

APPENDIX F:

STANDARDS AND REQUIREMENTS FOR FLOOD HAZARD EVALUATION

STANDARDS

The Applicant shall contract the services of a registered engineer to conduct a detailed water surface profile analysis (Flood Study if the following conditions are met.

1. The local jurisdiction is enrolled in the National Flood Insurance Program (NFIP) and has in effect a local floodplain management program.
2. The proposed project is located within an approximated floodplain as shown on the FEMA Flood Insurance Rate Map (FIRM).
3. The detailed floodplain delineation is coordinated with the local floodplain administrator and/or county sanitarian.
4. The proposed project is located on property being subdivided.

REQUIREMENTS

The detailed information shall be prepared by the Applicant's registered engineer and shall include the information listed below.

1. Certification: Certification by a registered professional engineer.
2. Overall Plan View: An overall scaled plan view (project map) with identified scale for vertical and horizontal distance showing the following:
 - a. watercourse
 - b. floodplain boundaries
 - c. location of property
 - d. contours
 - e. cross-sections
 - f. bridges or other contractions in the floodplain.
 - g. USGS gauging stations (if any).
3. Benchmark(s): The location and elevation of a temporary benchmark(s) established within the subdivision and referenced to mean sea level with appropriate elevation adjustment.

4. Cross sectional information:
 - a. Cross-section elevations and stations should be determined at points representing significant breaks in ground slope and at changes in the hydraulic characteristics of the floodplain (i.e., points where ground cover, soil, or rock conditions change). Elevations must be reported in NAVD 88 or NGVD 29 datum.
 - b. Each cross-section shall cross the entire floodplain. The cross-section alignment should be perpendicular to the general flow of the watercourse (approximately perpendicular to contour lines). Occasionally, wide floodplains require a dog-leg alignment to be perpendicular to the anticipated flow-lines. Shots should be taken at the water's edge and measurements taken (if elevation shots can not be taken) to determine the channel bottom shape. Cross sections shall be accurately located on a USGS 7 1/2 minute quad sheet.
 - c. The number of cross-sections needed, and the distance between cross-sections will vary depending on the site, the slope of the watercourse, the slope of the channel, and the hydraulic characteristics of the reach. A minimum of four cross sections is required over the entire reach with at least two cross-sections at the property where the elevations are desired. Additional cross-sections must be taken at bridges, control structures, or natural constrictions in topography. Photogrammetric methods may be used in lieu of cross sections whenever appropriate and when reviewed and approved by the county.
5. Bridges: Descriptions and sketches of all bridges within the reach, showing unobstructed waterway openings and elevations.
6. Water Surface: Elevation of the water surface is to be determined by survey as part of each valley cross section.
7. Supporting Documentation: Engineering report of computer computations, calculations, and assumptions that may include:
 - a. Hydrology (Research of published hydrology or calculations showing how hydrology was derived)
 - b. Input Files (hardcopy and electronic copy)
 - c. Output Files (hardcopy and electronic copy)