1034 SW DOUGLAS PL REV-01 RS11-168370

Rev 01 RS11-168370

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MICROFILMED

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11-168370-REV-01-RS

Jason E. Stanek, P.E.
10104 NE 109th Ave
Vancouver, WA 98662
P 360 901.6461
F 360.853.8862

JS STRUCTURAL
PLLC

Field Memo Report

To: Mr. Bob Schatz (AllUSA Architecture)
From: Jason Stanek, PE
CC:
Date: November 29, 2011
Re: 11-049.Aikins Remodel and Addition

This field memorandum is regarding a field question that has come up for the existing framing condition at the main floor. We had assumed the location of a wide flange beam to be directly under where we have located a new shearwall, however it is in a different location. This memo is intended to be in response to this field question.

Question: During the preparation to begin the installation of the new shearwall sheathing on the existing hallway wall, we discovered that the steel wide flange beam that we initially thought was located directly under this location is instead located under the wall on the opposite side of the hall. We would like to keep the shearwall in the location that we are showing it now, however this changes the configuration of the lateral force transfer (no beam there to transfer loads over in to the existing concrete basement wall), and we now need to have the holdown anchoring in to blocking between existing joists. What do we need to add to make this configuration acceptable.

***Answer:** It appears that it will be acceptable to keep the shearwall in the current location, however we will need to add blocking under the wall in order to get our wall bottom plate anchorage down into the floor system. We will also place one holdown anchor rod down through blocking with oversized washer and nut, and attach the blocking to the 2 adjacent joists with Simpson brackets, and the other holdown appears to be capable of being installed in to the top of the existing concrete basement wall. This configuration assumes that the existing wood diaphragm transfers the lateral load over to the existing concrete wall. Through the connections of the sheathing to the continuous rim joist and end nailing of the rim in to the end of the joists and toe nails of the joists in to the mud sill, and finally, anchor bolts into the top of the concrete wall, the lateral load is transferred down where it is intended to go. Please refer to the attached plan of this area with additional information and details of the required revisions. Please also refer to the calculations attached herewith for the*

revised shearwall length and holdown verification, as well as uplift calcs on the existing joists diaphragm shear ch[illegible] for adequacy to drag the required loads.

We trust this information is satisfactory to answer you questions. However, if you should require further clarification, or information, please feel free to contact us.

JS Structural, PLLC

Jason E. Stanek, PE

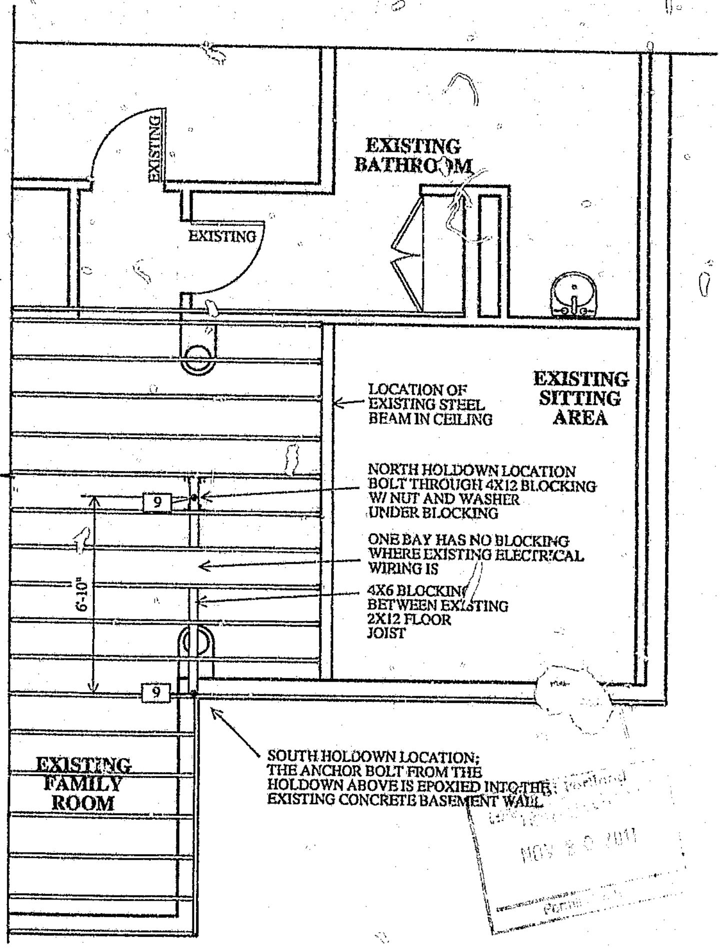
56354

JULY 13, 2002

JASON E. STANEK

11/29/2011

EXPIRES: 6/30/20 12



BASEMENT FLOOR PLAN WITH FLOOR FRAMING ABOVE

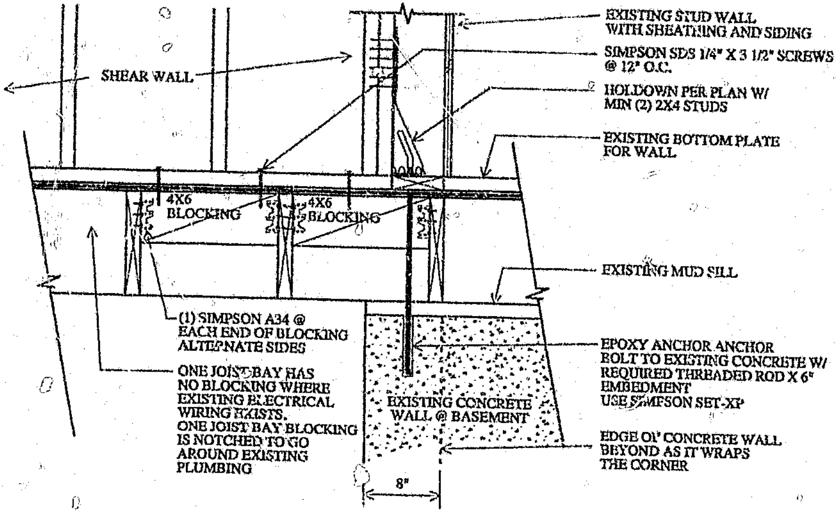
1/4" = 1'-0"

ALLUSA
ARCHITECTURE

2118 SE Division street Portland, OR 97202
Phone (503) 235-8585 Fax (503) 235-0835

ATKINS RESIDENCE

1034 SW Douglas Place **Portland, OR**
NOVEMBER 29TH, 2011



3. SECTION @ HOLDOWN

1" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
56354
OREGON
JULY 13, 2004
JASON E. STANEK
EXPIRES: 6/30/20 12

11/29/2011

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2118 SE Division street Portland, OR 97202
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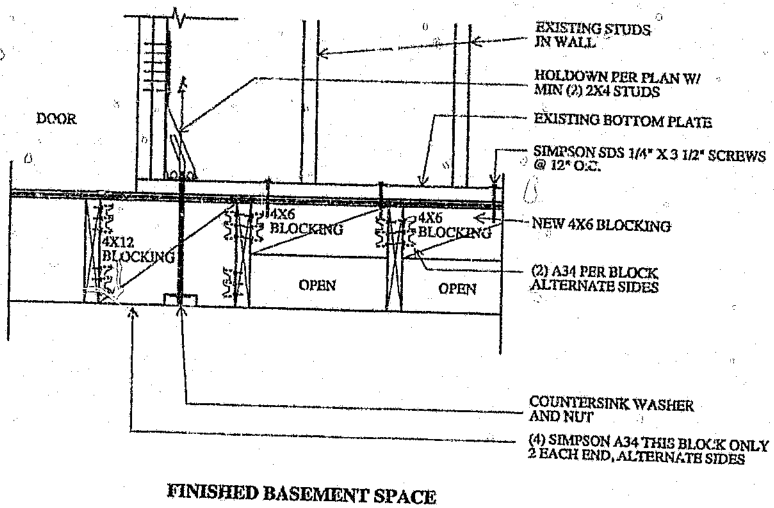

4. SECTION @ HOLDOWN

1" = 1'-0"

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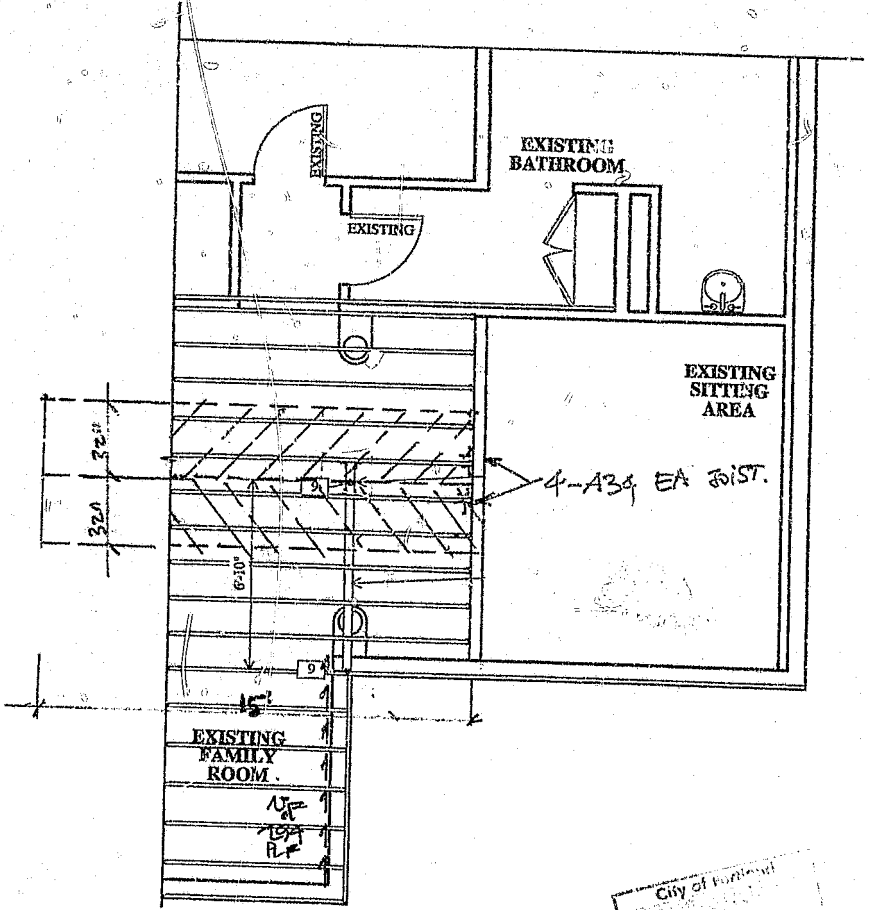

BASEMENT FLOOR PLAN WITH FLOOR FRAMING ABOVE

1/4" = 1'-0"

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ATKINS RESIDENCE

1034 SW Douglas Place **Portland, OR**
NOVEMBER 20TH, 2011

LPA - REVISION

WALL W.C.: USE ONLY THE 7' SECTION OF SOLID WALL & NOT THE TOTAL LENGTH w/ DOOR OPENING

F = 2548#
ℓ_w = 7'
v_w = 364 PLF

8d @ 3" o.c. / 490 PLF - TYPE B

OVERTURNING:

OTM = 2548 (8) = 20.4k
R.M. = w = FLR = $\left(\frac{12+5}{2}\right)$(20 PSF) = 170 PLF
WALL = 2(8'+8)(10 PSF) = 160 PLF } 330 PLF
P = 500# × 2 = 1000# (HDR LOAD)
$M_R = \left[\frac{330(7)^2}{2} + 1000(7)\right]0.6 = 9.05$

$F_{T/up} = \frac{20.4 - 9.05}{7} = 1.62^k$

LTT20B / 1750 - TYPE 9

✓ FLOOR UPLIFT @ JOISTS

- FLOOR AREA: 64" × 15' = 80SF
- FLOOR MASS: 80 SF × 15 PSF = 1200 #
- UPLIFT ONTO 2 JOISTS: 810# EA
- UPLIFT REACTION @ END = 810(10/15) = 540# (max.)
- UPLIFT ACTUALLY ENGAGES MORE FLOOR AREA, THUS ASSUME THAT REACTION WOULD BE ON (2) JOISTS EA:
- RESISTING UPLIFT: (1200#/2)(0.6) = 360#
- NET UPLIFT: 540 - 360 = 180#

ENGAGES 2 JOISTS: 90#/JOIST
NEGLIGIBLE LOAD

58354
OREGON
JULY 13, 2004
MASON E. STANEK
11/22/2011
EXPIRES: 6/30/2012

✓ DIAPHRAGM AS DRAG MEMBER:

- F = 2548#
- ℓ_d = 8.67'
- $v_{dia} = 2548/8.67 = 294$ PLF
- 1× DIAGONAL SHT'G w/ PLY OVER: v_{allow} = 700 PLF* > 294 PLF ✓ok

* THIS ALLOWABLE SHEAR IS SUGGESTED TO BE USED