

3811 SW ALFRED ST. REV-01 RS05-136318

RS.05.136318 REV.01.

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JUL 15 2005
MICROFILMED

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CITY OF
PORTLAND, OREGON
BUREAU OF DEVELOPMENT SERVICES
1900 SW 4th Ave, Suite 5000
Portland, OR 97201



RESIDENTIAL 1 & 2 FAMILY PERMIT

05-136318-REV-01-RS

Site Address: 3811 SW ALFRED ST
3811 ALFRED ST

Issued: 7/8/05

PROJECT INFORMATION		Occ. Group	Const. Type
Single Family Dwelling	Addition	R3	V-N
Project Description: REVISE TO ADD MORE ENGINEERING DETAILS, CHANGE BEAM SIZE			

APPLICANT	BEN R JARRETT	Phone	(503) 244-9671
PROPERTY OWNER	BEN R JARRETT	Phone	(503) 244-9671
CONTRACTOR	No Contractor	Phone	

Project Details	Project Details
Code Edition	IRC - 2003
Number of Stories	1
Water District	Portland Water Bureau
	GIS Update Flag 06/14/05
	Valuation at Issuance 7669
	Zoning Enforcement Agency Portland

PAID
JUL 8 2005
CITY OF PORTLAND

This permit expires if, at any time, 180 days pass without an approved inspection. If you are not able to obtain an inspection approval within 180 days, you may request a one-time only extension of 180 days by calling 503-823-7388.

BEFORE YOU DIG	ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952-001-0010 through OAR 952-001-0090. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is 1-800-332-2344).
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CITY CONTACT	Phone:
E-Mail:	Fax: (503) 823-4172

INSPECTION REQUEST PHONE NUMBERS	Building/Trade Inspections - Call Before 6:00 AM:	(503) 823-7000
TDD: (503) 823-6868		
IVR Inspection Request Number: 2473657		



TKSE, Inc.

10101 SW Barbur Blvd, Suite 208
Portland, OR 97219
503-242-4990 / fax: 503-242-4988

STRUCTURAL CALCULATIONS

JARRETT DECK

Portland, Oregon

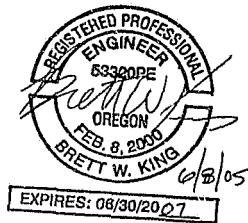
TKSE Job No. 05-323

For

Ben Jarrett

July 8, 2005

All calculations and structural engineering for this project
have been performed by myself or under my direct supervision.



05-13638-REV-01-RS

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TKSE, Inc.

10101 SW Barbur Blvd, Suite 208
Portland, OR 97219
503-242-4990 / fax: 503-242-4988

JARRETT DECK

TKSE No. 05-323

Project Overview

This project consists of a deck to be constructed on an existing residence in Portland Oregon. TKSE has been engaged to provide structural design for two beams of the deck as shown in the attached calculations. Other components of the deck, including columns and framing, have been provided by Ben Jarret and are outside the scope of responsibility of TKSE. TKSE can provide design of those other components at the clients request but has not been asked to do so.

Design Criteria and Considerations

The design is in accordance with the 2004 Oregon Structural Specialty Code.



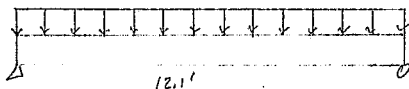
E, Inc

$$W = 40 \text{ lb} = 2 \times 6, 16'' \text{ o.c.} = 1.17 \text{ psf}$$

$$2 \times 6 \text{ w/ } 16'' \text{ o.c.} \text{ section} = 4 \text{ psf}$$

$$\rightarrow PL = 875$$

$$W = 48 \left(\frac{7}{2} \right) = 168 \text{ plf}$$



$$M_{\max} = \frac{168 (12.1)^2}{8} = 3074 \text{ lb-ft}$$

Use No. 2 Hem-Fir, $F_b = 850 \text{ psi}$, $E = 1.3 \times 10^6 \text{ psi}$

$C_D = 1.0$, $C_M = 1.0$, assume $C_E = 1.1 \rightarrow F_b = 850 (1.1) = 935$
 $E' = 1.3 \times 10^6$

$$S_{\text{required}} = \frac{3074 (12)}{935} = 39.5 \text{ in}^3$$

Try 4 x 10; $S_x = 49.9 \text{ in}^3$, $I_x = 239.8 \text{ in}^4$

$$D = \frac{5(12)^4}{384 E I} = \frac{5(168)(12.1)^4 (12)^3}{384 (1.3 \times 10^6) (239.8)} = 0.27 < \frac{L}{240} = 0.61 \text{ OK}$$

use No. 2 Hem-Fir 4x10 (for all spans)

USE EX-2 SEE ATTACHED CALC (PM-2)

Project	Sanett Deck	Beam Design	Date	7-08-05	Designer	JR
Client	Ben Jarrett		Job no.	05-322	Page	1

Title :
Dsgnr:
Description :

Job #
Date: 9:36AM, 8 JUL 05

Scope :

Rev: 580021
User: RW-0005853, Ver 5.0.0, 1-Dec-2003
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Timber Beam & Joist

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Jarratt.cow-Calculations

Description

BM-1

Timber Member Information

Code Ref: 2001 NDS, 2003 IBC, 2003 NFPA 5000. Base allowables are user defined.

Timber Section		4x8
Beam Width	in	3.500
Beam Depth	in	7.250
Let: Unbraced Length	ft	0.00
Timber Grade	Item Fir, No.2	
Fb - Basic Allow	psi	850.0
Fv - Basic Allow	psi	150.0
Elastic Modulus	ksi	1,300.0
Load Duration Factor		1.000
Member Type		Sawn
Repetitive Status		No

Center Span Data

Span	ft	7.00
Dead Load	#/ft	28.00
Live Load	#/ft	140.00

Results

Fratio = 0.3645

Mmax @ Center	in-k	12.35
@ X =	ft	3.50
fb : Actual	psi	402.7
Fb : Allowable	psi	1,105.0
		Bending OK
fv : Actual	psi	28.9
Fv : Allowable	psi	150.0
		Shear OK

Reactions

@ Left End	DL	lbs	98.00
	LL	lbs	490.00
	Max. DL+LL	lbs	588.00
@ Right End	DL	lbs	98.00
	LL	lbs	490.00
	Max. DL+LL	lbs	588.00

Deflections

Ratio OK

Center DL Defl	in	-0.010
L/Defl Ratio		8,024.2
Center LL Defl	in	-0.052
L/Defl Ratio		1,604.8
Center Total Defl	in	-0.063
Location	ft	3.500
L/Defl Ratio		1,337.4

2

Title :
Dsgnr:
Description :

Job #
Date: 9:40AM, 8 JUL 05

Scope :

Rev: 500001
User: KVV-0005853, Ver 5.6.0, 1-Dec-2003
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Timber Beam & Joist

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jkrell.ecw.Calculations

Description

BM-2

Timber Member Information

Code Ref: 2001 NDS, 2003 IBC, 2003 NFPA 5000, Base allowables are user defined.

Timber Section		6x8
Beam Width	in	5.500
Beam Depth	in	7.500
Le: Unbraced Length	ft	0.00
Timber Grade	Mem Fir, No.2	
Fb - Basic Allow	psi	850.0
Fv - Basic Allow	psi	150.0
Elastic Modulus	ksi	1,300.0
Load Duration Factor		1.000
Member Type		Sawn
Repetitive Status		No

Center Span Data

Span	ft	12.10
Dead Load	#/ft	28.00
Live Load	#/ft	140.00

Results Ratio = 0.8418

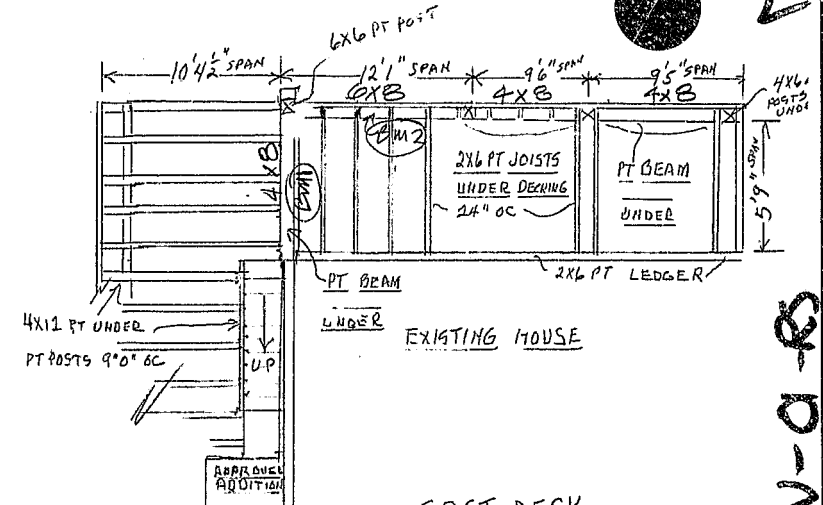
Mmax @ Center	in-k	36.90
@ X =	ft	6.05
fb : Actual	psi	715.5
Fb : Allowable	psi	850.0
		Bending OK
fv : Actual	psi	33.4
Fv : Allowable	psi	150.0
		Shear OK

Reactions

@ Left End DL	lbs	169.40
LL	lbs	847.00
Max. DL+LL	lbs	1,016.40
@ Right End DL	lbs	169.40
LL	lbs	847.00
Max. DL+LL	lbs	1,016.40

Deflections Ratio OK

Center DL Defl	in	-0.054
L/Defl Ratio		2,702.7
Center LL Defl	in	-0.269
L/Defl Ratio		540.5
Center Total Defl	in	-0.322
Location	ft	6.050
L/Defl Ratio		450.5



EAST DECK
PLOT PLAN OF DECK
SCALE: $1/8" = 1 \text{ FOOT}$

City of Portland
ENVIRONMENTAL POLICE DEPT.
COMPLIANCE
JUL 07 2005
Permit Number

RESIDENCE OF BEN AND KATHY JARRETT
3811 S.W. ALFRED STREET
PORTLAND, OR 97219-6173
PLANS BY CONTRACTOR-OWNER
LOT 6 BLOCK 5 HUBER TRACTS
SW 1/4 SEC 29 MAP 4025
REVISION OF PAGES 1 AND 2 OF 3 PAGES.
PAGE 3 OF 3 PAGES.
PERMIT #05.131.312-AS