Asphalt Maintenance Factsheet

In North America, over 254 million vehicles travel over 3 trillion miles on more than 4 million miles of streets and highways. Nearly a third of our roadways are rated as being in poor condition, which costs motorists nearly 70 billion dollars in additional car operating and repair costs annually.[1] Asphalt pavement accounts for 92 percent of the nation's road surfaces.

Poor pavement conditions add to travel times, increase the likelihood of accidents, and can cause damage to vehicles. However, advanced materials, recycled content, and binders are contributing to incredible advancements in roadway technology.

State and local transportation agencies are aware of the importance of having strong, low-maintenance pavement mixtures and well-trained crews who know how to properly install them. Reduced maintenance and pavement resilience save taxpayers' money and construction-related traffic congestion. NJ LTAP offers several workshops to ensure long lasting roads.

Asphalt Roads: Common Maintenance Problems

This workshop provides relevant information to individuals who maintain asphalt pavements. Included in the course material is the importance of preventive maintenance to the life of an asphalt pavement. The material will help the participant identify common asphalt distress, the cause of the distress, and the appropriate treatments—as well as the latest techniques, materials, and equipment to deal with them.

Pavement Management Systems for Locals

A pavement management system (PMS) is designed to provide objective information and useful data for analysis so that road managers can make more consistent, cost effective, and defensible decisions related to the preservation of pavement networks. While a PMS cannot make final decisions, it can provide the basis for an informed understanding of the possible consequences of alternative policies.

Asphalt Pavement Rehabilitation

This workshop is for municipal or county employees, as well as those that work with them who are involved in the planning, inspecting and placing of asphalt pavements. It provides the information needed to properly plan and monitor a hot mix asphalt paving project. Basic knowledge of hot mix asphalt materials and example construction specifications will be provided as well as best practices for installation techniques.

Make your Asphalt Last Longer

Asphalt lifespan varies based on a multitude of factors such as climate, traffic volume and whether or not routine maintence is undertaken. This leads to an average lifespan of about twenty-five years, with about 90% of structural integrity remaining intact throughout the first decade. Given today's high infrastructure needs combined with less available funding, any good stewardship will include life cycle cost analysist and a detailed pavement type selection process. Some of the choices available to you are listed below, and can allow you to make the most of your dollars.

Porous Asphalt

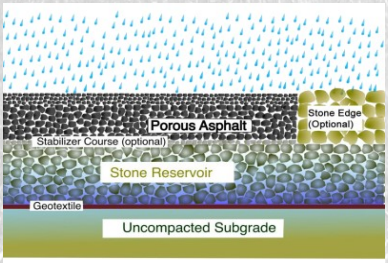

Figure 1: Typical porous asphalt pavement with stone reservoir cross section

Porous asphalts are an attractive option to those in public works departments, representing at cost-effective and environmentally friendly construction option. In use for nearly forty years, these pavements allow water to drain through he pavement surface and infiltrate into the soils below the pavement. Compared to standard storm-water management systems, porous asphalt pavement remains a less-expensive option that can last for decades. While constructed to be rougher to allow for permeability, they are smooth enough to meet the requirements of the Americans with Disabilities Act. For more information on porous asphalt, check out **http://www.fhwa.dot.gov/pavement/asphalt/pubs/hif15009.pdf**

Perpetual Pavement

Perpetual pavements use several layers of asphalt to produce safe and smooth roads. Whenever a surface restoration is performed, PP's can be maintained easily as they existing road structure does not need to be removed, saving time and money without significant impacting motorists. The asphalt is recycled at a rate of 99%, providing additional cost savings coupled with environmental benefits. For more information, visit **http://www.asphaltroads.org/perpetual-pavement/about-perpetual-pavements/**

Do More With Warm Mix Asphalt

Warm Mix Asphalt (WMA) is the generic term for a variety of technologies that allow producers of Hot Mix Asphalt (HMA) pavement material to lower temperatures at which the material is mixed and placed on the road. This versatile technology is applicable to all forms of asphalt concrete, and has show successful durability across all climates and traffic densities. The lower temperatures offer and immediate savings on fuel expenditures of up to 20% over traditional methods. Furthermore, the greater the disparity in temperature between the asphalt mix and the outside temperature, the faster the asphalt mix will cool, leading to durability issues. Since WMA cools more slowly, it can extend the paving season, allow asphalt to be hauled farther, and makes night paving more feasible. WMA also has the added benefit of producing less emissions than traditional HMA. This exposes workers to less hazards on the job, in particular less smoke and dust inhalation.

Today, over 40 state highway agencies have developed and adopted WMA specifications, and over 10% of the asphalt in the United States is produced using WMA technology. For more information, please check **http://www.fhwa.dot.gov/innovation/everydaycounts/edc-1/wma.cfm**

New Jersey Local Technical Assistance Program