The Story of 2 Houses
**2 LOMA’s --- 2 BFE’s**

---

**Federal Emergency Management Agency**

Washington, D.C. 20472

**LETTER OF MAP AMENDMENT**

**DETERMINATION DOCUMENT (NON-REMOVAL)**

### COMMUNITY AND MAP PANEL INFORMATION

<table>
<thead>
<tr>
<th>COMMUNITY</th>
<th>TOWNSHIP OF LEROY, INGHAM COUNTY, MICHIGAN</th>
</tr>
</thead>
</table>

### LEGAL PROPERTY DESCRIPTION

A parcel of land, as described in the Covenant Deed, recorded as Document No. 2009-015153, in Book 3340, Page 1016, in the Office of the County Register of Deeds, Ingham County, Michigan.

### COMMUNITY NO.: 260906

### NUMBER: 26065C0325D

### DATE: 8/16/2011

### FLOODING SOURCE: WEST BRANCH RED CEDAR (WEST BRANCH DRAIN)

### APPROXIMATE LATITUDE & LONGITUDE OF PROPERTY: 42.613, -84.147

### SOURCE OF LAT & LONG: ARCGIS 10

### DATUM: NAD 83

### DETERMINATION

<table>
<thead>
<tr>
<th>LOT</th>
<th>BLOCK/SECTION</th>
<th>SUBDIVISION</th>
<th>STREET</th>
<th>OUTCOME WHAT IS NOT REMOVED FROM THE SFHA</th>
<th>FLOOD ZONE</th>
<th>1% ANNUAL CHANCE FLOOD ELEVATION (NAVD 88)</th>
<th>LOWEST ADJACENT GRADE ELEVATION (NAVD 88)</th>
<th>LOWEST LOT ELEVATION (NAVD 88)</th>
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<tbody>
<tr>
<td>--</td>
<td>--</td>
<td>--</td>
<td>5452 East Dennis Road</td>
<td>Structure</td>
<td>A</td>
<td>893.3 feet</td>
<td>888.8 feet</td>
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</table>

**Special Flood Hazard Area (SFHA)** - The SFHA is an area that would be inundated by the flood having a 1-percent chance of being equaled or exceeded in any given year (base flood).

**ADDITIONAL CONSIDERATIONS** (Please refer to the appropriate section on Attachment 1 for the additional considerations listed below.)

ZONE A
**EXTRA WORK - VERY IMPORTAN**

**BFE is over 5 feet lower**
Shooting the Structure

Checking the LAG
Non-Studied Area

“Mini”-Flood Insurance Study
Cross-Section
(Nearby Doan Creek) - Flooding Source

Summary:
- Lowest Adjacent Grade = 890.9'
- Box Culvert Invert = 874.7'
- Top of Water Elev. = 876.1'
- Ordinary High Water Mark = 876.4'

Note: All Elevations are in NAVD 1988.

Note: Not to Scale.
Let's talk “Common Sense”
You are about to go from…

SURVEYOR

to

SUPERHERO !!!
Completing a LOMA

Main Components (when filing)

1. Deed
2. Subdivision Plat Map or Tax Map
3. FIRMette
4. Elevation Form or MT-EZ
5. Base Flood Elevation
6. Community Acknowledgement Form (Special)
THE DEED

- Must be a “copy” of the original
- Must have the recordation stamp from the Register of Deeds
- Must be a legible stamp
- May not be needed, if in Platted Subdivision
FIRMette

- Must have the property or structure plotted on it.
- Must have a Surveyor certify the location.

I Karol L. Grove hereby certify the location of 2314 Lakeview Trail to be located as shown here below.
### TABLE 8 - Summary of Stillwater Elevations

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<tr>
<th>Flooding Source and Location</th>
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<th>0.2% Annual Chance</th>
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* Data not available
FIS Profile
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</table>

*Miles above mouth

*Combined width with South Branch Huron River

---

### Table 14

**FEDERAL EMERGENCY MANAGEMENT AGENCY**

**LIVINGSTON COUNTY, MI**

**HURON RIVER (ALL JURISDICTIONS)**

**FLOODWAY DATA**
**Elevation Form**

**Elevation Form**

**DEPARTMENT OF HOMELAND SECURITY - FEDERAL EMERGENCY MANAGEMENT AGENCY**

**ELEVATION FORM**

**PAPERWORK BURDEN DISCLOSURE NOTICE**

Public reporting burden for this data collection is estimated to average 1.25 hours per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing and submitting the form. This collection is required to obtain or retain benefits. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 1800 South Bell Street, Arlington, VA 22202. Paperwork Reduction Project (1660-0015). NOTE: Do not send your completed form to this address.

This form must be completed for requests and must be completed and signed by a registered professional engineer or licensed land surveyor. A DHS - FEMA National Flood Insurance Program (NFIP) Elevation Certificate may be submitted in lieu of this form for single structure requests.

For requests to remove a structure on natural grade OR on engineered fill from the Special Flood Hazard Area (SFHA), submit the lowest adjacent grade (the lowest ground touching the structure), including an attached deck or garage. For requests to remove an entire parcel of land from the SFHA, provide the lowest lot elevation or, if the request involves an area described by metes and bounds, provide the lowest elevation within the metes and bounds description. All measurements are to be rounded to nearest tenth of a foot. In order to process your request, all information on this form must be completed in its entirety. Incomplete submissions will result in processing delays.

---

1. **NFP Community Number**: Property Name or Address:
2. **Are the elevations listed below based on existing or proposed conditions?** (Check one):
3. **For the existing or proposed structures listed below, what are the types of construction?** (Check all that apply):
   - [ ] crawl space
   - [ ] slab on grade
   - [ ] basement/enclosure
   - [ ] other (explain)
4. **Has DHS - FEMA identified this area as subject to land subsidence or uplift?** (See instructions): [ ] Yes [ ] No
   - If yes, what is the date of the current re-levelling? [ ] month/year
5. **What is the elevation datum?** [ ] NGVD 29 [ ] NAVD 88 [ ] Other (explain):
   - If any of the elevations listed below were computed using a datum different than the datum used for the effective Flood Insurance Rate Map (FIRM) e.g. NGVD 29 or NAVD 88, what was the conversion factor?
   - Local Elevation + ft. = FIRM Datum
6. **Please provide the Latitude and Longitude of the most upstream edge of the structure (in decimal degrees to the nearest fifth decimal place):**
   - Indicate Datum: [ ] WGS84 [ ] NAD83 [ ] NAD27 Lat.: Long.
   - Indicate Datum: [ ] WGS84 [ ] NAD83 [ ] NAD27 Lat.: Long.

---

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<tr>
<th>Address</th>
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<th>Block Number</th>
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<th>Lowest Adjacent Grade To Structure</th>
<th>Base Flood Elevation</th>
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This certification is to be signed and sealed by a licensed land surveyor, registered professional engineer, or architect authorized by law to certify elevation information. All documents submitted in support of this request are correct to the best of my knowledge. I understand that any false statement may be punishable by fine or imprisonment under Title 18 of the United States Code, Section 1001.

*Certifier's Name*: License No.: Expiration Date:

*Company Name*: Telephone No.:

*Email*: Fax No.:

*Signature*: Date:

*For requests involving a portion of property, include the lowest ground elevation within the metes and bounds description. Please note if the Lowest Adjacent Grade to Structure is the only elevation provided, a determination will be issued for the structure only.*

Seal (optional)
COMMUNITY ACKNOWLEDGEMENT FORMS
What if the structure is too low???
What if we cannot eliminate the Flood Insurance Requirement?

If done correctly, in most cases we can get a 75% reduction in your Flood Insurance Premium. Guaranteed!!

ELEVATION CERTIFICATE
<table>
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<th>Elevation Certificate</th>
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<tbody>
<tr>
<td>• No longer the Animal it used to be…</td>
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<tr>
<td>• When are they needed???</td>
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Why do we ask what year a structure was built?

Pre-FIRM Vs Post-FIRM
The National Flood Insurance Program
Community Status Book

Please select the state, territory or nation to see the report. These documents are now provided in Adobe PDF, comma separated values (CSV) text file, and HTML formats.

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Federal Emergency Management Agency
Community Status Book Report
VERMONT

Communities Participating in the National Flood Program

<table>
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<tr>
<th>CID</th>
<th>Community Name</th>
<th>County</th>
<th>Init FHBM Identified</th>
<th>Init FIRM Identified</th>
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<th>Reg-Emer Date</th>
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<td>12/20/74</td>
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<td>CORPORATION OF SAXTON’S RIVER</td>
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The Town of Sandgate is mapped on Bennington County FIRM panels effective 12/02/2015. The FIRM panels will be linked in CIS soon.

<table>
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<tr>
<th>CID</th>
<th>Community Name</th>
<th>County</th>
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<th>Init FIRM Identified</th>
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<th>Reg-Emer Date</th>
<th>Tribal</th>
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BW-12 & ELEVATION CERTIFICATES
INSURANCE AGENTS

- Writing a Flood Insurance Policy
- Homeowners have options
- Reading the Elevation Certificate
- Lowest Floor vs Lowest Adjacent Grade
- Conditions for installing Flood Vents
ELEVATION CERTIFICATES

MISTAKES
MANY MANY
MISTAKES!!!
ELEVATION CERTIFICATES

MISTAKES

MANY MANY

MISTAKES!!!
# Mistakes on Elevation Certificates

**U.S. DEPARTMENT OF HOMELAND SECURITY**  
Federal Emergency Management Agency  
National Flood Insurance Program  

## ELEVATION CERTIFICATE

**Important:** Follow the instructions on pages 1–9.

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

### SECTION A – PROPERTY INFORMATION

<table>
<thead>
<tr>
<th>A1. Building Owner’s Name</th>
<th>Rory Fox</th>
</tr>
</thead>
<tbody>
<tr>
<td>A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No.</td>
<td>41215 Conger Bay Drive</td>
</tr>
<tr>
<td>A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.)</td>
<td>Part of Lot 47, Lot 48, Belvidere Subdivision as per plat of record. Tax ID #: 17-12-15-154-035</td>
</tr>
<tr>
<td>A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.)</td>
<td>Residential</td>
</tr>
<tr>
<td>A5. Latitude/Longitude:</td>
<td>Lat. 42.597920 Long. -82.792798</td>
</tr>
<tr>
<td>A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.</td>
<td></td>
</tr>
<tr>
<td>A7. Building Diagram Number</td>
<td>8</td>
</tr>
<tr>
<td>A8. For a building with a crawl space or enclosure(s):</td>
<td></td>
</tr>
<tr>
<td>a) Square footage of crawl space or enclosure(s)</td>
<td>918 sq ft</td>
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DIAGRAM 2

All single- and multiple-floor buildings with basement (other than split-level) and high-rise buildings with basement, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor (basement or underground garage) is below ground level (grade) on all sides.*

The Correct Diagram??
The Correct Diagram

DIAGRAM 2A

All single- and multiple-floor buildings with basement (other than split-level) and high-rise buildings with basement, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor (basement or underground garage) is below ground level (grade) on all sides.*

C2.a

NEXT HIGHER FLOOR

C2.b

BOTTOM FLOOR BASEMENT

GRADE

C2.f–h (determined by existing grade)
DIAGRAM 2B

All single- and multiple-floor buildings with basement (other than split-level) and high-rise buildings with basement, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor (basement or underground garage) is below ground level (grade) on all sides; most of the height of the walls is below ground level on all sides; and the door and area of egress are also below ground level on all sides.*

![Diagram of basement and higher floors with annotations C2.a, C2.b, and C2.f-h indicating the grade and floor levels.](image-url)
DIAGRAM 9
All buildings (other than split-level) elevated on a sub-grade crawlspace, with or without attached garage.

Distinguishing Feature – The bottom (crawlspace) floor is below ground level (grade) on all sides.* (If the distance from the crawlspace floor to the top of the next higher floor is more than 5 feet, or the crawlspace floor is more than 2 feet below the grade [LAG] on all sides, use Diagram 2.)

The Correct Diagram ??
Figure 2. Limitations on below-grade crawlspaces in shallow flood hazard areas (TB 11)
DIAGRAM 2A

All single- and multiple-floor buildings with basement (other than split-level) and high-rise buildings with basement, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor (basement or underground garage) is below ground level (grade) on all sides.*

The Correct Diagram??
DIAGRAM 3

All split-level buildings that are slab-on-grade, either detached or row type (e.g., townhouses); with or without attached garage.

Distinguishing Feature – The bottom floor (excluding garage) is at or above ground level (grade) on at least 1 side.*

The Correct Diagram ??
DIAGRAM 7

All buildings elevated on full-story foundation walls with a partially or fully enclosed area below the elevated floor. This includes walkout levels, where at least 1 side is at or above grade. The principal use of this building is located in the elevated floors of the building.

Distinguishing Feature – For all zones, the area below the elevated floor is enclosed, either partially or fully. In A Zones, the partially or fully enclosed area below the elevated floor is with or without openings** present in the walls of the enclosure. Indicate information about enclosure size and openings in Section A – Property Information.
DIAGRAM 9

All buildings (other than split-level) elevated on a sub-grade crawlspace, with or without attached garage.

Distinguishing Feature – The bottom (crawlspace) floor is below ground level (grade) on all sides.* (If the distance from the crawlspace floor to the top of the next higher floor is more than 5 feet, or the crawlspace floor is more than 2 feet below the grade [LAG] on all sides, use Diagram 2.)

The Correct Diagram ??
DIAGRAM 8

All buildings elevated on a crawlspace with the floor of the crawlspace at or above grade on at least 1 side, with or without an attached garage.

Distinguishing Feature – For all zones, the area below the first floor is enclosed by solid or partial perimeter walls. In all A zones, the crawlspace is with or without openings** present in the walls of the crawlspace. Indicate information about crawlspace size and openings in Section A – Property Information.
DIAGRAM 1B

All raised-slab-on-grade or slab-on-stem-wall-with-fill single- and multiple-floor buildings (other than split-level), either detached or row type (e.g., townhouses); with or without attached garage.

**Distinguishing Feature** – The bottom floor is at or above ground level (grade) on at least 1 side.*

---

**Enclosure/No need to measure building!**
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) 918 sq ft
   b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade 0
   c) Total net area of flood openings in A8.b 0 sq in
   d) Engineered flood openings? ☐ Yes ☒ No

A9. For a building with an attached garage:
   a) Square footage of attached garage 440 sq ft
   b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade 0
   c) Total net area of flood openings in A9.b 0 sq in
   d) Engineered flood openings? ☐ Yes ☒ No

SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION

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<thead>
<tr>
<th>B1. NFIP Community Name &amp; Community Number</th>
<th>B2. County Name</th>
<th>B3. State</th>
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<tbody>
<tr>
<td>Harrison Township #260123</td>
<td>Macomb</td>
<td>Michigan</td>
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<table>
<thead>
<tr>
<th>B4. Map/Panel Number</th>
<th>B5. Suffix</th>
<th>B6. FIRM Index Date</th>
<th>B7. FIRM Panel Effective/Revised Date</th>
<th>B8. Flood Zone(s)</th>
<th>B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth)</th>
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<td>26099C0356</td>
<td>H</td>
<td>11/20/2013</td>
<td>12/04/2012</td>
<td>AE</td>
<td>578.6'</td>
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</table>
Standard Vent
42 sq. in.

Closure device disabled in the open position.
Vents vs. Flood Vents

Non-Engineered Opening Guide

To Assist in the Compliance and Measurement Documentation of Non-Engineered Flood Openings for the Elevation Certificate in Accordance with the National Flood Insurance Program

NON-ENGINEERED OPENING GUIDE
<table>
<thead>
<tr>
<th>Material</th>
<th>Concrete</th>
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<tbody>
<tr>
<td>Dimensions</td>
<td>Width: 15.5 inches</td>
</tr>
<tr>
<td></td>
<td>Height: 7.5 inches (excluding flange)</td>
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<tr>
<td>Net Open Area</td>
<td>32 sq. in.</td>
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**Figure 3**

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<th>Material</th>
<th>Concrete Block Turned Side Ways</th>
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<tr>
<td>Compliancy Notes</td>
<td>If used must have rodent screen attached per ICC Construction Codes.</td>
</tr>
<tr>
<td>Dimensions</td>
<td>Width: 15.5 inches</td>
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<tr>
<td></td>
<td>Height: 7.625 inches</td>
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<tr>
<td>Net Open Area</td>
<td>59 sq. in.</td>
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**Figure 4**
Flood Vent Certification

Non-Engineered Opening Agreement
for Owners of Structures in a Special Flood Hazard Area: A and V type zones

Subject Property Address:

Lot and Block Number:

Property Owner Name(s):

Property is in compliance with Non-Engineered Opening requirements? Yes [ ] No [ ]

The property owner acknowledges and agrees to the following:

1. That they are an owner of the above property.
2. That they understand that the flood openings identified on the Elevation Certificate under section A8 and A9, when applicable, are Non-Engineered Openings intended for hydrostatic flood relief.
3. That they must remain open at all times and cannot be covered, closed off, or blocked in any way.
4. That modifications to these openings could result in a greater risk to their property and personal safety in addition to increased flood insurance costs.
5. That at the time of the flood opening survey this property required ______ square inches of net open area. Non-Engineered Openings were identified providing ______ square inches of flood venting relief.

Date ____________________________ Signature of Property Owner ____________________________

Date ____________________________ Signature of Property Owner ____________________________

DISCLAIMER: A copy of this agreement will be sent to the local municipality office for floodplain management purposes.
Company Name

Certifier Name

Date of Elevation Certificate Completion

Non-Engineered Opening Agreement

for Owners of Structures in a Special Flood Hazard Area: A and V type zones

Subject Property Address:

Lot and Block Number:

Property Owner Name(s):

Property is in compliance with Non-Engineered Opening requirements? Yes [ ] No [ ]

The property owner acknowledges and agrees to the following:

1. That they are an owner of the above property.
Property Owner Name(s): 

Property is in compliance with Non-Engineered Opening requirements?  Yes [ ]  No [ ]

The property owner acknowledges and agrees to the following:

1. That they are an owner of the above property.

2. That they understand that the flood openings identified on the Elevation Certificate under section A8 and A9, when applicable, are Non-Engineered Openings intended for hydrostatic flood relief.

3. That they must remain open at all times and cannot be covered, closed off, or blocked in any way.

4. That modifications to these openings could result in a greater risk to their property and personal safety in addition to increased Flood Insurance costs.

5. At the time of the flood opening survey this property required ________ square inches of net open area. ________ Non-Engineered Openings were identified providing ________ square inches of flood venting relief.

Date ___________________________  Signature of Property Owner ___________________________

Date ___________________________  Signature of Property Owner ___________________________

DISCLAIMER: A copy of this agreement will be sent to the local municipality office for floodplain management purposes.