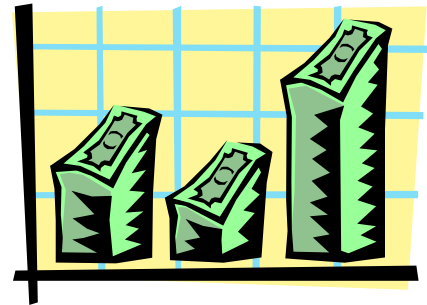


# The Asphalt Advantage

There are a number of reasons why over 90% of pavements in Minnesota are asphalt. With this in mind, it is important to understand the advantages of asphalt pavement.

**COST OF ASPHALT:** The statement that concrete now costs about the same or less than asphalt is not accurate. Asphalt prices have dropped with the declining crude oil prices. Furthermore, our member companies who are also in the concrete business have stated that the cost comparison of material type needs to take into consideration the intended use of the product. Minnesota Department of Transportation (Mn/DOT), local agencies, and the private sector has let and awarded alternate-design bid projects (asphalt and concrete head-to-head). The low bid (including initial cost and future maintenance costs) have overwhelmingly been asphalt. Also, there are many rehabilitation and maintenance applications for asphalt with minimal user delay.



Cost Savings

**ASPHALT & MODIFIED ASPHALT SUPPLY:** Asphalt is much more readily available today. Our local refiner/suppliers which includes our Canadian neighbors are supplying asphalt into the Minnesota market. Additional pipeline connection has occurred, the Mississippi River barge traffic is operational, and more transportation considerations by rail are in place. Alternatives are also available for modifying asphalt.

**PERFORMANCE LIFE:** The general statement that concrete pavement lasts longer than asphalt is not accurate. There are numerous asphalt roadways throughout Minnesota that were originally placed in the 1950's, 60's and 70's and are still in place and in service today. Minnesota Asphalt Pavement Association (MAPA) commissioned a consultant (ERES) to research the pavement management database of Mn/DOT to determine service lives of hot mix asphalt (HMA) and doweled pcc pavements. For additional information visit our MAPA website at [www.asphaltisbest.com](http://www.asphaltisbest.com). This analysis of HMA was also prior to the Superpave™ technology of today. Mn/DOT has received seven nationally recognized perpetual pavement awards.

It is not an apples-to-apples comparison to compare how long a road resurfacing project lasts (typically 18 -23 years before the first overlay) to how long a new or reconstructed roadway lasts. These are two different issues. There are numerous rehabilitation and maintenance applications of asphalt pavement that demonstrate a profound cost-benefit for the taxpayers. Besides, the remedial treatment for older asphalt pavements is typically only surface milling and overlay or just an overlay. This treatment is part of the "perpetual pavement" concept and allows an older asphalt roadway to retain a high level of serviceability at the low cost of surface rehabilitation and maintenance.

**ENVIRONMENTAL SUSTAINABILITY:** Asphalt is 100% recyclable and millions of tons of asphalt pavement are recycled each year. The amount of recycled asphalt pavement in Minnesota also continues to increase each year. We have been recycling asphalt pavement into HMA for 33 seasons.



In addition, porous or dense-grade HMA pavements to help manage storm water runoff have been used in numerous parking lots and commercial paving applications and can contribute to the U.S. Green Building Council's (USGBC's) Leadership in Energy and Environment Design (LEED) credit. This can be accomplished through materials recycling and by reducing storm water runoff and storm water retention.

The use of warm mix asphalt (WMA) is increasing in the nation and in Minnesota. WMA is the generic term for a variety of technologies that allow the producers of HMA pavement material to lower the temperatures at which the material is produced at the HMA plant and placed on the road.

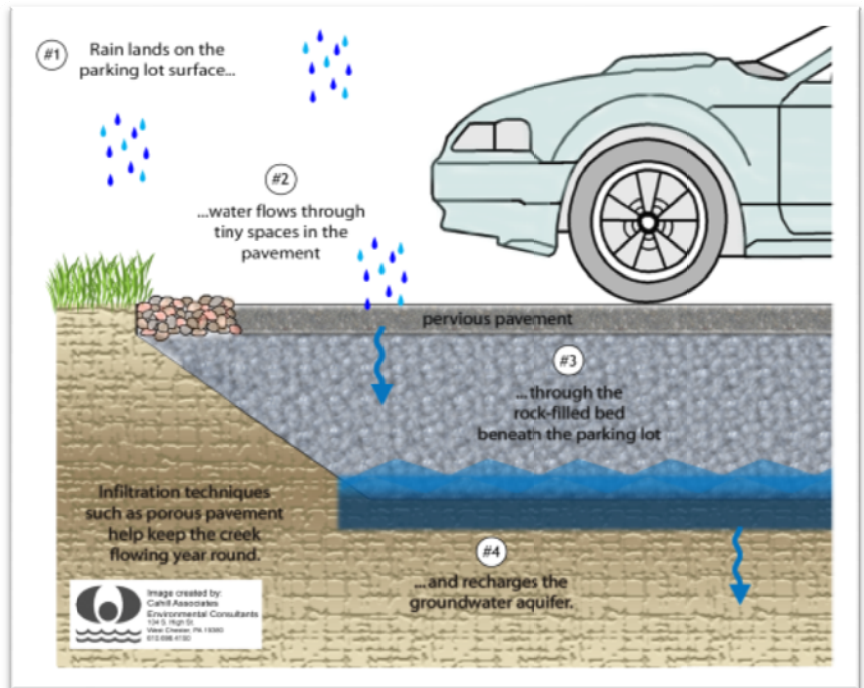
Lowering the temperature of asphalt mixes will decrease fuel usage, fumes, and greenhouse gas emissions, preserving resources while addressing growing environmental sustainability. Potential engineering benefits include better compaction on the road, the ability to haul paving mix for longer distances, and the ability to pave at lower temperatures. In addition, researchers hypothesize that the reduced level of oxidation at the HMA plant will lead to better long-term pavement performance.

Other environmental considerations are the use of roofing shingles, which continues to increase as an environmental innovation in HMA technology. Also, urban heat island (UHI) impacts are not a black and white issue, other factors affect UHI besides pavement color including elevation and the environmental surroundings.

**ECONOMIC CONSIDERATIONS:** Most agencies, including Mn/DOT, have budgets that are nowhere near what is necessary to maintain the current network. Currently, road work projects using asphalt materials provide the best value for specifiers struggling to maintain, preserve, and surface the transportation system. Also, water and utility work is a constant issue with urban roadways, and HMA is the pavement of choice to work with. The asphalt industry is ready to go to work to help with the solutions to our economic recession with environmentally friendly stewardship applications.

**OTHER FACTORS:** Some of the additional benefits of asphalt pavement include the ability to **carry heavy loads** on interstate highways, airports, bus lanes and other facilities; **reduce roadway noise** using quiet surface mix such as dense-graded or stone matrix asphalt; **construct with greater ease** when future development or adjacent land use requires utility cuts across the roadway surface; **reduce time of construction/reduced business impact** and **stage construction** whereby the HMA can be constructed and repaired while maintaining traffic or even at night to further enhance safety concerns; and **equity, recyclability, and salvage value** when the service life is completed.

**SUMMARY:** Asphalt is America's most recycled road material, and as described above, there are a number of factors why over 90% of all pavements are asphalt. Asphalt is smooth, quiet, easy to construct and easier and less expensive to maintain. In the discussion of pavement type selection or strategy or repair selection, it is important to take a broader look at all aspects. The best pavement available is a properly designed asphalt pavement!



***FOR MORE INFORMATION: Contact the Minnesota Asphalt Pavement Association at (651) 636-4666 or at [info@mnapa.org](mailto:info@mnapa.org) or visit our website at [www.asphaltisbest.com](http://www.asphaltisbest.com).***

