

CITY OF SACRAMENTO

1231 I Street, Sacramento, CA 95814

Permit No: 0506788

Insp Area: 2

Thos Bros: 336H1

Site Address: 744 LA CONTENTA WY SAC

Parcel No: 031-0340-054

Sub-Type: RES

Housing (Y/N): N

CONTRACTOR

YGNACIO MIKE RIOS
1105 25TH AVENUE
SACRAMENTO, CA 95822

OWNER

URSUA MARY L/FRANKLIN D POWELL
744 LA CONTENTA WY
SACRAMENTO, CA 95831

ARCHITECT

Nature of Work: TEAR OFF HEAVY SHAKE, RESHEET, REROOF W/ 26 SQ LIGHTWEIGHT 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 B License Number 851677 Date 05-12-05 Contractor Signature [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);

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 5-12-05 Applicant/Agent Signature [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, 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 EXEMPT Policy Number NO EMPLOYEES Exp Date _____

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 5-12-05 Applicant Signature [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.

SCHOEN ENGINEERING
9524 BEDINGTON WAY
SACRAMENTO, CA 95827
(916) 369 6866
Licensed by the California State
Board for Engineers and Land Surveyors
LIC.# C042913

June 17, 2005



Franklin Powell
744 La Contenta Way
Sacramento, CA 95831

SUBJECT: Reroof at @ 744 La Contenta Way, Sacramento, CA 95831

Franklin:

On June 17th 2005 I inspected the roof structure of the residence at the above mentioned address. The roof was made up of 2x6 Douglas fir No. 2 rafters @ 2' o.c. in the second story attic area and the first story roof of the garage and the entry porch with a max span of 9'. There were 2x10 D.F. No. 2 rafters @ 2' o.c. in the vaulted areas of the first story dining room, living room master bedroom and in the attic area of the kitchen with a max span of 13'. The vault area of the living room and the master bedroom had 4x12 D.F. Select structural vault support beams spanning a max of 13'. The front porch area has 6x 12 support beams with a max span of 9'. The second story had 2x4 purlins in the attic areas braced @ 4' o.c.. Although the UBC generally requires 2x6 purlins with 2x6 rafters the 2x4 purlins are adequate in this case because of the relatively short rafter spans(13'-2") from plate to ridge. The roof slope was 5:12.

The following modifications must be done prior to reroofing:

* In the second story attic area the purlin braces are framed so as to run by the purlin and then rely on a 2x2 block nailed to the brace to support the purlin. These are not adequate to support the roof loads. In order to remedy this a second full length 2x4 should be sistered on the purlin brace offset upward at least 1-1/2" so that the purlin sits directly on the end of the brace(see plan for location and sketch for details).

It is my finding that this structure is adequate for the following : 30lb. tarred felt installed over the Existing plywood sheathing; 1x2 batts; Lightweight concrete tile weighing 6 lbs./sq.ft.

NOTE: it is possible when reroofing 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 typical of wood framed structures and does not of itself indicate 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 observable. Any such structures were assumed to conform to standard construction specifications in the Uniform Building Code. Also, it does not address any existing deflection or warping of roof surfaces, nor is it guaranteed that any structural modifications that may be listed in this report will remove such deflections or warping. The repair of such deflections or warping to improve architectural appearance is at the option of the building owner and the roofing contractor.

This report has be prepared for the sole benefit of the individual to whom it is addressed. The use of or reliance on this report by any other individuals or entities without the expressed written consent of the above addressee and Schoen Engineering is forbidden. This does not preclude a licensed contractor acting as an agent for the addressee from using this report to obtain a building permit if the addressee is the home owner.

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.

APPROVED
City of Sacramento Plan Review
Structural

Sincerely,

Mark S. Schoen P.E.

MSS:mss
S-ENG2005IP001.001

John Tang
Signature

6/23/05
Date

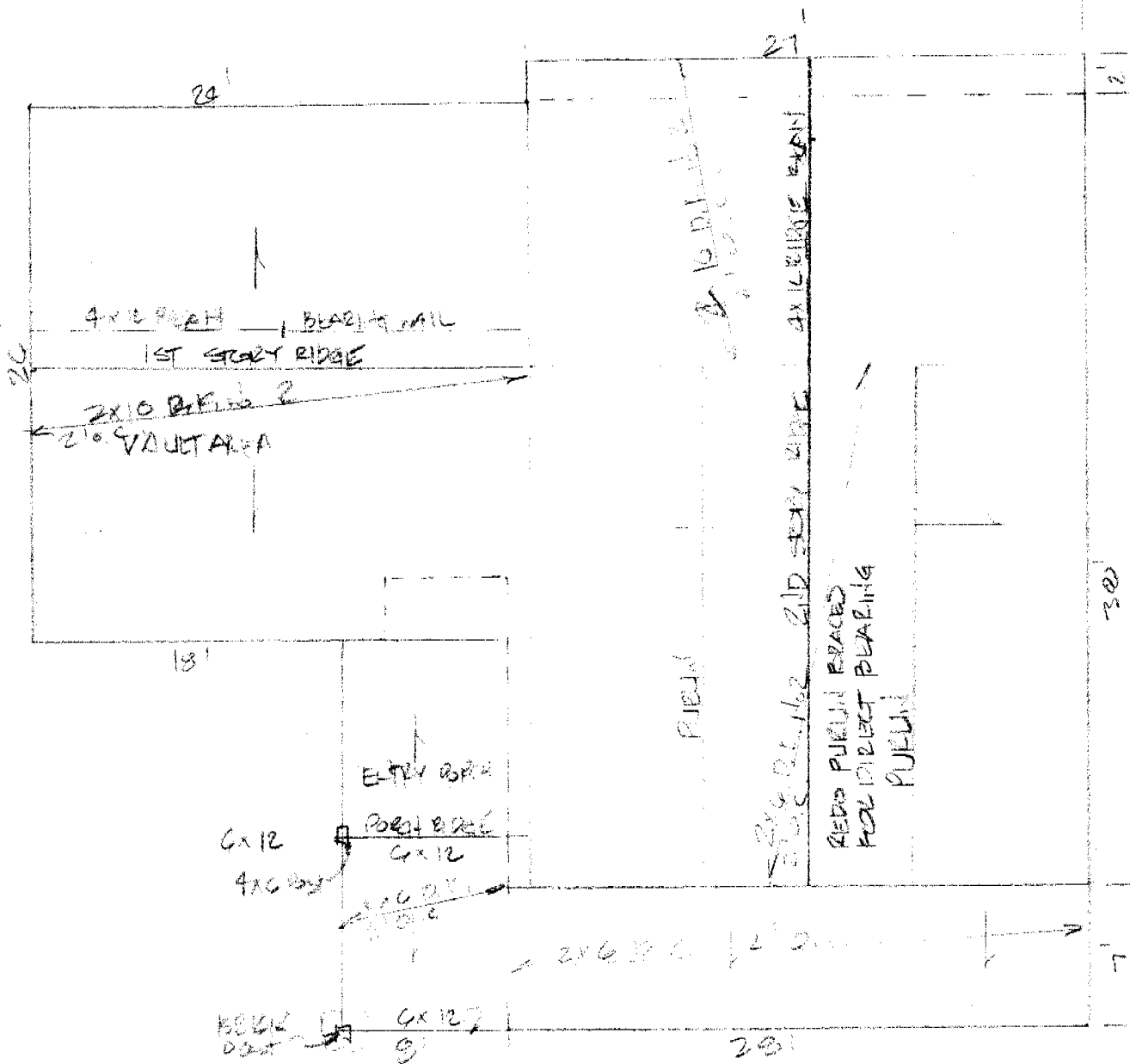


The approval of this plan and specification SHALL NOT be held to permit or approve the violation of any City Ordinance or State Law.

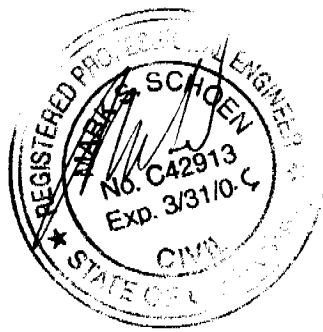
0506780
OHC
CITY COPY
744 LA CONTENTA WAY

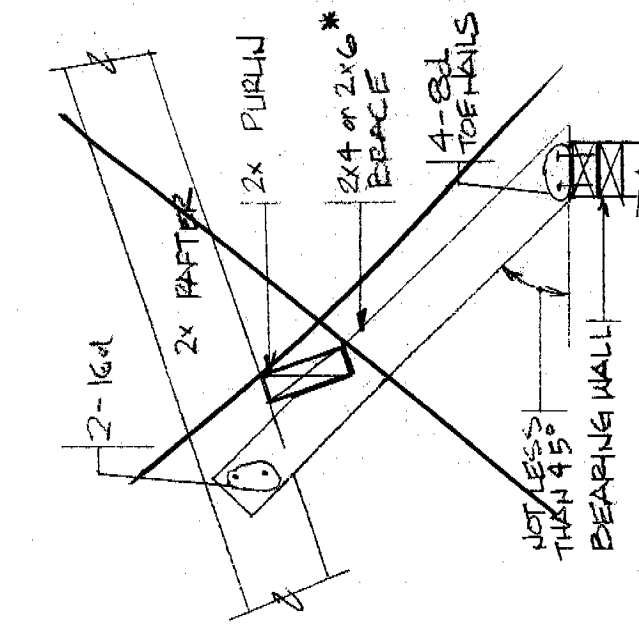
NOTE: OVERHANGS ALL
AROUND 1ST CHOUK

FAT ROOF ADDITION
W/ A SUBSET OF THE EXIST

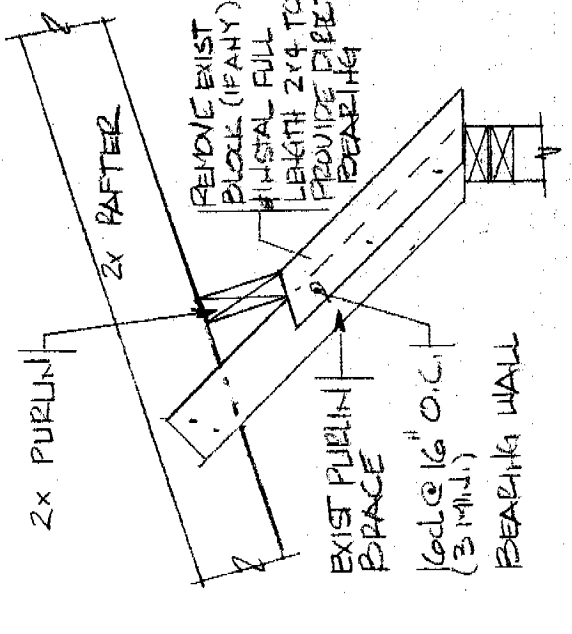


ROOF PLAN FOR
746 LA CORNELIA WAY
SACRAMENTO, CA 95831

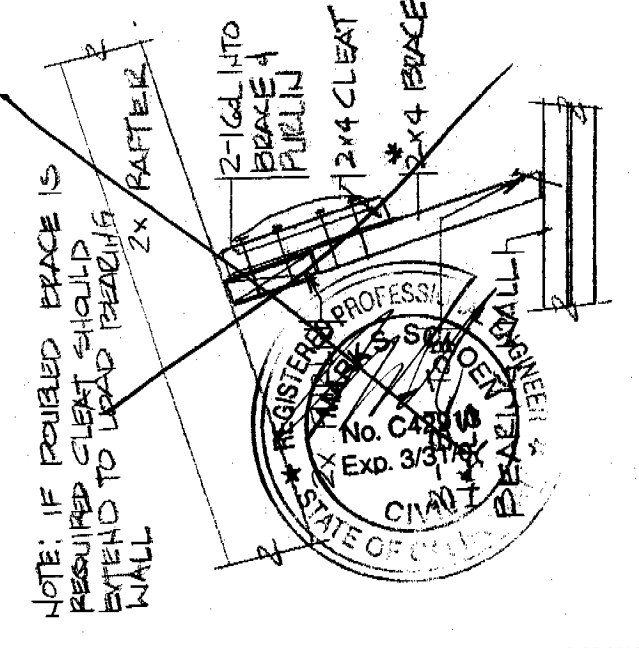




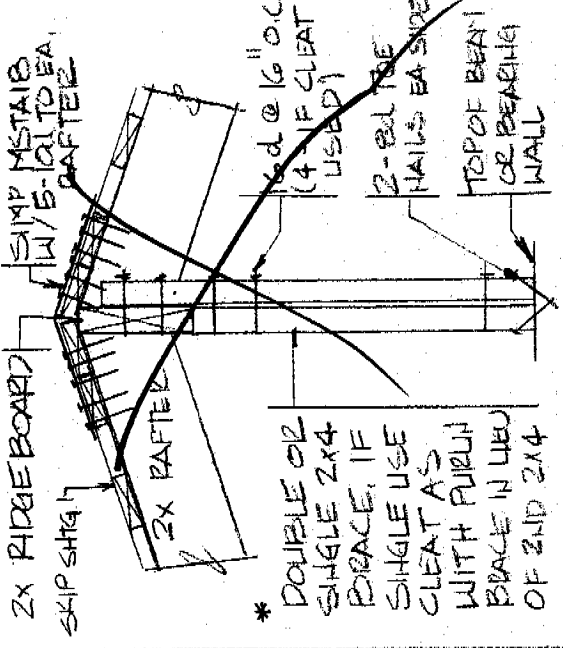
NOTCHED PURLIN BRACE



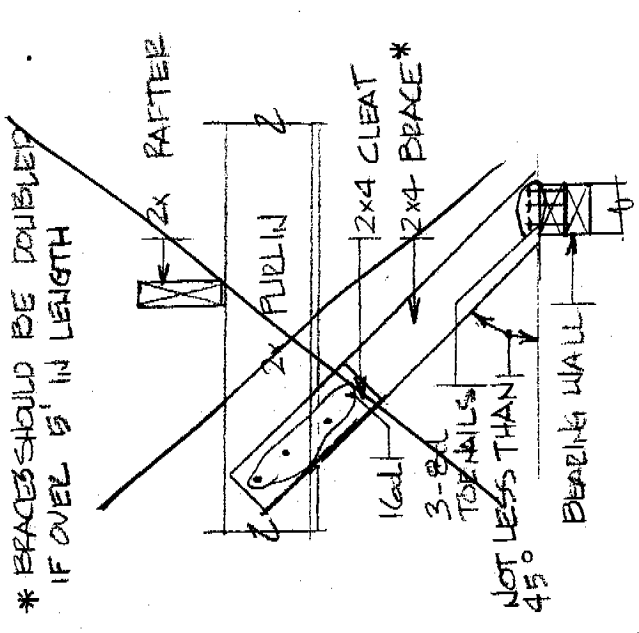
EXISTING BRACE MODIFIED FOR DIRECT BEARING



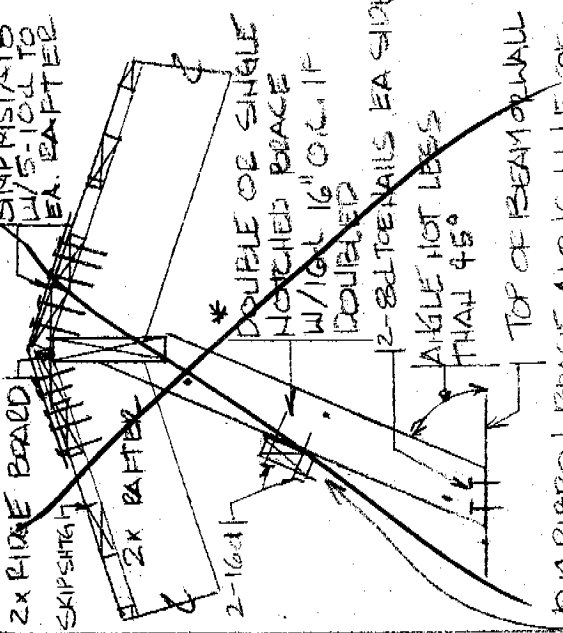
CLEATED PURLIN BRACE (END VIEW)



RIDGE BRACE W/ BEARING WALL DIRECTLY UNDER RIDGE



CLEATED PURLIN BRACE (SIDE VIEW)

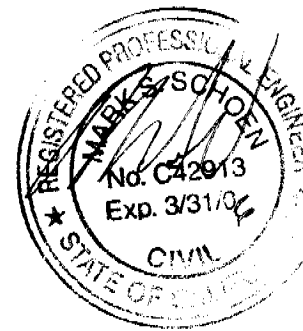


HOTCHED RIDGE BRACE W/ BEARING WALL DISPLACED TO SIDE OF RIDGE

SCHOEN ENGINEERING

Client: Franklin Powell
Job No.: FP001

Date: 6/17/05



Job Title: Reroof @ 744 La Contenta Way, Sacramento, CA 95831

Calculation for the required area, section modulus and moment of inertia for simple span wood beams. Dead load(Dl) and Live load(Ll) are in pounds per square ft., Spans(l) and Tributary load length or spacing(sp) are in ft., Areas are in sq.in., Section moduli are in inches cubed and Moments of inertia are in inches to the 4th power. Allowable stresses (Fy),(Fb),(Fv) are in lbs./sq.in. per 1991 U.B.C.(based on quality of lumber at time of construction).

VAULT SUPPORT BEAMS:

Superimposed dead and live loads:

Roofing dead load: DLt := 6 Live load: rll := 16 Rafter spacing: sp := 2

Rafter dead load: Rdl := $\frac{4}{sp}$ Skip shtg. dead load: skshtg := 1

Plywood dead load: ply := 2 Ceiling dead load: clg := 2.0 misl. dead load: msl := .5

Total dead load: rdl := DLt + Rdl + skshtg + ply + msl + clg rdl = 13.5

Roof trib area: rta := 13 Beam length l := 13 Total roof area: rta-l = 169

Beam weight per foot: Wdl := $11.25 \cdot \frac{3.5}{144} \cdot 35$ Wdl = 9.57

wt := rta · (rdl + rll) + Wdl

Fb := 1800 Cr := 1 Fbp := Fb · 1.25 Fbp = 2250 Ew := 1800000 Fv := 95 · 1.25

A min. required = $\frac{l \cdot wt}{Fv} \cdot \left(\frac{3}{2}\right) = 32.273$

S min. required = $wt \cdot l^2 \cdot \frac{1.5}{Fbp} = 44.286$

I min. required = $5 \cdot wt \cdot \frac{(1 \cdot 12)^4}{12 \cdot 384 \cdot Ew \cdot l \cdot \frac{12}{240}} = 215.894$

Check Beam properties:

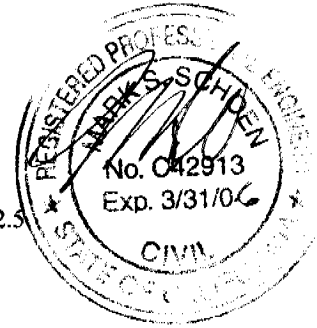
CF := $\left(\frac{12}{d}\right)^{\frac{1}{9}}$ w := 3.5 d := 11.25
A := w · d S := $w \cdot CF \cdot \frac{d^2}{6}$ I := $w \cdot \frac{d^3}{12}$ Stiffw := l · Ew

-- A = 39.375 > ~~52.7~~ 32.2 S = 74.359 > ~~57~~ 44.3 I = 415.283 > ~~260~~ 215.9 therefore O.K.

Check for adequacy of purlins for reroofing with material heavier than the original installation. Lumber grade is Douglas fir no. 2

$$E_w := 1700000 \quad F_b := 1250 \quad F_{bp} := F_b \cdot 1.25$$

$$F_{bp} = 1562.5$$



2x4 Douglas fir purlin:

$$b := 1.5 \quad d := 3.5$$

$$I_{x2x4} := b \cdot \frac{d^3}{12}$$

$$S_{x2x4} := b \cdot \frac{d^2}{6}$$

$$\text{Stiff}_{2x4} := I_{x2x4} \cdot E_w$$

Superimposed dead and live loads:

$$\text{Tile dead load:} \quad DL_t := 6 \quad sp := 13.5 \cdot 61$$

$$\text{Live load:} \quad LL := 16$$

$$\text{Structure roof dead load:} \quad DL_{ext} := 1.5 + 2 + 1$$

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)

$$\text{Load:} \quad wd := sp \cdot \frac{1}{12} \cdot ((DL_{ext} + DL_t) + LL)$$

$$ws := sp \cdot \frac{1}{12} \cdot ((DL_{ext} + DL_t) + LL)$$

$$L_{maxd} := \left(\frac{77 \cdot \text{Stiff}_{2x4}}{1 \cdot 180 \cdot wd} \right)^{\frac{1}{3}} \cdot \frac{1}{12}$$

$$L_{maxd} = 4.987 \quad > 4 \text{ therefore O.K.}$$

Check for maximum span based on stresses:

$$L_{maxs} := \sqrt{F_{bp} \cdot 10 \cdot \frac{S_{x2x4}}{ws} \cdot \frac{1}{12}}$$

$$L_{maxs} = 4.275 \quad > 4 \text{ therefore O.K.}$$