For additional information on porous Asphalt Pavement go to:
http://www.flexiblepavements.org/sustainable_pav.cfm#stormwater

For additional information on porous Portland Cement Concrete go to:
http://www.ohioconcrete.org/Pervious%20Concrete.htm

For additional information on porous Pavers go to:
http://www.paversearch.com/porous-pavers-introduction.htm

For additional information on the LEED program go to:
http://www.usgbc.org/Default.aspx

With over 200 member companies, OAIMA producers account for nearly 150 million tons of limestone, sand and gravel aggregates, salt, clay and other minerals mined in Ohio each year. Aggregates and industrial minerals mined in Ohio include: limestone, sand, gravel and slag for roads, bridges, asphalt and concrete; clay and shale for brick and block; industrial sand for drinking water and wastewater treatment; and salt for melting ice in the winter and softening our water at home. Agricultural lime, also from mining, allows farmers to enhance their soils, increase production, and decrease the dependence on fertilizers and pesticides, leading to a cleaner environment.

Each Ohio resident requires over 11 tons (about a dump truck load) per year of minerals mined locally in Ohio. One-half of all aggregates are paid for with tax dollars.

If it can't be grown, it has to be mined!

For Additional Information and for the location of the nearest OAIMA member who can supply your aggregate needs, please call us at 1-800-OH ROCKS or visit our website at www.oaima.org.

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OAIMA
162 N. Hamilton Rd.
Gahanna, OH 43230

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Going Green with Rock!

A Guide for the Use of Aggregates in Porous Pavements

Porous Pavements are increasingly in demand as tools for managing storm water in an environmentally friendly way. They are an alternative to costly, bulky and land-intensive detention or retention ponds.

In addition to the obvious environmental and land use benefits, installation of porous pavements can qualify for significant LEED® (Leadership in Energy and Environmental Design) points under the Green Building Rating System, developed by the United States Green Building Council (USGBC).

This document is intended to offer guidance to the designer who is interested in the storage capacity potential of the underlying aggregate layers.

In general the designer is seeking clean, uniformly graded aggregate. Rainfall events dictate the design capacity of the aggregate storage system and take into account local historical conditions and events with additional consideration for the permeability of the underlying soils.

Porous Pavement surfaces can include Asphalt, Portland Cement Concrete, Paving Brick or Block as well as natural stone or other innovative products and materials.

The following information is intended for guidance in the design process for material selection. It is suggested that all materials be tested in accordance with ASTM C29, "Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate" Section 13.2.

Voids are defined as the space between the aggregate particles that is available for storage of water. Voids are reported as a percent of the total volume of the aggregate. The percent of these voids is influenced by the gradation (or particle size range) of the specified material, particle shape or angularity, as well as the amount of compaction or compactive effort use in placement of the materials.

Size (ODOT 703.01)	Voids, Percent	
	Range	Average
No. 2 Limestone	39.6-43.3	41.2
No. 4 Gravel	36.9-39.7	37.7
No. 4 Limestone	37.0-43.0	41.1
No. 57 Gravel	33.9-41.2	36.6
No. 57 Limestone	38.7-42.6	41.3
No. 8 Gravel	33.5-43.2	36.4
No. 8 Limestone	38.2-44.3	41.7
No. 7 Gravel	--- (1)	41.3
No. 7 Limestone	--- (1)	42.2
Natural Sand	31.2-36.6	32.5
Limestone Sand	33.2-39.0	36.2

(1) One (1) sample submitted

Disclaimer: This information is provided courtesy of the Ohio Aggregates & Industrial Minerals Association and its many fine members and is intended for informational purposes only. All aggregate is unique and should be tested prior to placement. Contact the design engineer for additional information.

Porous Paver-Unit Driveway with Aggregate Storage Bed for storm water retention.

Porous Asphalt Pavement Parking Area with Aggregate Storage Bed base.

Water flows uninhibited through Portland Cement Concrete Porous Pavement.