FACTSHEET

PERMEABLE PAVEMENTS

DESCRIPTION

Permeable pavements (also called porous pavements or pavers) include:

- Modular and cobble block pavers
- Structurally-reinforced grass and gravel
- Porous asphalt and porous concrete

In general, the structure of permeable pavement consists of:

- Permeable pavement layer
- Angular rock filter layer
- Angular rock sub-base layer
- Stone reservoir layer consisting of clean washed uniformly graded aggregate
- Perforated underdrain incorporated into the reservoir layer as required

Insulations and barriers are also needed to protect adjacent buildings or roadway sub-base.

APPLICATION

The locations of permeable pavement systems must be carefully considered at the planning stage to ensure that traffic volume, de-icing activities and operation and maintenance activities are suitable for long-term functionality. Permeable pavements can be used for:

- Low-traffic roads, parking lots
- Driveways
- Pedestrian plazas and walkways

They are ideal for sites with limited space for other surface stormwater best management practices.

CONSIDERATIONS

- The use of permeable pavements in sites with high levels of sedimentation and high pollution (such as gas stations, handling areas for hazardous materials, and heavy industrial sites) is not recommended.
- They are unsuitable for use in areas with heavy vehicle traffic, unless specifically designed for heavy loads. They are susceptible to clogging where anti-skid material is applied.

BENEFITS

- Reduce storm runoff
- Reduce peak stormwater discharge rates
- Reduce contaminant transport through filtration
- Reduce surrounding air temperature due to reduced heat absorption

MAINTENANCE

Over time, sediments will accumulate in the pores of permeable pavement, reducing the infiltration rate. Maintenance activities involve preventing clogging, maintaining infiltration, and preventing/repairing damages to the pavers.

- Inspect for broken pavers, loose asphalt / concrete, and clogged areas.
- Apply vacuum sweeping to the permeable pavement surface.
- Avoid damage to permeable pavements and pavers during winter plowing activities through careful installation and maintenance and by using rubber spacers to buffer the plow blade from the surface, if required .
- Use clean gravel (2 to 5 mm) instead of sand as anti-skid material to avoid clogging the permeable pavement pores.

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