THE CHALLENGE

Building two large parking lots and an entrance roadway into a popular, scenic park as part of the Smith Bay Park Improvement Project posed two challenges for the Magen’s Bay Authority. First, the pavement would need to withstand frequent daily traffic into the park, located adjacent to the Caribbean Sea, and second, a highly-permeable pavement was desired to infiltrate stormwater and minimize stormwater runoff.

MAXIMIZING PERMEABILITY & STABILITY

The GEOPAVE® Aggregate Porous Pavement System was presented by Presto Geosystems’ island distributor JM Caribbean Distributors as a system that would meet the two challenges. The paver structure is designed with a mesh bottom that contains and stabilizes highly permeable, open-graded aggregate, an aggregate with <5% fines that would not normally be stable if left unconfined.

A six inch base was specified and installed over a prepared subgrade with a slight grade variance of less than 1.5% in the parking areas. The GEOPAVE units were installed over a geotextile in the two different patterns suitable for the intended traffic; herringbone for the parking areas, and bricklayer for the roadway. Crushed aggregate infill with a maximum particle size of 0.5 in (13 mm) and minimal fines was installed in the GEOPAVE units and raked flush with the top of the cell walls.