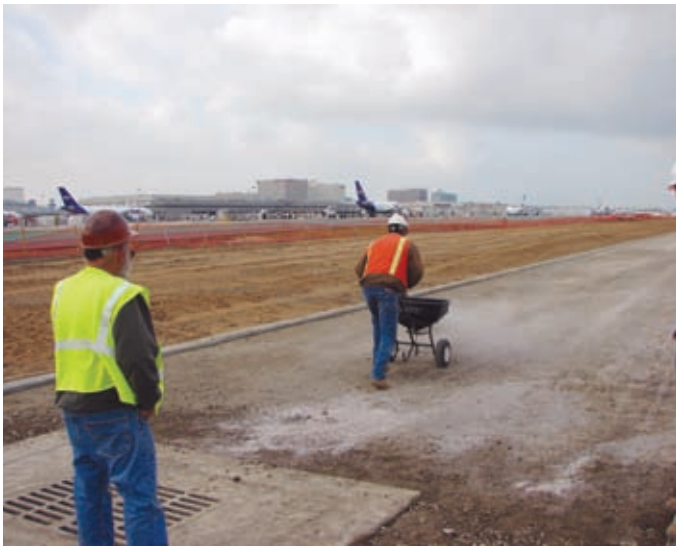
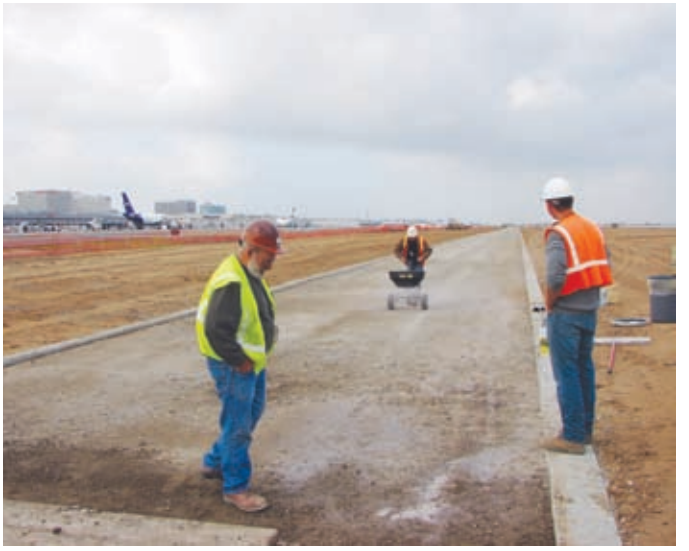
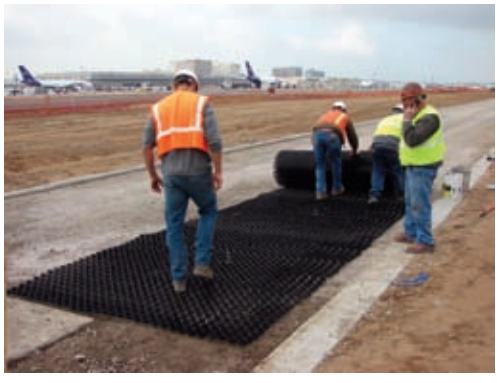
RUNWAY RENOVATION

Porous paving system takes off at LAX





By Dustin Glist



Construction crew members roll out porous paving system units at LAX and top them off with clean sand.

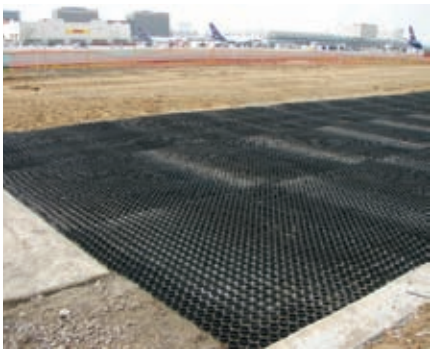
Major safety-enhancing runway, taxiway and over-roadway renovations are underway at Los Angeles International Airport's (LAX) South Airfield. And following suit with other notable sites like the Pentagon's helicopter landing pads and World's Fair Park in Knoxville, Tenn., engineering design firm HNTB chose to update LAX by installing a Grasspave2 porous paving system.

Grasspave2 is an Invisible Structures Inc. ring-and-grid system made from polyethylene plastic. The system's ultimate goal, in accordance with the Los Angeles region of the California Regional Water Quality Control Board's Standard Urban Stormwater Mitigation Plan (SUSMP), is to clean and treat storm water before it reaches the ocean and tributaries.

More than 438,000 sq ft of the porous pavement is being placed strategically throughout the South Airfield. Workers roll units out over road bases, fill them with clean sand and top the new additions with grass.

Besides serving LAX as service roads between taxiways and runways—Grasspave2 is strong enough that any street-legal vehicle can park or drive on it—the system allows these roads to be used as infiltration swales between runways.

Its porous pavement is designed to collect storm water coming off concrete taxiways and runways, filter out airport waste pollutants and either deliver the storm water to an underground detention system or let it infiltrate naturally back into the ground. A section of the



The porous pavement will serve LAX as service roads and infiltration swales.

Grasspave2 system will be graded as an infiltration swale and deliver storm water to inlet grates connected to the underground detention system.

For runoff exceeding the infiltration rates that the existing soil conditions can handle, HNTB has designed a cyclonic filter to remove debris, pollutants, sediment, oil and grease from water before it reaches the city storm drain. These devices will be found primarily on the eastern side of the airport, where clay soil conditions will not allow for SUSMP-suitable infiltration rates with a swale alone.

"Grasspave2 was perfect for what we needed, especially in the sandy soil," said Ryan Damery, an aviation engineer and project manager for HNTB. He noted that the system sits atop 12 in. of plastic media blast (PMB) material, adding that workers removed 18 in. of soil outside the units to provide sand and bacteria filtration for the runoff.

Invisible Structures Inc.'s Vice President Rick Cavallero sees this LAX reconstruction undertaking as an indication that porous pavement is a growing trend. "In the last few years," he said, "we've seen the construction industry embrace new technologies and really respond to the public's need for environmental and storm water-friendly products." **SWS**

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