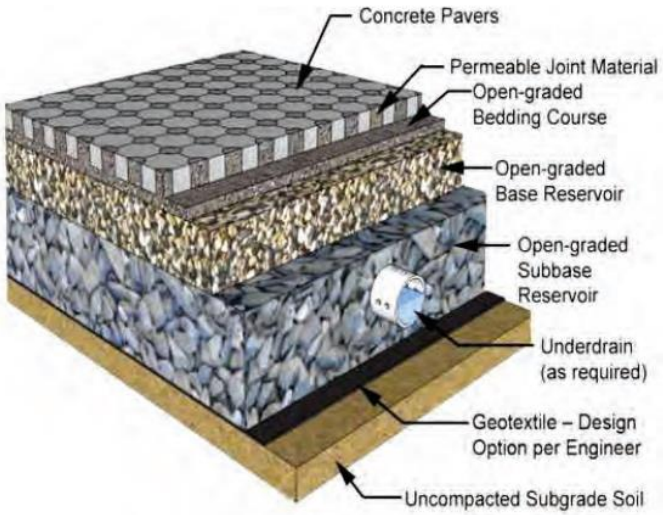
RESIDENTIAL PERMEABLE PAVER SYSTEMS

- Permeable (Pervious) pavers are most often used by homeowners to reduce the amount of impervious surface coverage on their property.

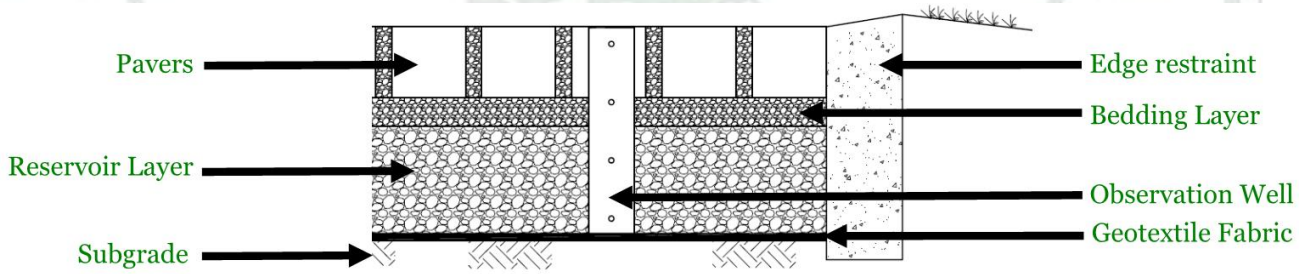
- Permeable paver systems consist of concrete pavers or blocks set on top of a stone reservoir layer which is placed over uncompacted soil.

- The paver system is designed to capture stormwater through the paver joints and temporarily store in the underlying stone reservoir before infiltrating into the ground.



Concrete pavers set on bare soil are <u>not</u> considered permeable.

- Further guidance on acceptable permeable paver systems and other pervious paving technologies can be found in Chapter 4, Section 4.3 of the *Low Impact Development in Coastal South Carolina: A Planning and Design Guide* (Ellis et al. 2014). A link to the LID Manual can be found on the Stormwater Permitting page of the Town's website or accessed directly at http://northinlet.sc.edu/LID/.

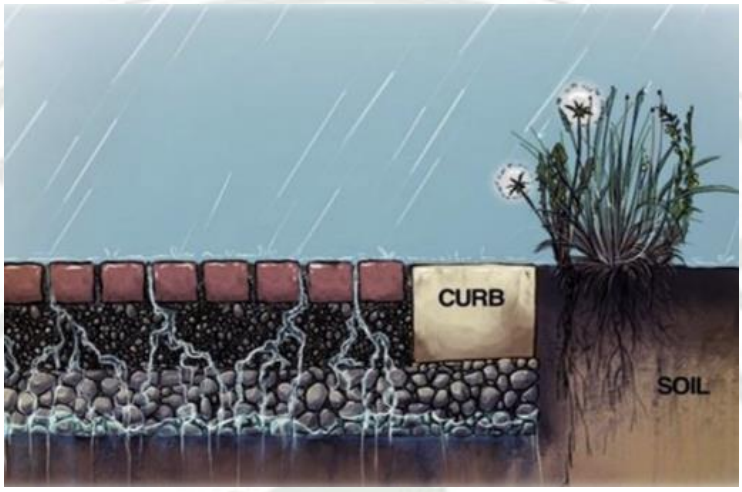


Key Elements of a Permeable Paver System include:

- **Pavers** – The top layer that is visible. Water infiltrates through the filling stone between the pavers.
- **Edge Restraint** – Plastic, metal, or concrete edge that holds the pavers in place.
- **Bedding Layer** – Layer of smaller stone below the pavers. Same material used between paver joints.
- **Reservoir Layer** – Thicker layer of larger stone where water is stored as it soaks into the soil.
- **Geotextile Fabric** – Separates the reservoir layer and subgrade soil. Allows water to pass into the subgrade.
- **Observation Well** – A PVC pipe that extends vertically to the bottom of the reservoir layer and is fitted with a cap installed flush with the pavement surface. Used to facilitate periodic inspection and maintenance of the system. (Typically not provided in small-scale residential applications. Homeowners can monitor the pavement surface for standing water to ensure system is functioning.)

RESIDENTIAL PERMEABLE PAVER SYSTEMS

Given that most permeable paver systems on residential properties are smaller scale (walkway, patios and driveways) the Town has compiled the following guidelines for permeable paver installation on residential properties not having an engineered design. Below is an overview of acceptable design and construction standards to be followed. This is not meant to replace the services of experienced, professional installers and it is recommended that a qualified installer with knowledge in hydrology and hydraulics be consulted to ensure desired results.



Common Residential Application

Open-graded, clean, washed stone shall be used for the bedding and reservoir layers to allow water to permeate through it with little resistance. **'Open-graded' stone means 'same size' stone** with no fines that would allow compaction to decrease the pervious qualities.

Materials such as **"crush & run", FLBC Limestone and GABC shall <u>not</u> be used as stone courses**. These materials compact and lose pervious qualities.

<u>Concrete Pavers:</u>

- Joint width separation: ¼ to ½ inch
    - If pavers abut each other, but must have a 1" separation no less than every four square-foot area, or two linear foot spacing.
- Joint filling stone: pea gravel, #8 or #89 stone (no fines). Recommended same as bedding layer.

<u>Bedding Layer:</u>

- Depth: 2 inches
- Example Materials: pea gravel, #8 or #89 stone (no fines)

<u>Reservoir Layer:</u>

- Depth: 6 inches (minimum)
- Material: #57 stone. #2 stone can be used for subbase course under the reservoir layer.

<u>Geotextile Fabric (optional):</u>

- 'Non-woven' fabric. Must be pervious and allow water to pass through.
- Placed on sides and bottom of the reservoir layer to protect from soil intrusion, however it may become clogged over time and cause the system to fail.