

INNOVATIONS FOR SUSTAINABLE ROAD INFRASTRUCTURE

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ABSTRACT

During the 20th century, the development of highway infrastructure provides safe, fast and easy driving. The integration of new technological achievements is at benefit of passengers, drivers and vehicles: high-quality materials, safety devices, intelligent transportation systems, electronic information. However, in the context of the 21st century, persistent challenges have to be faced: the increase in demand for road transport services, the consumption of large quantities of resources and energy, adverse climatic conditions, new road maintenance practices. The main question is how road highway infrastructure meets and handles the challenging future. Innovative practices in design, construction and maintenance of road infrastructure are implemented worldwide in order to reduce the reliance on virgin building materials and to reduce the impact of climate change through the reduction in CO₂ emissions. The main objective of this paper is to present some of these innovative practices that provide a sustainable and environment-friendly infrastructure.