



**COMMUNITY AND ECONOMIC DEVELOPMENT DEPARTMENT**

Box 2315, KETCHUM, IDAHO 83340  
 TELEPHONE: (208) 726-7801 FAX: (208) 726-7812

**Memo of Review For Correctness and Completion**

The attached FEMA Elevation Certificate has been reviewed by this office.  
 The items noted below are not correct on the attached form and should read as entered on this page.

| SECTION A - PROPERTY INFORMATION  |               | For Insurance Company Use: |
|---|---------------|----------------------------|
| A1. Building Owner's Name   | Craig Johnson | Policy Number              |
| A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. | 220 Buss Elle | Company NAIC Number        |
| City Ketchum State ID ZIP Code 83340  |               |                            |

A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)  
 Lot 7A Wild Rose Subdivision First Addition, Main House

A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) Residential

A5. Latitude/Longitude: Lat. 43°40.728 Long. 144°22.541 Horizontal Datum:  NAD 1927  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 8

A8. For a building with a crawlspace or enclosure(s):

|   |   |
|---|---|
| a) Square footage of crawlspace or enclosure(s)   | <u>2382</u> sq ft   |
| b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade | <u>3</u>  |
| c) Total net area of flood openings in A8.b   | <u>205</u> sq in  |
| d) Engineered flood openings?   | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |

A9. For a building with an attached garage:

|  |   |
|--|---|
| a) Square footage of attached garage   | <u>N/A</u> sq ft  |
| b) No. of permanent flood openings in the attached garage within 1.0 foot above adjacent grade | <u>N/A</u>  |
| c) Total net area of flood openings in A9.b  | <u>N/A</u> sq in  |
| 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<br>Ketchum, ID 160023 |                 | B2. County Name<br>Blaine             |   | B3. State<br>IDAHO      |   |
| B4. Map/Panel Number<br>160023/0461                              | B5. Suffix<br>C | B6. FIRM Index Date<br>March 17, 1997 | B7. FIRM Panel Effective/Revised Date<br>March 17, 1997 | B8. Flood Zone(s)<br>AE | B9. Base Flood Elevation(s) (Zone AO, use base flood depth)<br>5779.2 |

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.  
 FIS Profile  FIRM  Community Determined  Other (Describe) \_\_\_\_\_

B11. Indicate elevation datum used for BFE in Item B9:  NGVD 1929  NAVD 1988  Other (Describe) \_\_\_\_\_

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)?  Yes  No  
 Designation Date \_\_\_\_\_  CBRS  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.

Local Official's Name Lisa Horowitz Title Director, Community and Economic Development Department

Community Name City of Ketchum Telephone 208-726-7801

Signature \_\_\_\_\_ Date March 21, 2011

Comments \_\_\_\_\_

# 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>Craig Johnson</u>   |  | For Insurance Company Use:   |  |
| A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.<br><u>220 Buss Elle Road</u>                                     |  | Policy Number  |  |
| City <u>Ketchum</u> State <u>ID</u> ZIP Code <u>83340</u>  |  | Company NAIC Number  |  |
| A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)<br><u>Lot 7A Wild Rose Subdivision First Addition, Garage/ADU</u>         |  |  |  |
| A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <u>Accessory</u>  |  |  |  |
| A5. Latitude/Longitude: Lat. <u>43°40.744</u> Long. <u>144°22.552</u> Horizontal Datum: <input checked="" type="checkbox"/> NAD 1927 <input 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>1a</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>DNA</u> sq ft   |  | a) Square footage of attached garage _____ sq ft   |  |
| b) No. of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>DNA</u>   |  | b) No. of permanent flood openings in the attached garage within 1.0 foot above adjacent grade _____ |  |
| c) Total net area of flood openings in A8.b <u>DNA</u> sq in   |  | c) Total net area of flood openings in A9.b _____ sq in  |  |
| d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> No   |  | d) Engineered flood openings? <input type="checkbox"/> Yes <input type="checkbox"/> No               |  |

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

|   |                        |  |  |                                |  |
|---|------------------------|--|--|--------------------------------|--|
| B1. NFIP Community Name & Community Number<br><u>Ketchum 160023</u> |                        | B2. County Name<br><u>Blaine</u>             |  | B3. State ID<br><u>ID</u>      |  |
| B4. Map/Panel Number<br><u>0461</u>                                 | B5. Suffix<br><u>C</u> | B6. FIRM Index Date<br><u>March 17, 1997</u> | B7. FIRM Panel Effective/Revised Date<br><u>March 17, 1997</u> | B8. Flood Zone(s)<br><u>AE</u> | B9. Base Flood Elevation(s) (Zone AO, use base flood depth)<br><u>5779.4</u> |

B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9.  
 FIS Profile  FIRM  Community Determined  Other (Describe) \_\_\_\_\_

B11. Indicate elevation datum used for BFE in Item B9:  NGVD 1929  NAVD 1988  Other (Describe) \_\_\_\_\_

B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)?  Yes  No  
 Designation Date \_\_\_\_\_  CBRS  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 RM9-461 Vertical Datum NGVD1929  
 Conversion/Comments None

Check the measurement used.

|  |  |  |
|--|--|--|
| a) Top of bottom floor (including basement, crawlspace, or enclosure floor) <u>5780.5</u>  | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| b) Top of the next higher floor <u>5780.6</u>  | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| c) Bottom of the lowest horizontal structural member (V Zones only) <u>DNA</u>   | <input type="checkbox"/> feet            | <input type="checkbox"/> meters (Puerto Rico only) |
| d) Attached garage (top of slab) <u>DNA</u>  | <input 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>5780.6</u> | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| f) Lowest adjacent (finished) grade next to building (LAG) <u>5779.9</u>   | <input checked="" type="checkbox"/> feet | <input type="checkbox"/> meters (Puerto Rico only) |
| g) Highest adjacent (finished) grade next to building (HAG) <u>5780.5</u>  | <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>5779.9</u>                               | <input 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>Sean Flynn</u> |  | License Number <u>12497</u>   |                       |
| Title <u>Professional Engineer</u> | Company Name <u>Galena Engineering, Inc.</u> |                               |                       |
| Address <u>Po Box 425</u>          | City <u>Ketchum</u>                          | State ID _____                | ZIP Code <u>83340</u> |
| Signature <u>Sean Flynn</u>        | Date <u>11/09/09</u>                         | Telephone <u>208 726-4729</u> |                       |



**IMPORTANT: In these spaces, copy the corresponding information from Section A.**

Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.

220 Buss Elle Road

City Ketchum State ID ZIP Code 83340

For Insurance Company Use:

Policy Number

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

Signature

Date

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 |
|-------------------|------------------------|---|

- 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.) or P.O. Route and Box No.<br>220 Buss Elle Road | For Insurance Company Use:<br>Policy Number |
| City Ketchum State ID ZIP Code 83340  | 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, following.



Front View, taken 10/12/2009.

# Building Photographs

Continuation Page

|   |                            |
|---|----------------------------|
| Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.<br>220 Buss Elle Road | For Insurance Company Use: |
|   | Policy Number              |
| City Ketchum State ID ZIP Code 83340  | Company NAIC Number        |

If submitting more photographs than will fit on the preceding page, affix the additional photographs below. Identify all photographs with: date taken; "Front View" and "Rear View"; and, if required, "Right Side View" and "Left Side View."



Left Side View, taken 10/12/2009.

**Exhibit A to Elevation Certificate (FEMA Form 81-31, Mar 09).**

Main House, 220 Buss Elle, Ketchum, ID 83340

**Section A8(c) and (d).** The foundation has 3 Smart Vents, Model #1540-550 installed (see attached AC Houston Lumber invoice). The base of the vents are installed at elevation 5878.9', 0.3' below Base Flood Elevation (BFE) of 5879.2'. The 3 vents provide a total of 205 square inches of flood openings below BFE. There is an additional 400 square inches of flood vent opening above the BFE, to protect the house in the event of a flood that exceeds a 100-year event. The minimum area of required flood openings for this home is 196.5 square inches and was calculated using the formula from ASCE 24 (see below), approved by FEMA in Technical Bulletin 1, August 2008, page 24-27. A copy of pages 24-27 are attached. Smart Vents are an approved Engineered Flood Opening (see attached ICC-ES Evaluation Report) and each Model #1540-550 is certified for 800 sf of enclosed area, using the manufacturer's nationwide default calculation (the default calculation assumes a 5' rise/fall in the river in one hour --- a worst case scenario that can be applied nationwide). If independent discharge data is available for the specific river where the subject property is located, then the formula from ASCE 24 can be used with the independent river rise/fall data to calculate the required flood vent area. In the case of the Big Wood River, there is a USGS discharge gauge at Hailey, ID, approximately 10 miles downstream from the subject property. The Hailey gauge, on the highest peak flow (cfs) day ever recorded (and the only 100 year flood event in 90+ years) in May 2006, indicated a maximum rise of the river of 770 cfs/hour or approximately a 0.43 ft./hour rise. We rounded  $R = 0.43'$  up to  $1.0'$  in the formula for a 233% additional safety factor.

From page 27 of FEMA Technical Bulletin 1 / August 2008, the formula is:

$A_o = 0.033 (1/c)(R)(A_e)$ , where

$A_o$  = total net area of flood openings required (below BFE)

0.033 = coefficient corresponding to a factor of 5.0 (sq. in. multiplied by hr/cu ft)

$c$  = opening coefficient (see ASCE 24, table 2-2 on page 27 of Technical Bulletin 1)

$R$  = worst case rate of rise and fall (ft/hr) (with an additional safety factor of 233% included)

$A_e$  = total enclosed area (sq ft)

Inserting the values into the formula,

$A_o = 0.033 (1/.40)(1.0')(2382 \text{ sf})$

$A_o = 196.5$  square inches of required flood openings

**Conclusion:** With 196.5 square inches of engineered flood vent area required below BFE according to the ASCE 24 formula and 205 square inches of openings provided, the minimum flood vent area requirement is met.

# AC HOUSTON LUMBER COMPANY

"Lumbermen Since 1884"

P.O. BOX 2236  
 KETCHUM, ID 83340  
 (208) 726-5616  
 www.houstonlumber.com

|                    |      |
|--------------------|------|
| DATE SHIPPED       | 9-10 |
| FILLED BY          | NAK  |
| DELIVERED BY       | Rigo |
| INVOICE NO. / DATE |      |

ACCOUNT NO. KEARNS, <sup>SOLD TO:</sup> MCGINNIS &  
 16337-55 VANDENBERG  
 P.O. BOX 3233  
 KETCHUM ID 83340  
 10082-01

SHIP TO: JOHNSON/UNDERWOOD  
 220 BUSS ELLE  
 KETCHUM ID83340

014-220274

10:47AM 09/09/2008

| ORDER DATE   | CUSTOMER ORDER NO. / ORDERED BY  | HOW SOLD | SOLD BY         |             | DATE FROM     | PAGE     |
|--|--|----------|-----------------|-------------|---------------|----------|
| 26AUG08  | 000/721-2038   | CHARGE   | JIM LITTLEFIELD |             |               | 01/01    |
| QUANTITY   | DESCRIPTION  | ITEM NO. | UNITS           | PRICE/UNIT  | AMOUNT        |          |
| 3  | 345302 IS RSVD PO FOR SPEC ORDER<br>SMART VENT AUTOMATIC LOUVERED<br>"FLUID" ASSEMBLY LOUVERED VENT<br>MODEL 1540-550 LOUVERED VENT<br>LOUVERS AUTOMATICALLY OPEN AND<br>CLOSE WITH TEMPERATURE. NO<br>ELECTRICITY IS NEEDED | 00695    | 3.0             | 919.75/EACH | 2,759.25      |          |
| 1  | FUEL SURCHARGE PER DELIVERY  | 09909    | 1.0             | 5.00/EACH   | 5.00          |          |
| <p><b>FLOOD VENT INVOICE FOR<br/>                     JOHNSON/UNDERWOOD HOME<br/>                     220 BUSS ELLE<br/>                     KETCHUM, ID</b></p> |  |          |                 |             |               |          |
|  |  |          |                 |             | KETCHUM IDAHO | TOTAL    |
| NON-TAXABLE  | TAXABLE  |          |                 |             |               |          |
| 5.00   | 2,759.25   | 0.00     | 0.00            | 27.59       | 165.56        | 2,957.40 |

A FINANCE CHARGE of  
 1.50  
 18.00 % PER MONTH  
 ( ) % ANNUAL  
 PERCENTAGE RATE) will  
 be charged on All Accounts Past Due.



RECEIVED THE ABOVE IN GOOD CONDITION.  
 X *[Signature]*  
 IMPORTANT: TERMS Net 10th  
 Returned items subject to 15% restocking charge