

CITY OF SACRAMENTO

Permit No: 9807613

1231 I Street, Sacramento, CA 95814

Insp Area: 2

Site Address: 560 SHAW RIVER WY SAC

Sub-Type: RES

Parcel No: 0310450018

Housing (Y/N): N

CONTRACTOR

ZIMMERMAN ROOFING
3560 RAMONA AV
SACRAMENTO, CA

95826

OWNER

LEE JUDY
560 SHAW RIVER WY
SACRAMENTO CA

95831

ARCHITECT

Nature of Work: REROOF PIONEER LIGHTWEIGHT TILE

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 C39 License Number 557559 Date 8-7-98 Contractor Signature Billy Coy

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 (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 & 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 8-7-98 Applicant/Agent Signature Billy Coy

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 713 97 0002024 Exp 10-1-98

(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 8-7-98 Applicant Signature Billy Coy

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.

**Paul Zacher-Structural Engineers**

4701 Lakeside Way  
Fair Oaks, CA 95628

TEL: 916.961.3960  
FAX: 916.961.3960  
e-mail: pzacher@softcom.net

July 30, 1998

Zimmerman Roofing  
3560 Ramona Avenue  
Sacramento, CA 95826  
TEL: 916.454.3667  
FAX: 916.455.3784  
TEL (Jeff): 916.392.1971  
FAX (Jeff): 916.392.6853  
FAX (Framer) : 916.383.5308

Attn: Mr. Jeff Tucker,

re Job 98166: LEE

Subject: Structural Investigation Report of the Roof for the Residence located at 560 Shaw River Way, Sacramento, CA 95831.



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 it without the express written permission from the Engineer. The Engineer of this plan and specification SHALL NOT be held to permit or approve a violation of any City Ordinance or State Law.

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 July 30, 1998. The investigation was made to determine the existing condition of the structure. All information, data and analysis contained within this report is based on the 1994 Uniform Building Code.

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

DESCRIPTION:

- Type of Facility: Residence.
- Year Built: Estimated 1980's vintage.
- Occupancy: Residential.
- No. of Stories: One.
- Dimensions: Approximately 2000 square feet with a first story plate height of 8 feet.

CONSTRUCTION:

Roof:

The roof covering will consist of Pioneer Everwest Light Weight Concrete Tile over 1/2" solid sheathing. The living area is conventionally framed with 2x6 rafters spaced at 24" on center with 2x6 purlins supported at no more than 6'-0" on center by 2x4 struts bearing on walls below. The vaulted ceiling is constructed of 2x6 rafters spaced at 24" on center supported at the ridge with a

6x12 beam. The garage area is framed with 2x6 rafters spaced at 24" on center and 2x8 cross ties spaced at 4'-0" on center.

CONCLUSIONS:

Roof

The living and garage areas have sufficient structural capacity for the applied live and dead loads.


RECOMMENDATIONS:

None

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 which 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**

<u>MATERIAL</u>	<u>WEIGHT</u>	
Pioneer Everwest Light Wt	7.00	psf
Roofing felt	0.30	psf
1x4 skip sht'g	1.09	psf
1/2" OSB/ plywood	1.50	psf
2x6 rafters @ 24" oc	<u>1.00</u>	psf
Load	10.9	psf
Roof Pitch Adjustment	<u>0.59</u>	psf
Total Load	11.5	psf

**LOCATION: VAULT**

<u>MATERIAL</u>	<u>WEIGHT</u>	
Pioneer Everwest Light Wt	7.00	psf
Roofing felt	0.30	psf
1/2" OSB/ plywood	1.50	psf
1x4 skip sht'g	1.09	psf
2x6 rafters @ 24" oc	1.00	psf
Batt'blown insul	0.50	psf
1/2" Gypboard	<u>2.50</u>	psf
Load	13.9	psf
Roof Pitch Adjustment	<u>0.75</u>	psf
Total Load	14.6	psf

**BEAM DESIGN FOR UNIFORM LOAD: 2x6**

(Values for DF Larch #2)

Width, b	1.5 inches
Depth, d	5.5 inches
Length of beam	12 feet
Dead load roof	11.5 psf
Live load roof	16 psf
Contributory width of roof load	2 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	240
Total load defl ratio	180
Total dead load	23 plf
Total live load	32 plf

## Base design values:

Shear, $F_v$	95 psi
Bending, $F_b$	1350 psi
Comp perp to grain, $F_c$	625 psi
Mod of Elasticity, E	1600000 psi
Load duration factor, $C_d$	1.25
Size Factor, $C_f$	1.30
Repetitive factor, $C_r$	1.15

Dead load reaction	138 lbs
Live load reaction	192 lbs
Total load reaction	330 lbs

Allowable shear, $F_v'$	119 psi
Actual shear, $f_v$	55 psi
Allowable bending, $F_b'$	2523 psi
Actual bending, $f_b$	1571 psi
Allowable live load defl	0.60 inches
Actual live load defl	0.45 inches
Allowable total load defl	0.80 inches
Actual total load defl	0.77 inches

Bearing length req'd 0.35 inches

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

**BEAM DESIGN FOR UNIFORM LOAD: 2x6 Vault**

(Values for DF Larch #2)

Width, $b$	1.5 inches
Depth, $d$	5.5 inches
Length of beam	10.75 feet
Dead load roof	14.6 psf
Live load roof	16 psf
Contributory width of roof load	2 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	360
Total load defl ratio	240
Total dead load	29.2 plf
Total live load	32 plf

## Base design values:

Shear, $F_v$	95 psi
Bending, $F_b$	1350 psi
Comp perp to grain, $F_c$	625 psi
Mod of Elasticity, $E$	1600000 psi
Load duration factor, $C_d$	1.25
Size Factor, $C_f$	1.30
Repetitive factor, $C_r$	1.15

Dead load reaction	157 lbs
Live load reaction	172 lbs
Total load reaction	329 lbs

Allowable shear, $F_v'$	119 psi
Actual shear, $f_v$	55 psi
Allowable bending, $F_b'$	2523 psi
Actual bending, $f_b$	1403 psi
Allowable live load defl	0.36 inches
Actual live load defl	0.29 inches
Allowable total load defl	0.54 inches
Actual total load defl	0.55 inches

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Beam Fails under Total Load Deflection  
OK. Less than 1/32" over

Bearing length req'd	0.35 inches
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**BEAM DESIGN FOR UNIFORM LOAD: Vault**

(Values for DF Larch #1)

Width, b	5.5 inches
Depth, d	11.5 inches
Length of beam	16 feet
Dead load roof	14.6 psf
Live load roof	16 psf
Contributory width of roof load	11 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	360
Total load defl ratio	240
Total dead load	160.6 plf
Total live load	176 plf

Base design values:

Shear, $F_v$	85 psi
Bending, $F_b$	875 psi
Comp. perp to grain, $F_c$	625 psi
Mod of Elasticity, E	1600000 psi
Load duration factor, $C_d$	1.25
Size Factor, $C_f$	1.00

Dead load reaction	1285 lbs
Live load reaction	1408 lbs
Total load reaction	2693 lbs

Allowable shear, $F_v'$	106 psi
Actual shear, $f_v$	56 psi
Allowable bending, $F_b'$	1094 psi
Actual bending, $f_b$	1066 psi
Allowable live load defl	0.53 inches
Actual live load defl	0.23 inches
Allowable total load defl	0.80 inches
Actual total load defl	0.45 inches

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

Bearing length req'd 0.78 inches

**BEAM DESIGN FOR UNIFORM LOAD: Patio**

(Values for DF Larch #1)

Width, b	3.5 inches
Depth, d	9.25 inches
Length of beam	8.5 feet
Dead load roof	11.5 psf
Live load roof	16 psf
Contributory width of roof load	7 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	240
Total load defl ratio	180
Total dead load	80.5 plf
Total live load	112 plf

## Base design values:

Shear, $F_v$	95 psi
Bending, $F_b$	875 psi
Comp perp to grain, $F_c$	625 psi
Mod of Elasticity, E	1600000 psi
Load duration factor, $C_d$	1.25
Size Factor, $C_f$	1.20

Dead load reaction	342 lbs
Live load reaction	476 lbs
Total load reaction	818 lbs

Allowable shear, $F_v'$	119 psi
Actual shear, $f_v$	31 psi
Allowable bending, $F_b'$	1313 psi
Actual bending, $f_b$	418 psi
Allowable live load defl	0.43 inches
Actual live load defl	0.04 inches
Allowable total load defl	0.57 inches
Actual total load defl	0.06 inches

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

Bearing length req'd	0.37 inches
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**BEAM DESIGN FOR UNIFORM LOAD: Porch**

(Values for DF Larch #1)

Width, b	3.5 inches	
Depth, a	11.25 inches	
Length of beam	16 feet	
Dead load roof	11.5 psf	
Live load roof	16 psf	
Contributory width of roof load	8 feet	
Dead load floor	0 psf	
Live load floor	0 psf	
Contributory width of floor load	0 feet	
Dead load wall	0 plf	
Live load defl ratio	240	
Total load defl ratio	180	
Total dead load	92 plf	
Total live load	128 plf	
Base design values		
Shear, $F_v$	95 psi	
Bending, $F_b$	875 psi	
Comp perp. to grain, $F_c$	625 psi	
Mod of Elasticity, E	1600000 psi	
Load duration factor, $C_d$	1.25	
Size Factor, $C_f$	1.10	
Dead load reaction	736 lbs	
Live load reaction	1024 lbs	
Total load reaction	1760 lbs	
Allowable shear, $F_v'$	119 psi	Horizontal Shear OK
Actual shear, $f_v$	59 psi	
Allowable bending, $F_b'$	1203 psi	Bending OK
Actual bending, $f_b$	1144 psi	
Allowable live load defl	0.80 inches	Live Load Deflection OK
Actual live load defl	0.28 inches	
Allowable total load defl	1.07 inches	Total Load Deflection OK
Actual total load defl	0.49 inches	
Bearing length req'd	0.80 inches	



DEPARTMENT OF  
PLANNING AND DEVELOPMENT

CITY OF SACRAMENTO  
CALIFORNIA

1231 I STREET  
ROOM 200  
SACRAMENTO, CA  
95814-2998

Permit Service  
916-264-7619  
FAX 916-264-7046

*Lee  
Shaw River  
Sacramento, CA. 95831*

### TILE ROOF WORKSHEET

This worksheet must be filled out whenever any type of tile roof is applied for.

If the answer to question #5 is yes, a written engineering report from a registered engineer must be provided with each application.

- 1 BRAND AND MODEL OF TILE Pioneer lightweight tile
- 2 TILE WEIGHT PER SQUARE 730
- 3 WEIGHT OF ROOF SYSTEM PER SQUARE 180
- 4 TOTAL WEIGHT OF ROOF SYSTEM ~~730~~ 910
- 5 DOES TOTAL WEIGHT OF ROOF SYSTEM EXCEED 750# PER SQUARE? YES NO
- 6 ROOF SLOPE 4/12

PLEASE PROVIDE A SEPARATE WORKSHEET FOR EACH APPLICATION INVOLVING A TILE ROOF