

CITY OF SACRAMENTO

Permit No: 9804138

1231 I Street, Sacramento, CA 95814

Insp Area: 2

Site Address: 46 STARLIT CR SAC

Sub-Type: RES

Parcel No: 0300074006

Housing (Y/N): N

CONTRACTOR

ZIMMERMAN ROOFING
3560 RAMONA AV
SACRAMENTO, CA

OWNER

NAKAMURA ROBERT G
46 STARLIT CR
SACRAMENTO CA

ARCHITECT

95831

Nature of Work: T/O&34SQS REROOF W/LITE WT 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 5-22-98 Contractor Signature Kelly Coy

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractor's 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 herby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 5-22-98 Applicant/Agent Signature Kelly 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 0002021

(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 5-22-98 Applicant Signature Kelly 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 Engineer  
4701 Lakeside Way  
Fair Oaks, CA 95628  
TEL: 916.961.3960  
FAX: 916.961.3960

May 12, 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 98072: NAKAMURA

Subject: Structural Investigation Report of the Roof for the Residence located at 46 Starlit Circle, 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 May 12, 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 1700 square feet with a first story plate height of 8 feet.

CONSTRUCTION:

Roof:

The roof covering will consist of Pioneer Everwest Light Weight Tile over 1/2" solid sheathing. The living and garage areas are conventionally framed with 2x6 rafters spaced at 24" on center and 2x6 purlins supported at no more than 6'-0" on center by 2x4 struts bearing on walls below.

CONCLUSIONS:

Roof:

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

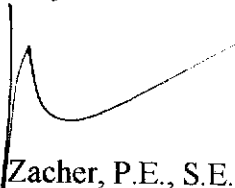
Garage:

1. Provide an additional 2x4 strut from the existing hip/ridge connection to the bearing wall below. The unbraced length of the struts shall not exceed 8'-0" and the minimum slope of the struts shall not be less than 45 degrees from the horizontal. See detail 1.

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 |

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

(Values for DF Larch #2)

|                                     |            |
|-------------------------------------|------------|
| Width, b                            | 1.5 inches |
| Depth, d                            | 5.5 inches |
| Length of beam                      | 12.08 feet |
| Dead load roof                      | 11.5 psf   |
| Live load roof                      | 16 psf     |
| Contributory width<br>of roof load  | 2 feet     |
| Dead load floor                     | 0 psf      |
| Live load floor                     | 0 psf      |
| Contributory width<br>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, Fv                | 95 psi      |
| Bending, Fb              | 875 psi     |
| Comp. perp. to grain, Fc | 625 psi     |
| Mod of Elasticity, E     | 1600000 psi |
| Load duration factor, Cd | 1.25        |
| Size Factor, Cf          | 1.30        |
| Repetitive factor, Cr    | 1.15        |

|                     |         |
|---------------------|---------|
| Dead load reaction  | 139 lbs |
| Live load reaction  | 193 lbs |
| Total load reaction | 332 lbs |

|                           |             |
|---------------------------|-------------|
| Allowable shear, Fv'      | 119 psi     |
| Actual shear, fv          | 56 psi      |
| Allowable bending, Fb'    | 1635 psi    |
| Actual bending, fb        | 1592 psi    |
| Allowable live load defl  | 0.60 inches |
| Actual live load defl     | 0.46 inches |
| Allowable total load defl | 0.81 inches |
| Actual total load defl    | 0.79 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: PORCH**

(Values for DF Larch #1)

|                                  |             |
|----------------------------------|-------------|
| Width, b                         | 3.5 inches  |
| Depth, d                         | 7.25 inches |
| Length of beam                   | 9.5 feet    |
| Dead load roof                   | 11.5 psf    |
| Live load roof                   | 16 psf      |
| Contributory width of roof load  | 5 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                  | 57.5 plf    |
| Total live load                  | 80 plf      |

Base design values:

|                          |             |
|--------------------------|-------------|
| Shear, Fv                | 95 psi      |
| Bending, Fb              | 1000 psi    |
| Comp. perp. to grain, Fc | 625 psi     |
| Mod of Elasticity, E     | 1700000 psi |
| Load duration factor, Cd | 1.25        |
| Size Factor, Cf          | 1.30        |

|                     |         |
|---------------------|---------|
| Dead load reaction  | 273 lbs |
| Live load reaction  | 380 lbs |
| Total load reaction | 653 lbs |

|                           |             |
|---------------------------|-------------|
| Allowable shear, Fv'      | 119 psi     |
| Actual shear, fv          | 34 psi      |
| Allowable bending, Fb'    | 1625 psi    |
| Actual bending, fb        | 607 psi     |
| Allowable live load defl  | 0.48 inches |
| Actual live load defl     | 0.08 inches |
| Allowable total load defl | 0.63 inches |
| Actual total load defl    | 0.13 inches |
| Bearing length req'd      | 0.30 inches |

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

## BEAM DESIGN FOR UNIFORM LOAD: PATIO

(Values for DF Larch #1)

|                                     |             |
|-------------------------------------|-------------|
| Width, b                            | 3.5 inches  |
| Depth, d                            | 7.25 inches |
| Length of beam                      | 7 feet      |
| Dead load roof                      | 7.5 psf     |
| Live load roof                      | 16 psf      |
| Contributory width<br>of roof load  | 5 feet      |
| Dead load floor                     | 0 psf       |
| Live load floor                     | 0 psf       |
| Contributory width<br>of floor load | 0 feet      |
| Dead load wall                      | 0 plf       |
| Live load defl ratio                | 240         |
| Total load defl ratio               | 180         |
| Total dead load                     | 37.5 plf    |
| Total live load                     | 80 plf      |
| Base design values:                 |             |
| Shear, Fv                           | 95 psi      |
| Bending, Fb                         | 1000 psi    |
| Comp. perp. to grain, Fc            | 625 psi     |
| Mod of Elasticity, E                | 1700000 psi |
| Load duration factor, Cd            | 1.25        |
| Size Factor, Cf                     | 1.30        |
| Dead load reaction                  | 131 lbs     |
| Live load reaction                  | 280 lbs     |
| Total load reaction                 | 411 lbs     |
| Allowable shear, Fv'                | 119 psi     |
| Actual shear, fv                    | 20 psi      |
| Allowable bending, Fb'              | 1625 psi    |
| Actual bending, fb                  | 282 psi     |
| Allowable live load defl            | 0.35 inches |
| Actual live load defl               | 0.02 inches |
| Allowable total load defl           | 0.47 inches |
| Actual total load defl              | 0.03 inches |
| Bearing length req'd                | 0.19 inches |

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

**BEAM DESIGN FOR UNIFORM LOAD: GARAGE**

(Values for DF Larch #1)

|                                     |             |
|-------------------------------------|-------------|
| Width, b                            | 3.5 inches  |
| Depth, d                            | 11.5 inches |
| Length of beam                      | 16 feet     |
| Dead load roof                      | 11.5 psf    |
| Live load roof                      | 16 psf      |
| Contributory width<br>of roof load  | 10 feet     |
| Dead load floor                     | 0 psf       |
| Live load floor                     | 0 psf       |
| Contributory width<br>of floor load | 0 feet      |
| Dead load wall                      | 0 plf       |
| Live load defl ratio                | 240         |
| Total load defl ratio               | 180         |
| Total dead load                     | 115 plf     |
| Total live load                     | 160 plf     |

Base design values:

|                          |             |
|--------------------------|-------------|
| Shear, Fv                | 95 psi      |
| Bending, Fb              | 1000 psi    |
| Comp. perp. to grain, Fc | 625 psi     |
| Mod of Elasticity, E     | 1700000 psi |
| Load duration factor, Cd | 1.25        |
| Size Factor, Cf          | 1.10        |

|                     |          |
|---------------------|----------|
| Dead load reaction  | 920 lbs  |
| Live load reaction  | 1280 lbs |
| Total load reaction | 2200 lbs |

|                           |             |
|---------------------------|-------------|
| Allowable shear, Fv'      | 119 psi     |
| Actual shear, fv          | 72 psi      |
| Allowable bending, Fb'    | 1375 psi    |
| Actual bending, fb        | 1369 psi    |
| Allowable live load defl  | 0.80 inches |
| Actual live load defl     | 0.31 inches |
| Allowable total load defl | 1.07 inches |
| Actual total load defl    | 0.54 inches |
| Bearing length req'd      | 1.01 inches |

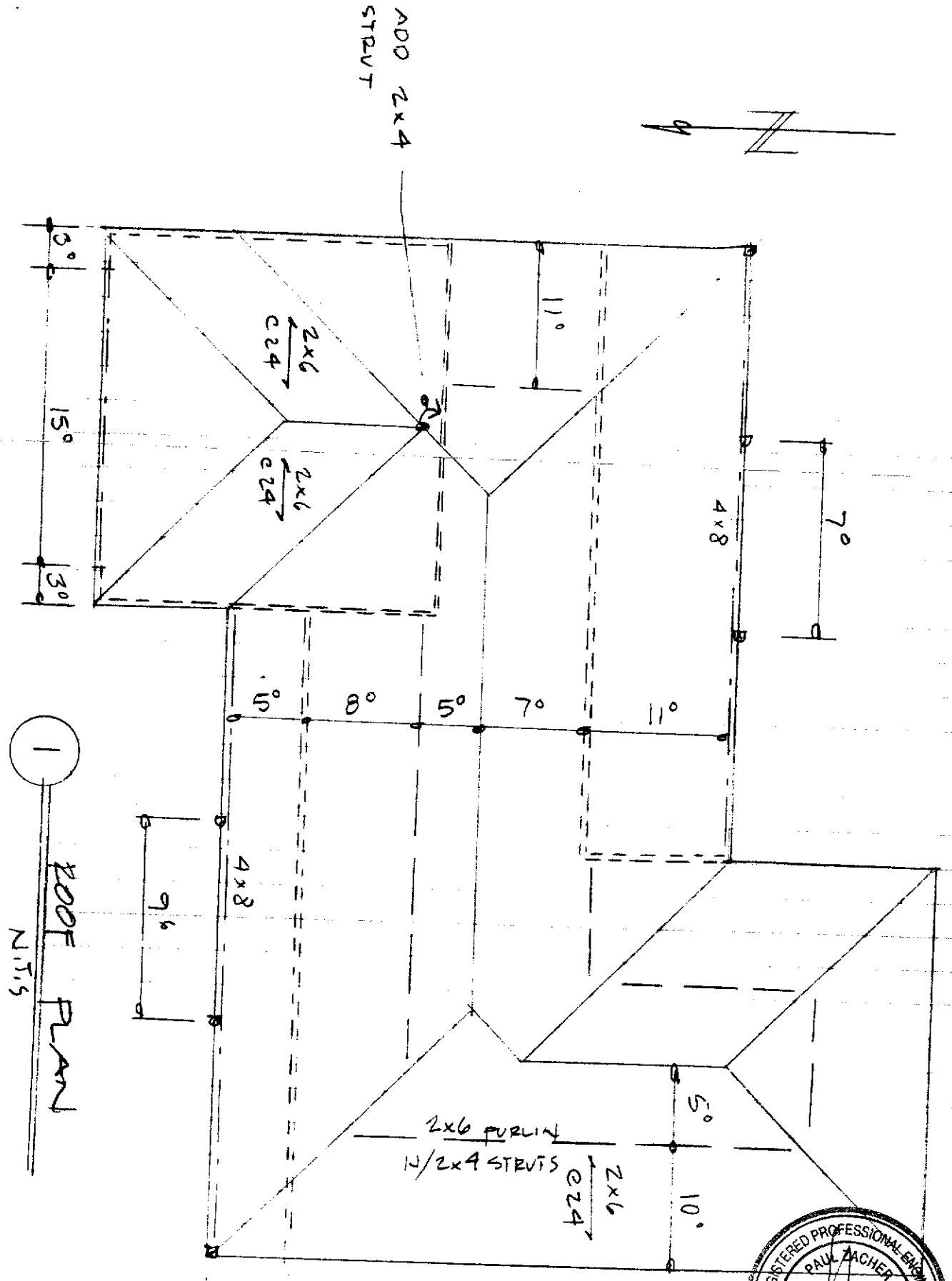
Horizontal Shear OK

Bending OK

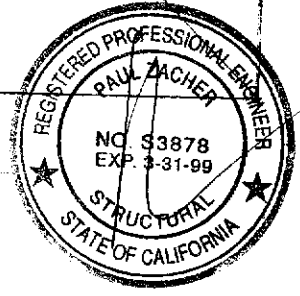
Live Load Deflection OK

Total Load Deflection OK





1 ROOF PLAN  
N.T.S.





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 Pioneer - Everwest
2. TILE WEIGHT PER SQUARE \_\_\_\_\_
3. WEIGHT OF ROOF SYSTEM PER SQUARE \_\_\_\_\_
4. TOTAL WEIGHT OF ROOF SYSTEM \_\_\_\_\_
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.