

**CITY OF SACRAMENTO**

1231 I Street, Sacramento, CA 95814

Permit No: **0507111**

Insp Area: **2**

Thos Bros: **316J7**

Site Address: **957 TRESTLE GLEN WY SAC**

Parcel No: **030-0203-010**

Sub-Type: **RES**

Housing (Y/N): **N**

**CONTRACTOR**

DAVID KNUTSON ROOFING  
WENDY STARK  
1520 MAIN AV 95838

**OWNER**

MARTIN CHRISTOPHER/STEPHANI  
957 TRESTLE GLEN WY  
SACRAMENTO, CA 95831

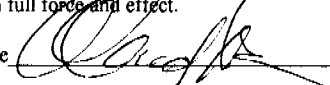
**ARCHITECT**

**Nature of Work: TEAR-OFF, RE-ROOF LIGHT WEIGHT TILE. INSTALL 35 SQS**

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

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

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

License Class C-39 License Number 453373 Date 5/19/05 Contractor Signature 

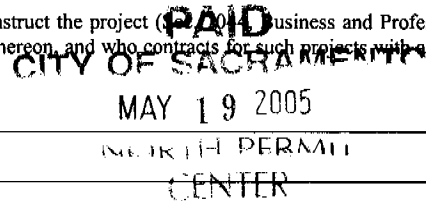
**OWNER-BUILDER DECLARATION:** I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.00);

I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

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

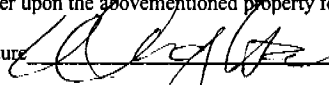
I am exempt under Sec. \_\_\_\_\_ B & PC for this reason: \_\_\_\_\_

Date \_\_\_\_\_ Owner Signature \_\_\_\_\_



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

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

Date 5/19/05 Applicant/Agent Signature 

**WORKER'S COMPENSATION DECLARATION:** I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

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

Carrier **STATE FUND** Policy Number **1677234** Exp Date **01/01/2006**

(This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date 5/19/05 Applicant Signature 

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

**THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.**

David Knutson Roofing  
1520 Main Avenue  
Sacramento, CA. 95838

May 18, 2005

#0507111

Subject: Lightweight Tile Re-roof  
957 Tresle Glen Way  
Sacramento, CA. 95831

Dear David,

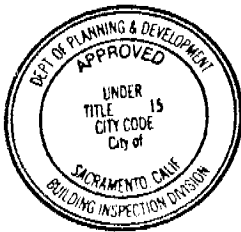
Pursuant to your request, Anderson Engineering Consultants has reviewed the roof framing of the structure at the above address for structural adequacy. The house is approximately 15 to 20 years old and conventionally framed. The roof is comprised of the following:

- 2x6 rafters at 24" o.c. with a 10'-0" maximum span.

Calculations show that for the given span and loading as noted below the rafters are adequate.

The roof has a pitch of 4:12 and appears to be in sound condition. 2x6 purlins support the rafters at approximately mid-span and are braced with 2x4 struts at 4' o.c. The hips and valleys are 2x8 and braced adequately to bearing members. The total dead load on the rafters including roofing material does not exceed 11 psf.

|  |           |
|--|-----------|
| ○ Lightweight Tile                     | = 7.2 psf |
| ○ Thermo-ply / light gage metal system | = 0.5 psf |
| ○ Existing skip sheathing              | = 1.5 psf |
| ○ 2x6 roof framing                     | = 1.0 psf |
| ○ Misc.                                | = 0.8 psf |
|  | <hr/>     |
|  | 11.0 psf  |



This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Building Inspection Division.  
The approval of this plan and specification SHALL NOT be held to permit or approve the violation of any City Ordinance or State Law.

*Jim R - 5-20-05*  
*site verify max tile wt. 7.2 # lb*  
*max 10ft span for 2x6, 2x6 purlins*  
*w/ 2x4 struts - 48" oc*  
*DO NOT COVER PRIOR TO INSPECTION.*

It is our opinion that using your proposed re-roof system consisting of the following will not compromise the structural integrity of the roof system:

- 7/8" - 22 gage hat channel fastened to the rafters with 10d-galvanized nails (or equal) at 24" o.c.
- "Thermo-ply" underlayment fastened to the hat channel with #10 self-tapping screws (or equal).
- 7/8" - 22 gage steel hat channel battens over the "Thermo-ply" underlayment fastened with #10 self tapping screws (or equal) at every rafter.
- Lightweight concrete Eaglelite tile weighing 7.2 psf or less.

The determination of the roof's structural integrity is based on observation and known mechanical properties of wood.

After re-roofing minor cracking of the ceiling and interior and exterior walls may occur. In addition, a small amount of deflection in the rafters may be observed. These conditions are cosmetic only and do not affect the structural integrity of the roof framing.

Should you have any questions, please do not hesitate to contact us.

Sincerely,



Carl Anderson, P.E.



Project: MARTIN - Location: MAX RAFTER SPAN

Summary:

1.5 IN x 5.5 IN x 10.0 FT @ 24 O.C. / #2 - Douglas Fir-Larch - Dry Use

Section Adequate By: 53.6% Controlling Factor: Section Modulus / Depth Required 4.61 In

Rafter Span Deflections:

|             |               |      |            |
|-------------|---------------|------|------------|
| Dead Load:  | DLD-Interior= | 0.17 | IN         |
| Live Load:  | LLD-Interior= | 0.24 | IN = L/526 |
| Total Load: | TLD-Interior= | 0.41 | IN = L/305 |

Rafter End Loads and Reactions:

|                               |         |        |    |
|-------------------------------|---------|--------|----|
| Upper Live Load:              | LOADS:  | RXNS:  |    |
| Upper Dead Load:              | 80 PLF  | 160 LB |    |
| Upper Total Load:             | 58 PLF  | 116 LB |    |
| Lower Live Load:              | 138 PLF | 276 LB |    |
| Lower Dead Load:              | 80 PLF  | 160 LB |    |
| Lower Total Load:             | 58 PLF  | 116 LB |    |
| Upper Equiv. Tributary Width: | 138 PLF | 276 LB |    |
| Lower Equiv. Tributary Width: | UTWeq=  | 5.0    | FT |
|                               | LTWeq=  | 5.0    | FT |

Rafter Data:

|  |          |      |         |
|--|----------|------|---------|
| Interior Span:   | L=       | 10.0 | FT      |
| Eave Span:   | L-Eave=  | 0.0  | FT      |
| Rafter Spacing:  | Spacing= | 24.0 | IN O.C. |
| Rafter Pitch:  | RP=      | 4.0  | : 12    |
| Roof sheathing applied to top of joists-Top of rafters fully braced. |          |      |         |
| Live Load Deflect. Criteria:   | L/       | 240  |         |
| Total Load Deflect. Criteria:  | L/       | 180  |         |

Non-Snow Live Load:

|                   |          |      |    |
|-------------------|----------|------|----|
| Roof Loaded Area: | RLA=     | 20.0 | SF |
| Live Load Method: | Method = | One  |    |

Rafter Loads:

|                       |     |      |     |
|-----------------------|-----|------|-----|
| Roof Live Load:       | LL= | 16.0 | PSF |
| Roof Dead Load:       | DL= | 11.0 | PSF |
| Roof Duration Factor: | Cd= | 1.25 |     |

Slope Adjusted Spans And Loads:

|                    |         |       |     |
|--------------------|---------|-------|-----|
| Interior Span:     | L-adj=  | 10.54 | FT  |
| Rafter Live Load:  | wL-adj= | 29    | PLF |
| Rafter Dead Load:  | wD-adj= | 21    | PLF |
| Rafter Total Load: | wT-adj= | 50    | PLF |

Properties For: #2- Douglas Fir-Larch

|                                |          |         |     |
|--------------------------------|----------|---------|-----|
| Bending Stress:                | Fb=      | 900     | PSI |
| Shear Stress:                  | Fv=      | 180     | PSI |
| Modulus of Elasticity:         | E=       | 1600000 | PSI |
| Stress Perpendicular to Grain: | Fc-perp= | 625     | PSI |

Adjusted Properties

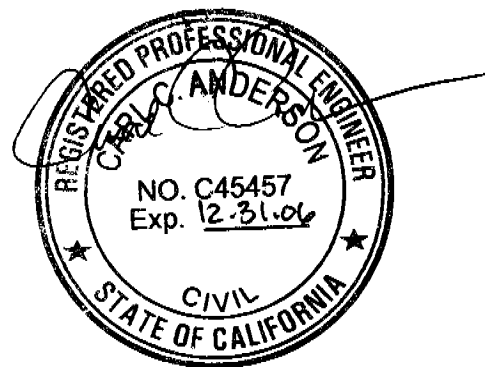
|   |      |      |     |
|---|------|------|-----|
| Fb' (Tension):                              | Fb'= | 1682 | PSI |
| Adjustment Factors: Cd=1.25 Cf=1.30 Cr=1.15 |      |      |     |
| Fv':  | Fv'= | 225  | PSI |
| Adjustment Factors: Cd=1.25                 |      |      |     |

Design Requirements:

|   |    |     |       |
|---|----|-----|-------|
| Controlling Moment:   | M= | 690 | FT-LB |
| 5.27 Ft from left support of span 2 (Center Span)                               |    |     |       |
| Critical moment created by combining all dead loads and live loads on span(s) 2 |    |     |       |
| Controlling Shear:  | V= | 241 | LB    |
| At a distance d from left support of span 2 (Center Span)                       |    |     |       |
| Critical shear created by combining all dead loads and live loads on span(s) 2  |    |     |       |

Comparisons With Required Sections:

|                                 |       |       |     |
|---------------------------------|-------|-------|-----|
| Section Modulus (Moment):       | Sreq= | 4.92  | IN3 |
|                                 | S=    | 7.56  | IN3 |
| Area (Shear):                   | Areq= | 1.61  | IN2 |
|                                 | A=    | 8.25  | IN2 |
| Moment of Inertia (Deflection): | Ireq= | 12.27 | IN4 |
|                                 | I=    | 20.80 | IN4 |



LOCATION:

757 TRENTLE GLEN WAY  
SACRAMENTO, CA.

\* 2x6 @ 24" o.c.

--- 2x6 PURLINS w/ 2x4 STRIPS  
@ 48" o.c.

