



# Superpave in St. Louis County

By Tom Deddens, *Asphalt Institute District Engineer*

## Superpave is good, but it's only for big highways and interstates. Right?

Wrong! Superpave is not just for major roads and interstates. You can use it anywhere you have a reasonable volume of traffic, heavy loads and a desire to see the road last a long time with a minimum of maintenance.

Road engineers around the nation are beginning to realize they can use Superpave on local roads where they need durability and good performance. There are a number of current examples. One of them is in St. Louis County, Missouri.

Vince Ogar, Materials Analyst for the St. Louis County Department of Highways and Traffic (DHT), is actively promoting the use of Superpave in his county. "In 1999, at least half of our projects will be Superpave," says Vince. "It's a superior system and it gives our

design engineers the kind of performance they are looking for in a road."

Vince decided several years ago to jump on the Superpave bandwagon for a number of reasons. "Two of them were to prepare for Superpave 2000 and to qualify for federal funds," he says. He wanted to ensure that St. Louis County would continue to get its share of federal highway dollars by using the Superpave system. Vince didn't want the County to be out in the cold when the Superpave 2000 mandate became a reality throughout the U.S. He also wanted to be thoroughly familiar with Superpave specifications because Missouri State DOT would be using them and St. Louis County consistently uses state specifications.

### Make a Budget and Go

Vince approached Pat Palmer, then Highway Materials Engineer for the

County's Department of Highways and Traffic (DHT), and proposed a plan to purchase the necessary Superpave testing equipment for their lab. Pat agreed to the plan. "Let's make a budget and go," he said. They set up a five-year, \$150,000 budget to purchase key pieces of Superpave equipment.

A Superpave Gyratory Compactor (SGC) was their first purchase. The cost was about \$30,000. During the next five years, the St. Louis County Highway Materials Division purchased the Dynamic Shear Rheometer (DSR), the Pressure Aging Vessel (PAV), an ignition oven, and a Bending Beam Rheometer (BBR). DHT not only wanted to be able to do their own mix designs, they also wanted to test asphalt binders.

After purchasing the SGC, Vince was ready for a Superpave project. "We did some test strips and small projects before launching our first major Superpave project," says Vince. He



St. Louis County Superpave team members (from right) Vince Ogar, Rich Holesinger and Daniel Ahlvers discuss Superpave surface mix characteristics at McDonald-Douglas Boulevard.

# County

found a contractor who was willing to work with the DHT and they began to learn together.

“Communication was vital in those first small projects,” says Vince. “Both us and the contractor, Pace Construction Company of St. Louis, had to learn how to apply the Superpave system.”

## First Major Project

“The first major Superpave project was McDonald-Douglas Boulevard off Bayless, Lucas and Hunt Streets,” says Vince. “It was a 2.4-mile, 6-lane road adjacent to the McDonald-Douglas plant in north St. Louis County between I-270 and Lindbergh Boulevard (Highway 67). The boulevard was subject to a high number of heavy trucks entering and leaving the McDonald-Douglas plant at night—up to 30 percent over a 24-hour period. It had a history of rutting at turn-offs and

intersections. It required constant maintenance.”

“Before doing the McDonald-Douglas Boulevard project, we did several test sections using PG binders,” comments Vince. “We had a number of pre-construction meetings with the contractor before we did the project. The project itself went very smoothly and the results were excellent. HDT and the contractor did the Quality Control field samples together and they came out favorably time after time.”

The McDonald-Douglas project has been a prototype of Superpave success. “After three years we have no visible rutting—absolutely zero,” says Vince. “We can’t find even  $\frac{1}{4}$ th or  $\frac{1}{16}$ th of an inch of rutted pavement. And there are a lot of heavy trucks traveling that road-in and out of the side roads to the McDonald-Douglas plant. That’s really not so amazing, though. We have had no rutting on any our

Superpave projects, except for one intersection on Hanley Road that had a bad subgrade.”

## Sulphur Springs Road

The Sulphur Springs Road project, a 10-inch Full-Depth® Superpave project, composed of a 19mm base course and a 2-inch, 12.5mm surface course, is on the books for the summer of 1999. The project is composed of three phases, each about a mile in length.

“The challenge on the Sulphur Springs project is the detour phasing,” says Rich Holesinger, Highway Materials Engineer for the DHT. “At this point we feel pretty confident in our application of the Superpave system. But we need to have a smooth flow of traffic through the project.”

*(continued on page 23)*

(continued from page 7)

## Why Superpave in St. Louis County?

Vince says he got involved with Superpave because he wanted to learn more about the proper use of asphalt. In 1993 He attended an asphalt conference sponsored by the University of Missouri in Rolla. At that conference, an FHWA spokesman got up and announced the "Superpave is the asphalt technology of the future." Vince knew then that he wanted to find out more about th new technology.

"I continued to attend several conferences that explained and promoted Superpave from 1994 through 1997," says Vince, Several of the DHT people attended conferences where the Asphalt Institute made several Superpave presentations. "We asked a lot of questions about Superpave and the Asphalt Institute field engineers supplied us with answers," says Vince.

Training was also a big factor. Our DHT group went to as many asphalt training courses as we could go to," says Vince. "I went to the Institute's wee-long training session at the University of Arkansas in Fayetteville. I and several others attended the Institute's Superpave Workshop at the University of Arkansas in 1996. We attended several other Institute seminars on proper construction of asphalt pavements." This year the DHT is sending three of their technicians to AI's advanced design and construction course.

"Remember, we are from Missouri," warns Vince. "our attitude in St. Louis County is show me, sho me, show me! We ask a lot of questions and get a lot of answers. We have applied those answers. As a result, we have some real confidence in doing Superpave. It will work for any local road agency that wants to improve the quality of their roads." ▲

*For further information about using Superpave at the local level, call Vince Ogar at 314-427-0398 or Richard Holesinger at 314-427-0398.*

# 1999

## Welcome New Members



GIRSA, INC.



ATS AD