Southwest
New Brunswick
Service Commission

A guide to slabs

It's quite common to build garages, sheds and homes on concrete slabs – here are a few things you need to know before choosing this building method.

Most small outbuildings and the like can be built on a normal concrete slab without any special designs, however, some buildings will require a design created by a certified engineer. We call those "engineered slabs."

Engineered slabs are specifically designed to handle larger loads *as an alternative* to the standard four-foot frost walls or concrete columns (sonotubes). It costs about $400 to have an engineer design a concrete slab, and engineered slabs are required for certain kinds of construction.

In general, there are a few more requirements for municipal clients (incorporated areas) than those building in unincorporated (rural) areas.

Here's a quick guide on when an engineered slab is required, and when a contractor or homeowner can build on a self-designed slab.

Project/construction type	Normal slab	Engineered slab*
Accessory building < 592 ft^2	X	
Accessory building > 592 ft^2		X
Minihome, IF Z240 MH compliant	X	
Rural camp/home <625 ft^2	X	
Minihome if not Z240MH compliant OR home >625 ft^2		X
** or frost wall/sonotubes to 4' depth*		

Possible exception:

The key concern regarding footings and foundations lies in preventing damage due to frost. The National Building Code recognizes that in some circumstances, it may not be necessary to place a footing at the standard four-foot depth (at which depth frost does not form.) If the building is to be situated on solid rock or, on suitably draining, undisturbed coarse soils, it may be possible to construct a footing at less than four feet - or, in other words, an

integrated footing at grade. This is a very special circumstance, and our office must have evidence the soils meet the requirement before such construction is permitted.

Tips and best practices:

- Regardless of what the function of the building, it's wise to place a layer of vapour barrier under the concrete even if not required by Code. This will limit the chance of water pushing up through the concrete to the construction above. (In engineered slabs for residential use, a vapour barrier is mandatory.)
- In general, Code requires only a 4" depth of concrete, however, it is wise to have a greater thickness, especially in areas that will support walls or other loads.
- Floors for garages should be reinforced with a welded wire mesh at least. Also, there are requirements for a greater compressive strength concrete (4,000 PSI) in garages and carports.
- A common practice for detached garages is to have a "sill" of concrete at the perimeter. This is usually about 5" or so in height.