# BROCK

For All Patios, Walkways, Stackable Sitting Walls, Pillars, Artificial Turf, Athletic Courts, Sheds and More

# HOW TO INSTALL PATIOS AND WALKWAYS

**Concrete** Overlay – (with and without expanding project size) Pavers, Patio Stones, Porcelain Tiles, Rubber Mats \*Natural Flagstone, Wet Cast\*

#### THE BASE is the most important step for long lasting projects.

# **STEP 1**

### PREPARING YOUR CONCRETE OVERLAY WITH EXPANDED PROJECT AREA

Most commonly this is removing a grass area that is around your current concrete patio. Determine how much to excavate using the example below. Remove the grass to desired depth (skim rather than dig deep) from the surface of your current concrete slab for the area of your extended patio.



### MATERIAL REMOVAL GUIDE

#### Tim's Tip:

The total project depth along the concrete area will be 1/2" sand (hand tamped, as the sand will need to be the same height as the concrete area.

How deep you need to dig is determined by adding the thickness of the following components:

NOTE: For expanded area only. Only panels are needed for concrete overlay

EXAMPLE	Approx. Thickness
Leveling Sand on Fabric	1/2 Inch (hand tamp)
Paving Stone Thickness*	N/A as top of expanded area will match top of concrete
Brock PaverBase	N/A as top of ground will match top of concrete
Dig out this many inches below your current level	Approx. 1/2 Inch

\*will depend on the Paving Stones you select.

# STEP 2

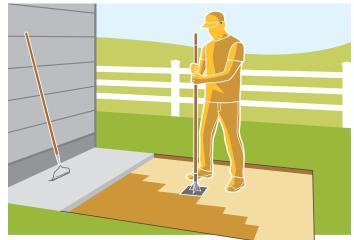
### LEVEL AND COMPACT THE BASE

Using a hard rake and/or shovel, compact and level the area and make sure it follows the slope of the concrete pad. The ground should be tightly compacted using a hand tamper or plate compactor. The slope should be about 1/4" per one foot of distance. It is helpful to pull a string line so you can check your slope. To run a string line, attach a string to a fixed point on the house side about 3" above the surface of the patio, and pull it tight toward the outside edge of your new patio area. Attach the other end to a landscape stake in the ground making sure the string it tight. Use a level and ruler to create the desired slope. For example, the patio should slope 2.5" over a 10 foot distance (Diagram below). This will ensure that the patio moves water away from the house.

#### Tim's Tip:

Use along straight edge or side of a 2 x 4 (from high end to low end of you project) to fix the high and low spots.

The area should be as smooth as possible, making sure to get rid of high and low spots to within +/- 1/4". This is now your compacted base. Congratulations, the hard part is over!



#### **Project Area Lavers:**

Concrete Overlay - Layers (Top Down)	Expanded Area - Layers (Top Down)
– Paving Stones	– Paving Stones
– Landscape Fabric 3-4" Overlap	– All Purpose Sand (hand tamped)
<ul> <li>Concrete Patio or Walkway</li> </ul>	– Landscape Fabric
	<ul> <li>Compacted Ground (flat with 1/4" slope/ft.)</li> </ul>

NOTE: The expanded project area ground prep up to the hand tamped sand, should be even with the concrete patio or walkway.

TIP: For clay soils, use dirt/soil or base material to make it easier to compact the ground flat with 1/4" slope per foot

# BROCK Paver Base

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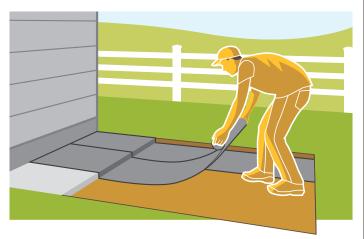
# **STEP 3**

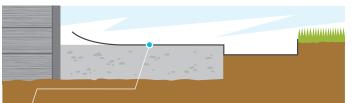
### ADD A LONG LASTING LANDSCAPE FABRIC

Next install long lasting landscape fabric (15, 20, 30 years, Lifetime) over the excavated and compacted area. Make sure the weed barrier fabric overlaps the concrete pad by at least 12 inches. Overlap the edges of the fabric by 4-6".

#### Tim's Tip:

Lay extra fabric on the sides. After you lay the panel or panels and paving stones, fold the fabric up then place edge restraints. This will ensure sand cannot leech out.





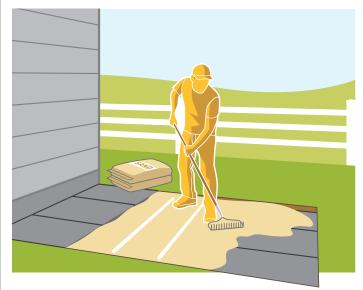
#### LANDSCAPE WEED FABRIC (BARRIER)

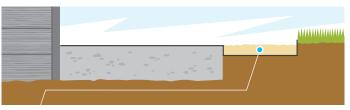
NOTE: Fabric holds in the sand, not for weeds.

# **STEP 4**

# SPREAD A 1/2" LAYER OF LEVELING SAND

Lay two 1/2" pipes (or rebar) on top of the fabric over the ground in the same direction as your slope, high to low end (not on the concrete). Spread an even layer of sand over the pipes in your project area.





1/2" ALL PURPOSE LEVELING PAVER SAND (STEP 2 SAND)



Paver Patio with Rock Garden

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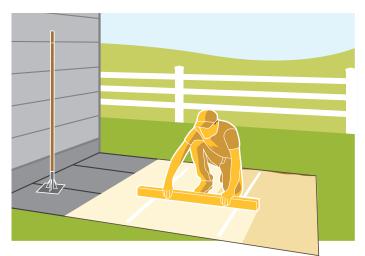
# STEP 5

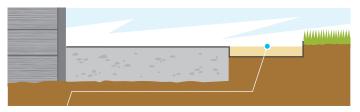
### SCREED THE SAND USING A BOARD

Using a standard 2x4 that is 6 feet long, screed the sand using the board along the pipe or Reba, maintaining your slope so watch your string line. Make sure the board you use is straight and true! Hand tamp the sand and recheck to make sure you do not have any high or low spots. Make sure that the sand is even with the top of the concrete. Do not use a plate compactor to compact the sand.

#### Tim's Tips:

- Remove the screed pipes before laying your paving stones
- Use long straight edge or side of 2 x 4 same (as step 2) after you hand tamp the sand.





LEVELING SAND SCREED



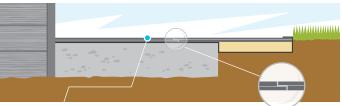
### STEP 6 INSTALL BROCK PAVERBASE PANELS

Starting against a straight edge of the patio, lay the Brock panels, ensuring that the side flanges overlap. Ideally, lay them in a "brick-like" pattern (illustration below). This will ensure stability of the panels when you lay the pavers. To off set the panels (for the second row), cut a panel in half, using a utility knife, and start with the cut panel edge on the outside (where the edge restraint will be) so the panel flange/lips (tongue and groove) can be used. Use the bottom half panel to finish the end of the next row.

Trim any curves or along edges using a utility knife. Place any extra scrap pieces of Brock PaverBase in your recycling bin.

 $\ensuremath{\text{TIP:}}$  Fold the fabric up and or up and over the panel. This will make sure the sand cannot leech out in time.





**BROCK PAVERBASE PANELS** 



Paver Porch

Paver Patio

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# **STEP 7**

### **INSTALL THE PATIO PAVERS**

Now the fun really begins! Lay the pavers directly on the Brock PaverBase panels. Yes you can walk on the panels. You can slide pavers into place. Do not worry if you make a mistake with your pattern, you can correct without ruining your base. If you are trying to do a straight line, and the line gets crooked, hammer the row back in place using a rubber mallet. Do not use the edges of the panels or the pattern on the panels to try to line up your pavers. Use a string line to ensure straightness.

#### Tim's Tip:

Make sure the panels are tight/together when laying your paving stones.

- If you are using multiple size paving stones, don't worry if you lay the pattern incorrectly. You can move pavers and fix when using the panels.

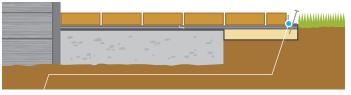


# PAVERS, PATIO STONES OR PORCELAIN TILES INSTALL EDGE RESTRAINT

Once you patio is complete and the pavers are tightly together you will want to hold the perimeter in place to keep it from moving. To do this simply lay pieces of edge restraint directly on top of the Brock panels. Then hammer 8-10" landscape spikes through the Brock PaverBase panel making sure to keep the edge restraint tight against the pavers.

#### Tim's Tip:

For 3/4" Porcelain Tiles and thin paving stones, you can lay the edge restraints along the side of the paving stones and panels, to avoid tripping or seeing edge restraint.



#### EDGE RESTRAINT AND SPIKES

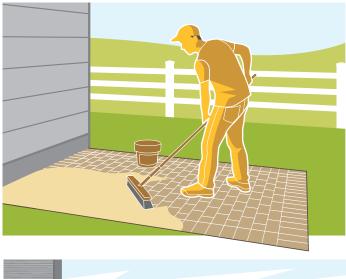
### STEP 8 SWEEP IN REGULAR OR POLYMERIC SAND

Using a broom, spread sand over the patio and into the gaps between the pavers. Spread over small areas before moving onto the next one. Go back and forth over the gaps until no more sand will fit. Once you have swept the sand into the paver joints, a hand tamp should be used over the entire paver area in order to "vibrate" the sand further into the joints.

This tamping procedure will insure that the maximum amount of sand is holding the pavers in place. (D0 NOT USE A PLATE COMPACTOR TO VIBRATE THE PAVERS!) Continue to add sand until the joints are full.

#### Tim's Tip:

If your paving stones are smooth sided, have no bumps/spacer bars, you do not need to add sand. Do not leave a gap as paving stone should always be laid together tightly.





#### POLYMERIC SAND

**NOTE:** There are two types of joint sand you can use. Polymeric joint sand will essentially harden like concrete between your paving stones so it is permanent. Polymeric sand has several advantages: It is stable, so the sand won't end up on the top of your pavers; it allows you to power wash your patio without displacing the joint sand; it gives the patio a cleaner, more finished look. Alternatively you can use traditional joint sand, but you will need to re apply it each year. For the purposes of these instructions we will refer to Polymeric sand since it requires a few extra steps than plain joint sand.

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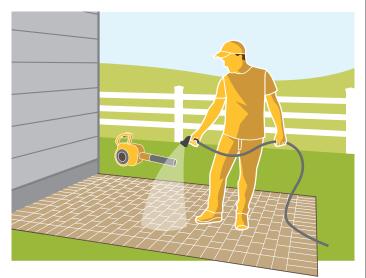
# STEP 9

# CLEAN THE SURFACE OF THE PAVERS

MAKE SURE THE SURFACE OF THE PAVERS IS CLEAN!

Once you are done spreading the polymeric sand into the gaps, use a leaf blower to blow the fine dust off the surface of your patio. (You want to make sure you sweep it off well first or you will generate a large dust cloud!) DO NOT WASH IT OFF WITH WATER!) THAT COMES LATER. If the patio is not free of polymeric sand on the surface of the pavers, you may see a film/haze on the pavers once you follow step 9.

Once the surface of the patio is completely clean, follow the instructions for wetting on the packaging of the polymeric sand. This will entail lightly spraying the joint sand with water several times which will activate the polymer that hardens the sand.





Paver Walkway



#### Need help?

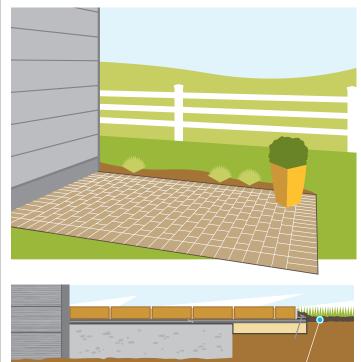
Call Tim Newton anytime with questions or to discuss your PaverBase project: 813.431.8259

# **STEP 10**

### **BACKFILL & FINISH NEW PATIO DESIGN**

Since your new patio is by nature of a higher elevation than your old concrete slab you must address the now exposed edge. There are a few ways to do so.

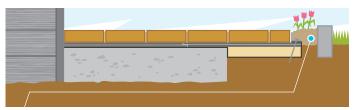
The first is to back fill the area with topsoil that slowly tapers away from the patio. You can then plant grass seed in the top soil, add mulch or decorative rock and have a finished yard right up to your new patio.



#### TOP SOIL OR GARDEN SOIL

The second option is to install a short retaining or edger stone some distance from the edge of your patio and install mulch in the area in-between to use as a planting bed to further enhance you project.

FINAL IMAGE SHOWING THE EXPANDED PATIO WITH ALL THE COMPONENTS OF PATIO PAVERS OVER A CONCRETE SLAB.



MULCH OR LANDSCAPE ROCK