

Home Elevation Project to elevate a Richmond Home in the Special Flood Hazard Area, FEMA Flood Zone AE

The State of Vermont has had 48 Major Disaster Flooding Declarations since 1963 (See attached list), 13 since Tropical Storm Irene in 2011. The National Flood insurance program may not be able to continue to cover the costs of damage; my flood insurance was just over \$2,000 in 2011 and it has more than tripled in cost since 2011. Every homeowner with a home in the flood zone has an obligation to explore every possible option to mitigate their home, both to reduce the cost of flood insurance, to reduce the overall burden of the National Flood insurance program, and ensure the long term health of the home.

While I am not here in any official state capacity, I do work for the State of Vermont and I had the opportunity to work on over 465 municipal projects after Tropical Storm Irene under the Federal Public Assistance program. I worked with a team of FEMA's engineers for years. I have the benefit of writing hundreds of successful Public Assistance applications on behalf of the state to FEMA.

I have reviewed the details of this project with folks at FEMA for years and after years of informal discussions, this is the time to submit a Hazard Mitigation Grant Program application for my house in Richmond, 54 Jones Mill Rd.

The house is in the Special Flood Hazard Area, and as a result, it gets a higher level of priority from FEMA for an elevation, and thus is an easy project for FEMA to approve. Most of the other homes in Jonesville have been elevated above base flood elevation over the years, most recently the house at 98 Jones Mill Rd. (DRB Approved 2018-053 for Conditional Use Review to raise a principal structure in the Special Flood Hazard Area at Parcel ID# JM0098, located at 98 Jones Mill Rd, Richmond, located within the Commercial (C) Zoning District.)

Quick Administrative Summary – The town will not pay anything for this. The homeowner has to pay 25% and, if this grant is successfully awarded, FEMA pays 75%. The town acts as a fiscal agent. I don't think any of the homeowners who have elevated their houses in the past have worked directly with the town, so this could be a different role for the town. Since other homeowners may want to elevate their homes above base flood elevation in the future, this is a great opportunity for the town to walk through the process so they can be in a better position to assist future homeowners.

Quick Technical Summary – Since I spent 7 years working with over 75 Vermont towns on repairing and rebuilding major infrastructure damage, I can safely say that this project is incredibly straightforward. Simply put, the house is 1 foot too low. In other words, this house is one foot below Base Flood Elevation. At a minimum, elevation standards indicate that the house needs to be elevated a minimum of 2 feet above the Base Flood Level, which in this case is, at least 3 feet higher than the current elevation of the house.

FEMA's guidance is extremely clear on this type of project. It is outlined in FEMA P-312, Homeowner's Guide to Retrofitting 3rd Edition (2014). The subgrade area (basement) will be eliminated and the foundation will be reconstructed with a slab with footings and an unfinished crawlspace, which will be vented. New footings will be poured, unless parts of the existing concrete wall can be repurposed, and a new concrete slab will be poured. This is the simplest approach to elevating a structure, as outlined in FEMA P-312, Homeowner's Guide to Retrofitting 3rd Edition (2014). In eliminating the sub grade area,

an unfinished crawlspace will be left, which will be vented. Everything below the first living floor will be unfinished.

Cost estimate attached -- From FEMA's perspective, elevating a single-family home a few feet higher in the Special Flood Hazard Area is an extremely simple project. It's easy to tell that this is a simple project for FEMA because they don't even require a complicated "benefit cost analysis". i.e. a "BCA" in order for them to review and approve the project. FEMA has an easy test for homes in the Special Flood Hazard Area (SFHA) and if the costs are less than \$175,000 (which they will be – I have a solid estimate of \$150,000), then FEMA considers it to be so cheap and critical, they don't require a BCA.

Attachments

1. Draft Application
2. Cost estimate
3. Elevation Certificate
4. Smart Vent Correspondence – the State had engineers from smartvent.com help us with a few projects, so I've been working with one of their Certified Flood plan Managers to understand how high the house needs to be elevated. They reviewed the elevation certificate and provided guidance on how high to elevate and the venting requirements.
5. Snapshot of Flood Zone Map of Jones Mill Road proving that it is in the Special Flood Hazard Area (AE).
6. List of Vermont disasters