

# Vernon Building Department

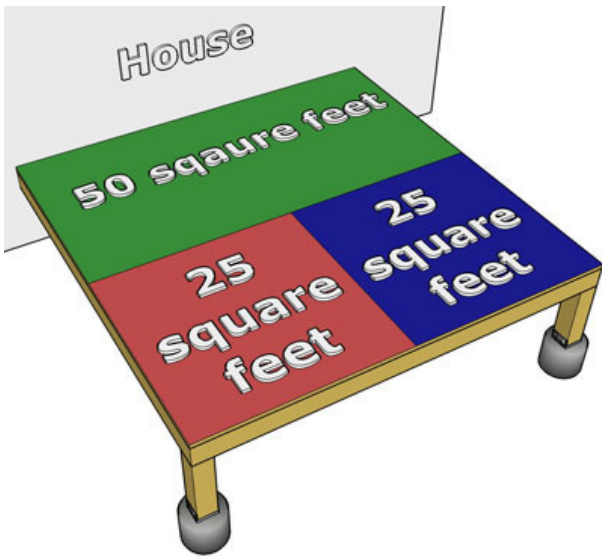
55 west Main Street, Vernon, CT 06066

860-870-3633

## DECK INFORMATIONAL HANDOUT

**DECK PIERS-** In order to determine the proper size for your footings, you will need to establish how much total weight they are going to have to support and what kind of soil they are covering. To calculate the load, you should use 40lbs per square foot for live loads (these are variable loads that are dynamic such as the weight of people and furniture) and 10lbs per square foot for dead loads (this is the weight of the materials used for the construction of the deck) for a total load weight of 50lbs per square foot.

For example, if you are building a 10x10 deck attached to a house with two footings on the corners, you could calculate the loads for the footings in the following way. First, draw a line dividing the deck into two halves between the house and the footings. The load for the section nearest the house will be transferred back to the ledger board and carried down to the house foundation. The remaining half of the deck will again be split into two parts to be supported by the two corner footings. This is called the tributary load. If you multiply the area of this section 5' x 5', you will get 25 square feet. You can multiply this area by 50lbs per square foot loading to come up with 1,250lbs total load. Once you know the total load, you can use the chart below to determine the footing size for your soil conditions. Always be sure to check your calculations with your local building inspections department before digging.



### MAXIMUM ALLOWABLE LOAD PER FOOTING IN LBS:

Diameter of Pier	Square Foot Multiplier	2000lb Load (Sand & Silty Sand) *Most Common Soil*	3000lb Load (sandy-gravel & gravel)	4000lb Load (sedimentary rock)
6 inch	.20	400	600	800
8 inch	.35	700	1050	1400
10 inch	.55	1100	1650	2200
12 inch	.79	1580	2370	3160
14 inch	1.1	2200	3300	4400