

# Peerless Resource Recovery

is giving a new definition to

# “Roof-top Parking”

Landfill operators Dale and George Behnen, have long noticed that, in Dale's words, “people were throwing away good stuff.” In particular, roof shingles. About 30,000 tons of shingles were coming to their landfill every year.

Asphalt roofing shingles are made out of petroleum, aggregate, and fiber. Road asphalt also is made out of petroleum, aggregate, and fiber. The Behnen's, owners of Peerless Resource Recovery since 1994, wondered if asphalt roofing shingles could be reused in the blacktop that goes on roads.

Dale Behnen began searching for information and attending roofing seminars that focus on shingle material. Her search led Peerless to sponsor a seminar on roof-to-road recycling at the Missouri Botanical Garden on March 29-30 to share what she had discovered. Along the way, she made contact with roof-to-road recycling programs in other states and participated in a pilot project to build a road using recycled tear-off shingles at the Antire Quarry.

“Missouri buries 150,000 tons of roof every year and it's 100 percent recyclable,” Dale Behnen said.

“Basically one hundred percent of what a roofing shingle is is what an asphalt company buys to put in the asphalt mix,”

she explained. “Every building has a parking lot or driveway, so why not use an asphalt base that has five percent to seven percent recycled shingles and get creative points for it?” referring to the Leadership in Energy and Environmental Design (LEED) certification.

“The potential for this application is enormous,” said Roger Brown, vice president of Pace Construction Company, a St. Louis area road and bridge construction company, which has experimented with using recycled shingles in asphalt pavements state projects. Brown said that recycled shingles do not add to the cost of traditional asphalt pavement mixes. “If we are able to generate some momentum in the acceptance of this practice, I think we could even see some cost savings,” he added.

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One of the speakers at the “Roofs to Roads” seminar, also sponsored by the St. Louis — Jefferson Solid Waste Management District and the Missouri Department of Natural Resources, was Ohio recycler, Steven Johnson, who owns Roof to Road, LLC. “As soon as local governments realize the potential this process has-not only to save landfill space, but to create more resilient pavements- we'll be able to generate cost efficiencies all-around,” Johnson said. “The roofers will have lower demolition costs and the roads will actually cost less and last longer.”

With oil prices climbing a ladder to new highs every few months, some people are asking if we can afford to keep throwing oil away in for form of used roofing shingles. “Over 11 million tons are buried annually,” Dale Behnen said, “why don't we do something with it?”

way and transit programs. In a corresponding bill drafted in the Senate by the Senate Environment and Public Works Committee, Missouri would receive \$4.96 billion, including an additional \$1 billion in new highway funds, \$44.6 million of which would go to the Mississippi River Bridge.

Briggs said that the total cost of the bridge, "even though shared with Illinois, will be \$1.6 billion."

He explained, "Every six years, a federal highway bill that comes through and the mechanism guides the fuel tax. Missourians pay 17 cents state tax that goes directly to MoDOT. They also pay 18.4 cents for regular, 24.4 for diesel federal tax that is put into a pot and redistributed among the states according to need. We have always been below 100 percent."

U.S. Senator Kit Bond, chairman of the Senate Transportation and Infrastructure subcommittee, said that under the Senate bill, Missouri would receive 98 cents on the dollar from federal gas taxes, up from 90.5 cents under the current law.

Kent Van Landuyt, MoDOT federal liaison, said both bills, drafted at the same time, will not be the same when they are finished and will go to a conference committee made up of members of the House and Senate. "They will work out differences and draft the two bills into one bill which will go to the House and Senate for final passage before going on to the President."

Projects that yet need to be addressed are the Mississippi River Bridge, I-64 and I-70.

In the case of I-70, long overdue for a major overhaul, Briggs said they need to build a new road "from the ground up since it's been so worn down from years of heavy traffic. That's about a \$3 billion job and while we have done some environmental design and planning, we have no money for actually building, and we have no plans."

Toll roads have come up repeatedly in the legislature, but that does not seem likely in the near future. One innovative way of getting new road and bridges is a combination of state and private financing.

"A toll bridge at the Lake of the Ozarks was built a few years ago with private money," Briggs said. "It was built with private money and the money is being collected. When it's paid off in 20 years or so, they will turn that bridge over to the state and we will maintain it."

Another project done through a public/private partnership is Highway 63 between Macon and Kirksville, where the city levied a sales tax to build a four-lane road.

Briggs said, "They're paying about a third, which is about \$35 to \$45 million dollars. We're looking at a similar arrangement on Highway 36 between Macon and Hannibal."

The I-64/Highway 40 project, going from Spoede Road on the west to Sarah Avenue on the east, should start in 2008 with the first section being the Kingshighway interchange to Sarah Avenue, at a cost of \$51.5 million including construction and right-of-way.

Leslie Hoffarth, MoDOT project manager for the I-64 project, said, "We hope to publish our final environmental statement in a couple of months so we should have environmental clearance in July."

"The I-170/Galleria Parkway/Hanley Avenue/Brentwood Avenue is in the long range plan," she said. "From 2007 to 2010. It hasn't been programmed yet, but when it is, there is a good chance it will be funded. This cost will be \$225 million."

She added that they were considering using design-build for this section. "We design the plans 100 percent now, but for the I-170/Hwy 40 section, we are considering the option of having whoever gets the bid use design build, which will make the process go faster."

Total cost for this corridor, including right of way and construction is \$550 million.

So, while we may have our roads "Smoother, Safer, Sooner," the big projects will take some time. **CNR**