

PERMEABLE PAVER
DESIGN & INSTALLATION

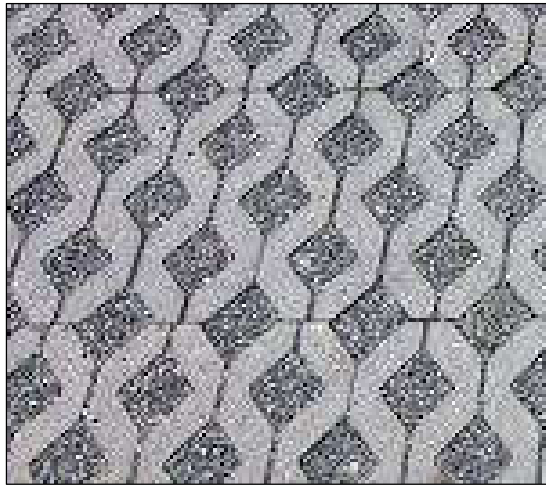


Photo credit: Rockstarstoneworks



Photo credit: Ecostone

SITING

Drainage Area

Small and large drainage areas.

Space

Can be used on driveways, walkways and patios.

Topography

Easiest to install in flat or slightly sloped areas. Maximum cross slope 2%.

Soils

Well drained soils are necessary.

Setbacks

Min 2' from property lines
Min 5' from septic systems and
Min. 25' from "404" wetlands

Vertical Separation

-Min 12" separation to seasonal high-water table.

DESIGN INFORMATION

DESCRIPTION

Permeable pavers typically have solid concrete surfaces and are meant to be laid with wide spaces between them on a bed of gravel or aggregate. Storm water collects in the joints and is absorbed into an underground base of gravel, which filters pollutants and prevents runoff.

BENEFITS

- Can be used on driveways and patios.
- Maintenance is minimal.
- Enhance the beauty of your yard and the neighborhood.

DESIGN CONSIDERATIONS

For most residential settings, permeable pavers will be applied on driveways and walkways.

1. Check the soils; make sure the soils properly infiltrate and are uncompacted.
2. Min. 3 1/8" thickness for vehicular applications
3. Min. 2 3/8" thickness for pedestrian.
4. A bedding or leveling course above the aggregate base layer should be considered.
5. Permeable pavers shall not count as built upon area.
6. If permeable pavers manage runoff from other built upon areas an additional depth of aggregate base layer will be required.
7. Paver installations will not be counted towards multiple SCM credit with slopes over 2% unless a tiered base layer is provided.

SIZING CALCULATIONS.

1. If you are taking advantage of open space credits, tree credits and storm water control measure credits, see worksheet A for confirmation of volume required.

OPERATION & MAINTENANCE

(TO BE CONDUCTED POST-CONSTRUCTION & ANNUALLY)

An effective maintenance plan shall ensure system efficiency of permeable pavement installations.

Cleaning

The surface should be kept clean of weeds, leaves, mulch, topsoil and excess sand. Bristle brooms, leaf blowers, rotary brushes, power washers or walk behind vacuums shall be utilized for preventative maintenance and extend the paver's functional life.

Materials

Additional aggregate fill material may also need to be added after cleaning.

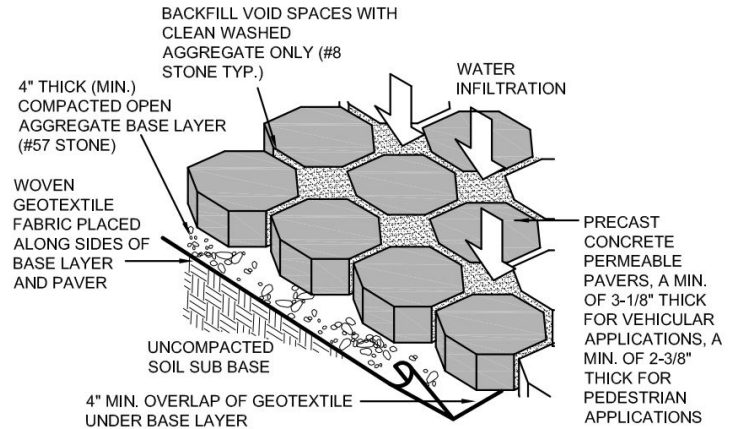
Inspections

Inspection of the site should occur monthly for the first few months after construction. Then inspections can occur on a semi-annual basis, preferably after rain events when clogging will be obvious. Consult a professional for remedial measures when surface ponding is observed.

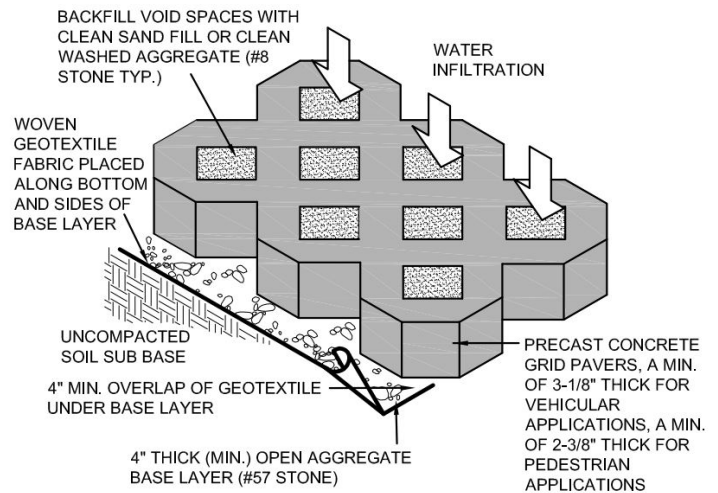
INSTALLATION

MATERIALS

- Permeable pavers, other than Turfstone, shall be considered and shall be approved on a case by case basis with the submission of specific product technical specifications. Pavement section substitutions shall follow manufacturer recommended specifications OR as designed by a NC licensed Professional Engineer.
- Erosion and sediment control around the perimeter of the pavers is critical. Mulch, topsoil and sand shall be managed post-installation.
- Excavate to a depth as needed to accommodate, base layer depth, bedding course depth and surface course layer so install is flush and level with other finished surfaces.
- Lay woven geotextile fabric; place along sides of base layer and pavers, provide 4" overlap under base layer.
- Install a 4" thick open aggregate base layer over the leveled and uncompacted subgrade.
- The Town Engineer shall be contacted for review and approval upon installation of the base layer in advance of the paver install.
- A bedding layer of 1-1/2" to 2" with No. 8 stone, or approved equal, may be utilized to provide a level base surface for paver installation. A non-woven geotextile fabric is recommended to be installed between the bedding later and open graded aggregate base layer.
- Install a paver edge restraint to keep the pavers from shifting. (See Typ residential permeable paver edge restraint Detail 104).
- A final inspection shall be conducted by the Town Engineer or authorized representative.



PRECAST CONCRETE PERMEABLE PAVER



PRECAST CONCRETE GRID PAVER