

Permit No: 0106893

Insp Area: 2

Sub-Type: RES

Housing (Y/N): N

ARCHITECT

OWNER

HAMPTON ROBERT I & PATRICIA

6784 ORLEANS WY

SACRAMENTO CA 95831

CONTRACTOR

ZIMMERMAN ROOFING, INC

3675 R STREET

SACRAMENTO, CA 95816

Site Address: 6784 ORLEANS WY SAC  
Parcel No: 030-0383-008

CITY OF SACRAMENTO  
1231 I Street, Sacramento, CA 95814

Nature of Work: 33SQ T/O REROOF W HVY SHAKE

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: 5572559 Date: 4/1/01 Contractor Signature: [Signature]

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 (\$500.00).

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 Professions Code). The Contractor's 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 (Sec. 7044, Business and Professions Code). The Contractor's 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 Contractor's 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 permitted 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 above mentioned property for inspection purposes.

Date: 4/1/01  
Applicant/Agent Signature: [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 (FALL) Policy Number: 713-00-2071 Exp Date: 01/01/2001

(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 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: 4/1/01  
Applicant/Agent Signature: [Signature]

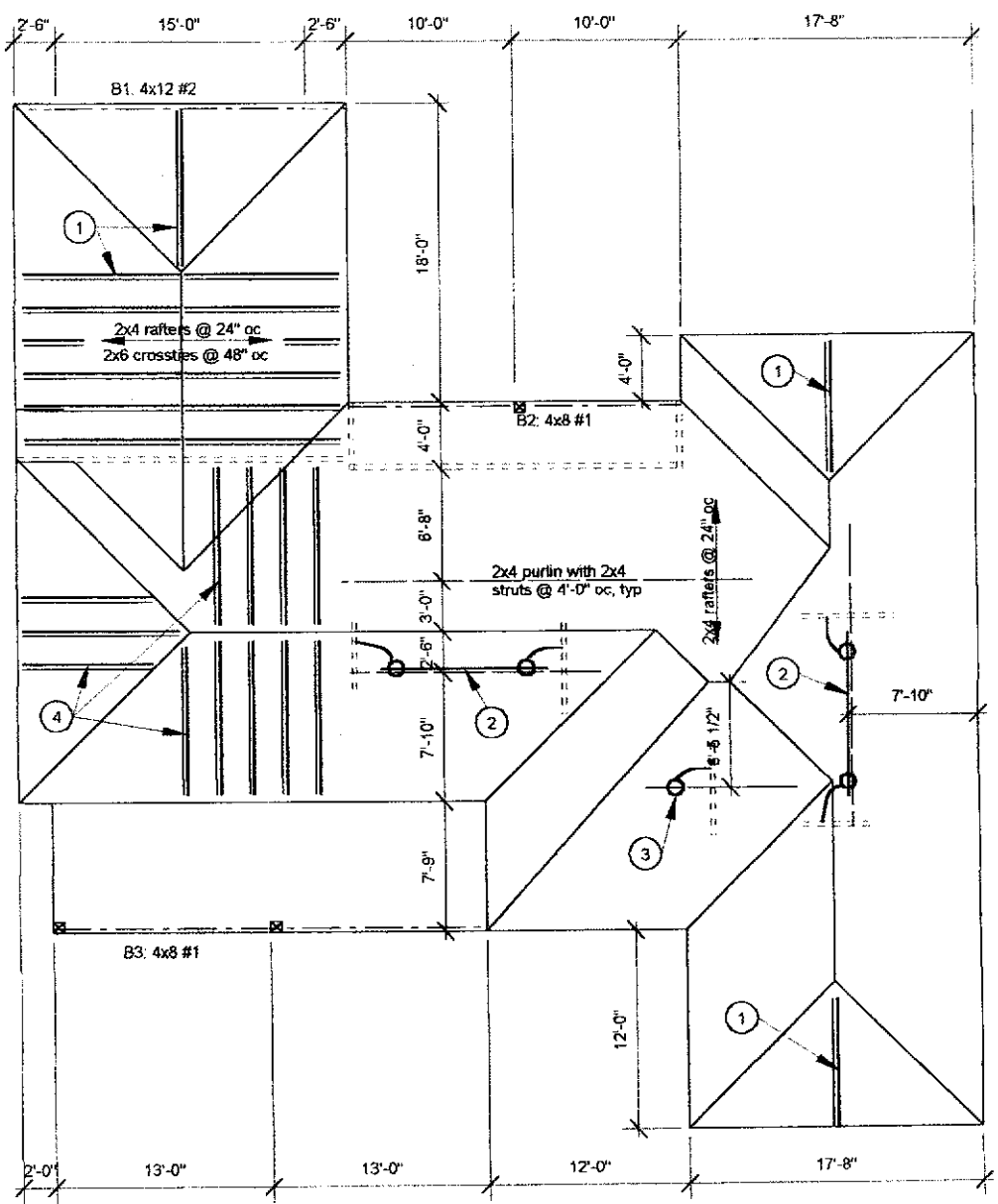
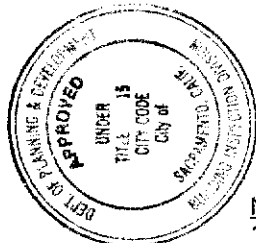
WARNING: FAILURE TO SECURE WORKERS' COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S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

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

Q196893

*Subal*  
8/19/01

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.

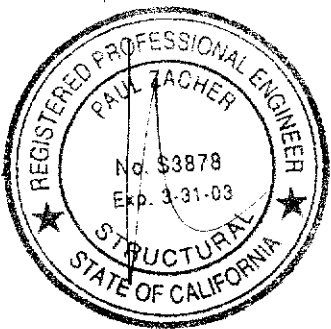


**Framing Notes:**

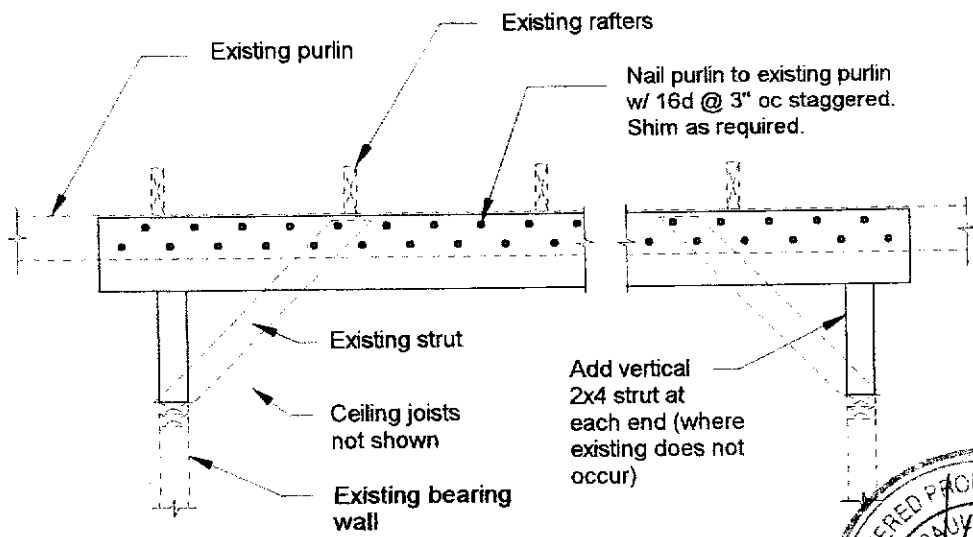
1. Scab a 2x4 to existing 2x4 rafters where the span is greater than 7'-9" (total 15).
2. Scab a 2x12 DF#2 x 10'-0" to the existing 2x4 purlin. See detail 2.
3. Add a 2x4 strut to bearing below (total 1).
4. Scab a 2x4 to existing 2x4 rafters where the span is greater than 7'-9" (total 4).  
Scab a 2x6 to existing 2x4 rafters where the span is greater than 9'-9" (total 9).

**Notes:**

1. This is a reroof project. The new roofing material shall be a Light Weight Concrete Tile. The tile shall weigh less than or equal to 7.0 psf.
2. All rafters are 2x4 DF#2 and hips and valleys are 2x6 DF#2 unless otherwise noted.
3. All existing rafter, hips, valleys, rafter ties, and purlins are braced per UBC Section 2320.12 "Roof and Ceiling Framing" unless otherwise shown.
4. All structural wood members that were observed appear to be in sound condition and without structural defect.

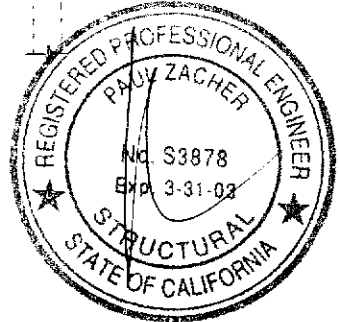


1 ROOF PLAN - HAMPTON  
Not to Scale



Nail purlin to existing purlin  
w/ 16d @ 3" oc staggered.  
Shim as required.

Add vertical  
2x4 strut at  
each end (where  
existing does not  
occur)



2

**PURLIN DETAIL**

scale: 1/2" = 1'-0"

Hampton

Paul Zacher – Structural Engineers  
4701 Lakeside Way  
Fair Oaks, CA 95628

TEL: 916.961.3960  
FAX: 916.961.6552

June 5, 2001

Zimmerman Roofing  
3675 R Street  
Sacramento, CA 95816  
TEL: 916.454.3667  
FAX: 916.455.3784

Attn.: Mr. Jeff Tucker,

re: Job 2001\_135: HAMPTON

Subject: Structural Investigation Report of the Roof for the Residence located at 6784 Orleans Way, Sacramento, CA 95831.

As requested by Mr. Jeff Tucker, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site May 17, 2001. The investigation was made to determine the existing condition of the structure. All information, data and analysis contained within this report are based on the 1997 Uniform Building Code.

The following is based on visual observations with no subsurface investigation being made.

DESCRIPTION:

Type of Facility: Residence.  
Year Built: Estimated 1960's vintage.  
Occupancy: Residential.  
No. of Stories: One.  
Dimensions: Approximately 1500 square feet with a first story plate height of 8 feet.

CONSTRUCTION:

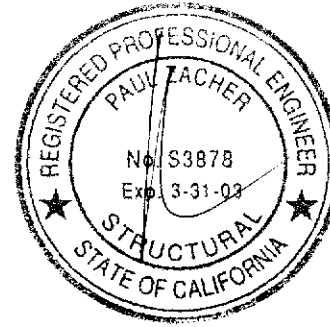
Roof:

The roof covering will consist of a Light Weight Concrete Tile over 1/2" solid sheathing. The living area is conventionally framed with 2x4 rafters spaced at 24" on center with 2x4 purlins supported at no more than 10'-0" on center by 2x4 struts bearing on walls below. The garage area is framed with 2x4 rafters spaced at 24" on center and 2x6 cross ties spaced at 4'-0" on center.

CONCLUSIONS:

Roof:

The living and garage areas currently lacks sufficient structural capacity for the applied live and dead loads. See "Recommendations" for location and repair to bring the living and garage areas up to the required capacity.



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17

Hampton



Paul Zacher - Structural Engineers  
4701 Lakeside Way  
Fair Oaks, CA 95628

TEL: 916.961.3960  
FAX: 916.961.6552

### RECOMMENDATIONS:

If any of the following recommendations do not correspond to actual field conditions, the engineer of record shall be notified for further investigation and evaluation before continuing work.

#### Living and Garage Areas:

1. Scab a 2x4 to existing 2x4 rafters where the span is greater than 7'-9" (total 15).
2. Scab a 2x12 DF#2 x 10'-0" long purlin to the existing 2x4 purlin which spans 10'-0". Attach it with 16d's @ 3" on center. Support the 2x12 to the bearing walls below with 2x4 struts. See details 1 and 2.
3. Provide an additional 2x4 strut from the existing purlin to the bearing wall below. The maximum spacing between the new and existing struts shall not exceed 4'-0" on center and the minimum slope of the struts shall not be less than 45 degrees from the horizontal. See detail 1.
4. Scab a 2x4 to existing 2x4 rafters where the span is greater than 7'-9" (total 4). Scab a 2x6 to existing 2x4 rafters where the span is greater than 9'-9" (total 9).

It shall be noted that small hairline cracking may occur at exterior stucco and interior gypboard finished walls that are load bearing or distributing roof strut loads. These cracks are a natural occurrence as the existing structure re-distributes the new roof weight. They are cosmetic in nature and are not an indication of a structural hazard or failure.

It shall be noted that some deflection of the rafters may be evident after installation of the tile. The existing roof framing has deflected but this may not be readily evident due to the uneven nature of the existing roofing material. Concrete tile is a very consistent and uniform product and when installed in an even plane, even small deflections can become apparent. This is only a cosmetic issue and not a structural concern.

The inspection consisted of visual observation only, made solely to determine the structural capacity of the existing roof. Analysis does not determine any effects on the overall structure under lateral forces or effects on the foundation unless specifically noted in the calculations and in this document. No warranties, expressed or implied, are made or intended in conjunction with this report. The inspection was made only to the portions that were accessible. The specific items noted were those that were observable and there may be defects that are not observable, or are hidden by architectural and structural materials.

If you have any questions on the above, do not hesitate to call.

Sincerely,

Paul Zacher, P.E., S.E.

file

**DESIGN LOADING:**

Roof Pitch 4 in 12  
Pitch Adjustment Factor 1.05

**LOCATION: ROOF**

**MATERIAL**

**WEIGHT**

Light Weight Tile	7.00	psf
Roofing felt	0.30	psf
1x4 skip sht'g	1.09	psf
1/2" OSB/ plywood	1.50	psf
2x4 rafters @ 24" oc	<u>0.64</u>	psf
	Load	10.5 psf
Roof Pitch Adjustment	<u>0.57</u>	psf
Total Load	11.1	psf

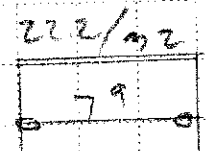
Job #: 01-105

Date: 6/5/01

LOADING

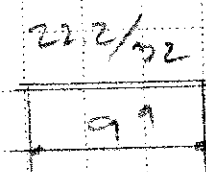
RAPID

OR = 11.1 psf x 2° = 22.2 psf      2 x 4" x 2"  
LR = 16.0      "      = 32



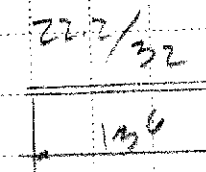
RAPID

OR = 11.1 psf x 2° = 22.2 psf      2 x 4" x 2"  
LR = 16.0      "      = 32



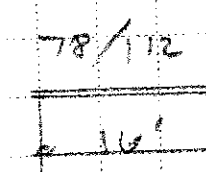
RAPID

OR = 11.1 psf x 2° = 22.2 psf      2 x 4" +  
LR = 16.0      "      = 32      2 x 6" x 2"



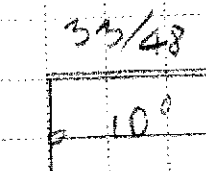
B1

OR = 11.1 psf x 7° = 78 psf      4 x 12" x 2"  
LR = 16.0      "      = 112



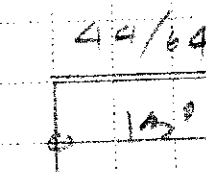
B2

OR = 11.1 psf x 3° = 44 psf      4 x 8" x 1"  
LR = 16.0      "      = 48



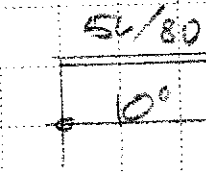
B3

OR = 11.1 psf x 4° = 44 psf      4 x 8" x 1"  
LR = 16.0      "      = 64



PURLIN

OR = 11.1 psf x 5° = 56 psf      2 x 12" x 2"  
LR = 16.0      "      = 80



Paul Zacher - Structural Engineers  
 4701 Lakeside Way  
 Fair Oaks  
 TEL: (916) 961-3960  
 FAX: (916) 961-6552

Title :  
 Dsgnr:  
 Description :

Job #  
 Date: 7:36PM, 5 JUN 01

Scope :

Rev. 510304  
 User: KW 0602844, Ver 5.1.3, 22-Jun-1999, Win32  
 (c) 1993-99 ENERCALC

### Timber Beam & Joist

c:\enercalc\test ecw:Calculations

#### Description RAFTERS AND BEAMS

#### Timber Member Information Calculations are designed to 1997 NDS and 1997 UBC Requirements

Timber Section		rafter 2x4	rafter 2-2x4	rafter 2x4 + 2x6	B1 4x12	B2 4x8	B3 4x8	purlin 2x12
Beam Width	in	1.500	3.000	2.120	3.500	3.500	3.500	1.500
Beam Depth	in	3.500	3.500	5.500	11.250	7.250	7.250	11.250
Le: Unbraced Length	ft	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Timber Grade		Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch
Fb - Basic Allow	psi	875.0	875.0	875.0	875.0	875.0	875.0	875.0
Fv - Basic Allow	psi	95.0	95.0	95.0	95.0	95.0	95.0	95.0
Elastic Modulus	ksi	1,600.0	1,600.0	1,600.0	1,600.0	1,600.0	1,600.0	1,600.0
Load Duration Factor		1.250	1.250	1.250	1.250	1.250	1.250	1.250
Member Type		Sawn	Sawn	Sawn	Sawn	Sawn	Sawn	Sawn
Repetitive Status		Repetitive	Repetitive	Repetitive	Repetitive	No	No	No

#### Center Span Data

	ft	7.75	9.75	13.50	16.00	10.00	13.00	10.00
Span	ft	7.75	9.75	13.50	16.00	10.00	13.00	10.00
Dead Load	#/ft	22.20	22.20	22.20	78.00	33.00	44.00	56.00
Live Load	#/ft	32.00	32.00	32.00	112.00	48.00	64.00	80.00

#### Results Ratio =

	Ratio =	0.8451	0.6688	0.8478	0.7143	0.3019	0.6803	0.5895
Mmax @ Center	in-k	4.88	7.73	14.82	72.96	12.15	27.38	20.40
@ X =	ft	3.87	4.87	6.75	8.00	5.00	6.50	5.00
fb : Actual	psi	1,594.5	1,261.8	1,386.3	988.2	396.3	892.9	644.7
Fb : Allowable	psi	1,886.7	1,886.7	1,635.2	1,383.6	1,312.5	1,312.5	1,093.8
		Bending OK	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK
fv : Actual	psi	55.7	35.6	44.1	51.4	21.1	37.8	49.3
Fv : Allowable	psi	118.8	118.8	118.8	118.8	118.8	118.8	118.8
		Shear OK	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK

#### Reactions

@ Left End	DL	lbs	86.02	108.22	149.85	624.00	165.00	286.00	280.00
	LL	lbs	124.00	156.00	216.00	896.00	240.00	416.00	400.00
	Max. DL+LL	lbs	210.02	264.22	365.85	1,520.00	405.00	702.00	680.00
@ Right End	DL	lbs	86.02	108.22	149.85	624.00	165.00	286.00	280.00
	LL	lbs	124.00	156.00	216.00	896.00	240.00	416.00	400.00
	Max. DL+LL	lbs	210.02	264.22	365.85	1,520.00	405.00	702.00	680.00

#### Deflections Ratio OK Deflection OK Deflection OK Deflection OK Deflection OK Deflection OK Deflection OK

Center DL Defl	in	-0.210	-0.263	-0.353	-0.173	-0.042	-0.159	-0.044
L/Defl Ratio		442.6	444.5	459.2	1,109.2	2,874.2	981.2	2,712.1
Center LL Defl	in	-0.303	-0.379	-0.509	-0.249	-0.061	-0.231	-0.063
L/Defl Ratio		307.0	308.4	318.6	772.5	1,976.0	674.6	1,898.5
Center Total Defl	in	-0.513	-0.643	-0.861	-0.422	-0.102	-0.390	-0.107
Location	ft	3.875	4.875	6.750	8.000	5.000	6.500	5.000
L/Defl Ratio		181.3	182.1	188.1	455.4	1,171.0	399.7	1,116.8