

# ELEVATION CERTIFICATE

OMB No. 1660-0008  
Expires March 31, 2012

Important: Read the instructions on pages 1-9.

## SECTION A - PROPERTY INFORMATION

A1. Building Owner's Name <u>William &amp; Phyllis Smith</u> <u>Builder - Clint Reed</u>		For Insurance Company Use
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. <u>4758 Fox Lane S</u>		Policy Number
City <u>Salem</u>	State <u>OR</u>	Company NAIC Number
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) <u>Map Tax Lot 084W36CC 00100</u>		
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>Residential</u>		
A5. Latitude/Longitude: Lat. <u>44.82765°</u> Long. <u>-123.127969°</u>		Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> NAD 1983
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.		
A7. Building Diagram Number <u>8</u>		
A8. For a building with a crawlspace or enclosure(s):		A9. For a building with an attached garage:
a) Square footage of crawlspace or enclosure(s) <u>1481</u> sq ft		a) Square footage of attached garage <u>606</u> sq ft
b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>16</u>		b) No. of permanent flood openings in the attached garage within 1.0 foot above adjacent grade <u>7</u>
c) Total net area of flood openings in A8.b <u>1600</u> sq in		c) Total net area of flood openings in A9.b <u>700</u> sq in
d) Engineered flood openings? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		d) Engineered flood openings? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

## SECTION B - FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

B1. NFIP Community Name & Community Number <u>Marion Co Uninc &amp; Inc Areas 41054</u>		B2. County Name <u>Marion</u>		B3. State <u>OR</u>	
B4. Map/Panel Number <u>41047C0650</u>	B5. Suffix <u>G</u>	B6. FIRM Index Date <u>1-2-2003</u>	B7. FIRM Panel Effective/Revised Date <u>1-19-2000</u>	B8. Flood Zone(s) <u>A</u>	B9. Base Flood Elevation(s) (Zone AO, use base flood depth) <u>165.5</u>
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9. <input type="checkbox"/> FIS Profile <input checked="" type="checkbox"/> FIRM Community Determined <input checked="" type="checkbox"/> Other (Describe) <u>See previous letter dated 2-4-10</u>					
B11. Indicate elevation datum used for BFE in Item B9: <input checked="" type="checkbox"/> NGVD 1929 <input type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other (Describe)					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Designation Date <input type="checkbox"/> CBRS <input type="checkbox"/> OPA					

## SECTION C - BUILDING ELEVATION INFORMATION (SURVEY REQUIRED)

C1. Building elevations are based on:  Construction Drawings\*  Building Under Construction\*  Finished Construction  
\*A new Elevation Certificate will be required when construction of the building is complete.

C2. Elevations - Zones A1-A30, AE, AH, A (with BFE), VE, V1-V30, V (with BFE), AR, AR/A, AR/AE, AR/A1-A30, AR/AH, AR/AO. Complete Items C2.a-h below according to the building diagram specified in Item A7. Use the same datum as the BFE.

Benchmark Utilized OLD FEMA RM10 Vertical Datum 172.96 NGVD 1929

Conversion/Comments BM set at site, RR spike in power pole 163.63

Check the measurement used.

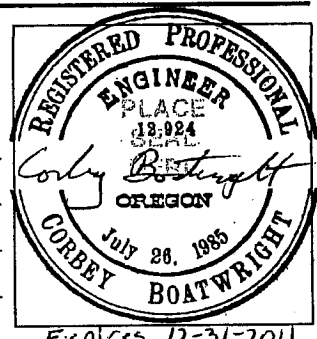
a) Top of bottom floor (including basement, crawlspace, or enclosure floor)	<u>163.3</u> feet	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
b) Top of the next higher floor	<u>167.8</u> feet	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
c) Bottom of the lowest horizontal structural member (V Zones only)	<u>NA</u> feet	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
d) Attached garage (top of slab)	<u>163.6</u> feet	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
e) Lowest elevation of machinery or equipment servicing the building (Describe type of equipment and location in Comments)	<u>166.6</u> feet	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
f) Lowest adjacent (finished) grade next to building (LAG)	<u>163.3</u> feet	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
g) Highest adjacent (finished) grade next to building (HAG)	<u>163.8</u> feet	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)
h) Lowest adjacent grade at lowest elevation of deck or stairs, including structural support	<u>163.4</u> feet	<input checked="" type="checkbox"/> feet	<input type="checkbox"/> meters (Puerto Rico only)

## SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION

This certification is to be signed and sealed by a land surveyor, engineer, or architect authorized by law to certify elevation information. I certify that the information on this Certificate represents my best efforts to interpret the data available. I understand that any false statement may be punishable by fine or imprisonment under 18 U.S. Code, Section 1001.

Check here if comments are provided on back of form. Were latitude and longitude in Section A provided by a licensed land surveyor?  Yes  No

Certifier's Name <u>Corbey Boatwright</u>	License Number <u>PE12924</u>
Title <u>Civil Engineer</u>	Company Name <u>Boatwright Engineering Inc</u>
Address <u>2613 12th St SE</u>	City <u>Salem</u>
State <u>OR</u>	ZIP Code <u>97302</u>
Signature <u>Corbey Boatwright</u>	Date <u>12-23-10</u>
Telephone <u>503-363-9225</u>	



<b>IMPORTANT: In these spaces, copy the corresponding information from Section A.</b>		For Insurance Company Use
Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. 4758 Fox Lane S		Policy Number
City Salem	State OR	ZIP Code 97306
		Company NAIC Number

**SECTION D - SURVEYOR, ENGINEER, OR ARCHITECT CERTIFICATION (CONTINUED)**

Copy both sides of this Elevation Certificate for (1) community official, (2) insurance agent/company, and (3) building owner.

Comments C2.e) The lowest elevation of machinery servicing the building is the septic control box outside, elevation shown is the bottom of the box.

Signature Corby Bostump Date 12-23-2010  Check here if attachments

**SECTION E - BUILDING ELEVATION INFORMATION (SURVEY NOT REQUIRED) FOR ZONE AO AND ZONE A (WITHOUT BFE)**

For Zones AO and A (without BFE), complete Items E1-E5. If the Certificate is intended to support a LOMA or LOMR-F request, complete Sections A, B, and C. For Items E1-E4, use natural grade, if available. Check the measurement used. In Puerto Rico only, enter meters.

- E1. Provide elevation information for the following and check the appropriate boxes to show whether the elevation is above or below the highest adjacent grade (HAG) and the lowest adjacent grade (LAG).
  - a) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_\_  feet  meters  above or  below the HAG.
  - b) Top of bottom floor (including basement, crawlspace, or enclosure) is \_\_\_\_\_  feet  meters  above or  below the LAG.
- E2. For Building Diagrams 6-9 with permanent flood openings provided in Section A Items 8 and/or 9 (see pages 8-9 of Instructions), the next higher floor (elevation C2.b in the diagrams) of the building is \_\_\_\_\_  feet  meters  above or  below the HAG.
- E3. Attached garage (top of slab) is \_\_\_\_\_  feet  meters  above or  below the HAG.
- E4. Top of platform of machinery and/or equipment servicing the building is \_\_\_\_\_  feet  meters  above or  below the HAG.
- E5. Zone AO only: If no flood depth number is available, is the top of the bottom floor elevated in accordance with the community's floodplain management ordinance?  Yes  No  Unknown. The local official must certify this information in Section G.

**SECTION F - PROPERTY OWNER (OR OWNER'S REPRESENTATIVE) CERTIFICATION**

The property owner or owner's authorized representative who completes Sections A, B, and E for Zone A (without a FEMA-issued or community-issued BFE) or Zone AO must sign here. *The statements in Sections A, B, and E are correct to the best of my knowledge.*

Property Owner's or Owner's Authorized Representative's Name \_\_\_\_\_

Address _____	City _____	State _____	ZIP Code _____
Signature _____	Date _____	Telephone _____	
Comments _____			

Check here if attachments

**SECTION G - COMMUNITY INFORMATION (OPTIONAL)**

The local official who is authorized by law or ordinance to administer the community's floodplain management ordinance can complete Sections A, B, C (or E), and G of this Elevation Certificate. Complete the applicable item(s) and sign below. Check the measurement used in Items G8 and G9.

- G1.  The information in Section C was taken from other documentation that has been signed and sealed by a licensed surveyor, engineer, or architect who is authorized by law to certify elevation information. (Indicate the source and date of the elevation data in the Comments area below.)
- G2.  A community official completed Section E for a building located in Zone A (without a FEMA-issued or community-issued BFE) or Zone AO.
- G3.  The following information (Items G4-G9) is provided for community floodplain management purposes.

G4. Permit Number _____	G5. Date Permit Issued _____	G6. Date Certificate Of Compliance/Occupancy Issued _____
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- G7. This permit has been issued for:  New Construction  Substantial Improvement
- G8. Elevation of as-built lowest floor (including basement) of the building \_\_\_\_\_  feet  meters (PR) Datum \_\_\_\_\_
- G9. BFE or (in Zone AO) depth of flooding at the building site \_\_\_\_\_  feet  meters (PR) Datum \_\_\_\_\_
- G10. Community's design flood elevation \_\_\_\_\_  feet  meters (PR) Datum \_\_\_\_\_

Local Official's Name _____	Title _____
Community Name _____	Telephone _____
Signature _____	Date _____
Comments _____	

Check here if attachments

# Building Photographs

See Instructions for Item A6.

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) 4758 FOX LANE S			For Insurance Company Use
City SALEM State OR ZIP Code 97306			Policy Number
			Company NAIC Number

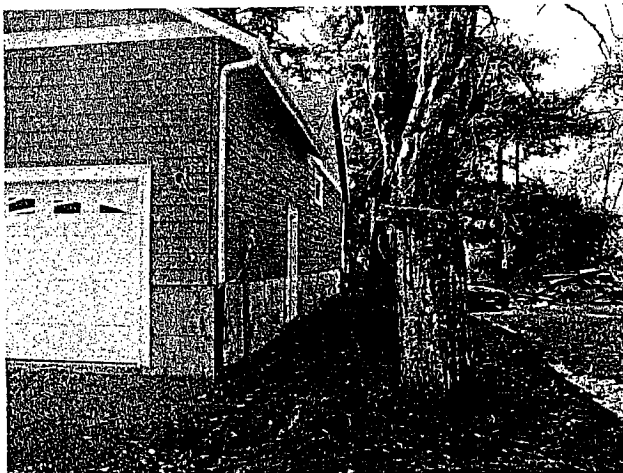
If using the Elevation Certificate to obtain NFIP flood insurance, affix at least two building photographs below according to the instructions for Item A6. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View." If submitting more photographs than will fit on this page, use the Continuation Page on the reverse



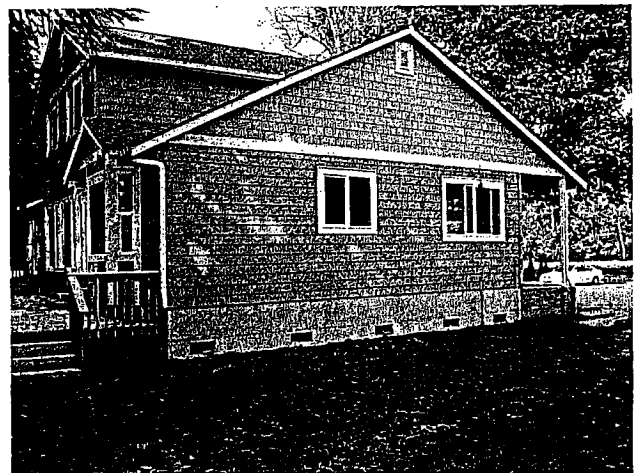
REAR VIEW OF THE HOUSE



FRONT VIEW



GARAGE - WEST SIDE OF HOUSE



EAST SIDE OF HOUSE

Post-it* Fax Note	7671	Date	4/27/10	# of pages	3
To	Jennifer Brown	From	Boatwright Eng.		
Co./Dept.	Marion County	Co.			
Phone #		Phone #	503-363-9225		
Fax #	503-589-3284	Fax #	503-363-1051		



## Boatwright Engineering Inc.

2613 12th ST SE, SALEM, OREGON 97302  
civil engineers • land surveyors

503 363-9225 FAX 363-1051

February 4, 2010

Clint Reed  
545 James Howe Road  
Dallas, OR 97338

RE: RESIDENTIAL SITE  
4758 FOX LANE SOUTH  
SALEM, OREGON

Dear Clint,

I have established a railroad spike bench mark on power pole #361201 on Fox Lane near the above site on Tax Lot 084W 36CC 00100. The base flood elevation and bench mark are on NGVD 1929 datum.

This site is 15,890 feet south of the FEMA study (limits) for the Independence area. To develop information beyond the flood plain in this area I looked to the manual "MANAGING FLOODPLAIN DEVELOPING IN APPROXIMATE ZONE A AREA, A GUIDE FOR OBTAINING AND DEVELOPING BASE (100-YEAR) FLOOD ELEVATION" published by FEMA, April 1995. Under the section "Data Extrapolation", FEMA limits extrapolation to 500 feet upstream.

I then looked at information, developed by the US Army Corp of Engineers, "Flood Plain Information, Willamette River and Tributaries in Marion and Polk Counties Oregon Volume I" May 1968. I was able to obtain the 100 year flood elevation from Independence to Buena Vista from plate 49 from the Corps' document and make corrections to the Corp information to match FEMA's base flood elevation in both areas, Independence and Buena Vista. I was able to extend the base flood elevation down from Independence to the project site. I assumed the top of the bank would be where the floodway would be. The building site is 150'± away from the top of the bank. I established the 100 year flood elevation to within one half of a foot to be 165.5 NGVD.

You asked me to set a mark one foot above the 100 year flood plain elevation, which the survey crew set on the pole. Chapter 17.178.060(A)(1) of the Marion County Rural Zone Doe requires that, for dwellings and manufactured homes, the top of the lowest floor be elevated two feet above the base flood elevation, and the bottom of the lowest floor be constructed a minimum of one foot above the base flood elevation.

Flood Plain Elevation - 4758 Fox Lane S  
Page 2

On the FEMA elevation certificate the top of the bottom floor is the crawl space (C2. a) where the next higher floor is the 1<sup>st</sup> floor of your finished structure.

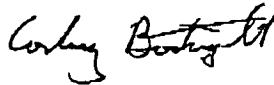
Before any work begins you should consult with the County because in this same section of the code, 17.178.060(A)(a), it also states "Where the base flood elevation is not available, the top of the lowest floor, .... shall be .... two feet above the highest adjacent natural grade (within 5 feet) of the building site ...." The conservative path that would satisfy all of the above would be to set the finish floor two feet above my calculated flood elevation at 167.5, provided the floor members total thickness is less than one foot.

The highest adjacent natural grade is 163.4 in elevation. If you place the finish floor 2 feet above this elevation, the floor will be at 165.4, and will still be 0.1 foot below what I have calculated for the 100-year flood elevation. The safest choice is to set the floor at a minimum of 167.5 elevation.

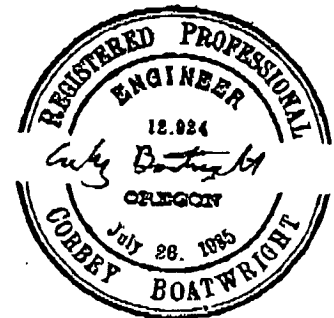
I have included a FEMA Elevation Certificate form filled out except in the areas of A7, A8, C2 a), b), d), e), h). I did not have this information to fill in. If the County, or other agencies, need this information you can fill these areas in.

If you need any additional information let me know.

Sincerely,



Corbey Boatwright, PE



Expires 12-31-11

Documents Used:

- FEMA FIRM Map 41047C0650 G January 19, 2000 - Marion County
- FEMA FIRM Map 41047C0650 G January 19, 2000 - Marion County
- FEMA FIRM Map 41053C0140 C April 5, 1988 - Polk County
- FEMA FIRM Map 41053C0140 F December 19, 2006 - Polk County
- Flood Insurance Study Polk County Oregon and Incorporated Area
- Managing Floodplain Development in Approximate Zone A Area, A Guide For
- Obtaining and Developing Base (100 Year) Flood Elevation April 1995
- Floodplain Information Willamette River and Tributaries in Marion and Polk Counties
- Oregon Volume I May 1968
- Monmouth Quad Map 1986
- Sidney Quad Map 1986
- 84W 36C Assessors
- 84W 36 CC Assessors
- Study by BEI for J Frank Schmidt and Son June 2000

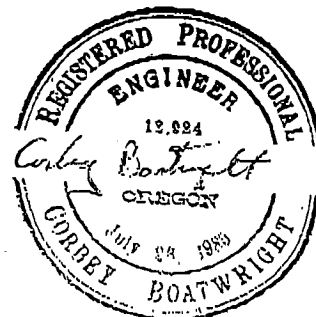


Marion County Floodplain Development Permit  
Case No. 10-1

William & Phyllis Smith  
4758 Fox Lane S  
Salem, Oregon

Plan: Plan 02 WILLAMETTE MILE 99.75 RS: 99.798 Profile: PF 1

E.G. Elev (ft)	165.92	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.41	Wt n-Val	0.040	0.030	0.035
W.S. Elev (ft)	165.51	Reach Len. (ft)	1358.00	1512.00	847.00
Crit W.S. (ft)		Flow Area (sq ft)	3555.84	15690.89	54663.83
E.G. Slope (ft/ft)	0.000266	Area (sq ft)	3555.84	15690.89	54663.83
Q Total (cfs)	260000.00	Flow (cfs)	6589.66	113963.30	159447.10
Top Width (ft)	7556.01	Top Width (ft)	661.28	581.00	6313.73
Vel Total (ft/s)	3.79	Avg Vel (ft/s)	1.85	7.26	2.92
Max Chl Dpth (ft)	32.51	Hydr Depth (ft)	5.38	27.01	8.66
Conv. Total (cfs)	17179930.0	Conv. (cfs)	404320.8	6992432.0	9783178.0
Length Wid. (ft)	1116.21	Wetted Per. (ft)	664.00	581.42	6315.69
Min Chl El (ft)	133.00	Shear (lb/sq ft)	0.09	0.45	0.14
Alpha	1.84	Stream Power (lb/ft s)	0.16	3.25	0.42
Frcn Loss (ft)	0.24	Cum Volume (acre-ft)	214.80	532.89	1094.48
C & E Loss (ft)	0.04	Cum SA (acres)	31.83	19.44	111.26



Exp 12-31-11

