# THE CRAM PAVEMENT

**The CRAM Pavement is a technological advancement developed using space age technology to achieve a highly efficient structurally engineered pavement section. In contrast to the conventionally based 18th century Macadam concept, the CRAM Pavement is founded on the concept that:**

**THE PLACEMENT OF MATERIALS WITHIN THE PAVEMENT SECTION BE BASED ON THEIR COMPATIBILITY WITH THE STRESS, TEMPERATURE AND MOISTURE ENVIRONMENTS SO AS TO FORM THE OPTIMUM STRUCTURAL SECTION AND FULL BEAM-LIKE ACTION.**

**The CRAM Pavement efficiently achieves the full beam-like action with aggregate materials interspaced between a tensile bearing base asphalt concrete layer and a surface asphalt concrete layer.**

CRAM Pavement on Palos Verdes Drive South in Southern California.

CRAM Pavement at Port of Los Angeles, Berths 127 - 131 Inter-modal yard. The facility is used for loaded container stacking by top-loader and loaded chassis parking.

**CRAM** was first constructed in 1983 on a portion of Palos Verdes Drive South in Southern California. **CRAM** was also utilized for a reconstruction of an existing asphalt paved inter-modal yard at the Port of Los Angeles, which was put in service in 1992. Both the Palos Verdes **CRAM** Pavement, after 17 years in service, and the Port of LA inter-modal **CRAM** Pavement, after 8 years of extremely heavy usage; exhibit **excellent performance!**

## CRAM'S FAVORABLE INTERNAL DRAINAGE

Port of LA CRAM construction site, Jan. 18, 1993, after 11 days of rainfall.

Port of LA CRAM construction site, Jan. 19 continuation of work without further delay

Construction at the Port inter-modal yard was able to proceed on a very stable foundation immediately after cessation of a period of heavy rainfall, as the base asphalt prevented the rain water from entering the subgrade. The Open Graded Aggregate and the drainage components allowed the rapid and safe removal of the water.

The removal of water on the Palos Verdes pavement, through the outlet pipes, attests to the important fact that rain water can and does penetrate a conventional asphalt concrete layer. In the **CRAM** pavement, this water is collected by the internal drainage system and safely discharged without damage to the subgrade.

CRAM internal drainage outlet pipe discharging water at Palos Verdes Drive South