

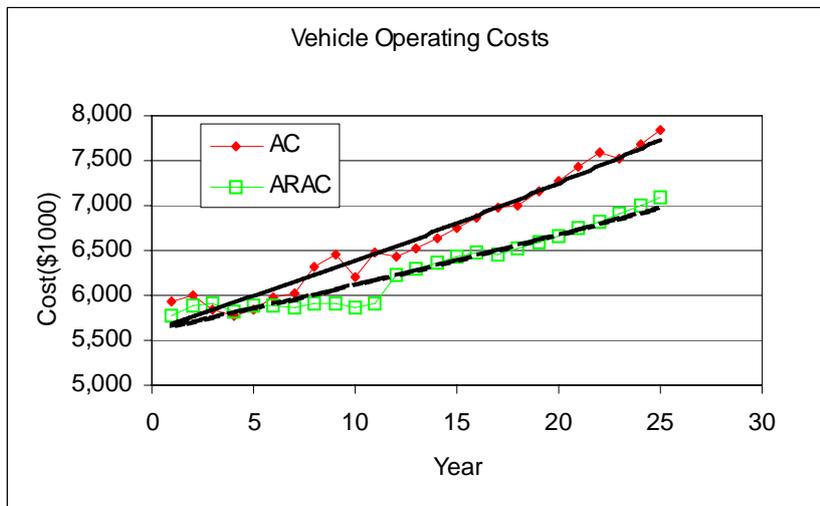


ASPHALT-RUBBER USER COST BENEFITS

Have you heard about fuel efficient roads?

You've heard about how the auto manufacturers' have increased of fuel efficiency in today's vehicles, but have you ever heard about fuel-efficient roads?

It's true. Several studies have demonstrated that smoother roads with less rutting, roughness and fatigue cracking help achieve greater fuel efficiency for the vehicles traveling upon them. And the roads last longer! Because Asphalt-Rubber pavements last longer and resist cracking better than regular asphalt roads, tremendous savings can be obtained through the project's life cycle. Let's take a look.



Vehicle Operating Costs - When Arizona State University compared two adjacent projects on I-40 near Flagstaff, Arizona the differences between the conventional material and asphalt-rubber pavements were staggering. The asphalt-rubber pavement is projected to save **\$9,340,000** in user's vehicle operating costs over the life of the project. **That means less wear and tear on your vehicle, saving you time**

and money.

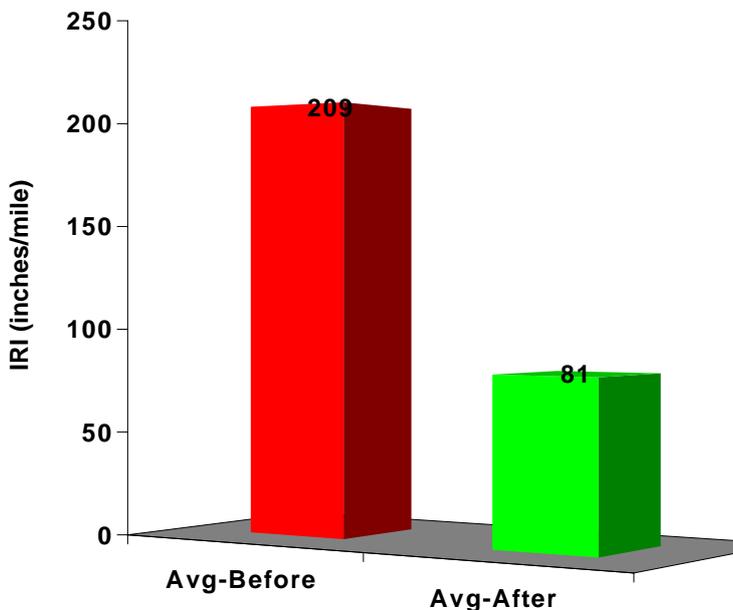
Fuel Efficiency - How would you like to save 4.5% in fuel costs just because your city, county or state uses Asphalt-Rubber? WesTrack, a US study on pavement design completed in Reno, Nevada, in 1999 showed that for identical conditions cracked pavements cost more in fuel, 4.5% more to be exact. The driverless trucks that were used to load the pavement test sections used less fuel when there were less cracks in the pavement. Less cracking means a smoother road and lower operating costs. **Some of the smoothest pavement ever measured by industry and agencies alike have asphalt-rubber on the top.** Award winning pavements on the Long Beach Freeway I-710 in Long Beach, California, the "Two Guns" project near Winslow, Arizona on I-40 and the I-35 Near San Antonio, Texas all have

According to Overdrive magazine, in December 2004, Truckers driving through Texas rated the Interstate system there as the best in the USA. Here's one of the reasons why: an asphalt-rubber permeable friction course in Texas made an old, beat-up concrete surface into a safer quieter, and smoother drive for the San Antonio community. The table below shows the Internationally Roughness Index (IRI) ratings scale. The index measures pavement roughness in terms of the number of inches per mile that a laser, mounted in a specialized van, jumps as it is driven over the interstate. Each jump is measured in term of inches. The lower the IRI number, the smoother the ride.

Good	Fair	Poor
IRI Below 95	IRI 95-170	IRI Above 170

The IRI in the San Antonio project went from 209 IRI (extremely poor ride) to an 81 IRI (a very good ride). **What's the IRI on your commute? Find out, ask for asphalt-rubber and you can save too.**

**Tex DOT Ride Quality Measurements
IH-35 San Antonio**



Whenever the costs are compared, asphalt-rubber strategies come out ahead of conventional materials over eighty percent of the time. Life Cycle Costs studied by Oregon State University in Arizona, California and Texas where Asphalt-Rubber is widely used, show great savings over the life of the project, as much as \$7.34 for every square yard of pavement. **That's over \$50,000 for every lane mile. Imagine putting that much in your bank account every thirty years for every lane/mile of pavement in your community.**

The Arizona Department of Transportation provides a closer look at these life cycle costs. Consider how much it costs to crack fill a highway. Highways with too many cracks cost more to maintain. The chart to the left

is a comparison of unmodified asphalt pavements and asphalt-rubber pavements in the ADOT system. The charts tracks how much the pavements with and without rubber cost to maintain for every lane and every mile and every year. **After ten years, Asphalt-Rubber pavements have only one third the maintenance costs.**

You save money on fuel and less vehicle maintenance when you have smooth, crack free, efficient roads. Your local paving agency will save with less road maintenance dollars spent on repair work. Save the environment and save money with asphalt-rubber.

For more information visit www.rubberpavements.org/usercostbenefits

**Arizona DOT, Materials Group, Maintenance Cost,
Dollars Per Lane Mile**

