



SUPPLEMENTAL FORM "A"

PROCESS TO APPLY FOR A FLOOD DAMAGE PREVENTION DEVELOPMENT PERMIT FOR: SINGLE FAMILY DWELLING (INCLUDES MANUFACTURE HOMES AND TINY HOMES)

Step 1: Determine what flood hazard exist on the property of the proposed development. If you have difficulty in determining the flood hazard that exist, please call the Flood Damage Prevention Administrator for assistance. Contact Office Number (828) 694-6553.

Flood Fringe Area Present (1 % chance of flooding)

Step 2: Is the proposed development located in the area described in Step 1?

Yes No

(If yes, proceed to Step 3)

(If no, STOP, residential units are not permitted in the Floodway/Non-Encroachment Areas in Henderson County).

Step 3: Complete Page 1 and 2 of 5 of the Flood Damage Prevention Application. (All owners listed in the Deed must sign the application to be valid, or provide Section D of Application to assign a representative to apply for permits) The application can be found at <https://www.hendersoncountync.gov/waterresources/page/henderson-county-flood-damage-prevention-forms> . (Proceed to Step 4)

Step 4: The finished flood must be at least 2 foot or more above the designated Base Flood Elevation (BFE) for the location of the proposed structure. (Proceed to Step 5)

Step 5: Manufactured Homes, or Tiny Homes: No Manufactured/Mobile homes shall be permitted except replacement manufactured/mobile homes in an existing manufactured home park, existing manufactured home subdivision, or replacement manufacture/mobile homes on an individual parcel, provided the following conditions are met:

- Shall be elevated so that the reference level of the manufactured/mobile home is no lower than the regulatory flood elevation.
- Shall be securely anchored to an adequately anchored foundation to resist floatation, collapse, and lateral movement in accordance with the State of NC Regulations for Manufactured Homes adopted by the Commissioner of Insurance pursuant to NCGS §143-143.15. Additionally, when the elevation would be met by an elevation of the chassis 36 inches or less above the grade at the site, the chassis shall be supported by reinforced piers or engineered foundation system. When the elevation of the chassis is above 36 inches in height, an engineering certification is required.
- All enclosures or skirting shall be in accordance with Step 7 below.
- An evacuation plan must be developed for evacuation of all residents of all substantially improved or substantially damaged manufactured/mobile home parks or subdivisions located within flood prone areas. This plan shall be filed with and approved by the Floodplain Administrator and the Local Emergency Management Coordinator.

Step 6: Hire a "Professional Engineer" or a "Land Surveyor", registered in North Carolina, to develop a complete set of plans to meet §42-350A-C. This includes a site plan (showing the proposed structure with finished floor elevation and flood elevation information from the FEMA Flood Insurance Rate Maps (FIRMS)), and a foundation plan* for Single Family Homes, whether they are stick built, manufactured homes, tiny homes, or off frame modular. *Foundation enclosures made of flexible skirting are not considered enclosures for regulatory purposes, and therefore, do not require openings. Masonry or wood skirting, regardless of structural status, is considered an enclosure and requires openings as outlined below.*

- Regulatory Flood Elevation level (RFE) is defined as the base flood elevation plus the freeboard. The elevation to which all structures and other development located within the Special Flood Hazard Areas must be elevated. In Special Flood Hazard Areas where Base Flood Elevations (BFE's) have been determined, this elevation shall be the BFE plus two (2) feet of freeboard.
- Base Flood Elevation is defined as the water surface elevations of the base flood as published in the FEMA Flood Insurance Study (FIS) or FIRM's.
- If fill material is proposed from another source (off site) as a means to elevate the finished floor, a separate permit would be required to place the fill. See Supplemental Form for "20 percent Fill Placement".

- ** No fill whatsoever shall be allowed except on parcels of land, the boundaries of which are of record in the Henderson County Registry as of the original date of adoption of these regulations (July 5, 2005), and then only upon 20 percent of the total of the flood fringe area (does not include floodway or non-encroachment area) contained in each such parcel, except that additional fill may be permitted in the flood fringe pursuant to a special fill permit (See §42-355 (Special Fill Permits) for more information). If you have trouble determining whether the parcel you are proposing to construct on was created prior to 7-5-2005, contact the office for assistance at (828) 694-6553.
- *If Fill is not proposed as a method to elevate the finished floor to the regulatory flood elevation, the Foundation Plan must include flood openings to automatically equalize hydrostatic flood forces on walls by allowing for the entry and exit of floodwaters for any enclosed space below the regulatory flood elevation.
 - To meet this requirement, the openings must either be certified by a North Carolina registered professional engineer **or** North Carolina registered Architect **or** meet or exceed the following minimum design criteria:
 - Provide a minimum of two (2) flood openings on different sides of each enclosed area subject to flooding.
 - The total net area of all openings must be at least one (1) square inch for each square foot of each enclosed area subject to flooding;
 - If a structure has more than one (1) enclosed area, each area must have flood openings to allow floodwater to automatically enter and exit:
 - The bottom of all required openings shall be no higher than one (1) foot above the adjacent grade; and; (inside and outside of crawl space)
 - Flood openings may be equipped with screens, louvers, or other opening coverings or devices provided they permit the automatic flow of floodwaters in both directions. Crawl Space doors cannot be utilized for this requirement.
- If a crawl space is proposed, no mechanical equipment, duct work, building utilities are allowed to be in this area if it is at or below RFE.
- The crawl space floor shall be constructed in accordance with Technical Bulletin 11. This document can be found at <https://www.hendersoncountync.gov/waterresources/page/technical-bulletins> .
 - Example of preferred crawlspace construction is shown in Figure 1 and Figure 2 below:

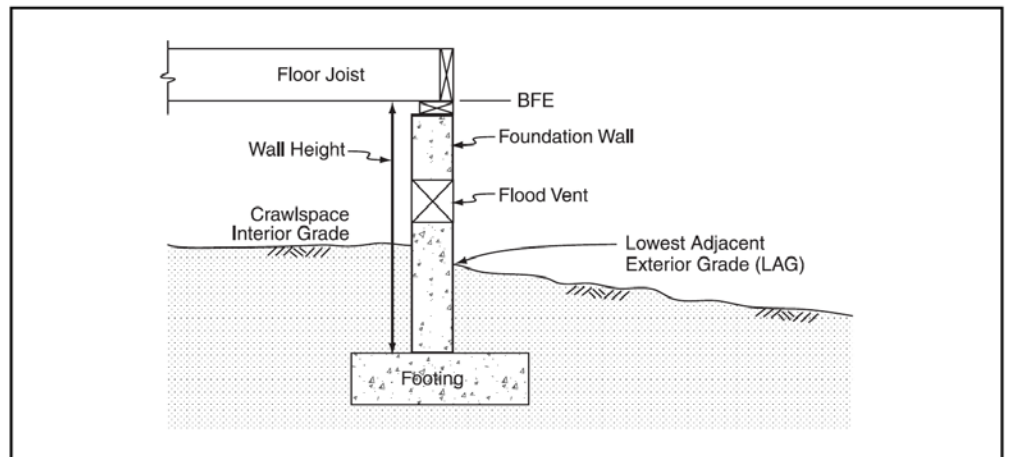


Figure 1 Preferred crawlspace construction.

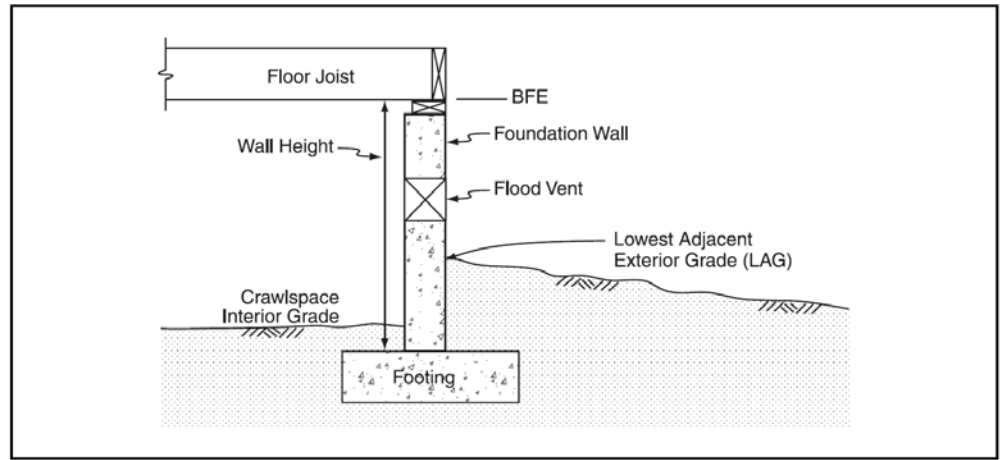


Figure 2 Below-grade crawlspace construction.

Additional Requirements for Below-Grade Crawlspaces

If a community chooses to amend its floodplain management ordinance to allow for the construction of below-grade crawlspaces, the ordinance must include the following provisions in addition to the above requirements:

- The interior grade of a crawlspace below the BFE must not be more than 2 feet below the lowest adjacent exterior grade (LAG), shown as D in Figure 3.
- The height of the below-grade crawlspace, measured from the interior grade of the crawlspace to the top of the crawlspace foundation wall must not exceed 4 feet (shown as L in Figure 3) at any point. The height limitation is the maximum allowable unsupported wall height according to the engineering analyses and building code requirements for flood hazard areas (see the section Guidance for Pre-Engineered Crawlspaces, on page 7 of this bulletin). This limitation will also prevent these crawlspaces from being converted into habitable spaces.
- There must be an adequate drainage system that removes floodwaters from the interior area of the crawlspace. The enclosed area should be drained within a reasonable time after a flood event. The type of drainage system will vary because of the site gradient and other drainage characteristics, such as soil types. Possible options include natural drainage through porous, well-drained soils and drainage systems such as perforated pipes, drainage tiles, or gravel or crushed stone drainage by gravity or mechanical means.
- The velocity of floodwaters at the site should not exceed 5 feet per second for any crawlspace. For velocities in excess of 5 feet per second, other foundation types should be used.
- Below-grade crawlspace construction in accordance with the requirements listed above will not be considered basements.

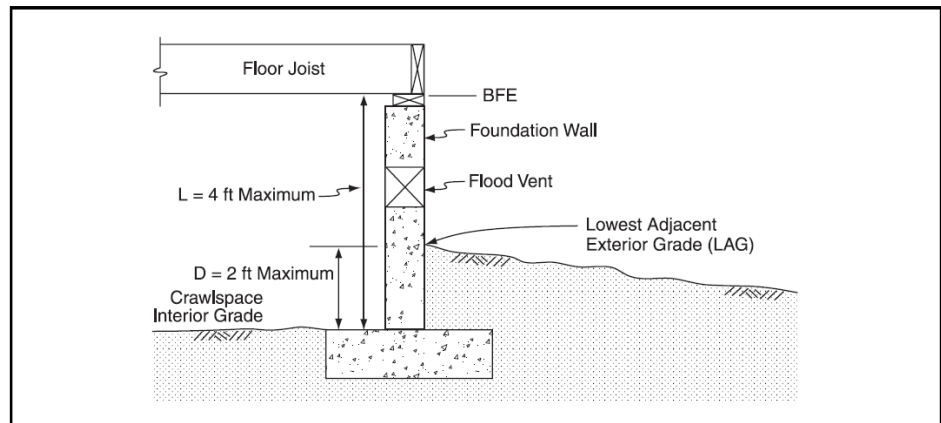


Figure 3 Requirements regarding below-grade crawlspace construction.

Step 7: : An elevation certification showing proposed elevation of lowest floor (including basement) when the Application is submitted. This may be developed by a licensed and registered NC Professional Engineer or Architect.

Note: Two other elevation certifications are required during construction:

- An elevation certification showing actual elevation of lowest floor (including basement) when the foundation is placed.
- An elevation certification showing actual elevation of lowest floor (including basement) and any building utility designed to service the structure at final stage.

Step 8: Check the latest fee schedule for appropriate fees to be submitted with the Application, Plan, and Elevation Certificate for review at <https://www.hendersoncountync.gov/waterresources/page/henderson-county-flood-damage-fee-schedule-fy2020> .

Step 9: Gather the information you compiled from the instructions above. (Proceed to step 11).

Step 10: You can either call (828) 694-6553 and schedule at time to submit the package or you may mail the information to:

Attn: Floodplain Administrator
Site Development
240 Second Avenue East
Suite 118
Hendersonville, NC 28792