## **CITY OF SACRAMENTO**

1231 I Street, Sacramento, CA	95814	Insp Area: 2					
Site Address: 6734 RIPTIDE WY S Parcel No: 0300670045	SAC	Sub-Type: RES Housing (Y/N): N					
CONTRACTOR ZIMMERMAN ROOFING 3560 RAMONA AV SACRAMENTO, CA 95826  Nature of Work: PEMOVE OLD POO	OWNER COHEN JEFFREY/ROCHELLE 6734 RIPTIDE WY SACRAMENTO CA 95831  F & REROOF W/PIONEER TILE 4/12 PITO	ARCHITECT					
	<b>CONSTRUCTION LENDING AGENCY:</b> 1 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'sAddress						
(commencing with section 7000) of Division 3 of the License Class 2-31 License Number 5-51	TION: I hereby affirm under penalty of perjury that the Business and Professions Code and my license is in formal to the state of the s	ill force and effect.  nature Life Conf					
following reason (Sec. 7031.5, Business and Profes any structure, prior to its issuance, also requires the of the Contractors License Law (Chapter 9 (comm	hereby affirm under penalty of perjury that I am exessions Code; any city or county which requires a permit applicant for such permit to file a signed statement than energy with Section 7000) of Division 8 of the Busing mption. Any violation of Section 7031.5 by any application;	t to construct, alter, improve, demolish, or repair t he or she is licensed pursuant to the provisions ness and Professions Code) or that he or she is					
for sale (Sec. 7044, Business and Professional Cothereon, and who does such work himself or herse	ees with wages as their sole compensation, will do the words: The Contractors License Law does not apply to If or through his/her own employees, provided that suc sold within one year of completion, the owner-builder	an owner of property who builds or improves th improvements are not intended or offered for					
	v contracting with licensed contractors to construct the y to an owner of property who builds or improves. the icense Law).						
I am exempt under Sec	B & PC for this reason:	NOV 1998					
IN ISSUING THIS BUILDING PERMIT, the ap all measurements and locations shown on the applied	Owner Signature **ND I Plicant represents, and the city relies on the representacation or accompanying drawings and that the improve ibited locations for such improvements. This building eement relating to location of improvements.	DEVELOPMENT SERVICES tion of the applicant, that the applicant verified ment to be constructed does not violate any law					
	that all information is correct. I agree to comply wit e representative(s) of this city to enter upon the abovem						
Date 11-12 10	Applicant/Agent Signature	<del>/</del>					
l have and will maintain a certificate of cons performance of work for which the permit is issued.		d for by Section 3700 of the Labor Code, forthe					
I have and will maintain workers' compensa which his permit is issued. My workers' compensa	ation insurance, as required by Section 3700 of the Lation insurance carrier and policy number are:	bor Code, for the performance of the work for					
Carrier GOLDEN EAGLE INS CORP	Policy Number CCP560841-00	Exp Date 05/01/1999					
shall not employ any person in any manner so as subject to the workers' compensation provisions of S	ermit is for \$100 or less) I certify that in the performant to become subject to the workers' compensation laws of Section 3700 of the Labor Code, I shall forthwith complete Applicant Signature	of California and agree that if I should become					
WARNING: FAILURE TO SECURE WORKER' CRIMINAL PENALTIES AND CIVIL FINES U	S COMPENSATION COVERAGE S UNLAWFUL A P TO ONE HUNDRED THOUSAND DOLLARS (\$ OR IN SECTION 3706 OF THE LABOR CODE, INTE	100,000) IN ADDITION TO THE COST OF					

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

Permit No: 9811271

# Paul Zacher-Structural Engineers

TEL: 916,961,3960

FAX: 916.961.3960

e-mail: pzacher@softcom.net

4701 Lakeside Way Fair Oaks, CA 95628

October 27, 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 98278: COHEN

Subject: Structural Investigation Report of the Roof for the Residence located at 6734 Riptide 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 October 27, 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 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 Pioneer 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 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.

#### **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 Area:

Garage:

1. Scab a 1 3/4" x 11 7/8" microlam beam to the existing 2x6 crosstie and nail together with 16d's @ 12" oc. The ends of the microlam may be clipped as required to meet the slope of the rafters.. Support the existing ridge/ hip connection to the microlam beam with 2x4 struts. The minimum slope of the struts shall not be less than 45 degrees from the horizontal See detail 1.

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** 

MATERIAL	<b>WEIGHT</b>	
Pioneer Light Weight	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**

BOOMING VIIOZI		
MATERIAL	<b>WEIGHT</b>	
Pioneer Light Weight	7.00	psf
Roofing felt	0.30	psf
1/2" OSB/ plywood	1.50	psf
1x4 skip sht'g	1.09	psf
2x8 rafters @ 24" oc	1.00	psf
Batt/blown insul	0.50	psf
1/2" Gypboard	<u>2.50</u>	$\operatorname{psf}$
Load	13.9	psf
Roof Pitch Adjustment	<u>0.75</u>	psf
Total Load	14.6	psf

Title:

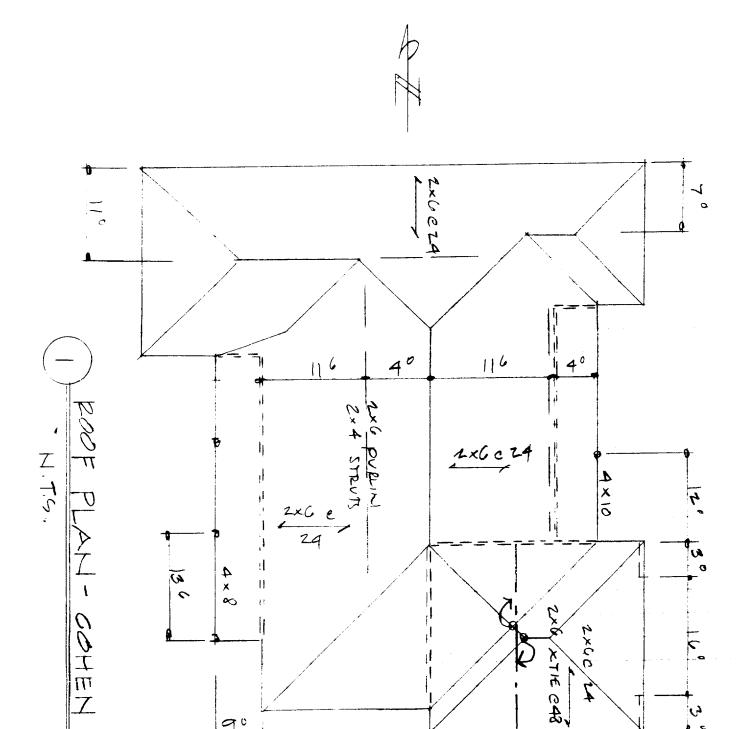
Dsgnr: Description :

Date:

Job#

Scope:

Rev: 510001			Timb	er Beam & Jo	ist	Page 1
Description	RAFTE	RS AND BE	AMS			
Timber Member	Informa	ution .				
Timber Member	IIIIOIIIIa					
	!	2x6	4x8	microlam		
Timber Section	. 1	2x6	4x8	LVL:1.750x		
Beam Width	in:	1.500	3.500	1.750		
Beam Depth	in	5.500	7.250	11.875		
Le: Unbraced Length	fti	0.00	0.00	2.00		
Timber Grade	:	ouglas Fir - Larch,				
Fb - Basic Allow	psi	875.0 95.0	1,000.0 95.0	2,600.0 285.0		
Fv - Basic Allow	psi ksi	1,600.0	1,700.0	1,800.0		
Elastic Modulus	i					
Load Duration Factor		1.250 Sawn	1.250 Sawa	1.250 Sawn		
Member Type	i	Sawn Repetitive	Sawn No	Sawn No		
Repetitive Status	<u> </u>	Meherinae		140		
Center Span Dat						
Span	ft	12.25	13.50	22.00		
Dead Load	#/ft	21.20	80.30			
Live Lo <b>ạd</b>	#/ft	32.00	88.00			
Point#1 DL	lbs			690.00		
LL	lbs			960.00		
@ X	ft		12.000	11.000		
Results	Ratio =	0.9684	0.9234	0.8643		
Mmax @ Center	in-k	11.97	46.01	108.90		
@ X =	ft	6.12	6.75	11.00		
fb : Actual	psi	1,583.5	1,500.5	2,647.7		
Fb : Allowable	psi	1,635.2	1,625.0	3,063.4		
		Bending OK	Bending OK	Bending OK		
fv : Actual	psi	55.0	61.2	59.5		
Fv : Allowable	psi	118.8	118.8	356.3 Shear OK		
	i	Shear OK	Shear OK	Silear OK	- 114	
Reactions						
@ Left End DL	lbs	129.85	542.02	345.00		
LL	lbs	196.00	594.00	480.00		
Max. DL+LL	lbs	325.85	1,136.02	825.00		
@ Right End DL	lbs	129.85	542.02	345.00		
LL	lbs	196.00	594.00	480.00		
Max. DL+LL	lbs	325.85	1,136.02	825.00		
Deflections						
Center DL Defl	in	-0.323	-0.318	-0.602		
⊔/Defl Ratio	:	455.4	510.1	438.8		
Center LL Defl	in	-0.487	-0.348	-0.837		
L/Defl Ratio		301.7	465.5	315.4		
Center Total Defl	in	-0.810	-0.666	-1.439		
Location	ft	6.125	6.750	11.000		
L/Defl Ratio		181.5	243.4	183.5		



EXISTING PIOCE/HIP CONNECTION
TO ML W/2×4 CITENTS.





DEPARTMENT OF

PLANNING A	No develorment	CALJEO		ROOM 200 SACRAMENTO, CA
Jell	E Cohen		·	9581 4-1998 Farmit Septem 916-264-7609 51X 916-264-7896
67	34 R	ptide	Way	and the second second
958	-31	TILE ROOF WO	RKSHEET	
This worl	ksheet must be fille	d out whenever an	y type of tile roof	is applied for.
If the an	swer to question a must be provided v	/5 is yes, a writter vith each application	n engineering repose.	ort from a registered
1.	BRAND AND MOI	DEL OF TILE PI	020er 5	hake telo
2.	TILE WEIGHT PE	R SQUARE	730	
3.	WEIGHT OF ROOM	SYSTEM PER SQUA	RE 180	
4.	TOTAL WEIGHT (	OF ROOF SYSTEM _	910	
<b>5</b> .	DOES TOTAL WEI	GHT OF ROOF SYSTI	M EXCEED 750/ PB	R SQUARET YES NO
6.	ROOF SLOPE			4/12
PLEASE A F	Provide a separa	TE WORKSHEET FOR	EACH APPLICATIO	ON INVOLVING A TILE
See	attach	el engin	neering	Report