## **CITY OF SACRAMENTO**

1231 I Street, Sacramento, CA 95814			Insp Area: 2	Insp Area: 2	
Site Address: Parcel No:	1330 GRANT LN S 0160301007	SAC	Sub-Type: RES Housing (Y/N): N		
CONTRACTOR REACH ROOFING 9300 GERBER RD SAC CA	95829	<b>OWNER</b> ADAMS GERALD R/SHARON N 1330 GRANT LN SACRAMENTO CA	<u>ARCHITECT</u> 95822		
Nature of Work	:: ROOF TILE				
	N LENDING AGENCY h this permit is issued (Sec. 3		at there is a construction lending agency for the per	rformance	
Lender's Name		Lender'sAddress_			
(commencing with so	ection 7000) of Division 3 of $\mathcal{H}$ License Number $5\%$	the Business and Professions Code and my Date 2-3-99 Co	ontractor Signature 4 - 6		
following reason (Se any structure, prior to of the Contractors L exempt therefrom an	ec. 7031.5, Business and Profe o its issuance, also requires the cicense Law (Chapter 9 (com-	essions Code; any city or county which require applicant for such permit to file a signed sumencing with Section 7000) of Division 8 emption. Any violation of Section 7031.5 to	nat I am exempt from the contractors License La aires a permit to construct, alter, improve, demolish statement that he or she is licensed pursuant to the of the Business and Professions Code) or that he by any applicant for a permit subjects the applicant	n, orrepair provisions e or she is	
for sale (Sec. 7044, thereon, and who do sale. If, however, th	Business and Professional Coes such work himself or hers	Code: The Contractors License Law does telf or through his/her own employees, prov	will do the work, and the structure is not intended on not apply to an owner of property who builds or ided that such improvements are not intended or owner-builder will have the burden of proving that I	improves offered for	
Code: The Contract	of the property, am exclusive ors License Law does not ap d pursuant to the Contractors	ply to an owner of property who builds or it	construct the project (Sec. 7044, Business and Property of the project of the contracts for such project (Sec. 7044, Business and Property of the project (Sec. 7044, Business and Busi	rofessions cts with a	
l am exempt u	ınder Sec	B & PC for this reason:			
Date		Owner Signature			
all measurements and or private agreement	d locations shown on the app relating to permissible or pro	lication or accompanying drawings and that	the representation of the applicant, that the applicant the improvement to be constructed does not violath is building permit does not authorize any illegal letts.	te any law	
I certify that I have relating to building c	read this application and star construction and herby author	te that all information is correct. I agree to ize representative(s) of this city to enter upon	o comply with all city and county ordinances and the abovement of property for inspection purpose.	state laws oses.	
Date 2-3	-99	Applicant/Agent Signature	- W		
I have and wil			perjury one of the following declarations: on as provided for by Section 3700 of the Labor Co	de, forthe	
		sation insurance, as required by Section 37 sation insurance carrier and policy number a	700 of the Labor Code, for the performance of the re:	work for	
Carrier S	TATE FUND	Policy Number 285-98	Exp Date 01/01/2000		
shall not employ any	y person in any manner so as	s to become subject to the workers' competer f Section 3700 of the Labor Code, Lshall for	the performance of the work for which this permit insation laws of California and agree that if I shoul thwith comply with those provisions.	is issued,I ld become	
Date 4 5	٢/	Applicant Signature	MT		
CRIMINAL PENAL	TIES AND CIVIL FINES	UP TO ONE HUNDRED THOUSAND D	NLAWFUL AND SHALL SUBJECT AN EMPLO OLLARS (\$100,000) IN ADDITION TO THE C CODE, INTEREST AND ATTORNEY'S FEE.	OYER TO COST OF	

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

Permit No: 9901049

### SCHOEN ENGINEERING

9524 BEDINGTON WAY SACRAMENTO, CA 95827 (916) 369 6866 Lic. # C042913

EXP 3/00

January 29, 1999

Tony Cienchetta Reach Roofing P.O. Box 292486 Sacramento, California 95829

SUBJECT: Reroof at 1330 Grant Lane, Sacramento, CA 95822

Dear Tony:

On January 29th, 1999 I observed the roof structure of the residence at the above mentioned address. The roof was made up of 2x8 Douglas fir No. 2 rafters @ 2' o.c. with a max. span of 16'-7" in the house and 2x6 rafters @ 2' o.c. with a max span of 10'-9" in the garage. The garage door header was a 4x12 spanning 16'.

The following modifications will be necessary prior to reroofing:

\* In the bedroom wing of the house the two existing ridge braces should be doubled by installing a 2nd 2x4 along side the existing brace and nailing them together with 16d common nails @ 16" o.c. (see attached sketch).

It is my finding that with the above mentioned modification this structure is adequate for the proposed reroof system which is comprised of: Install 1/2" plywood over the existing skip sheathing; 30lb. tarred felt; 1x2 wood battens; Lightweight concrete tile weighing no more than 6 lbs://sq.ft..

Note: It is possible when rerobfing that the increased load to structural elements also supporting wall, ceiling and floor finishes could cause some minor cosmetic cracking of these finishes. This is not untypical of a wood framed house and does not necessarily constitute structural inadequacy of these members.

This report deals with the structural adequacy of roof supporting members that were readily observable. It does not address any structure that was covered by wall finishes, buried in the ground or was otherwise not directly observable. These structures were assumed to be of standard construction as called for in the Uniform Building Code. Also, it does not address any existing deflection or warping of roof members. The repair of such deflections to improve architectural appearance, is at the option of the home owner and the roofing contractor.

Theb

Revened by Matt P. 2/3/99

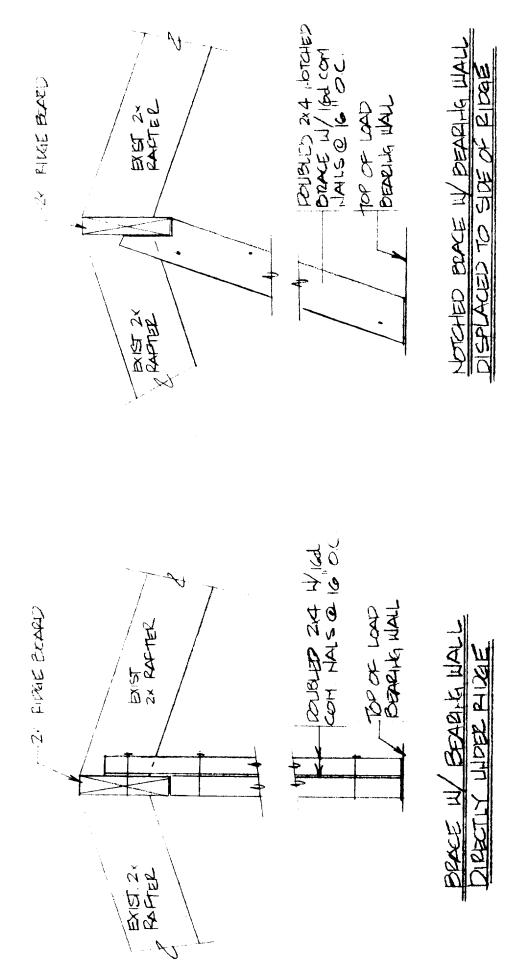
I would like to thank you for allowing me to provide my services in this matter. Please let me know if I may be of further assistance.

Sincerely

Mark S. Schoen P.E.

MSS:mss

C:\WP51\S-ENG99\RERF001.001



Mark John

#### SCHOEN ENGINEERING



Client: Reach Roofing

Date: 2/1/99

Job No.: RERF0199

Page:

Job Title: Reroof at 1330 Grant Lane, Sacramento, CA 95822

Check for adequacy of existing rafters for reroofing with material heavier than the original installation. Lumber grade is Douglas fir no. 2. Building is about 20years old. 1979 U.B.C. is used

Ew = 1700000 Fb = 1450 Fbp = Fb·1.25

$$Fbp = 1812.5$$

(stress increase of 25% is used for live load duration.)

2x8 Douglas fir rafter:

$$b = 1.5$$
  $d = 7.25$   $Ix2x8 = b \cdot \frac{d^3}{12}$   $Sx2x8 = b \cdot \frac{d^2}{6}$  Stiff2x8 =  $Ix2x8 \cdot Ew$ 

Superimposed dead and live loads:

Tile dead load:

DLt = 6

Live load:

Rafter spacing:

sp = 2

Rafter dead load:

 $Rdl = \frac{2.64}{sp} \qquad Rdl = 1.32$ 

Skip shtg. dead load:

skshtg = 1

Plywood dead load:

Ceiling dead load:

clg = 0

misl. dead load:

msl = 0

**Total roof dead load:** DLtotal = DLt + Rdl + skshtg + ply + clg - msl

DLtotal = 9.82

Check maximum span based on deflection limit of L/240 for rafters w/ceiling L/180 for rafters w/o ceiling:

(Note: The formula used to calculate allowable span for deflections is based on a two span continuous beam where rafters are continuous over a midspan purlin with live load on one span only and dead load on both spans otherwise it is based on a simple span condition)

Load:

wd = 
$$sp \cdot \frac{1}{12} \cdot ((DLtotal) + LL)$$

ws = 
$$sp \cdot \frac{1}{12} \cdot ((DLtotal) + LL)$$

Lmaxd =  $\frac{77 \cdot \text{Stiff2x8}}{1 \cdot 180 \cdot \text{wd}} = \frac{\frac{1}{3}}{12}$  Lmaxd = 16.701 > 16.583 therefore O.K.

Check for maximum span based on stresses:

Lmaxs = 
$$Fbp \cdot 8 \cdot \frac{Sx2x8}{ws} \cdot \frac{1}{12}$$

 $L_{maxs} = 17.535 > 16.583$  therefore O.K



DEPARTMENT OF PLANNING AND DEVELOPMENT

# CITY OF SACRAMENTO CALIFORNIA

1231 I STREET ROOM 200 SACRAMENTO, CA 95814-2998

Permit Services 916-264-7619 FAX 916-264-7046

## 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 MONIER CEDARLITE	11/0
2.		TILE WEIGHT PER SQUARE.  560	M
3.		WEIGHT OF ROOF SYSTEM PER SQUARE	-
4.		TOTAL WEIGHT OF ROOF SYSTEM 710	-
5.		DOES TOTAL WEIGHT OF ROOF SYSTEM EXCEED 750# PER SQUARE? YES	(NO)
6.	-	ROOF SLOPE 442	_

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