DO-IT-YOURSELF PAVERS & RETAINING WALLS

XTERIORS
**STEP 1 Plan Your Project**

Determine the outside dimensions of your project.

*Hint:* Laying out a garden hose gives you the ability to stand back and adjust your dimensions. After you’re satisfied with the layout you can paint the ground so you have a clear understanding of where to dig*.

*Notify Ms. Utility before you dig so they can mark underground utilities.

**STEP 2 Materials Needed**

Calculate the amount of materials – Base, sand, edging and pavers that you will need for your project (Xteriors can help you with these calculations). Determine where you would like the different materials when they are delivered.

*Hint:* Never set materials where your project is going. It would cause you to move them twice.
Step 3: Excavation

Dig out the area where your pavers will be laid. Always dig about 8” past where your pavers are going to allow room for edge restraint. For patios and walks you will typically dig down 7 to 8 inches from where you want the final grade to allow for base, sand and paver. For heavy traffic areas or bad soils more base may be required.

Step 4: Drainage

Establish finished grade and slope to make sure project drains well. This can be done easily by using a line level and string. Take the line level to the edge of your paving in the direction you want the water to go. Set the line level to level and drop down one inch for every 8 feet of paving width. Set this as your final grade this will allow water to drain in the direction you want. Never drain water toward your house!
Make sure the existing ground is stable and start to spread base (base materials are a crushed stone 1” to fines in gradation, 21A’s). Spread your base in 2 to 4 inch lifts and compact with a hand tamper or a plate compactor until it no longer settles. When complete the base should be 3” below final grade and not have dips or ruts.

**Hint:** Keeping the base material damp helps with compaction.

Install edge restraint where necessary (all edges must be restrained). PVC edging, precast curbs, landscape timbers and retaining wall blocks are just some of the options for edge restraint.

**Hint:** Sometimes it’s best to leave one side of the edge restraint open until the pavers are installed. Never lay edge restraint on top of the sand setting bed!
Spread one inch of concrete sand evenly over the base. The easiest way to do this is to set two 1” PVC pipes on your base and use them as screed rails by dragging a 2 x 4 over the top with sand in between. This should give you 1” of sand nice and level.

**Hint:** Only lay enough sand for what you can install that day. Do not disturb the sand once it is set. Work off of the pavers you have laid or a piece of plywood.

**STEP 7 Sand Bedding Course**

Begin placing pavers on the sand in the desired pattern. Set the pavers just hand tight (do not use a hammer to drive pavers together). Check the pavers occasionally with a string line to make sure the pattern is staying straight. Try to work from the side with the longest straight edge to eliminate as many cuts as possible. Always pull pavers from several bundles so you are constantly blending color.

**STEP 8 Lay Pavers**
When all pavers are set and all edge restraints are in place and before you sweep sand between the joints compact your pavers with a hand tamper or a plate compactor. Next, sweep sand into the joints and over the top of the pavers leaving a residue of sand of about 1/4". Re-compact the pavers until the joints are full and the pavers no longer get movement. Sweep the remaining sand from the surface and your job is complete.

Congratulations!

On the outside edges cut the pavers to fit using a masonry saw or a Splitter (available for rental from Xteriors). To make sure the cuts are accurate first mark the pavers where they need to be cut with a marker. **Hint:** Use edge restraint or PVC as a guide to determine outside edges.
STEP 1 Plan Your Project

Determine the location and height of your wall. Lay the wall out using tall stakes so you can determine height. Check wall height about every 4 feet to determine quantities. **If your wall is over 4ft an engineered drawing is required by most counties.**

**Hint:** Laying out a garden hose is an easy way to lay out your wall.

STEP 2 Prepare the Site

After determining the location of your wall dig a trench 6 to 10 inches deep and wide enough for the type of wall you have selected. Fill half of your trench with crushed stone and compact. Make sure the crushed stone is level after compaction using a 4 foot level.
Place the first level of retaining wall block checking each stone to make sure it is level in both directions and level with the previous wall stone laid. After laying 6 feet of block go back and check to make sure you are staying level. **Keeping the base course level is the most important part of laying a block wall.** Always start the wall at the lowest elevation. If the grade changes more than the thickness of the block you have chosen, step the next block up keeping it level. **Never run a wall unit at an angle always keep the block level.** Complete the entire base course before proceeding.

Stack the next levels of wall on top of the previous level making sure to stagger the block so that the joints do not line up. Continue to check your level as you build the wall. On free standing walls it’s recommended that you glue each level with a construction adhesive. Continue to backfill the wall as you stack the layers. Do not stack more than two layers without back filling.
STEP 5  Backfill and Drainage

On any wall over two feet tall it is important to have at least a foot of clean free draining gravel and a drain pipe behind the wall to make sure no water sets behind the wall.

*Hint:* It is important that the water drains away from the wall and house.

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STEP 6  Set Caps (if required)

Set the cap blocks on the top of the wall to finish the wall. Make sure all caps are glued down with a construction adhesive to make sure they are not disturbed.
**Suggested Tools**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety Glasses</td>
<td>Stakes</td>
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<tr>
<td>Gloves</td>
<td>String</td>
</tr>
<tr>
<td>Line Level</td>
<td>Measuring Tape</td>
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<tr>
<td>Shovel</td>
<td>Rake</td>
</tr>
<tr>
<td>Broom</td>
<td>1&quot; PVC pipe</td>
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<tr>
<td>4 foot wood 2 x 4</td>
<td>Paver splitter or wet saw</td>
</tr>
<tr>
<td>Hammer</td>
<td>Hand Tamper or plate compactor</td>
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<tr>
<td>Marker</td>
<td>Wheelbarrow</td>
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<tr>
<td>Trowel</td>
<td>Pick if ground is hard</td>
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</tbody>
</table>

**Materials List**

- Concrete Sand – One cubic yard does approximately 200 square feet of pavers
- Crushed stone base (21A) – One ton does approximately 40 sq ft 4” deep
- Edge Restraint
- Landscape spikes for edge restraint (1 spike every 18”)
- Pavers

**Rental list (optional)**

- Plate compactor
- Masonry Saw
- Roto-tiller

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**XTERIORS**

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