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Topic: Pervious concrete pavement

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Abstract:

Pervious concrete pavement is a permeable pavement, often with an underlying stone reservoir, that captures rainfall and stores runoff before it infiltrates into the subsoil. This pervious surface replaces traditional pavement, allowing stormwater to infiltrate directly, permitting a naturally occurring form of water treatment. Pervious concrete consists of specially formulated mixtures of hydraulic cementitious materials, uniform open graded coarse aggregate such as ASTM C-33 (size should be 9.5 mm to 12.5 mm), and water. When properly designed and installed, pervious concrete has a high percentage of void space (15% or more) which can accommodate stormwater from any significant storm event.

The ideal application for pervious concrete pavement is around buildings (walkways, courtyards, etc.) and parking areas, as well as low-volume roadways. Pervious concrete pavement may also have some application on highways, where it could be used in shoulder and median construction for stormwater runoff mitigation. There may also be application for its use as a surface material to reduce hydroplaning, splash and spray, and mitigate tire-pavement noise.