Surveying for a LOMA in "Zone A"

To be eligible for a Letter of Map Amendment (LOMA) from FEMA, you must be able to prove that the water surface elevation of the 100-year flood (or "**base flood elevation**") is lower than the ground elevation at the lowest exterior point around your foundation.

Regions labeled as "Zone A" on your community's floodplain map indicate those areas where FEMA has designated the approximate floodplain, but has not done the detailed river studies necessary to establish a base flood elevation.

If your LOMA request is for a single residential structure or lot, and BFE data are not available from authoritative state or federal sources, FEMA will calculate the base flood elevation for you IF you provide the appropriate survey information with your LOMA application:

- Prior to conducting an elevation survey, you should first verify that BFE data does not already exist for the stream in question. Please call the Vermont Floodplain Management Office at 802-241-3759. The applicant will need to indicate in the LOMA application cover letter that BFE data does not exist from state or other federal sources;

- The surveyor must establish a cross-section of the stream. This cross-section should begin at the **upstream** edge of your structure, and should extend **perpendicular** to the stream. The cross-section should extend on the opposite bank of the stream to the point where the relative ground elevation on the opposite bank equals or exceeds the ground elevation of your structure;

- Several survey points should be established along this cross-section (Figure 2). A survey point should be included at every point where there is a significant break in slope or change in topography along the cross-section. **Elevation** and **distance** along the cross-section should be measured for each survey point. Elevation can be measured using an "assumed datum", where the surveyor establishes an arbitrary elevation at a nearby landmark and records relative elevations compared to that point. Distance along the cross-section can be made starting from the corner of your structure;

- All distance and elevation measurements should be recorded in a table. The surveyor should include a scaled diagram of the cross-section that includes each of the survey points (see "cross-section view" above). An "overhead view" of the cross-section (including the survey points) that shows the home in relation to the stream should also be included (Figures 1 and 2);
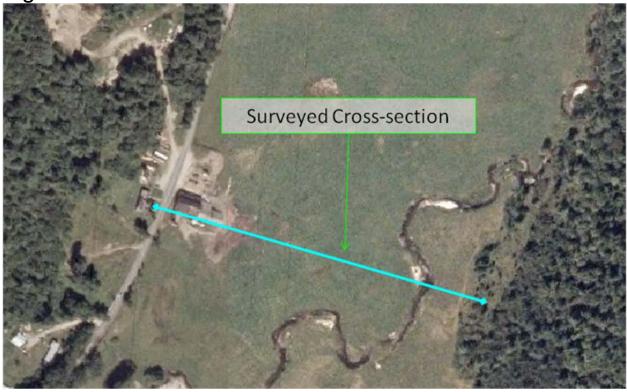
- If your structure is upstream of a stream crossing structure, the bridge or culvert maybe controlling flooding at your structure. Survey information about the stream crossing structure should be included as well, including top-of-road elevations, opening dimensions and elevations, and material type (e.g. – concrete, corrugated steel, etc.). Photos of the structure are also helpful;

- Include all other information relevant to the survey. You should include several photos of the banks on either side of the stream. Knowing the type of ground cover nearby is necessary for FEMA to model the base flood elevation;

- Your LOMA application must also include the ground elevation at the lowest point around your foundation (also called the "**lowest adjacent grade**"), using the assumed datum.

This survey information should allow FEMA to calculate a base flood elevation for your site, and compare that information to the lowest adjacent grade. PLEASE NOTE: the investment of time and money needed to obtain this survey information does not guarantee that the outcome will be favorable, and there is always the possibility that the calculated base flood elevation will be higher than your lowest adjacent grade confirming that the home is correctly mapped in the Special Flood Hazard Area.
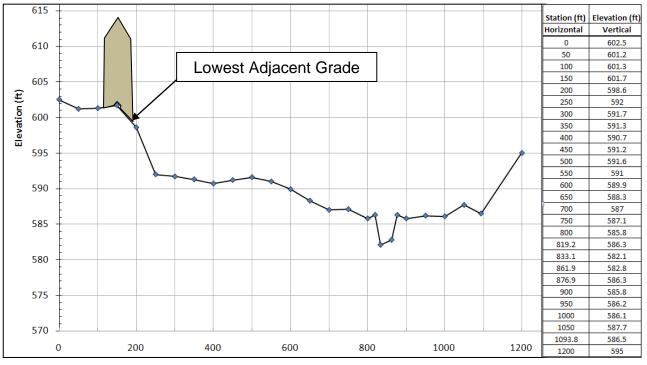
If you have questions regarding Letters of Map Amendment, please visit the FEMA Map Information eXchange (www.floodmaps.fema.gov/fhm/fmx_main.html)or contact a FEMA Map Specialist at FEMAMapSpecialist@riskmapcds.com or 1-877-FEMA-MAP (1-877-336-2627).

Survey Information (Example)

Figure 1:

Surveyed Cross-section

Figure 2:

Lowest Adjacent Grade

Station (ft)	Elevation (ft)
Horizontal	Vertical
0	602.5
50	601.2
100	601.3
150	601.7
200	598.6
250	592
300	591.7
350	591.3
400	590.7
450	591.2
500	591.6
550	591
600	589.9
650	588.3
700	587
750	587.1
800	585.8
819.2	586.3
833.1	582.1
861.9	582.8
876.9	586.3
900	585.8
950	586.2
1000	586.1
1050	587.7
1093.8	586.5
1200	595

Elevation (ft)

Distance (Ft)