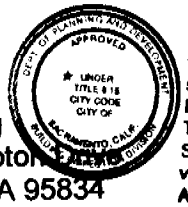
0507253

GREGORIN DESIGN
9469 FORT WORTH WAY
SACRAMENTO, CA 95827

DATE: 05-23-05

RESIDENTIAL ROOF INSPECTION REPORT
7707 EL RITO, SACRAMENTO CA

Prepared for:
Aguirre Roofing
3515 Binghampton
Sacramento, CA 95834



This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Building Inspection Division. The approval of this plan and specification SHALL NOT be held to permit or approve the violation of any City Ordinance or State Law.
Approved By _____
05-23-05

This report was prepared in compliance with Sacramento City Code, Section 9.03.146 (D) 3) and is evidence that Frank L. Gregorin, P.E., with the assistance of Jose Aguirre (Roofer) has inspected the roof structure of the residence which is subject of this report. The sole purpose of this inspection and report is to determine the general conditions of the roof construction and evaluate it's structural adequacy for supporting the roof loads of the newly proposed roof assembly as prescribed herein.

The structure is a single family one story house built in the late 1980's. The roof structure consists a 5:12 roof slope with 1x skip sheathing over of 2x4 rafters at 24" o.c. with intermediate purlin and strut supports.[1] The existing roof framing shows no visible of distress or deterioration and is deemed to be in sound condition.

The loads to the existing roof structure expressed herein are exclusively meant for the application of Monier Villa – Duralite tile having an installed weight of 580 pounds per square (100 square feet) placed over 7/16" plywood or osb sheathing over existing roof framing as shown in the load table on page 2. Roofer may substitute other light-weight tile with the conditions the prescribed allowable roof dead load of this report are not exceeded and an I.C.B.O. Evaluation Report showing the installed weight of the substituted tile is submitted to the Building Department for approval.

Roofer shall bring to the attention of the Engineer of Record any wood found during the course of roofing work showing signs of deterioration (dry rot, termite infestation, etc.) or distress (splitting, warping, etc.). The Roofer will be liable for any repairs that were performed without the Engineer of Record's knowledge or consent.

It is the condition of this report that the Roofer, if requested, shall arrange for the Engineer of Record to perform additional inspection(s) of the existing roof framing and if necessary shall remove existing roof sheathing for purpose of inspection.

Field Verify - Purlin + strut size/spacing conn to bearing wall
- Tile weight
- Spans (Rafters + ceiling joist)

[1] Roofer shall verify that the typical 2x4 rafters have 8' maximum span between supporting elements.

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Evaluation of roof loads for determining the adequacy of the existing roof rafters to support the newly proposed light-weight tile as prescribed in this report.

The weight of the new roof assembly will consist of:

(e) 2x4 rafter @ 24" o.c.	1.00 psf	
(e) 1x skip sheathing	1.13 psf	
(n) 7/16" sheathing	1.32 psf	
roofing paper	0.25 psf	
(n) light-weight tile	5.80 psf	(Installed weight, see load information in I.C.B.O. ER 2656 included with this report.)
$\Sigma =$	9.5 psf	

x 13/12 (5:12 roof slope adjustment)
= 10.3 psf

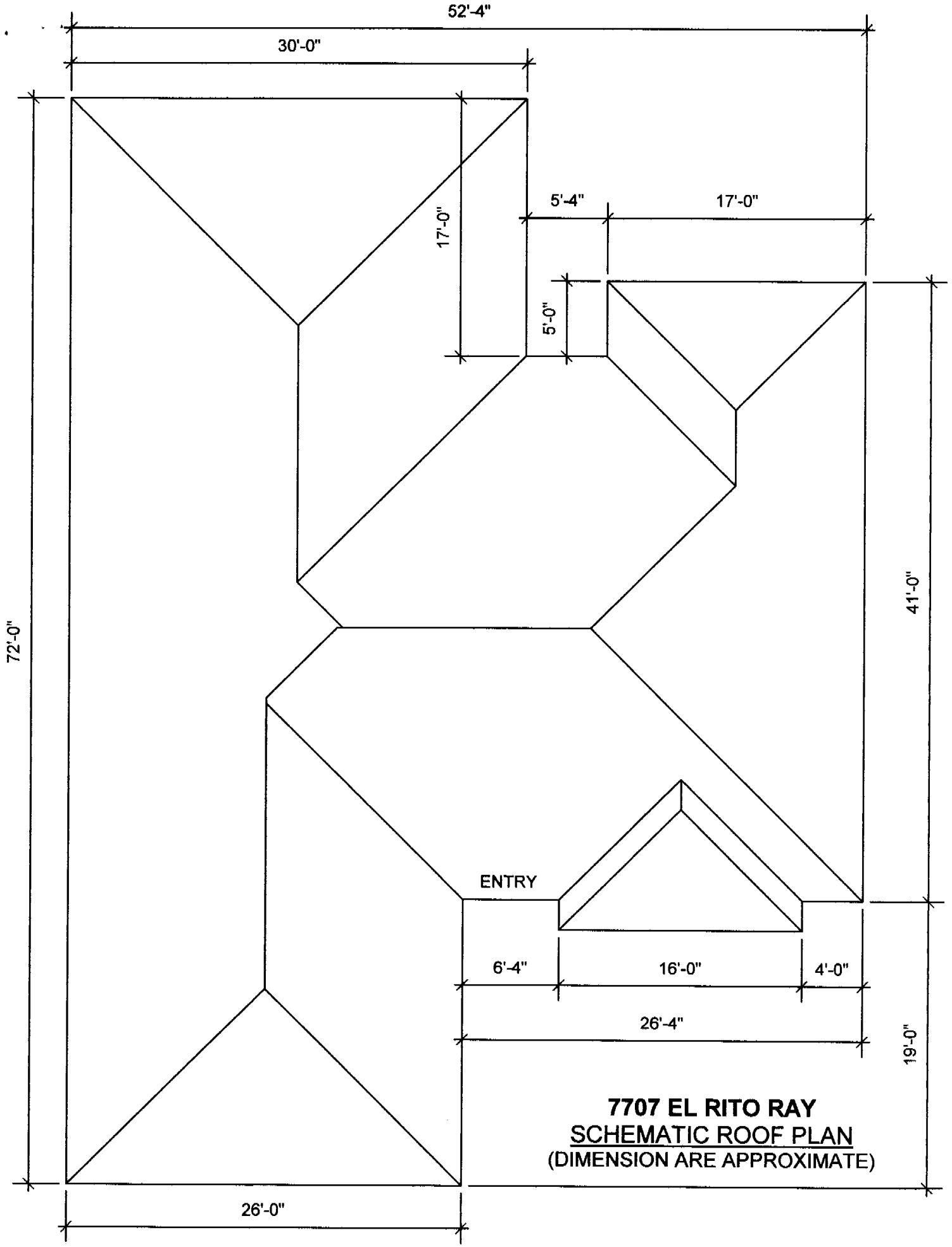
Typical 4:12 roof slope: Check 2x4 rafter @ 24" o.c. for max. span of 8'
(using pre-1997 UBC timber allowable stress values for DF #1)

fv = 1.5 x 8'/2 x 2 'x (10.3 + 16)psf / (5.25 in^2) = 60psi < 1.25x95psi

M = (10.3 +16)(2')(8^2 /8) = 420 ft-lb
fb = (420)(12 in/ft) / (3.06 in^3) = 1650psi < 1.25 x1750psi

defl. = 0.1 (0.42)(8^2) / I = 2.67 / 5.36 = 0.51" = L/188 > L/180
defl. LL = (16/26.3)(0.5") = 0.31" = L/309 > L/240

Therefore (e) 2x4 @ 24" o.c. OK



7707 EL RITO RAY

SCHEMATIC ROOF PLAN

(DIMENSION ARE APPROXIMATE)