

# CITY OF GRAFTON

## MEMO TO POTENTIAL BUILDERS ON FLOODPLAIN REQUIREMENTS AND DESIGN

The City of Grafton falls under the regulation of a Floodplain Ordinance. In essence this means other than a few exceptions the floor of all structures must be constructed one (1) foot above the base flood elevation (BFE) otherwise know as the level of the 100-year flood. Basements may be constructed under specific construction guidelines that also serve to protect them to that same level. The owner is required to provide a pre-construction elevation form signed by a certified engineer prior to issuance of a building permit and within 10 days of completion of the structure, a copy of the final elevation certificate issued by said engineer.

There are two primary methods, which may eliminate the need for flood insurance or enable the owner to obtain flood insurance at a reduced rate.

***Construction on fill:*** This is the process most likely to enable the owner to eliminate the need for flood insurance and is applicable to all structures built on slabs or foundations. Fill is brought to the site and compacted, resulting in an area roughly 10 feet beyond the proposed location of the foundation to be elevated one (1) foot above the BFE. An engineer then certifies the site and an application are made to FEMA, along with a fee, to have the site removed from the floodplain. Please note that only an elevated site certified prior to construction may be eligible. When approved, the owner and City will receive a Letter of Map Revision or Amendment (LOMR or LOMA) indicating it has been removed from the floodplain. This document is necessary to eliminate the need for flood insurance. This **WILL NOT** allow for the construction of uncertified basements (block or wood construction). In most cases it will eliminate the requirement, established by FEMA or the National Flood Insurance Program (NFIP), for the purchase of flood insurance, but may still be subject to requirement for insurance under regulations or policies established by the lender that are beyond those set forth by FEMA/NFIP, established by the lender.

***Certified construction above the BFE:*** In this process the grade is not necessarily raised but the floor of the structure (top of slab or bottom of floor joists) is still constructed at one (1) foot above the BFE such as one might see in an “exposed foundation”. An engineer then certifies the structure and an “Elevation Certificate” is issued. An elevation certificate will assure a reduced rate of flood insurance and usually but not always, depending on lender requirements, eliminate the need for flood insurance. The City of Grafton also has a special exemption from FEMA to permit the construction of basements in the floodplain. In this process special construction provisions must be followed and the top of the foundation/wall or lowest opening must be constructed one (1) foot above the base flood elevation. As windows (especially the egress type) are generally required in basements the accepted method of complying with the regulations is to construct a concrete window well, basically an extension of the foundation wall, to the same height as said wall. Only reinforced, 8” poured concrete walls are permitted. Again certification by an engineer is required. While certification assures a reduced flood insurance rate it **may not** remove the need for flood insurance for a structure with a basement.

Under some circumstances certain types of structures may be constructed with floors below the BFE. Garages and storage buildings fall under this classification. If built in such a manner these structures can not be certified or exempt from flood insurance and rates will be based on how far beneath the BFE the floor is, possibly resulting in a rate 4-5 times higher or more than a certified building. In most cases the extra cost for elevating such a structure will show a return in 4-5 years in flood insurance savings.

***Approved construction below the BFE:** In this process the BFE must still be established and all construction below that level must be of flood resistant materials (e.g. treated lumber, steel, concrete and etc.) Venting must be provided to allow for the flow of water in and out of the structure during a flooding event. All electrical and mechanical services in such a structure must also be elevated above the BFE.*

Extended depth crawlspace type construction is a popular method of building in areas where a significant amount of elevation is required but under current regulations is wrought with design problems, especially when the design exceeds 18"-24" in crawlspace height. This type of construction is discouraged as it is often costly and difficult to construct in a manner to satisfy floodplain requirements.

#### **Certification and your lender:**

It is best to talk to your lender to see what method of certification they will accept, keeping in mind that while your current lender may accept certified construction, if the structure is refinanced or sold the "next" lender may require a LOMA or LOMR, which may affect the marketability of the structure. Some lenders have requirements beyond FEMA regulations. An example would be a structure which has a foundation built to the required height (certified) but that foundation is exposed (no backfill). In some cases if floodwaters are able to make direct contact with that foundation the lender may require insurance even though FEMA doesn't require it. For structures with basements lenders may still require insurance, though at a reduced rate

Specific information on foundation design may be obtained by talking to the City Building Official or Jon or Dennis Markusen at Kadermas, Lee and Jackson Inc. (701-352-1555)

Effective date 2/4/12

**The city flood map can be viewed by going to the fema map service center on the web.**