



D.I.Y. Free Standing Retaining Wall System



Developed By:

Jeff Moyer

Vice President / Project Manager

MOYER'S INC.

www.moyersinc.net



“Where Quality Always Comes First!”



Let's Get Started...

- You're going to need some important tools in order to accomplish your wall with less headaches and potentially costly mistakes.





Materials Needed

- Besides the important tools and equipment that you'll need to get started; there are some very important materials you'll need to construct your wall.

- These materials include (but are not always limited to):

Landscape Fabric Underlayment

Compaction Stone Base Material

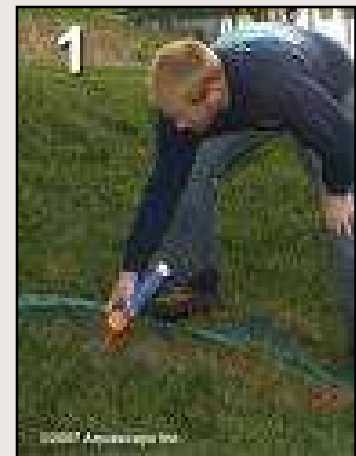
Wall Material of Choice

Block Adhesive



Location and Size of Desired Wall

- After you have acquired the necessary tools and equipment needed to accomplish the construction of your wall its time to get its potential size and dimensions.
- It helps to mark out your desired patio with a garden hose or rope to foresee the future size and shape of your patio.
- Get its length, width, and depth of entire base.
- These dimensions will help you figure your quantities of materials that will be needed to install your patio.





L x W x H

- Now that you have your dimensions you can apply them to calculate the amount material you'll need.
- Keep in mind that most of our dimensional measurements are made in linear feet. However, most base material is ordered by the cubic yard or ton. You will need to make some mathematical conversions to come up with our "landscape friendly" orders.
- Here is an easy conversion to keep in mind.
For converting cubic feet into cubic yards take your length x width x height (in feet) and divide it by 27 (to give you your new volume in cubic yards).

Example (Calculation Compaction Stone Base):

16 ft. x 12 ft. x .5 ft = 96 Cubic Feet

96 Cu. Ft. / 27 = 3.56 Cubic Yards

(or just over 3.5 Cu. Yrds. Of Compaction Stone Base Material)

Order Your Material

- Contact Moyer's Hometown Nurseries and Landscape Services, Inc. for all of your hardscaping supply needs.
- We supply all of your base materials and offer a wide variety of paver types and styles to chose from. Just give us a ring, stop by or check us out on the web!

MOYER'S INC.

936 Starr School Rd.

Stoughton, WI 53589

Phone: 608-873-9141

Fax: 608-873-9414

www.moyersinc.net





Excavation



- The excavation of your base should exceed at least six (6) inches beyond the predetermined size of your patio on all sides. This “over excavation” allows for strength and stability of pavers, drainage, room for slight adjustment of actual finish size of your patio.
- Depth of patio base excavation is determined by sub soil conditions, patio usage (driveway, patio, retention, etc.), and building / structural obstacles. A standard to go by is assuming that your pavers will be between 2” and 3” thick, your total excavation depth should be 9”. This takes into account a 6” compacted stone base, an approximately ½” screed sand base, and a 2” to 3” thick paver.
- A string line and / or painted markings help insure your excavation remains accordingly to how you want your patio to finish.
- After the base is excavated to the proper depth, it is very important to compact the sub soil with the use of a jumping jack or vibratory plate compactor to insure there are no voids in the existing soil.

Base Materials Installation

- Install your fabric underlayment. This fabric does not act as a weed barrier! It is used as a semi-permeable barrier separating the sub soil from the compaction base material. It also acts as soil stabilizer; strengthening the base, increasing the longevity of your patio.
- After the fabric underlayment is installed. Begin adding your compaction stone material (3/4" crushed limestone aggregate w/ fines) in lifts of 2 inches, leveling and compacting properly between each lift. Do this step until you have a minimum 6 inch compacted base. You will need to dampen the compaction to gain a proper moisture level for compaction.



Setting Your Level and Pitch

- Compacting your stone base is not the only task that is crucial while setting your base for your patio. While setting your lifts of compaction stone you should also be leveling the stone according to your predetermined pitch (different patio applications may require different pitch ratings). Pitch is what determines water runoff and flow which is very important for outdoor structures. By setting your level and pitch as you build your base upward you are decreasing the possibility of errors that can occur while setting your screed levels.



Master of the SCREED...

- Now that you've set your stone base properly, with great compaction, and of of course, setting the correct slope and pitch, the easy part is done!
- You now need to spread a layer of screed sand evenly over the compacted stone base not exceeding 1 inch. This sand will be leveled and prepared as the final base prior to laying your pavers... this is very crucial to the outcome of your patio! Screed the sand with a manufactured screed board or a very plum and straight 2 x 4" board. While screeding, perform your strokes in a "cross pattern" action or perpendicular to one another to insure that all areas have been smoothed level.



Its Paver Laying Time!

- Okay, now the hard part is over... The base has been excavated, compacted, stone set, pitched and leveled and the sand has been screeded.
- The key to successfully completing the laying process is bribery and Advil! It helps to have several people involved to carry pavers to a person who can lay out the desired pattern. This makes the laying process efficient and saves a bit on the back and knees if you're caught having to haul and lay pattern yourself.
- It is best to start a "square point," when laying out the pavers. Usually a house corner or door entrance is a great starting point.



Paver Restraint Edging

- After laying the main body of your patio and cutting pavers to meet the shape and style you desire, it's time to install the edging restraint. This helps to "hold your patio in place." It is a strength and stability application that allows interlocking pavers to interlock and do their jobs.
- It is recommended to use a sturdy, rigid PVC edge restraint secured with heavy nails or stakes.





Polymeric Sand

- Now that the pavers have been secured with a sturdy PVC edge restraint you can sweep in the interlocking bonding agent. Polymeric sand is a bonding sand that “grouts” the pavers and adds to the patio’s strength and stability, but also makes the pavers “pop” with a beautiful outlining appearance!





Finish The Project!

- Generally, most patio applications will require backfilling of topsoil and to meet the new grade of the patio. There are many clean up and finish duties involved that can be very time consuming however, they are important to the longevity and appearance of the patio and will allow you to enjoy your patio retreat for years to come!



Enjoy!



Take a look at some of our
projects on the web!

www.moyersinc.net