" (40%), therefore flood regulations apply. [ ] Located inside the *Laguna de Santa Rosa* below elevation of 75 ft (Ordinance #4906).
Geo-technical:	[ ] Area of suspected slides, slumps, earth flow, or soil creep. (a) [ ] Area of previous fill placement. (g) [ ] Area of suspected expansive soil. (c) [ ] Area without sufficient slope setback as set forth in UBC Section 1806. (b) [ ] Area subject to possible liquefaction. (e) [ ] Area of suspected soft, compressible, or organic soil with low bearing capacity. **Soils Investigation:**	[ ] Area without recommended setback from stream (Drainage Division recommendations). [ ] Area of high moisture content in soil. (f) [ ] Area subject to high erosion (water or wind). [ ] Area of soft soil due to past deep ripping or cultivation below minimum foundation depth. (h) [ ] Area within 1000 feet of a solid waste disposal site. [ ] Non exempt structure per tech bulletin B-28. **Required [ ] Included [ ] Available [ ] Not Required [X]**
Geologic:	[ ] Located in the Alquist-Priolo Special Studies Zone.	[ ] Geologic report required (see CGS Publication 42).
Seismic:	Seismic Design Category (SDC) D [ ] E [X]	[ ] Pictures available in S Drive
General:	[ ] Building addition will affect the required light and ventilation in an existing room. [ ] Existing electric meter must be replaced. [ ] Existing gas meter must be replaced. Slope is _____	[ ] Indications of existing substandard conditions that are not addressed by the proposed construction. [ ] Indications of past work done without a permit. [ ] Grading permit required for road, driveway, or site preparation. [ ] Site is likely to be acceptable for conventional construction methods.
Wind:	Exposure "B" Exposure "C" Exposure "D"	N.S.C. Air Pollution Control District.....[ ] Yes [ ] No

Acreage . . 2.46

Soils . HeF, HkF, HrF, JoE, KnF, YaB

Landslide - Few, Mostly, Superficial

Liq. - Moderate, Very High, Very Low

Fire . . State

Old large farmhouse, level lot area, major remodel,

OK to proceed. RP

Grading Permit Questionnaire

GRD - 002

Purpose: To assist applicants in determining if a grading permit is required for a proposed project.

Background: Grading is the removal and/or the deposition of earth material by artificial means. Earth material is defined as any rock or natural soil or combination thereof. Grading is generally a combination of excavation (cuts) and placement (fill) of soil. Common examples of grading include constructing a driveway, creating a building pad for further development, or stabilizing a slope. A grading permit is required prior to commencing any grading or related work, including preparatory site clearing and soil disturbance, except where exempted from permit requirements by Section 11.04.020 of the Sonoma County Code.

To determine if a project requires a grading permit, please answer the following questions. If any questions cannot be answered, contact a design professional for assistance and/or consult with the Permit and Resource Management (PRMD) Grading & Storm Water staff. **Incorrect answers may cause delays processing and/or issuing the permit(s) for the project.**

☐ Yes ☒ No ☐ Unknown	1. Does the project include cuts or fills exceeding 50 cubic yards of soil?*
☐ Yes ☐ No ☑ Unknown	2. Does the project include a cut greater than 2 feet in depth?*
☐ Yes ☒ No ☐ Unknown	3. Does the project create a cut slope greater than 5 feet in height and steeper than 2:1 (H:V)?*
☐ Yes ☒ No ☐ Unknown	4. Does the project include a fill greater than 3 feet in depth?
☐ Yes ☒ No ☐ Unknown	5. Does the project include fill between 1 foot and 3 feet in depth, and not intended to support a structure or surcharge, and placed on terrain with a natural slope steeper than 15%?
☐ Yes ☒ No ☐ Unknown	6. Does the project include fill greater than 1 foot in depth and intended to support a structure or surcharge?
☐ Yes ☒ No ☐ Unknown	7. Does the project include any fill within the Flood Prone Urban Area (FPUA)? See map on reverse side of this form for the location of the FPUA.
☐ Yes ☒ No ☐ Unknown	8. Does the project include any fill within a Special Flood Hazard Area designated by FEMA as subject to flooding by the 1% annual chance flood (100-year flood)?

* A "No" answer may be selected for excavations below finished grade for basements, tanks, vaults, swimming pools, and footings of a building, retaining wall, or other structure, where authorized by a valid building permit.

Acknowledgment:

I, as the applicant, understand that a "Yes" answer to **any** of the above questions means that a grading permit is required for my proposed project. Furthermore, the grading permit must be approved before a building permit can be approved for the site. If any answers are "Unknown" to me, I should contact my design professional immediately to determine if a grading permit is required.

Applicant Printed Name: Churchill Hildreth

Applicant Signature

Date: 7/19/04

Property Address: 2335 Willow Creek

Assessor's Parcel Number(s): 097-210-006

Building Permit Number(s): BL011-2886

Sonoma County Permit and Resource Management Department
2550 Ventura Avenue ❖ Santa Rosa, CA ❖ 95403-2829 ❖ (707) 565-1900 ❖ Fax (707) 565-2210

PERFORMANCE CERTIFICATE: Residential (Part 1 of 5) CF-1R

Project Name	Building Type			Date
Matthews-Cardamone Residence	☑ Single Family ☐ Multi Family	☐ Addition Alone ☑ Existing+ Addition/Alteration		7/13/2011
Project Address	**California Energy Climate Zone**	**Total Cond. Floor Area**	**Addition**	**# of Stories**
2335 Willow Creek Road Jenner	CA Climate Zone 01	4,614	1,380	3

FIELD INSPECTION ENERGY CHECKLIST

☐ Yes ☑ No HERS Measures -- If Yes, A CF-4R must be provided per Part 2 of 5 of this form.

☑ Yes ☐ No Special Features -- If Yes, see Part 2 of 5 of this form for details.

INSULATION

Construction	Type	Cavity	Area (ft^2)	Special Features (see Part 2 of 5)	Status
Wall	Wood Framed	None	330		Existing
Floor	Wood Framed w/o Crawl Space	None	295		Existing
Roof	Wood Framed Attic	R-30	32		New
Wall	Wood Framed	R-19	3,454		New
Door	Opaque Door	None	116		New
Floor	Wood Framed w/Crawl Space	R-19	769		New
Wall	Solid Unit Masonry	None	298		New
Wall	Hollow Unit Masonry	None	70		New

FENESTRATION

Orientation	Area(ft^2)	U-Factor	SHGC	Overhang	Sidefins	Exterior Shades	Status
Rear (N)	290.7	0.390	0.37	none	none	Bug Screen	New
Front (S)	9.5	0.550	0.67	none	none	Bug Screen	Existing
Front (S)	165.6	0.390	0.37	none	none	Bug Screen	New
Left (W)	87.1	0.390	0.37	none	none	Bug Screen	New
Front (SW)	9.0	0.390	0.37	none	none	Bug Screen	New
Left (NW)	9.0	0.390	0.37	none	none	Bug Screen	New
Right (E)	221.5	0.390	0.37	none	none	Bug Screen	New
Skylight	28.0	0.710	0.73	none	none	None	New
Skylight	16.0	0.710	0.73	none	none	None	New

HVAC SYSTEMS

Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status
1	Central Furnace	80% AFUE	No Cooling	13.0 SEER	Setback	Altered
1	Central Furnace	80% AFUE	No Cooling	13.0 SEER	Setback	New
1	Boiler		No Cooling	13.0 SEER	Setback	New

HVAC DISTRIBUTION

Location	Heating	Cooling	Duct Location	Duct R-Value	Status
New First/Main Floor Furna	Ducted	Ducted	Basement	6.0	New
New Upper Floor HVAC	Ducted	Ducted	Attic, Ceiling Ins, vented	6.0	New
New Radiant System	Radiant Floor	Ducted	Basement	6.0	New

WATER HEATING

Qty.	Type	Gallons	Min. Eff	Distribution	Status
1	Instant Gas	0	0.66	No Pipe Insulation	Altered
1	Instant Gas	0	0.66	No Pipe Insulation	New

PERFORMANCE CERTIFICATE: Residential (Part 1 of 5) CF-1R

Project Name	Building Type			Date
Matthews-Cardamone Residence	☑ Single Family ☐ Multi Family	☐ Addition Alone ☑ Existing+ Addition/Alteration		*7/13/2011*
Project Address	**California Energy Climate Zone**	**Total Cond. Floor Area**	**Addition**	**# of Stories**
2335 Willow Creek Road Jenner	*CA Climate Zone 01*	*4,614*	*1,380*	*3*

FIELD INSPECTION ENERGY CHECKLIST

☐ Yes ☑ No HERS Measures -- If Yes, A CF-4R must be provided per Part 2 of 5 of this form.

☑ Yes ☐ No Special Features -- If Yes, see Part 2 of 5 of this form for details.

INSULATION Construction	Type	Cavity	Area (ft^2)	Special Features (see Part 2 of 5)	Status
Slab	*Unheated Slab-on-Grade*	*None*	*869*	*Perim = 156'*	*New*
Roof	*Wood Framed Rafter*	*R-30*	*2,080*		*New*
Floor	*Wood Framed w/o Crawl Space*	*R-19*	*173*		*New*

FENESTRATION Orientation	Area(ft^2)	U-Factor	SHGC	Overhang	Sidefins	Exterior Shades	Status

HVAC SYSTEMS Qty.	Heating	Min. Eff	Cooling	Min. Eff	Thermostat	Status

HVAC DISTRIBUTION Location	Heating	Cooling	Duct Location	Duct R-Value	Status

WATER HEATING Qty.	Type	Gallons	Min. Eff	Distribution	Status

PERFORMANCE CERTIFICATE: Residential	(Part 2 of 5)	CF-1R

Project Name	Building Type	Date
Matthews-Cardamone Residence	☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration	*7/13/2011*

SPECIAL FEATURES INSPECTION CHECKLIST

The 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 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.

The HVAC System Lennox 13GCSA-36-090-230 does not include a cooling system, field verification is not necessary.

The HVAC System Lennox 13GCSA-36-090-230 does not include a cooling system, field verification is not necessary.

The HVAC System Radiant Floor does not include a cooling system, field verification is not necessary.

The HVAC System New Radiant System is a Hydronic System that uses a Dedicated Boiler for Space Heating. System details are on Part 5 of the CF-1R.

HERS REQUIRED VERIFICATION

Items in this section require field testing and/or verification by a certified HERS Rater. The inspector must receive a completed CF-4R form for each of the measures listed below for final to be given.

PERFORMANCE CERTIFICATE: Residential (Part 3 of 5) CF-1R

Project Name	Building Type	Date
Matthews-Cardamone Residence	☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration	*7/13/2011*

ANNUAL ENERGY USE SUMMARY

TDV (kBtu/ft^2-yr)	Standard	Proposed	Margin
Space Heating	98.01	64.31	33.71
Space Cooling	2.53	0.42	2.11
Fans	11.66	6.97	4.69
Domestic Hot Water	11.56	7.71	3.85
Pumps	0.00	0.00	0.00
Totals	123.76	79.41	44.35
Percent Better Than Standard:			35.8 %

BUILDING COMPLIES - NO HERS VERIFICATION REQUIRED

				Fenestration Area
Building Front Orientation:	(S) 202 deg	Ext. Walls/Roof	Wall Area	
Number of Dwelling Units:	1.00	(S)	1,492	184
Fuel Available at Site:	Natural Gas	(W)	1,004	96
Raised Floor Area:	1,237	(N)	1,471	291
Slab on Grade Area:	869	(E)	1,093	222
Average Ceiling Height:	9.0	Roof	2,156	44
Fenestration Average U-Factor:	0.39		TOTAL:	836
Average SHGC:	0.37		Fenestration/CFA Ratio:	18.1 %

REMARKS

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.

The documentation author hereby certifies that the documentation is accurate and complete.

Documentation Author

Company *Griffin Energy Compliance*
Address *23 Webster Street* Name *P. Griffin-Young*
City/State/Zip *Petaluma, CA 94952* Phone *(707)778-7818*
Signed Date *7/13/2011*

The individual with overall design responsibility hereby certifies that the proposed building design represented in this set of construction documents is consistent with the other compliance forms and worksheets, with the specifications, and with any other calculations submitted with this permit application, and recognizes that compliance using duct design, duct sealing, verification of refrigerant charge, 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)

Company *ADR*
Address *1197 East Washington* Name
City/State/Zip *Petaluma, CA 94952* Phone *(707)778-7232*
Signed License # Date

CERTIFICATE OF COMPLIANCE: Residential (Part 4 of 5) CF-1R

Project Name	Building Type	Date
Matthews-Cardamone Residence	☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration	7/13/2011

OPAQUE SURFACE DETAILS

Surface Type	Area	U-Factor	Insulation Cavity	Exterior	Frame	Interior	Frame	Azm	Tilt	Status	Joint Appendix 4	Location/Comments
Wall	163	0.356	None					22	90	Existing	4.3.1-A1	Existing Main Floor Area
Door	20	0.500	None					22	90	Removed	4.5.1-A4	Existing Main Floor Area
Wall	39	0.356	None					22	90	Removed	4.3.1-A1	Existing Main Floor Area
Wall	148	0.356	None					112	90	Removed	4.3.1-A1	Existing Main Floor Area
Wall	167	0.356	None					202	90	Existing	4.3.1-A1	Existing Main Floor Area
Wall	108	0.356	None					202	90	Removed	4.3.1-A1	Existing Main Floor Area
Floor	295	0.238	None					0	180	Existing	4.4.2-A1	Existing Main Floor Area
Floor	365	0.238	None					0	180	Removed	4.4.2-A1	Existing Main Floor Area
Roof	32	0.031	R-30					0	0	New	4.2.1-A20	Addition Main Floor/Furna
Wall	186	0.074	R-19					22	90	New	4.3.1-A5	Addition Main Floor/Furna
Wall	103	0.074	R-19					112	90	New	4.3.1-A5	Addition Main Floor/Furna
Door	34	0.500	None					112	90	New	4.5.1-A4	Addition Main Floor/Furna
Wall	213	0.074	R-19					202	90	New	4.3.1-A5	Addition Main Floor/Furna
Door	56	0.500	None					202	90	New	4.5.1-A4	Addition Main Floor/Furna
Wall	280	0.074	R-19					292	90	New	4.3.1-A5	Addition Main Floor/Furna
Wall	20	0.074	R-19					247	90	New	4.3.1-A5	Addition Main Floor/Furna

FENESTRATION SURFACE DETAILS

ID	Type	Area	U-Factor[1]		SHGC[2]		Azm	Status	Glazing Type	Location/Comments
1	Window	67.5	0.550	Default	0.67	Default	22	Removed	Double Non Metal Clear	Existing Main Floor Area
2	Window	91.0	0.390	NFRC	0.37	NFRC	22	New	New Double Non Metal	Existing Main Floor Area
3	Window	67.5	0.550	Default	0.67	Default	112	Removed	Double Non Metal Clear	Existing Main Floor Area
4	Window	9.5	0.550	Default	0.67	Default	202	Existing	Double Non Metal Clear	Existing Main Floor Area
5	Window	9.5	0.550	Default	0.67	Default	202	Removed	Double Non Metal Clear	Existing Main Floor Area
6	Window	8.7	0.390	NFRC	0.37	NFRC	22	New	New Double Non Metal	Addition Main Floor/Furnace Zo
7	Window	42.7	0.390	NFRC	0.37	NFRC	202	New	New Double Non Metal	Addition Main Floor/Furnace Zo
8	Window	51.7	0.390	NFRC	0.37	NFRC	292	New	New Double Non Metal	Addition Main Floor/Furnace Zo
9	Window	9.0	0.390	NFRC	0.37	NFRC	247	New	New Double Non Metal	Addition Main Floor/Furnace Zo
10	Window	9.0	0.390	NFRC	0.37	NFRC	337	New	New Double Non Metal	Addition Main Floor/Furnace Zo
11	Window	54.4	0.390	NFRC	0.37	NFRC	22	New	New Double Non Metal	New Basement
12	Window	40.0	0.390	NFRC	0.37	NFRC	112	New	New Double Non Metal	New Basement
13	Window	8.7	0.390	NFRC	0.37	NFRC	292	New	New Double Non Metal	New Basement
14	Window	67.3	1.190	Default	0.83	Default	22	Removed	Single Non Metal Clear	Main Floor Removed
15	Window	12.5	1.190	Default	0.83	Default	112	Removed	Single Non Metal Clear	Main Floor Removed
16	Window	46.3	1.190	Default	0.83	Default	202	Removed	Single Non Metal Clear	Main Floor Removed

(1) U-Factor Type: 116-A = Default Table from Standards, NFRC = Labeled Value
(2) SHGC Type: 116-B = Default Table from Standards, NFRC = Labeled Value

EXTERIOR SHADING DETAILS

ID	Exterior Shade Type	SHGC	Window Hgt	Window Wd	Overhang Len	Overhang Hgt	Overhang LExt	Overhang RExt	Left Fin Dist	Left Fin Len	Left Fin Hgt	Right Fin Dist	Right Fin Len	Right Fin Hgt
1	Bug Screen	0.76												
2	Bug Screen	0.76												
3	Bug Screen	0.76												
4	Bug Screen	0.76												
5	Bug Screen	0.76												
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												
12	Bug Screen	0.76												
13	Bug Screen	0.76												
14	Bug Screen	0.76												
15	Bug Screen	0.76												
16	Bug Screen	0.76												

CERTIFICATE OF COMPLIANCE: Residential (Part 4 of 5) CF-1R

Project Name	Building Type	Date
Matthews-Cardamone Residence	☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration	7/13/2011

OPAQUE SURFACE DETAILS

Surface Type	Area	U-Factor	Insulation Cavity	Exterior	Frame	Interior	Frame	Azm	Tilt	Status	Joint Appendix 4	Location/Comments
Wall	20	0.074	R-19					337	90	New	4.3.1-A5	Addition Main Floor/Furna
Floor	769	0.037	R-19					0	180	New	4.4.1-A4	Addition Main Floor/Furna
Wall	365	0.074	R-19					22	90	New	4.3.1-A5	New Basement
Wall	102	0.074	R-19					112	90	New	4.3.1-A5	New Basement
Wall	142	0.820	None					112	90	New	4.3.6-D5	New Basement
Wall	201	0.074	R-19					202	90	New	4.3.1-A5	New Basement
Wall	140	0.820	None					202	90	New	4.3.6-D5	New Basement
Wall	70	0.690	None					202	90	New	4.3.5-A10	New Basement
Wall	161	0.074	R-19					292	90	New	4.3.1-A5	New Basement
Wall	16	0.820	None					292	90	New	4.3.6-D5	New Basement
Slab	869	0.730	None					0	180	New	4.4.7-A1	New Basement
Roof	518	0.079	R-11					0	0	Removed	4.2.1-A2	Main Floor Removed
Wall	206	0.356	None					22	90	Removed	4.3.1-A1	Main Floor Removed
Wall	164	0.356	None					112	90	Removed	4.3.1-A1	Main Floor Removed
Wall	227	0.356	None					202	90	Removed	4.3.1-A1	Main Floor Removed
Wall	293	0.356	None					292	90	Removed	4.3.1-A1	Main Floor Removed

FENESTRATION SURFACE DETAILS

ID	Type	Area	U-Factor[1]		SHGC[2]		Azm	Status	Glazing Type	Location/Comments
17	Window	97.2	1.190	Default	0.83	Default	292	Removed	Single Non Metal Clear	Main Floor Removed
18	Skylight	28.0	0.710	Default	0.73	Default	22	New	Double Metal Clear	New Upper Floor
19	Skylight	16.0	0.710	Default	0.73	Default	202	New	Double Metal Clear	New Upper Floor
20	Window	78.4	0.390	NFRC	0.37	NFRC	22	New	New Double Non Metal	New Upper Floor
21	Window	80.0	0.390	NFRC	0.37	NFRC	112	New	New Double Non Metal	New Upper Floor
22	Window	105.4	0.390	NFRC	0.37	NFRC	202	New	New Double Non Metal	New Upper Floor
23	Window	26.7	0.390	NFRC	0.37	NFRC	292	New	New Double Non Metal	New Upper Floor
24	Skylight	16.0	1.190	Default	0.83	Default	22	Removed	Single Metal Clear	Upper Floor Removed
25	Skylight	12.0	1.190	Default	0.83	Default	202	Removed	Single Metal Clear	Upper Floor Removed
26	Window	37.9	0.550	Default	0.67	Default	22	Removed	Double Non Metal Clear	Upper Floor Removed
27	Window	20.8	0.550	Default	0.67	Default	112	Removed	Double Non Metal Clear	Upper Floor Removed
28	Window	41.1	0.550	Default	0.67	Default	202	Removed	Double Non Metal Clear	Upper Floor Removed
29	Window	58.2	0.390	NFRC	0.37	NFRC	22	New	New Double Non Metal	Addition Main Fl/Radiant Zone
30	Window	101.5	0.390	NFRC	0.37	NFRC	112	New	New Double Non Metal	Addition Main Fl/Radiant Zone
31	Window	17.5	0.390	NFRC	0.37	NFRC	202	New	New Double Non Metal	Addition Main Fl/Radiant Zone

(1) U-Factor Type: 116-A = Default Table from Standards, NFRC = Labeled Value
(2) SHGC Type: 116-B = Default Table from Standards, NFRC = Labeled Value

EXTERIOR SHADING DETAILS

ID	Exterior Shade Type	SHGC	Window Hgt	Window Wd	Overhang Len	Overhang Hgt	Overhang LExt	Overhang RExt	Left Fin Dist	Left Fin Len	Left Fin Hgt	Right Fin Dist	Right Fin Len	Right Fin Hgt
17	Bug Screen	0.76												
18	None	1.00												
19	None	1.00												
20	Bug Screen	0.76												
21	Bug Screen	0.76												
22	Bug Screen	0.76												
23	Bug Screen	0.76												
24	None	1.00												
25	None	1.00												
26	Bug Screen	0.76												
27	Bug Screen	0.76												
28	Bug Screen	0.76												
29	Bug Screen	0.76												
30	Bug Screen	0.76												
31	Bug Screen	0.76												

CERTIFICATE OF COMPLIANCE: Residential (Part 4 of 5) CF-1R

Project Name	Building Type	Date
Matthews-Cardamone Residence	☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration	*7/13/2011*

OPAQUE SURFACE DETAILS

Surface Type	Area	U-Factor	Insulation Cavity	Exterior	Frame	Interior	Frame	Azm	Tilt	Status	Joint Appendix 4	Location/Comments
Floor	*1,216*	*0.238*	*None*					*0*	*180*	*Removed*	*4.4.2-A1*	*Main Floor Removed*
Roof	*922*	*0.035*	*R-30*					*22*	*22*	*New*	*4.2.2-A17*	*New Upper Floor*
Roof	*934*	*0.035*	*R-30*					*202*	*22*	*New*	*4.2.2-A17*	*New Upper Floor*
Wall	*330*	*0.074*	*R-19*					*22*	*90*	*New*	*4.3.1-A5*	*New Upper Floor*
Wall	*260*	*0.074*	*R-19*					*112*	*90*	*New*	*4.3.1-A5*	*New Upper Floor*
Wall	*303*	*0.074*	*R-19*					*202*	*90*	*New*	*4.3.1-A5*	*New Upper Floor*
Wall	*313*	*0.074*	*R-19*					*292*	*90*	*New*	*4.3.1-A5*	*New Upper Floor*
Roof	*731*	*0.079*	*R-11*					*22*	*22*	*Removed*	*4.2.1-A2*	*Upper Floor Removed*
Roof	*735*	*0.079*	*R-11*					*202*	*22*	*Removed*	*4.2.1-A2*	*Upper Floor Removed*
Wall	*194*	*0.356*	*None*					*22*	*90*	*Removed*	*4.3.1-A1*	*Upper Floor Removed*
Wall	*123*	*0.356*	*None*					*112*	*90*	*Removed*	*4.3.1-A1*	*Upper Floor Removed*
Wall	*191*	*0.356*	*None*					*202*	*90*	*Removed*	*4.3.1-A1*	*Upper Floor Removed*
Wall	*144*	*0.356*	*None*					*292*	*90*	*Removed*	*4.3.1-A1*	*Upper Floor Removed*
Roof	*224*	*0.035*	*R-30*					*0*	*0*	*New*	*4.2.2-A17*	*Addition Main Fl/Radiant Z*
Wall	*137*	*0.074*	*R-19*					*22*	*90*	*New*	*4.3.1-A5*	*Addition Main Fl/Radiant Z*
Wall	*231*	*0.074*	*R-19*					*112*	*90*	*New*	*4.3.1-A5*	*Addition Main Fl/Radiant Z*

FENESTRATION SURFACE DETAILS

ID	Type	Area	U-Factor[1]	SHGC[2]	Azm	Status	Glazing Type	Location/Comments

(1) U-Factor Type: 116-A = Default Table from Standards, NFRC = Labeled Value
(2) SHGC Type: 116-B = Default Table from Standards, NFRC = Labeled Value

EXTERIOR SHADING DETAILS

ID	Exterior Shade Type	SHGC	Window Hgt	Window Wd	Overhang Len	Overhang Hgt	Overhang LExt	Overhang RExt	Left Fin Dist	Left Fin Len	Left Fin Hgt	Right Fin Dist	Right Fin Len	Right Fin Hgt

CERTIFICATE OF COMPLIANCE: Residential (Part 4 of 5) CF-1R

Project Name	Building Type	Date
Matthews-Cardamone Residence	☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration	*7/13/2011*

OPAQUE SURFACE DETAILS

Surface Type	Area	U-Factor	Insulation Cavity	Exterior	Frame	Interior	Frame	Azm	Tilt	Status	Joint Appendix 4	Location/Comments
Wall	*113*	*0.074*	*R-19*					*202*	*90*	*New*	*4.3.1-A5*	*Addition Main Fl/Radiant Z*
Door	*26*	*0.500*	*None*					*202*	*90*	*New*	*4.5.1-A4*	*Addition Main Fl/Radiant Z*
Wall	*117*	*0.074*	*R-19*					*292*	*90*	*New*	*4.3.1-A5*	*Addition Main Fl/Radiant Z*
Floor	*173*	*0.048*	*R-19*					*0*	*180*	*New*	*4.4.2-A4*	*Addition Main Fl/Radiant Z*

FENESTRATION SURFACE DETAILS

ID	Type	Area	U-Factor[1]	SHGC[2]	Azm	Status	Glazing Type	Location/Comments

[1] U-Factor Type: 116-A = Default Table from Standards, NFRC = Labeled Value
[2] SHGC Type: 116-B = Default Table from Standards, NFRC = Labeled Value

EXTERIOR SHADING DETAILS

ID	Exterior Shade Type	SHGC	Window Hgt	Window Wd	Overhang Len	Overhang Hgt	Overhang LExt	Overhang RExt	Left Fin Dist	Left Fin Len	Left Fin Hgt	Right Fin Dist	Right Fin Len	Right Fin Hgt

...IFICATE OF COMPLIANCE: Residential (Part 5 of 5) CF-1R

Project Name	Building Type	Date
Matthews-Cardamone Residence	☑ Single Family ☐ Addition Alone ☐ Multi Family ☑ Existing+ Addition/Alteration	*7/13/2011*

BUILDING ZONE INFORMATION

System Name	Zone Name	Floor Area (ft²) New	Existing	Altered	Removed	Volume	Year Built
New ... Main Floor Furnace	*Existing Main Floor To Stay*		*660*			*6,468*	*1930*
	Addition Main Fl/Furnace	*769*				*7,536*	
	New Basement	*869*				*6,778*	
	Main Floor Removed				*1,216*	*11,917*	*1930*
New ... r Floor HVAC	*New Upper Floor*	*1,727*				*15,198*	
	Upper Floor Removed				*1,358*	*11,950*	*1930*
New ... ant System	*Addition Main Fl/Radiant*	*589*				*5,772*	
	Totals	*3,954*	*660*	*0*	*2,574*		

...STEMS

...stem Name	Qty.	Heating Type	Min. Eff.	Cooling Type	Min. Eff.	Thermostat Type	Status
...ain Floor Furnace	*1*	*Central Furnace*	*80% AFUE*	*No Cooling*	*13.0 SEER*	*Setback*	*Altered*
... for above		*Central Furnace*	*78% AFUE*	*No Cooling*	*13.0 SEER*	*Setback*	
... r Floor HVAC	*1*	*Central Furnace*	*80% AFUE*	*No Cooling*	*13.0 SEER*	*Setback*	*New*
... ant System	*1*	*Boiler*	*see below*	*No Cooling*	*13.0 SEER*	*Setback*	*New*

...RIBUTION

...em Name	Heating	Cooling	Duct Loc...	Duct R-Value	Ducts Tested?	Status
...Main Floor Furnace	*Ducted*	*Ducted*	*Basement*	*6.0*	☐	*New*
... above	*Ducted*	*Ducted*	*Attic, Ceiling Ins, v...ted*	*4.2*	☐	
... Floor HVAC	*Ducted*	*Ducted*	*Attic, Ceiling Ins, v...ted*	*6.0*	☐	*New*
... al System	*Radiant Floor*	*Ducted*	*Basement*	*6.0*	☐	*New*
					☐	

...ATING SYSTEMS

...m Name	Qty.	Type	Distribution	Rated Input (Btuh)	...nk ...ap. ...al)	Energy Factor or RE	Standby Loss or Pilot	Ext. Tank Insul. R-Value	Status
...R 170 ...	*1*	*Instant Gas*	*No Pipe Insulation*	*165,000*	*0*	*0.66*	*n/a*	*n/a*	*Altered*
...as 50 gal or Le...	*1*	*Small Gas*	*pre-altered for Above*	*40,000*	*50*	*0.57*	*n/a*	*n/a*	
...R 170	*1*	*Instant Gas*	*No Pipe Insulation*	*165,000*	*0*	*0.66*	*n/a*	*n/a*	*New*

...MILY WATER HEATING DETAILS

...ntrol	Qty.	HP	Eff. Premium	Hot Water Piping Length (ft) Plenum	Outside	Buried	Add ½" Insulation
			☐				☐
			☐				☐
			☐				☐
			☐				☐
			☐				☐

HYDR...IC HEATING SYSTEM PIPING

S...stem Name	Pipe Length	Pipe Diameter	Insul. Thick.
Versa H... Radiant Boiler	*15*	*0.50*	*0.50*

Project Name	Building Type	☑ Single Family ☐ Multi Family	☐ Addition Alone ☑ Existing+ Addition/Alteration	Date
-Cardamone Residence				7/13/2011

ZONE INFORMATION

System Name	Zone Name	Floor Area (ft²) New	Existing	Altered	Removed	Volume	Year Built
	Totals	3,954	6[illegible]	0	2,574		

SYSTEMS

System Name	Qty.	Heating Type	Min. Eff.	Cooling Type	Min. Eff.	Thermostat Type	Status

DISTRIBUTION

System Name	Heating	Cooling	Duct Location	Duct R-Value	Ducts Tested?	Status
					☐	
					☐	
					☐	
					☐	
					☐	

WATER HEATING SYSTEMS

Name	Qty.	Type	Distribution	Rated Input (Btuh)	Tank Cap. (gal)	Energy Factor or RE	Standby Loss or Pilot	Ext. Tank Insul. R-Value	Status
[illegible] Boiler	1	Instant Gas	Hydronic Heating	199,0[illegible]	[illegible]	0.82	n/a	n/a	New

MULTI-FAMILY WATER HEATING DETAILS

Control	Qty.	HP	Eff. Premium	Hot Water Piping Length (ft) Plenum	Outside	Buried	Add ½" Insulation
			☐				☐
			☐				☐
			☐				☐
			☐				☐
			☐				☐

HYDRONIC HEATING SYSTEM PIPING

System Name	Pipe Length	Pipe Diameter	Insul. Thick.

MANDATORY MEASURES SUMMARY: Residential (Page 1 of 3) MF-1R

Project Name	Date
Matthews-Cardamone Residence	*7/13/2011*

NOTE: Low-rise residential buildings subject to the Standards must comply with all applicable mandatory measures listed, regardless of the compliance approach used. More stringent energy measures listed on the Certificate of Compliance (CF-1R, CF-1R-ADD, or CF-1R-ALT Form) shall supersede the items marked with an asterisk (*) below. This Mandatory Measures Summary shall be incorporated into the permit documents, and the applicable features shall be considered by all parties as minimum component performance specifications whether they are shown elsewhere in the documents or in this summary. Submit all applicable sections of the MF-1R Form with plans.

Building Envelope Measures:

§116(a)1: Doors and windows between conditioned and unconditioned spaces are manufactured to limit air leakage.

§116(a)4: Fenestration products (except field-fabricated windows) have a label listing the certified U-Factor, certified Solar Heat Gain Coefficient (SHGC), and infiltration that meets the requirements of §10-111(a).

§117: Exterior doors and windows are weather-stripped; all joints and penetrations are caulked and sealed.

§118(a): Insulation specified or installed meets Standards for Insulating Material. Indicate type and include on CF-6R Form.

§118(i): The thermal emittance and solar reflectance values of the cool roofing material meets the requirements of §118(i) when the installation of a Cool Roof is specified on the CF-1R Form.

*§150(a): Minimum R-19 insulation in wood-frame ceiling or equivalent U-factor.

§150(b): Loose fill insulation shall conform with manufacturer's installed design labeled R-Value.

*§150(c): Minimum R-13 insulation in wood-frame wall or equivalent U-factor.

*§150(d): Minimum R-13 insulation in raised wood-frame floor or equivalent U-factor.

§150(f): Air retarding wrap is tested, labeled, and installed according to ASTM E1677-95(2000) when specified on the CF-1R Form.

§150(g): Mandatory Vapor barrier installed in Climate Zones 14 or 16.

§150(l): Water absorption rate for slab edge insulation material alone without facings is no greater than 0.3%; water vapor permeance rate is no greater than 2.0 perm/inch and shall be protected from physical damage and UV light deterioration.

Fireplaces, Decorative Gas Appliances and Gas Log Measures:

§150(e)1A: Masonry or factory-built fireplaces have a closable metal or glass door covering the entire opening of the firebox.

§150(e)1B: Masonry or factory-built fireplaces have a combustion outside air intake, which is at least six square inches in area and is equipped with a with a readily accessible, operable, and tight-fitting damper and or a combustion-air control device.

§150(e)2: Continuous burning pilot lights and the use of indoor air for cooling a firebox jacket, when that indoor air is vented to the outside of the building, are prohibited.

Space Conditioning, Water Heating and Plumbing System Measures:

§110-§113: HVAC equipment, water heaters, showerheads, faucets and all other regulated appliances are certified by the Energy Commission.

§113(c)5: Water heating recirculation loops serving multiple dwelling units and High-Rise residential occupancies meet the air release valve, backflow prevention, pump isolation valve, and recirculation loop connection requirements of §113(c)5.

§115: Continuously burning pilot lights are prohibited for natural gas: fan-type central furnaces, household cooking appliances (appliances with an electrical supply voltage connection with pilot lights that consume less than 150 Btu/hr are exempt), and pool and spa heaters.

§150(h): Heating and/or cooling loads are calculated in accordance with ASHRAE, SMACNA or ACCA.

§150(i): Heating systems are equipped with thermostats that meet the setback requirements of Section 112(c).

§150(j)1A: Storage gas water heaters rated with an Energy Factor no greater than the federal minimal standard are externally wrapped with insulation having an installed thermal resistance of R-12 or greater.

§150(j)1B: Unfired storage tanks, such as storage tanks or backup tanks for solar water-heating system, or other indirect hot water tanks have R-12 external insulation or R-16 internal insulation where the internal insulation R-value is indicated on the exterior of the tank.

§150(j)2: 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 are insulated per Standards Table 150-B.

§150(j)2: Cooling system piping (suction, chilled water, or brine lines),and piping insulated between heating source and indirect hot water tank shall be insulated to Table 150-B and Equation 150-A.

§150(j)2: Pipe insulation for steam hydronic heating systems or hot water systems >15 psi, meets the requirements of Standards Table 123-A.

§150(j)3A: Insulation is protected from damage, including that due to sunlight, moisture, equipment maintenance, and wind.

§150(j)3A: Insulation for chilled water piping and refrigerant suction lines includes a vapor retardant or is enclosed entirely in conditioned space.

§150(j)4: Solar water-heating systems and/or collectors are certified by the Solar Rating and Certification Corporation.

§150(m)1: All air-distribution system ducts and plenums installed, are sealed and insulated to meet the requirements of 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

§150(m)1: 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.

§150(m)2D: 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.

§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 readily accessible, manually operated dampers.

§150(m)9: 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.

§150(m)10: Flexible ducts cannot have porous inner cores.

§150(o): All dwelling units shall meet the requirements of ANSI/ASHRAE Standard 62.2-2007 Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings. Window operation is not a permissible method of providing the Whole Building Ventilation required in Section 4 of that Standard.

Pool and Spa Heating Systems and Equipment Measures:

§114(a): Any pool or spa heating system shall be certified to have: a thermal efficiency that complies with the Appliance Efficiency Regulations; an on-off switch mounted outside of the heater; a permanent weatherproof plate or card with operating instructions; and 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 between filter and heater, or dedicated suction 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 time switch that will allow all pumps to be set or programmed to run only during off-peak electric demand periods.

§150(p): Residential pool systems or equipment meet the pump sizing, flow rate, piping, filters, and valve requirements of §150(p).

Residential Lighting Measures:

§150(k)1: High efficacy luminaires or LED Light Engine with Integral Heat Sink has an efficacy that is no lower than the efficacies 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 by §130(d).

§150(k)4: Ballasts for fluorescent lamps rated 13 Watts or greater shall be electronic and shall have an output frequency no less than 20 kHz.

§150(k)5: Permanently installed night lights and night lights integral to a permanently installed luminaire or exhaust fan shall contain only high efficacy lamps meeting the minimum efficacies contained in Table 150-C and shall not contain a line-voltage socket or line-voltage lamp holder; OR shall be rated to consume no more than five watts of power as determined by §130(d), and shall not contain a medium screw-base socket.

§150(k)6: Lighting integral to exhaust fans, in rooms other than kitchens, shall meet the applicable requirements of §150(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 lighting in kitchens shall be high efficacy. EXCEPTION: Up to 50 watts for dwelling units less than or equal to 2,500 ft_2 or 100 watts for dwelling units larger than 2,500 ft_2 may be exempt from the 50% high efficacy requirement when: all low efficacy luminaires in the kitchen are controlled by a manual on occupant sensor, dimmer, energy management system (EMCS), or a multi-scene programmable control system; and all permanently installed luminaries in garages, laundry rooms, closets greater than 70 square feet, and utility rooms are high efficacy and controlled by a manual-on occupant sensor.

§150(k)9: Permanently installed lighting that is internal to cabinets shall use no more than 20 watts of power per linear foot of illuminated cabinet.

Project Name	Date
Matthews-Cardamone Residence	*7/13/2011*

§150(k)10: Permanently installed luminaires in bathrooms, attached and detached garages, laundry rooms, closets and utility rooms shall be high efficacy.
EXCEPTION 1: Permanently installed low efficacy luminaires shall be allowed provided that they are controlled by a manual-on occupant sensor certified to comply with the applicable requirements of §119.
EXCEPTION 2: Permanently installed low efficacy luminaires in closets less than 70 square feet are not required to be controlled by a manual-on occupancy sensor.

§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 luimnaires. 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. 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 lumiunaire 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 motion sensor, and one of the following controls: a photocontrol 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 management control system (EMCS) not having an override or bypass switch that allows the luminaire to be always on EXCEPTION 2: Outdoor luminaires used to comply with Exception1 to §150(k)13 may be controlled by a temporary override switch which bypasses the motion sensing function provided that the motion sensor is automatically reactivated within six hours. EXCEPTION 3: Permanently installed luminaires in or around swimming pool, water features, or other location subject to Article 680 of the California Electric Code need not be high efficacy luminaires.

§150(k)14: Internally illuminated address signs shall comply with Section 148; OR not contain a screw-base socket, and consume no more than five watts of power as determined according to §130(d).

§150(k)15: Lighting for parking lots and carports with a total of for 8 or more vehicles per site shall comply with the applicable requirements in Sections 130, 132, 134, and 147. Lighting for parking garages for 8 or more vehicles shall comply with the applicable requirements of Sections 130, 131, 134, and 146.

§150(k)16: 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. EXCEPTION: Permanently installed low efficacy luminaires shall be allowed provided that they are controlled by an occupant sensor(s) certified to comply with the applicable requirements of §119.

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JOB: ADR MATTHEWS RESIDENCE
ELEMENT
SHEET NO. 41 OF
CALCULATED BY TOR DATE 6-7-11
CHECKED BY TJO JN ADR 1101.1

ENGINEERING STRUCTURAL ANALYSIS

SCOPE: PROVIDE ENGINEERING ANALYSIS AS REQUIRED BY 2010 CALIFORNIA BUILDING CODE

DESIGN FOR CONVENTIONAL CONSTRUCTION AS ALLOWED:

R301.1 Application. Buildings and structures, and all parts thereof, shall be constructed to safely support all loads, including dead loads, live loads, roof loads, flood loads, snow loads, wind loads and seismic loads as prescribed by this code. The construction of buildings and structures in accordance with the provisions of this code shall result in a system that provides a complete load path that meets all requirements for the transfer of all loads from their point of origin through the load-resisting elements to the foundation. Buildings and structures constructed as prescribed by this code are deemed to comply with the requirements of this section.

ALTERNATIVELY:

R301.1.3 Engineered design. When a building of otherwise conventional construction contains structural elements exceeding the limits of Section R301 or otherwise not conforming to this code, these elements shall be designed in accordance with accepted engineering practice. The extent of such design need only demonstrate compliance of nonconventional elements with other applicable provisions and shall be compatible with the performance of the conventional framed system. Engineered design in accordance with the *California Building Code* is permitted for all buildings and structures, and parts thereof, included in the scope of this code.

1604.4 Analysis.

Any system or method of construction to be used shall be based on a rational analysis in accordance with well-established principles of mechanics. Such analysis shall result in a system that provides a complete load path capable of transferring loads from their point of origin to the load-resisting elements.

ROOF OR FLOOR ABOVE (point of origin) — FOUNDATION (load-resisting elements)

LATERAL ANALYSIS - 1) SEISMIC

Period (sec)	Sa (g)
0.2	1.338 (SDs, Site Class D)
1.0	1.072 (SD1, Site Class D)

Conterminous 48 States
2003 NEHRP Seismic Design Provisions
Latitude = 38.4373
Longitude = -123.0971
Design Spectral Response Accelerations SDs and SD1
SDs = 2/3 x SMs and SD1 = 2/3 x SM1
Site Class D - Fa = 1.0 ,Fv = 1.5

PER ASCE 7-05 SEC 12.8.1.3: $S_{DS} = \frac{2}{3} F_a S_s$; $\frac{2}{3} \times 1.0 \times 1.5 = 1.0$

$$V = \frac{S_{DS} I}{R} W = \frac{1.0 \times 1.0}{6.5} W = .154 W$$

BASE SHEAR: $0.7 \times .154 W = 0.108 W$ (LOAD COMBO 8)

7-05 SEC 12.3.4.2: $E = \rho Q_E = 1.3 \times .108 W = \underline{0.14 W}$

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JOB ADR / MATTHEWS
ELEMENT
SHEET NO. OF 8
CALCULATED BY DATE 10-20-11
CHECKED BY JN ADR1101.1

THESE ATTACHMENTS ARE PART OF THE APPROVED PLANS.
* DO NOT REMOVE THEM *

DEC 08 2011
PERMIT AND RESOURCE MANAGEMENT DEPARTMENT
BUILDING PLAN CHECK
PERMIT # BCLD-2996

REGISTERED PROFESSIONAL ENGINEER
TERRY J. O'REILLY
NO. 49506
CIVIL
STATE OF CALIFORNIA

11-4-11

DESIGN REVISIONS/ADDITIONS

CHECK JOIST @ 1ST FLOOR DINING ROOM

(REVISED FLOOR FINISH 3 1/2" CONC)

REVISED D.L: CONC $3.5/12 \times 150 = 44$ psf
PREVIOUS 12d
56 PSF

L = 16'
$w = 16/12 (40L + 56d) = 53L + 75d$ (2x12@16" O.C. NO GOOD)
$= 128$ plf

USE 11 7/8" LPI 36A @16" O.C.

HANGER $P = 8 \times 128 = 1024$ LB

MIU2.37/11

CHECK 1ST FLOOR JOIST @ HEARTH

HEARTH JOIST L = 4.5' LL = 40 psf x 16/12 = 53 plf

RAISED HEARTH SITTING AREA: $w = 1.5' \times 16/12 \times 150$ pcf = +12 PSF DL
312 plf @ 0-2'

FLOOR LEVEL HEARTH
$w = 2.5"/12 \times 16/12 \times 150$ pcf + 12d = 54 plf @ 2'-4.5'

2x6 DF#2 SISTER OK

Hydraulic Calculations
for

Project: Matthews Residence
Drawing no.: FP-2
Date: 7/20/2012

COUNTY OF SONOMA
Fire & Emergency Services Dept.
Plan Check Approved

Design

Remote area number:	1
Remote area location:	Master bedroom
Occupancy classification:	NFPA 13D
Density:	18 GPM/spnklr
Area of application:	2 Head
Coverage per sprinkler:	16 x 16
Type of sprinklers calculated:	Reliable RFC 43 reliable concealed pendent
No. of sprinklers calculated:	1
In rack demand:	n/a
Hose streams:	n/a outside + 5 GPM inside
Total water required (including hose streams):	41.0 gpm at 54.32 psi [5.68 psi safety margin]
Total water required at base of system riser:	36.0 gpm at 53.87 psi
Type of system:	wet pipe
Volume of dry or preaction system:	

Water Supply Information

Date:
Location:
Source:

Contractor:	McCoy Fire Protection 131 Stony Circle Santa Rosa, CA. 95401
Under contract with:	Earthtone Construction
Name of designer:	Dale Homer
Authority having jurisdiction:	Sonoma County Fire District

Notes

Calculation Revised 7/20/12 at request of AHJ. Changed linear feet of pipe between node 4-3 and 3-2

Actual Location of booster pump and storage tanks have not been determined at this time. Calcs include a generic length of 2" pipe to allow for pump in calcs. Builder to provide adequate pressure at BOR.

Hydraulic Calculations
for

Project: Matthews Residence
2335 Willow Creek
Jenner, Ca
Drawing no.: FP-1
Date: 6/11/2012

Design

Remote area number:	1
Remote area location:	Master bedroom
Occupancy classification:	NFPA 13D
Density:	17 GPM/Sprinkler
Area of application:	2 Head
Coverage per sprinkler:	16 x 16
Type of sprinklers calculated:	Tyco LFII 4.9K concealed pendent
No. of sprinklers calculated:	1
In rack demand:	n/a
Hose streams:	n/a outside + 5 psi inside
Total water required (including hose streams):	39.0 gpm at 50.86 psi [9.14 psi safety margin]
Total water required at base of system riser:	34.0 gpm at 50.45 psi
Type of system:	wet pipe
Volume of dry or preaction system:	

Water Supply Information

Date:
Location:
Source:

Contractor: McCoy Fire Protection
131 Stony Circle
Santa Rosa, CA. 95401
Under contract with: Earthtone Construction
Name of designer: Dale Horner
Authority having jurisdiction: County of Sonoma

Notes