

FHWA's Livable Communities Case Study Series



Arizona Department of Transportation – Use of Innovative Highway Materials to Support Livability.

One role highways play in the development of livable communities is safety. Public safety is a fundamental goal for all transportation improvement safety projects that are undertaken specifically to correct a public safety deficiency or to raise awareness about public safety strategies on America's streets and highways. Traditional highway paving technologies now use new methodologies such as, rubberized concrete. The use of rubber is of interest as a result of additional elasticity imparted to the binder and enhanced safety related to improved roadway skid resistance. In addition to the noise reduction of rubberized asphalts, there are numerous environmental benefits such as the recycling of tires.

Using sustainable renewable technologies such as rubberized asphalt promotes highway's role in livability. Creating pavement that is smoother, safer and quieter is one way Arizona has improved the quality of life for its residents. Arizona Department of Transportation (ADOT) began a pilot program in 2003 to see how well rubberized asphalt would reduce traffic noise. Public response was so great that ADOT eventually used rubber asphalt on the entire Phoenix Freeway system.

What are the benefits of rubberized asphalt? Rubberized asphalt performed so well for the major infrastructure facilities operated by ADOT, that in 2005 road experts in Chandler, Arizona began experimenting with rubberized asphalt on city streets. Two stretches of arterial streets in Chandler were redone in the summer of 2003 and reopened in November. The use of rubberized asphalt in the southeast Valley of Phoenix showcased benefits outweighing any drawbacks. As the community grew, they were fortunate to have the resources available to make their growing road system as efficient as possible with rubberized asphalt helping to meet their goals.

In addition to the use of rubberized asphalt, the ADOT also successfully deploys operational strategies such as intelligent transportation system and Ramp Metering in the Phoenix and Tucson areas. These operational strategies are effective in improving the flow and reducing travel times on the nation's highway system.

Creating more livable communities through transportation choices

