

**CITY OF SACRAMENTO**  
1231 I Street, Sacramento, CA 95814

**Permit No: 9907298**  
**Insp Area: 2**

**Site Address: 840 SENIOR WY SAC**  
Parcel No: 030-0194-006

Sub-Type: RES  
Housing (Y/N): N

CONTRACTOR  
LESS CO  
PO BOX 41863  
SACRAMENTO CA 95841

OWNER  
CHINN KHAN M & CHERYL  
840 SENIOR WY  
SACRAMENTO CA 95831

ARCHITECT

**Nature of Work: TEAR OFF AND REROOF WITH 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 57 License Number 383238 Date 7-7-99 Contractor Signature Leo Numsuck

**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 7-7-99 Applicant/Agent Signature Leo Numsuck

**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 1353545-98 Exp Date 07/01/1999

\_\_\_\_ (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 \_\_\_\_\_ Applicant Signature Leo Numsuck

**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.**

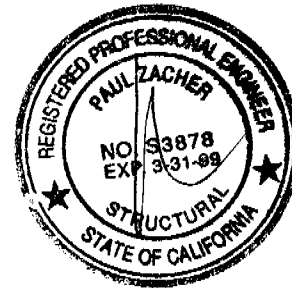
Chan

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

TEL: 916.961.3960  
FAX: 916.961.3960

January 28, 1999

Less-co Roofing  
P.O. Box 41863  
Sacramento, CA 95826  
TEL: (916) 485-9859  
FAX: (916) 485-9859



Attn.: Mr. Dennis Giles,

re: Job 99016: CHAN

Subject: Structural Investigation Report of the Roof for the Residence located at 841 Senior Way,  
Sacramento, CA 95831.

As requested by Mr. Dennis Giles, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site January 27, 1999. 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 1970'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 Monier 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 except for the vaulted ceiling area. The vaulted ceiling is constructed of 2x8 rafters spaced at 16" on center supported at the ridge by a 6x beam. The garage area is framed with 2x6 rafters spaced at 24" on center and 2x6 cross ties spaced at 4'-0" on center.

CONCLUSIONS:

Roof:  
The living area has sufficient structural capacity for the applied live and dead loads. The garage lacks sufficient structural capacity for the applied live and dead loads.

*See struc. mods. ① & ②,  
on sheets 2, 5 & 6.  
1/6 Reviewed by Matt P. 2/7/99*

Chan



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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.

Garage:

1. Scab a 1 3/4" x 11 7/8" x 19'-0" microlam purlin to the existing 2x6 purlin and nail together with 16d's @ 12" oc. Support the microlam to the bearing walls below with 2x4 struts. See details 1 and 2.
2. Add a 2x12 DF#2 x 12'-0" purlin. Support the purlin to the bearing walls below with 2x4 struts. See details 1 and 2.

It shall be noted that small hairline cracking may occur at exterior stucco and interior gypboard finished walls which 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 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>	
Monier Duralite	6.00	psf
Roofing felt	0.30	psf
1x4 skip sht'g	1.09	psf
1/2" OSB/ plywood	1.50	psf
2x6 rafters @ 24" oc	1.00	psf
Load	9.9	psf
Roof Pitch Adjustment	0.54	psf
Total Load	10.4	psf

**LOCATION: VAULT**

<u>MATERIAL</u>	<u>WEIGHT</u>	
Monier Duralite	6.00	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	2.50	psf
Load	12.9	psf
Roof Pitch Adjustment	0.70	psf
Total Load	13.6	psf

Title :  
 Dsgnr:  
 Description :

Date:  
 Job #

Scope :

Rev. 510001

**Timber Beam & Joist**

Page 1

**Description RAFTERS AND BEAMS**

**Timber Member Information**

		2x6	2x8	4x6	6x16	2x12	microlam
Timber Section		2x6	2x8	4x6	6x16	2x12	LVL:1.750x
Beam Width	in	1.500	1.500	3.500	5.500	1.500	1.750
Beam Depth	in	5.500	7.250	5.500	15.500	11.250	11.875
Le: Unbraced Length	ft	0.00	0.00	2.00	0.00	0.00	0.00
Timber Grade		Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Truss Joist - MacMill
Fb - Basic Allow	psi	875.0	875.0	875.0	1,350.0	875.0	2,600.0
Fv - Basic Allow	psi	95.0	95.0	95.0	85.0	95.0	285.0
Elastic Modulus	ksi	1,600.0	1,600.0	1,600.0	1,600.0	1,600.0	1,800.0
Load Duration Factor		1.250	1.250	1.250	1.250	1.250	1.250
Member Type		Sawn	Sawn	Sawn	Sawn	Sawn	
Repetitive Status		Repetitive	No	No	No	No	No

**Center Span Data**

Span	ft	12.00	12.00	11.00	14.00	12.00	19.00
Dead Load	#/ft	20.80	18.10	52.00	163.00	62.00	62.00
Live Load	#/ft	32.00	21.33	80.00	192.00	96.00	96.00

Results	Ratio =	0.9223	0.4938	0.9570	0.3358	0.9862	0.6401
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Mmax @ Center	in-k	11.40	8.52	23.96	104.37	34.13	85.56
@ X =	ft	6.00	6.00	5.50	7.00	6.00	9.50
fb : Actual	psi	1,508.1	648.1	1,357.7	473.9	1,078.6	2,080.2
Fb : Allowable	psi	1,635.2	1,312.5	1,418.8	1,640.2	1,093.8	3,250.0
		Bending OK	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK
fv : Actual	psi	53.5	29.5	52.0	35.7	71.5	97.1
Fv : Allowable	psi	118.8	118.8	118.8	106.3	118.8	356.3
		Shear OK	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK

**Reactions**

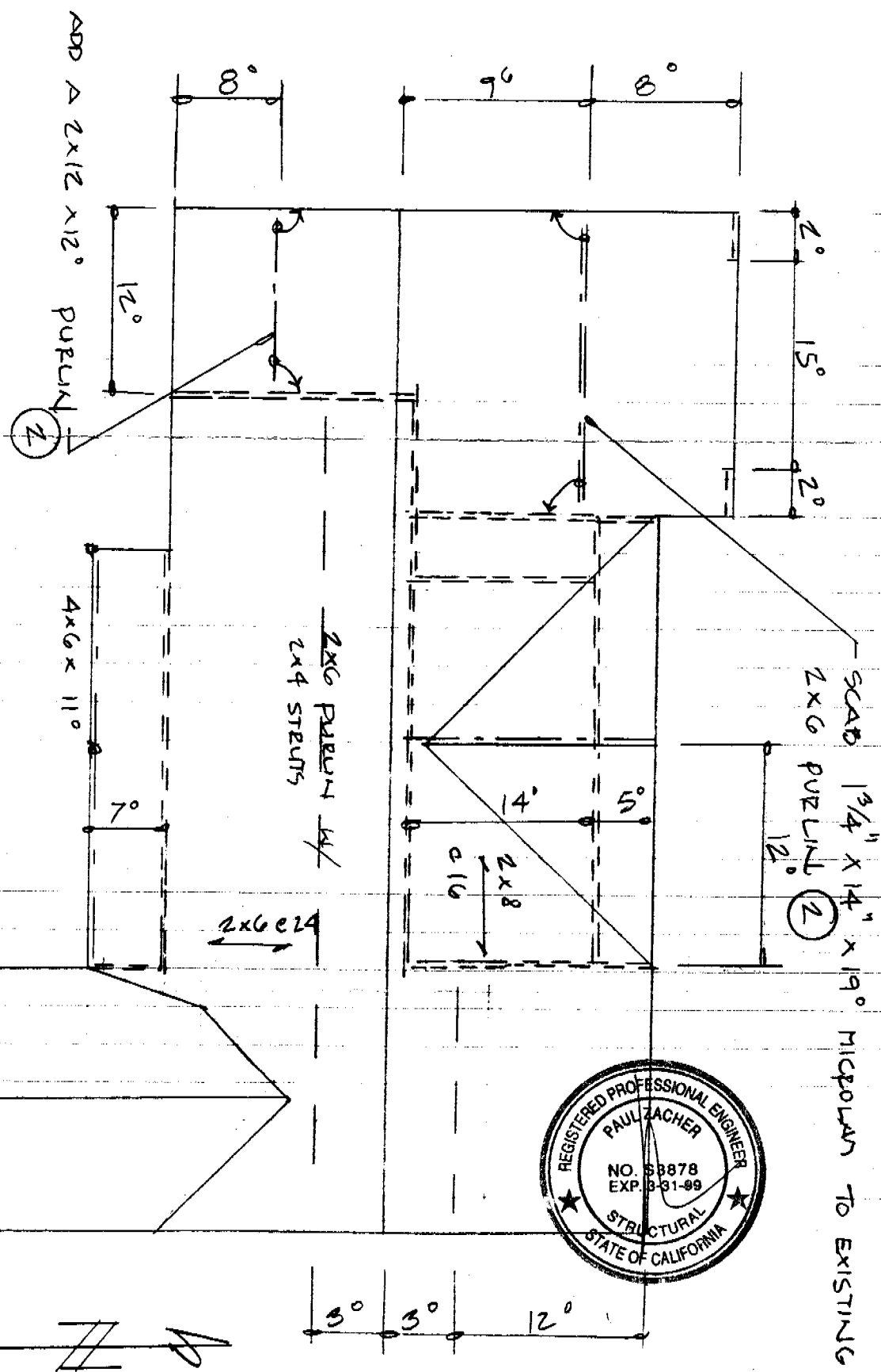
@ Left End DL	lbs	124.80	108.60	286.00	1,141.00	372.00	589.00
LL	lbs	192.00	127.98	440.00	1,344.00	576.00	912.00
Max. DL+LL	lbs	316.80	236.58	726.00	2,485.00	948.00	1,501.00
@ Right End DL	lbs	124.80	108.60	286.00	1,141.00	372.00	589.00
LL	lbs	192.00	127.98	440.00	1,344.00	576.00	912.00
Max. DL+LL	lbs	316.80	236.58	726.00	2,485.00	948.00	1,501.00

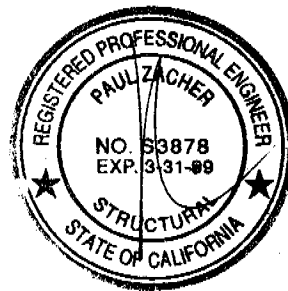
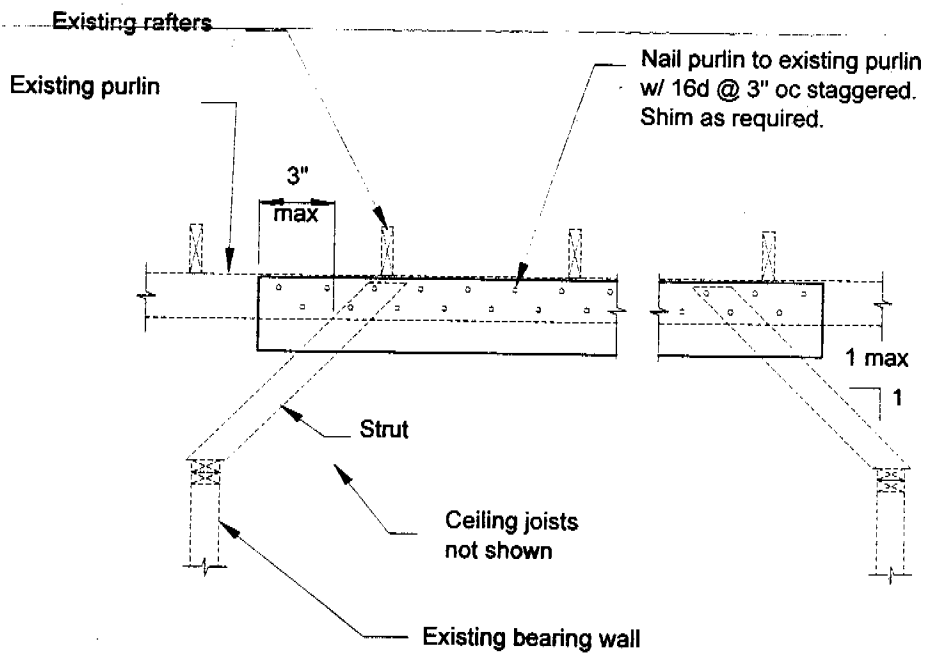
**Deflections**

Center DL Defl	in	-0.292	-0.111	-0.221	-0.052	-0.102	-0.414
L/Defl Ratio		493.8	1,299.7	598.3	3,256.4	1,417.6	551.3
Center LL Defl	in	-0.449	-0.131	-0.339	-0.061	-0.157	-0.640
L/Defl Ratio		320.9	1,102.9	388.9	2,764.5	915.6	356.0
Center Total Defl	in	-0.740	-0.241	-0.560	-0.112	-0.259	-1.054
Location	ft	6.000	6.000	5.500	7.000	6.000	9.500
L/Defl Ratio		194.5	596.6	235.7	1,495.2	556.3	216.3

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① ROOF PLAN - CHAN.  
NT'S.





2

PURLIN DETAIL

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