CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 9912492
Insp Area: 2

Site Address: 7680 RIVER RANCH WY SAC
Parcel No: 031-0540-024

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

CONTRACTOR
ZIMMERMAN ROOFING
4560 RAMONA AV
SACRAMENTO CA 95826

OWNER
BRADDOCK EDDIE J/CAROL W
7680 RIVER RANCH WY
SACRAMENTO CA 95831

ARCHITECT

Nature of Work: TEAR OFF & REROOF W/PIONEER TILE (7/12 PITCH)

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'sAddress _____

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.

X License Class _____ License Number _____ Date _____ Contractor Signature _____

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):

_____ As 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.)

_____ 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 herby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

X Date _____ Applicant/Agent 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, forthe 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 COMP INS FUND Policy Number 713-98-2021 Exp Date 10/01/2000

_____ (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.

X Date _____ Applicant Signature _____

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.

DEPARTMENT OF
PLANNING AND DEVELOPMENT

CITY OF SACRAMENTO
CALIFORNIA

1231 I STREET
ROOM 200
SACRAMENTO, CA
95814-2998

Permit Services
916-264-7619
FAX 916-264-7096

Eddie Braddock
7680 River Ranch Way
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 Liteweight
2. TILE WEIGHT PER SQUARE 730 lbs
3. WEIGHT OF ROOF SYSTEM PER SQUARE 180 lbs
4. TOTAL WEIGHT OF ROOF SYSTEM 910 lbs
5. DOES TOTAL WEIGHT OF ROOF SYSTEM EXCEED 750# PER SQUARE? (YES) NO
6. ROOF SLOPE 4/12

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

All attached engin. report

BRADDOCK

Paul Zacher – Structural Engineers
4701 Lakeside Way
Fair Oaks, CA 95628
TEL: 916.961.3960
FAX: 916.961.3960

ISSUED

NOV 0 2 1999

Sacramento Building Division

October 14, 1999

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

REGISTERED PROFESSIONAL ENGINEER
PAUL ZACHER
No. S3878
Exp. 3-31-03
STRUCTURAL
STATE OF CALIFORNIA

Attn.: Mr. Jeff Tucker,

re: Job 99289: BRADDOCK

Subject: Structural Investigation Report of the Roof for the Residence located at 7680 River Ranch 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 14, 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 1997 Uniform Building Code.

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

<u>DESCRIPTION:</u>

Type of Facility:	Residence.
Year Built:	Estimated 1980's vintage.
Occupancy:	Residential.
No. of Stories:	One.
Dimensions:	Approximately 3000 square feet with a first story plate height of 8 feet.

<u>CONSTRUCTION:</u>

Roof:

The roof covering will consist of a 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.

<u>CONCLUSIONS:</u>

Roof:

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

See work reqd. p. 2 & 5.
Details are on p. 6 & 7.
1/7 Reviewed by Matt P. on 11/1/99

PAUL ZACHER STRUCTURAL ENGINEERS

BRADDOCK

Paul Zacher – Structural Engineers
4701 Lakeside Way
Fair Oaks, CA 95628
TEL: 916.961.3960
FAX: 916.961.3960

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:

1. Scab a 1 3/4"x14" x 20'-0" long LVL purlin to the existing 2x6 purlin. Attach it with 16d's @ 3" on center. Support the LVL to the bearing walls below with 2x4 struts. See details 1 and 2.
2. Properly install 2x4 struts (or add a 2x4 scab to both the existing purlin and strut) to prevent the purlin from "rocking" off the top of the existing strut. See detail 1.
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 6'-0" on center and the minimum slope of the struts shall not be less than 45 degrees from the horizontal. See detail 1.

Garage:

4. Scab a 1 3/4" x 11 7/8" microlam beam to the existing header. See details 1 and 3.

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	8	in 12
Pitch Adjustment Factor	1.20	

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
2x6 rafters @ 24" oc	1.00	psf
Load	10.9	psf
Roof Pitch Adjustment	2.20	psf
Total Load	13.1	psf

LOCATION: VAULT

MATERIAL	WEIGHT	
Light Weight Tile	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	2.50	psf
Load	13.9	psf
Roof Pitch Adjustment	2.80	psf
Total Load	16.7	psf

Rev: 510304

Timber Beam & Joist

Description RAFTERS AND BEAMS

Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

		rafter	patio	purlin	garage
Timber Section		**2x6**	**4x12**	**LVL:1.750x**	**4x12 + 1 3**
Beam Width	in	1.500	3.500	1.750	5.250
Beam Depth	in	5.500	11.250	14.000	11.250
Le: Unbraced Length	ft	2.00	2.00	2.00	0.00
Timber Grade		ouglas Fir - Larch,	ouglas Fir - Larch,	Truss Joist - MacMilCustom,	DF#2 + LVL
Fb - Basic Allow	psi	875.0	875.0	2,600.0	1,450.0
Fv - Basic Allow	psi	95.0	95.0	285.0	158.0
Elastic Modulus	ksi	1,600.0	1,600.0	1,800.0	1,700.0
Load Duration Factor		1.250	1.250	1.250	1.250
Member Type		Sawn	Sawn	Manuf/Pine	Manuf/Pine
Repetitive Status		Repetitive	No	No	No

Center Span Data

Span	ft	11.75	9.20	20.00	18.00
Dead Load	#/ft	26.20	79.00	119.00	118.00
Live Load	#/ft	32.00	96.00	146.00	144.00

Results

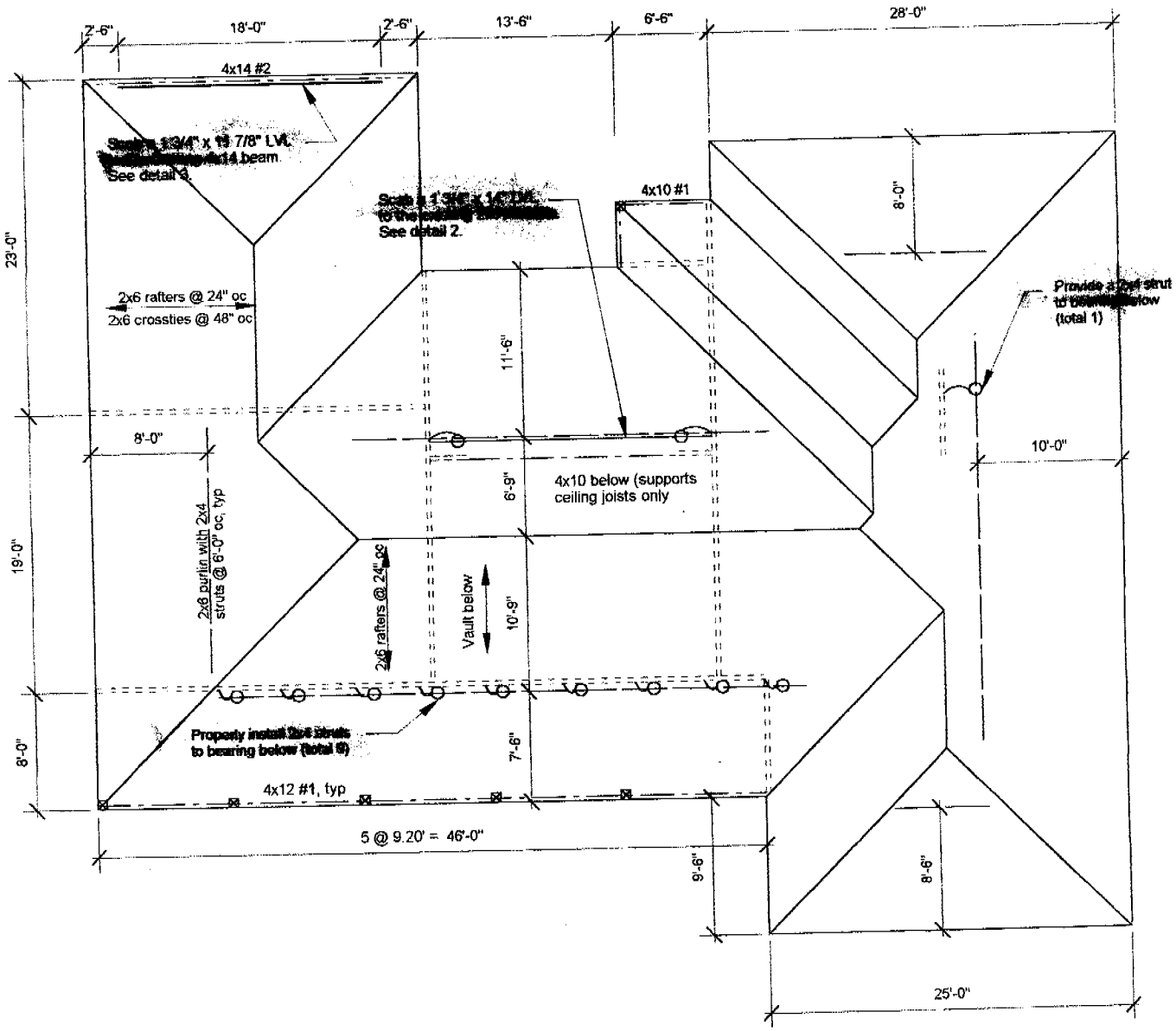
Ratio =		0.9933	0.2512	0.9255	0.6344
Mmax @ Center	in-k	12.05	22.22	159.00	127.33
@ X =	ft	5.87	4.60	10.00	9.00
fb : Actual	psi	1,593.8	300.9	2,781.3	1,149.8
Fb : Allowable	psi	1,604.5	1,198.1	3,005.2	1,812.5
		Bending OK	**Bending OK**	**Bending OK**	**Bending OK**
fv : Actual	psi	57.7	24.5	144.1	53.7
Fv : Allowable	psi	118.8	118.8	356.3	197.5
		Shear OK	**Shear OK**	**Shear OK**	**Shear OK**

Reactions

@ Left End	DL	lbs	153.92	363.40	1,190.00	1,062.00
	LL	lbs	188.00	441.60	1,460.00	1,296.00
	Max. DL+LL	lbs	341.92	805.00	2,650.00	2,358.00
@ Right End	DL	lbs	153.92	363.40	1,190.00	1,062.00
	LL	lbs	188.00	441.60	1,460.00	1,296.00
	Max. DL+LL	lbs	341.92	805.00	2,650.00	2,358.00

Deflections

Center DL Defl	in	-0.338	-0.019	-0.595	-0.263
L/Defl Ratio		417.6	5,760.8	403.5	820.7
Center LL Defl	in	-0.412	-0.023	-0.730	-0.321
L/Defl Ratio		341.9	4,740.7	328.9	672.5
Center Total Defl	in	-0.750	-0.042	-1.324	-0.584
Location	ft	5.875	4.600	10.000	9.000
L/Defl Ratio		188.0	2,600.6	181.2	369.6

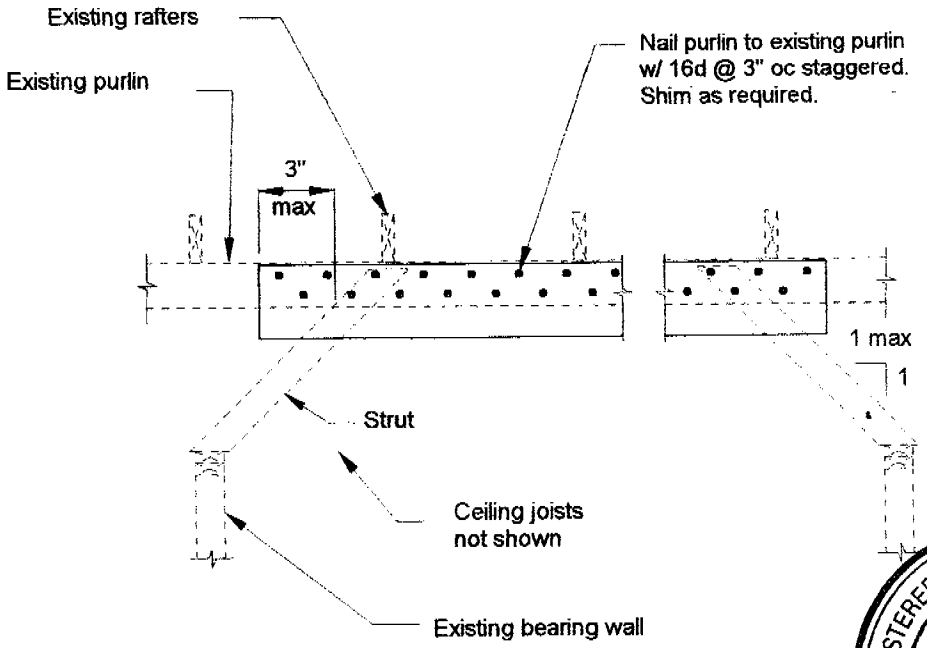


Notes:

1. This is a reroof project. The new roofing material shall be a Light Weight Concrete Tile.
2. All rafters are 2x6 DF#2 and hips and valleys are 2x8 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.

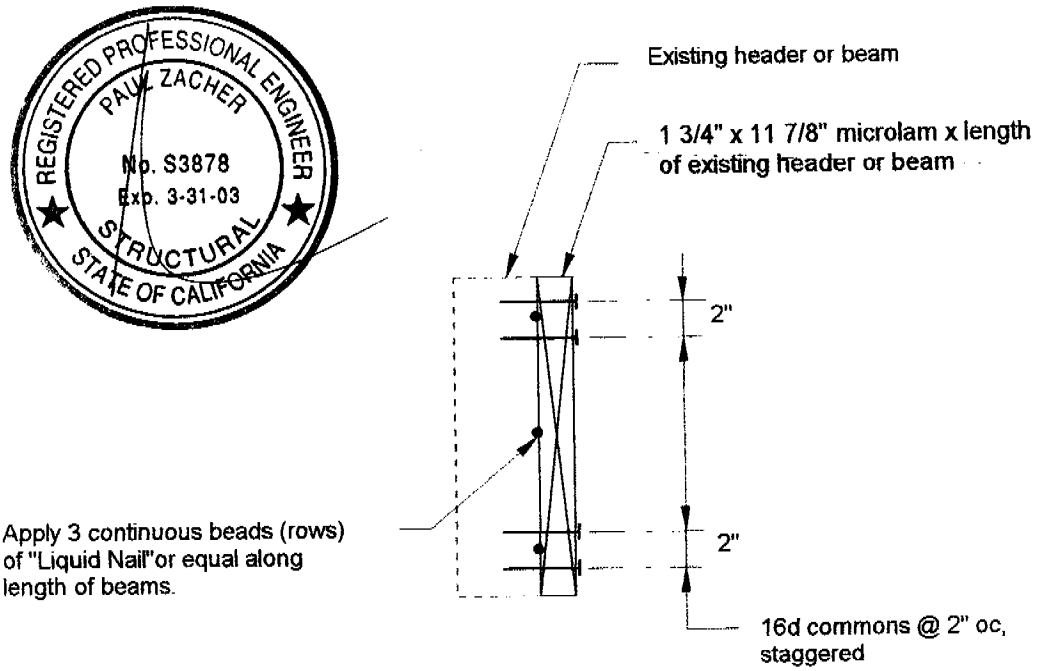
1 ROOF PLAN - BRADDOCK

Not to Scale



2 **PURLIN DETAIL**

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



3 **HEADER DETAIL**

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