

**Rubble Mounds**

By Tony Antonellis

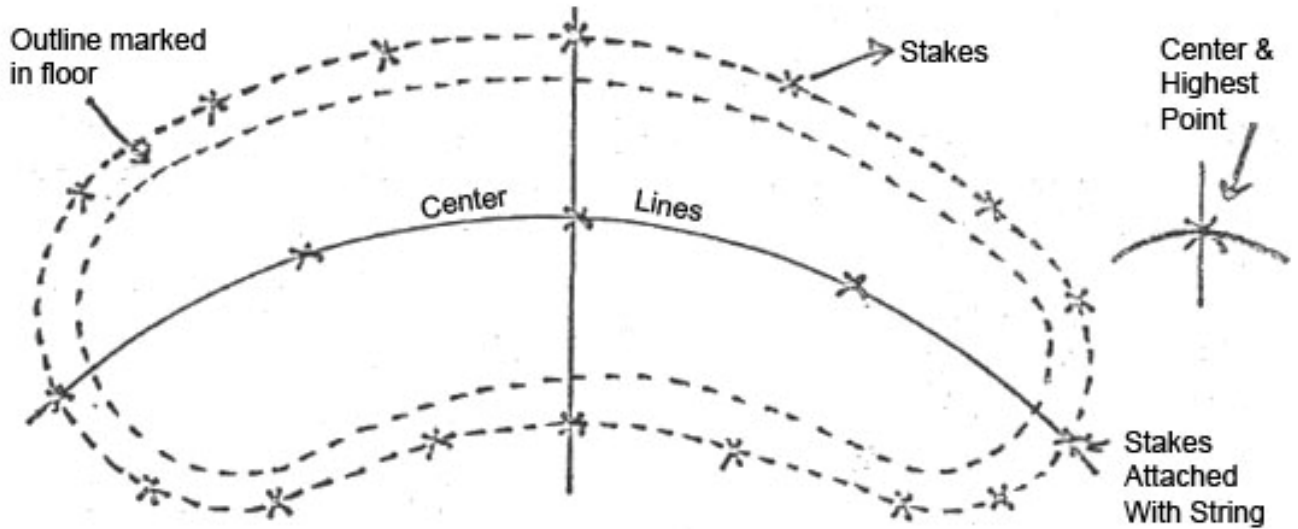
Very often when clearing a rubble – strewn vacant lot two problems present themselves – one aesthetic and one practical: how to improve and humanize the dreary, prairie-like appearance of a flat wind-blown surface after clearing; and what to do with the huge piles of leftover rubble. Even if all of the surface rubble is carted away, there sometimes will be an almost equal accumulation from excavations for in-ground plantings of trees and shrubs.

An often overlooked but very practical solution is to use the rubble to create the bases of mounds, hill and closures. These mounds will have many advantages when sculpted and covered with soil; they can provide windbreaks, seating, amphitheatres and stages. In short, it will change the appearance of a flat vacant lot so much that passersby will never realize that your garden was not always there! In addition to the aesthetic advantages, there is the practical side in terms of the saving of time, money and energy otherwise spent in removing the excess rubble.

Before you begin collecting the rubble indiscriminately, a certain amount of planning will be required:

Location – If your site is an open, unprotected site, subject to harsh winds I winter you might consider the northwest side of the garden for the mound – or the southwest side if it is subject to hot drying winds in summer. If the latter situation is the case, plan very carefully with a compass to make sure you do not block too much sun out. Also, if you are considering placing this mound near or adjacent to a building or other structure, get legal permission and consult an engineer or architect. A general rule is, do not exceed a height of 30” especially if there will be a steep slope or vertical drop which will require terracing or a retaining wall. If this becomes necessary consult an architect.

Preparation – After considering all the possibilities you should mark out the approximate area and shape. (Almost any shape will do, but irregular or kidney-shaped designs are most interesting to the eye, especially in lots with square or linear boundaries).



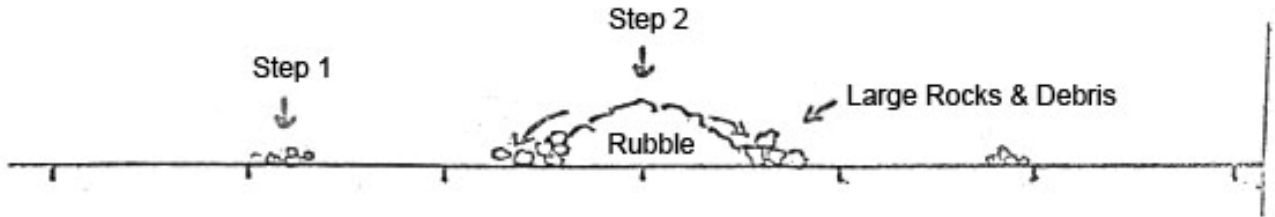
A simple method would be to use a bag of ordinary baking flour (5-10 lbs, will do) and slowly pour the contents on the ground marking out the shape you desire. Using flour in this first step is a good idea because you can change the shape of the markings simply by erasing with your foot and remarking until you feel satisfied. Then stake out the area with wooden stakes, sharpened at one end; discarded broom hands or any other similar material will do. Physical excavation and shaping of the mound will take some time, depending on the size.

Construction – You may need the use of a back – hoe or other excavation equipment which must be considered carefully because of the expense involved. Also, the equipment’s size and weight which, if uses incorrectly, can

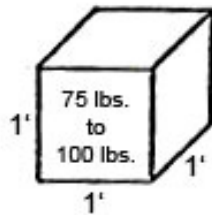
compact the soil permanently destroying its structure. Anything exceeding 10 cubic yards will probably require a backhoe.\*

It is best to start with a low line of rubble following all the way around the inside perimeter of the shape you have decided on. This will act as a barrier, containing the rubble somewhat as the heap grows from the center. Always allow the drainage with porous gravel "weep" holes.

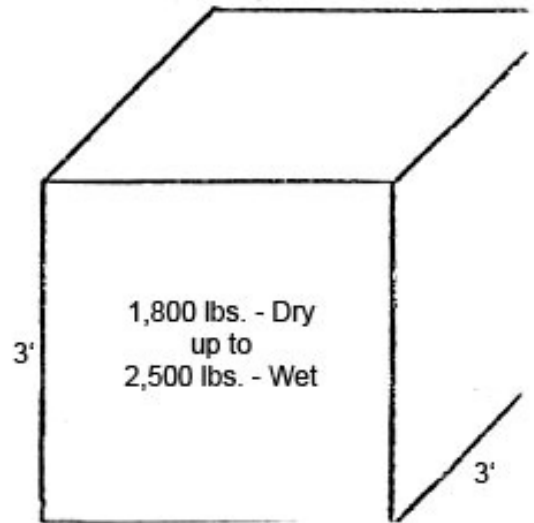
Next, pile the rubble into a hill all the way down the centerline of your outline.



This is important for two reasons: first, as the bubble is piles on top of itself the heavier matter will continually fall to the bottom towards the outer perimeters, increasing their drainage and stability; second, if you want to adjust the shape of the mound, it is much easier to rake it down than to pile it up.



10 cubic yards  
 $10 \times (3' \times 3' \times 3') = 10 \text{ yard}^3$   
 $10 \times (27) \text{ or } 270 \text{ cubic feet} = 10 \text{ yard}^3$



After the mound is roughly the size and shape you desire, grade the entire structure with a steel tooth, landscape or how rake until fairly smooth, removing all the large rocks or stones which may not have settled to the bottom and sides. During this process make sure to eliminate any dips or gullies as these may tend to become troublesome and collect water later.

Now you are almost ready to cover with manure and soil. First, you should wait a few day for rain to stabilize the mound. Or you can hose down the entire hill with a gentle spray of water several times, watering deeply.

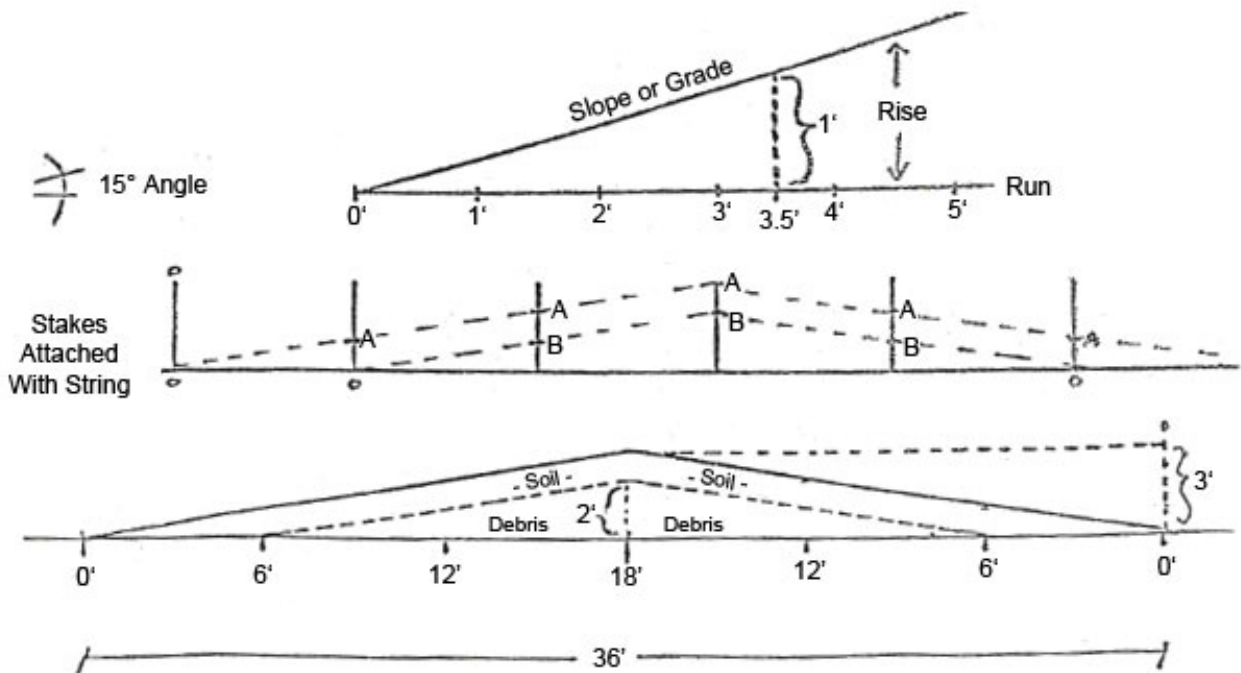
This will serve several purposes: It will keep dust from blowing around any more than necessary, especially if the mound is intended to act as a wind break; secondly, this process will get the lime, mortar and cement out of this debris much of which was originally used in building construction; finally, this wetting down will help to settle the

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debris into its final shape, (depending on the structure and content of the debris it can shrink up to 25% when it settles) as well as eliminating troublesome air pockets which can cause roots of trees and shrubs to die.

**Structure** – It is essential to make sure that most of the material used in the construction of the mound be non-biodegradable: this means brick, rocks and rubble; lumber and other biodegradable material are not; plastic will impede drainage. Be sure to remove biodegradable as these materials will eventually break down and cause the mound to shift. Box and/or tie these materials – wood, paper, etc. – for pick up by your local sanitation crews. A good cover of soil (1 ft. minimum) will enable you to establish groundcovers or grass.

**Slope and Grade** – It is very important to make sure that the grade is no more than 15 degrees, or erosion will become a serious problem to your plants later requiring steeper terracing or cribbing. A simple method of making sure that the grade is right is to mark wooden stakes, sharpened at one end, at two points along their lengths, the bottom point indicating the highest level of the rubble, and the uppermost mark indicating the maximum height of the finished mound.



**Height** – You should try to keep the final size of your mound within workable limits, paying special attention to visibility, safety and total weight. It should certainly not be more than 30" from ground level. Remember that you are going to add soil up to 12" all the way around and on top of the hill, so whatever height the debris reaches the final height will be one foot higher.

**Soil Cover** – In general you will want an overall soil cover of 12" minimum for grass and flowers and 3-4' for trees and shrubs. (You can compensate for this by digging an appropriate size pit, minimum 3' X 3' X 3' and filling with soil. If you have the time (4-6 months) you may want to give nature a helping hand in reconverting the clay bricks back to clay soil – like particles. This is done by spreading a 6" – 1' top dressing of organic matter such as stable waste or leafmold or compost to the surface of the rubble. The pH of this cover will speed up the breakdown of the highly alkaline rubble below. Above this you may then add your soil.

**Ground Cover** – The following is a list of suggested plant material for the mound:

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Periwinkle ( <i>Winca minor</i> )	Evergreen and shade tolerant
Small - leaved cotoneaster ( <i>Cotoneaster microphylla</i> )	
Memorial rose ( <i>Rosa wichuraian</i> )	Training rose
Hall's Japanese honeysuckle ( <i>Lonicera japonica halliana</i> )	
St. Johnswort ( <i>Hypericum claycinum</i> )	Shade tolerant evergreen
Japanese hop ( <i>Humulus japonicus</i> )	A twining annual vine
Forsythia	Spring flowering survival



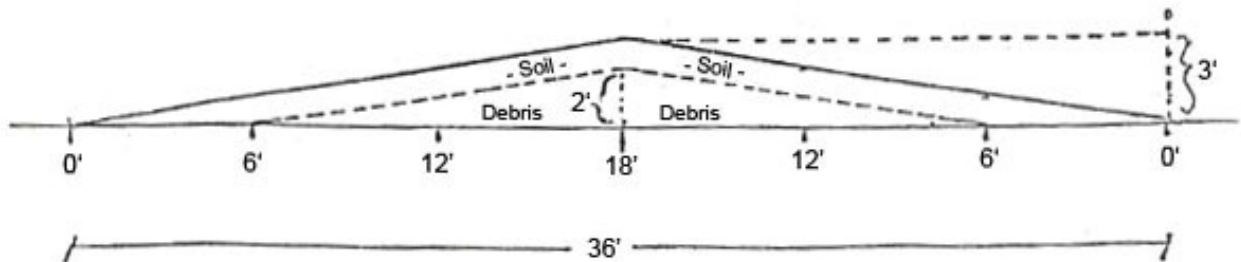
In the illustration below a mound has been created with rubble and soil.

The total width of the mound is 36'.

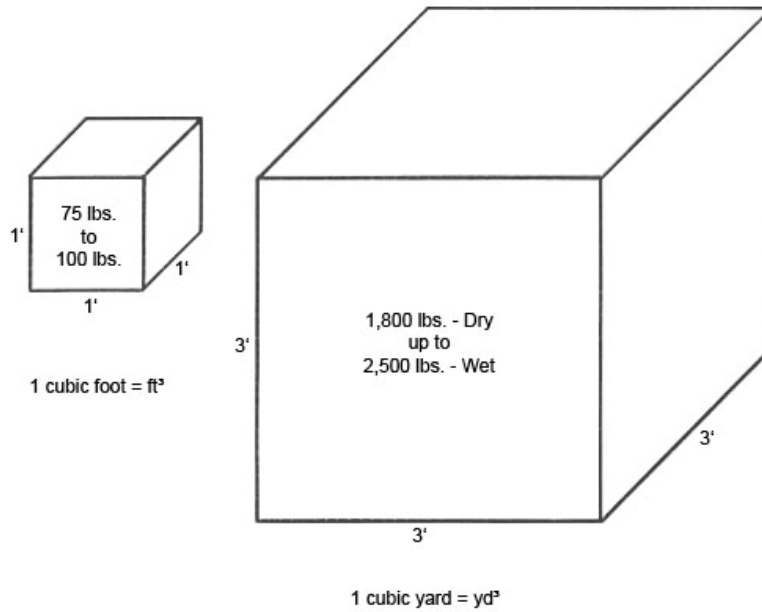
The total rise or elevation is 3'.

The rise is not more than 1' per 6' of run.

In other words less than 10° or with safe limits for controlling erosion.



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Relative Weights: 1 cubic foot - up to 100 lbs.

1 cubic yard - up to 2,500 lbs.

Cubic yard = 3' x 3' x 3'

