
Standard Practice for

**Geosynthetic Reinforcement of
the Aggregate Base Course of
Flexible Pavement Structures**

AASHTO Designation: R 50-09 (2022)¹

Technically Revised: 2009

Reviewed but Not Updated: 2022

Editorially Revised: 2022

**Technical Subcommittee: 4g, Geosynthetics and Erosion
Control Products**



**American Association of State Highway and Transportation Officials
555 12th Street NW, Suite 1000
Washington, DC 20004**

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1. SCOPE

- 1.1. This standard practice provides guidance to pavement designers interested in incorporating geosynthetics for the purpose of reinforcing the aggregate base course of flexible pavement structures. Geosynthetic reinforcement is intended to provide structural support of traffic loads over the life of the pavement.
- 1.1.1. For the purpose of this guide, base reinforcement is the use of a geosynthetic within, or directly beneath, the granular base course.
- 1.1.2. When referring to geosynthetics, the discussion is limited to geotextiles, geogrids, or geogrid/geotextile composites.
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2. REFERENCED DOCUMENTS

- 2.1. *AASHTO Standard:*
- [M 288](#), Geotextile Specification for Highway Applications
- 2.2. *Other References:*
- FHWA. Geosynthetics Design and Construction Guidelines Reference Manual, FHWA NHI-07-092, August 2008.
 - Geosynthetic Materials Association (GMA). GMA White Paper I, “Geosynthetics in Pavement Systems Applications,” May 6, 1999. Available at https://geosynthetics.ifai.com/wp-content/uploads/sites/10/2016/06/geosynthetics_in_pavement_systems_applications_white_paper_1.pdf.
 - Geosynthetic Materials Association (GMA). GMA White Paper II, “Geosynthetic Reinforcement of the Aggregate Base/Subbase Courses of Pavement Structures,” June 2000. Available at https://geosynthetics.ifai.com/wp-content/uploads/sites/10/2016/06/geosynthetic_reinforcement_gma_white_paper_ii.pdf.
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3. INTRODUCTION

- 3.1. Because the benefits of geosynthetic reinforced pavement structures may not be derived theoretically, test sections are necessary to obtain benefit quantification. Studies have been done that demonstrate the value added by a geosynthetic in a pavement structure. These studies,