

LilyPad Ponds Inc.



SMALL PAVER PROJECT

Home Gardeners School

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Owner



LET'S GET STARTED

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





MATERIALS NEEDED

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

- *Landscape Fabric Underlayment*
- *Stone Base Aggregate*
- *Stone dust or sand*
- *Pavers or stone of Choice*
- *Polymeric Joint Stabilizing Sand*
- *Paver Edge Restraint w/ Stakes or Nails or concrete*
- *Cleaning and Sealant Material (if desired)*



LOCATION AND SIZE OF DESIRED PATIO

- After you have acquired the necessary tools and equipment needed to accomplish the construction of your patio its time to get its potential size and dimensions.
- It helps to mark out your desired patio with yard paint, garden hose or rope to foresee the future size and shape of your patio.
- Can be adjusted as many times as needed
- These dimensions will help you figure the quantity 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 of material you'll need.
- **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 the actual 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. Yds. Of Compaction Stone Base Material)

- Order your material



EXCAVATION

- The excavation of your base should exceed at least 6 inches beyond the predetermined size of your patio on all sides. This “over excavation” allows for strength and stability of pavers, drainage, and room for slight adjustment of actual finished 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” – 3” thick, your total excavation depth should be 8 - 9”. This takes into account a 5” compaction stone base, an approximately ½ - 1” screed stone dust top, and a 2” – 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 vibratory plate compactor or hand tamper to insure there are no voids in the existing soil. ***NOTE: Compact sub-base thoroughly***



BASE MATERIALS INSTALLATION

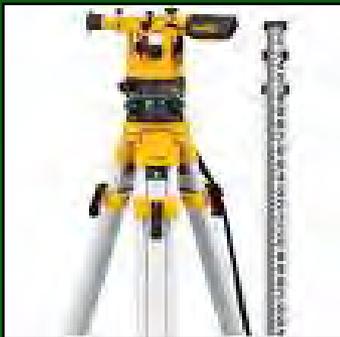
- Install your fabric underlayment. This fabric does not act as a weed barrier! It is a semi-permeable barrier separating the compacted sub soil from the compaction base material. It also acts as soil stabilizer; strengthening the base and increasing the longevity of your patio.
- After the fabric underlayment is installed, begin adding your compaction stone material (3/4" crushed 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 proper compaction rates.
- This is called proctor density.





SETTING YOUR LEVEL AND PITCH

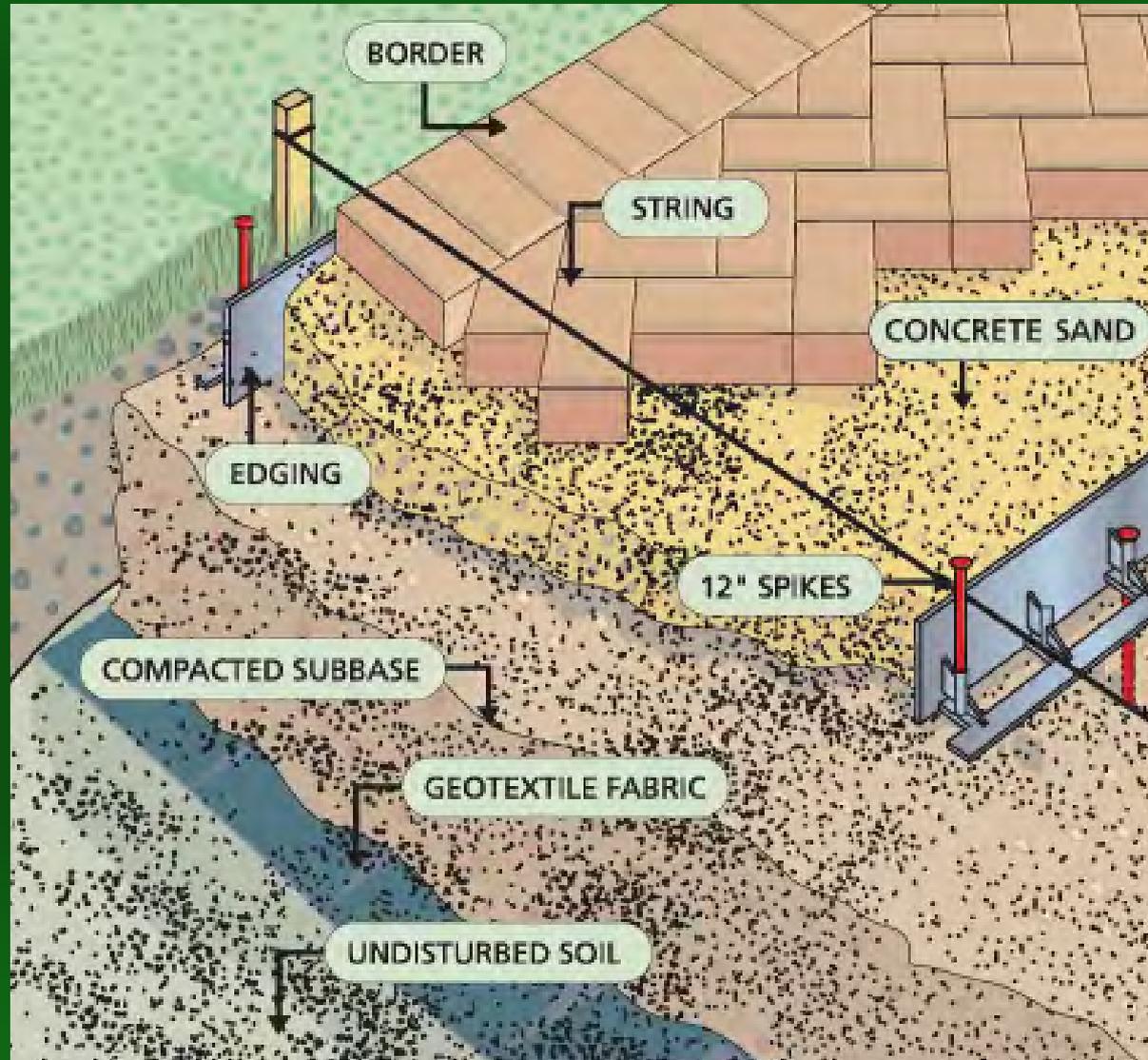
- Compacting your stone base is not the only task that is crucial while setting the base for your patio. While setting your lifts of compaction stone you should also be leveling the stone according to your predetermined pitch (different patio applications may require different pitch ratings). Pitch is what determines water runoff and flow which is very important for outdoor structures.





HOW TO SET PITCH

- Every 4 feet, you should slope down 1”
- Place stakes around the perimeter and mark stakes with the slope decline.
- Place a string tightly on the stakes to indicate the height level to follow.





PUT DOWN LAYER OF SAND OR STONE DUST

- The sand or stone dust is the material that holds pavers in place. Use coarse sand or stone dust and screed it smooth to a uniform depth of a least 1 in.
- This material will be leveled, and compacted 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.
- ***NOTE: It helps to use 1" PVC pipe as a screed guide over top of your base aggregate for your board to run across. This tool keeps your screed layer consistent and limits human error!***



EXAMPLE OF SCREEDING SAND OR STONE DUST





IT'S PAVER LAYING TIME!

- Start with the longest straight side. Begin laying pavers at a 90-degree corner. Keep pavers in straight lines. Generally want to leave a 1/16" gap between pavers.
- DO NOT WALK on prepared sand. Stand on pavers you have already installed and work your way out.
- Cut pavers as needed.



CUTTING PAVER EDGES

- Mark desired edge to be cut with flexible PVC pipe and marking crayon.

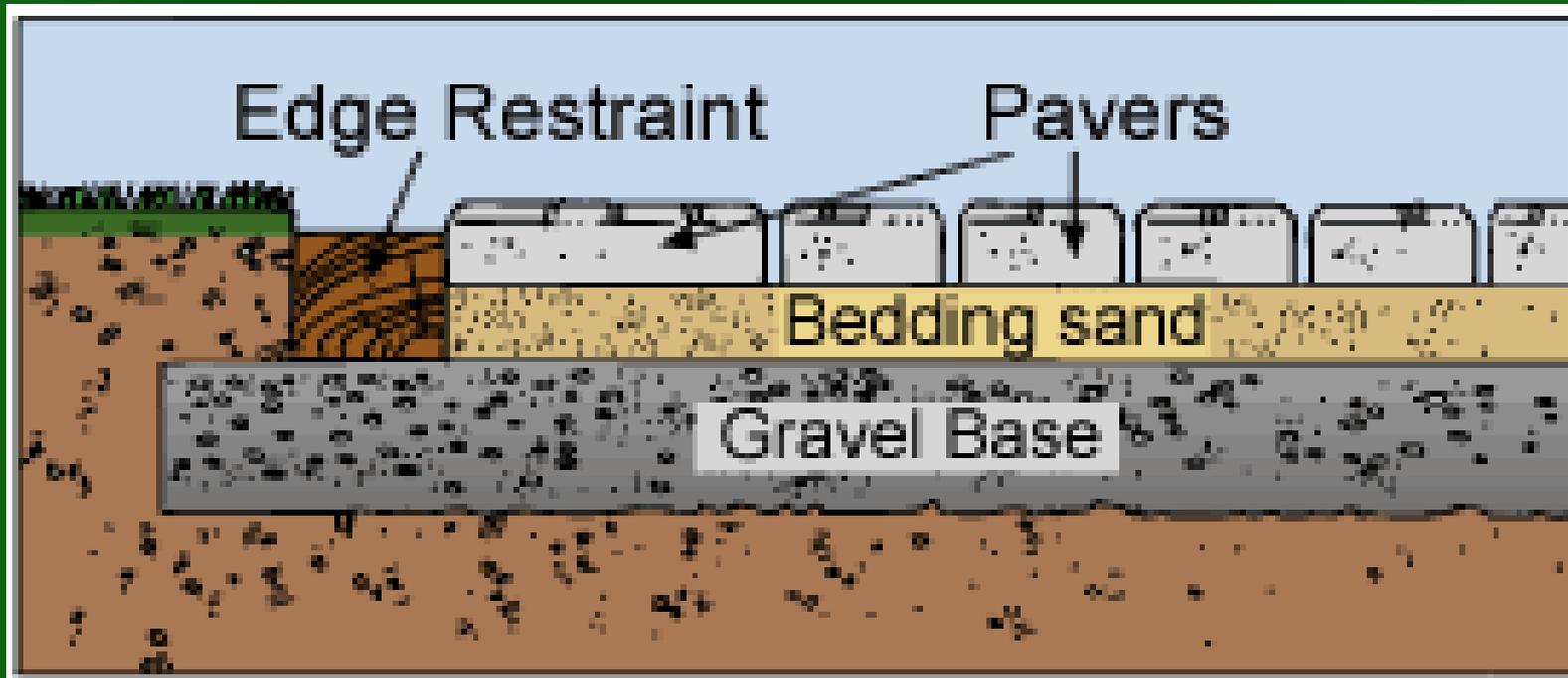




PAVER EDGE RESTRAINT

- 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 holds interlocking pavers together on open edges
- It is recommended to use an edge restraint to hold patio together on open edges.
- Could be plastic strip, wood or concrete.







POLYMERIC JOINT SAND

- Now that the pavers have been secured with a sturdy 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 outlined appearance all while eliminating potential weeds, insects and moss.
- ***NOTE: Properly installing and curing polymeric sand takes care and patience. Remember to read all product labels and follow directions diligently!***





SEAL YOUR PAVERS

- For additional durability, seal the pavers with an appropriate sealing product. Look for non-toxic paver sealer.





HOW TO CARE FOR YOUR PAVERS

- Sweep or hose down your patio on a regular basis.
- Seal your pavers every 2-3 years. The use of sealer will help you maintain the color and that "new look" and stains and spills will be much easier to remove.

LilyPad Ponds Inc.



Complete Service
Maintenance & Installations of
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