

# Six Tips on Constructing the Right Subbase

Careful attention to the design and construction of subbases is essential to ensure structural capacity and ride quality of concrete pavements.

Constructing an effective subbase includes several factors, including subgrade soil type, environmental conditions, and amount of heavy truck traffic. In any case, the objective is to obtain a condition of uniform support for the pavement that will prevail throughout its service life. Here are six tips for achieving that objective and constructing the right subbase:

- 1.** Select subbase materials that meet minimum requirements for preventing mudpumping of subgrade soils.
- 2.** Specify gradation controls that will ensure a reasonably constant subbase gradation for individual projects.
- 3.** Specify a minimum subbase depth of 4 in.
- 4.** Specify a minimum density for untreated subbases of 95 percent of AASHTO T99 (standard proctor) for most projects.
- 5.** Specify a cement-treated or lean concrete subbase that provides a strong and uniform support for the pavement and joints; provides an all-weather working platform; and contributes to smoother pavements by giving firm support to the forms or paver during construction
- 6.** Specify a permeable subbase for pavements carrying high volumes of heavy trucks for which past experience indicates the potential for pavement faulting and pumping.

For additional information, see ACPA publication, "Subgrades and Subbases for Concrete Pavements" (TB011P). To order ACPA publications, log-in to the ACPA members only section at [www.pavement.com](http://www.pavement.com); call toll-free 1-800-868-6733; or fax requests to 847-966-9666.