

PAVING *the* WAY

A PUBLICATION OF THE PLANTMIX ASPHALT INDUSTRY OF KENTUCKY AND THE KENTUCKY ASPHALT PAVEMENT ALLIANCE

A Few Facts & Figures

By Brian K. Wood, Executive Director of PAIKY

Here are a few facts and figures about the nation's Interstate System from the Federal Highway Administration:

- The Sherman Minton Bridge on I-64 between Louisville and New Albany was named "the most beautiful long span bridge opened to traffic in 1961." That distinction came from the American Institute of Steel Construction.

I have a personal interest in this bridge since my grandfather, Robert H. Wood, P.E. was the Engineer of Record for this project. Employed by Hazelet & Erdal Consulting Engineers in Louisville, he supervised a team of engineers who designed the bridge – without the aid of modern computers – and stamped the final set of drawings.

- The Cochran Hill Tunnel in Louisville, which is now part of I-64, was originally completed in 1892. It was built under Cherokee Park and is one of the first known attempts to minimize environmental impact.
- I-95 connecting Florida and Maine passes through 15 states and the District of Columbia. That's the highest number of states tied by the Interstate ribbon; I-90 from Boston to Seattle is second, passing through 13 states.
- Generally, single- or two-digit numbers that are even are east-west routes. Those ending in odd numbers are north-south.
- The Interstate System includes approximately 15,000 interchanges.

(continued on next page)

Interstate System Celebrates Golden Anniversary

After World War I, a young Lieutenant Colonel in the U.S. Army, Dwight D. Eisenhower, joined a military convoy that took more than

two months to cross the United States along the old "Lincoln Highway." Crawling at a speed of 60 miles per day and encountering heat, mud, breakdowns and accidents, and bridgeless river crossings, Eisenhower's 1919 convoy traveled from Washington D.C. to San Francisco along roughly the same route as present-day I-80.



The difficulty of the experience led the young Eisenhower to believe the U.S. needed an improved roadway system. Those views were reinforced during World War II, when, as Supreme Commander of the Allied Forces in Europe, Gen. Eisenhower saw the superhighway system of the German autobahns and recognized "that old convoy had started me thinking about good, two-lane highways, but Germany had made me see the wisdom of broader ribbons across the land."

When Eisenhower became president, building an interstate highway system which would tie the nation together became a focus of his domestic policy. He signed the bill that started the construction of a National System of Interstate and Defense Highways on June 29, 1956.

Federal and state officials recently gathered in Bowling Green to commemorate the anniversary.

"We are celebrating an amazing public works project at this event," said Federal Highways Assistant Division Administrator

(continued on next page)

THIS ISSUE:

Interstate System	1
Asphalt Contributes	3
A Barrel of Crude Oil	4

A Few Facts & Figures *(continued)*

- I-45 is the shortest two-digit interstate ending in "5." It's a 285-mile route connecting Galveston and Dallas. I-30 is the shortest route ending in "0." It's 367 miles connect Fort Worth and Little Rock.
- Half of the 41,000-mile system was opened before 1966.
- New York has the most interstate routes (29) but Texas has the most interstate miles (3,233).
- The average daily traffic on interstate bridges is 1.9 billion vehicles.
- The Pennsylvania Turnpike is called the Grandfather of the Interstate System. It opened in 1940. Originally, it had no posted speed limit. When motorists asked toll booth attendants what the speed limit was, they were simply told, "Drive carefully."
- When President Eisenhower signed the Federal Aid Highway Act of 1956, he was in the hospital recovering from surgery for ileitis.
- In 1976, *Life Magazine* published a special edition "The 100 Events that Shaped America." The Interstate System was 98th. The Louisiana Purchase was first.
- The Eisenhower/Johnson Memorial Tunnel on I-70 in Colorado is the System's longest and is the highest point above sea level—more than 11,000 feet.



Interstate System *(continued)*

Dennis Luhrs. "Although the more than 46,000 miles of interstate highways are a little over one percent of our nation's roads, they carry more than 24 percent of all travel, including about 40 percent of total truck miles. Interstates typically carry 26 times the traffic per mile as the rest of the road system but with a fatality rate of roughly half."

"Creating the interstate system provided the United States with the first ever comprehensive standardized system of highways and signage," said Transportation Secretary Bill Nighbert. "The completion of this system greatly improved safety for the traveling motorist."

Although the Interstate System was supported by the Defense Department as a means of moving troops at the height of the Cold War, it was a civilian-focused initiative. But that has given rise to a popular myth that still persists. You've probably heard for years that one out of every five miles of Interstate has to be straight to accommodate planes taking off and landing. Simply not true according to the Federal Highway Administration.

Of course, as with all things that age, the Interstate System is in need of some attention—in some cases cosmetic, but in some, substantive rehabilitation. The asphalt industry stands ready to assist because it's uniquely qualified to provide a smooth driving surface that can be completed quickly so as to avoid as much disruption to motorists as possible.

You can find out more about the facts and myths behind the Interstate System at <http://www.fhwa.dot.gov/interstate/homepage.cfm>

Interstate Increases Highway Safety

In 1956, prior to the Interstate Highway system, there were 65 million cars in the USA resulting in accidents killing 40,100 people. In 2004, the number of cars more than doubled to 137 million and resulted in 42,800 deaths.

Since 1956, the growth in vehicle miles traveled (VMT) on our highways has been incredible. In fact, traffic on just the Interstate System alone has more than doubled in the past two decades—from 300 billion VMT to more than 700 billion in 2004. Yet the death rate per 100 million VMT continues to drop.

Asphalt Contributes To Military Operations

The Ft. Campbell military base is best known for the 101st Airborne Division – a group of men and women who have played a critical role in recent military operations in Iraq and throughout the Middle East.



Crews from The Rogers Group paving the main runway at Ft. Campbell

The base itself stretches over more than 105,000 acres in Kentucky and Tennessee. It provides training for both ground and air operations. Military preparedness is paramount to the success of any operation – when equipment and soldiers are deployed to other parts of the country and around the globe – the runway at Ft. Campbell is vital to the success of our military.

Whether it is a large C-130 cargo plane or a Blackhawk helicopter, the runway and taxiways at Ft. Campbell must perform on a moment's notice. The main runway measures 11,000 feet long and 200 feet wide. It also serves as an alternate landing location for NASA's Space Shuttle. Airport runway pavements must be carefully designed and properly constructed to stand up to such severe load conditions.

It's no accident that the runway at Ft. Campbell is paved with hot mix asphalt. Last rehabilitated in 1992, military personnel decided that the main runway should be milled and resurfaced in 2006. The

new pavement must meet the most stringent military specifications while minimizing disruptions to air-field operations.

Hopkinsville-based Rogers Group was selected to produce the asphalt mixture and pave the project. The existing runway was milled and then resurfaced to create an entirely new landing surface. Corps of Engineers specifications maintained strict requirements and tolerances for asphalt mixture properties, smoothness, and pavement density. Longitudinal joints (the seam

between adjoining sections of pavement) were trimmed with a special piece of equipment to create a perfect edge that will result in excellent performance.

The contractor was held to a statistical-based specification that requires the highest level of production consistency and pavement quality. Rogers Group produced a total of 60,000 tons of hot mix asphalt and met or exceeded all quality measures for the project. A Material Transfer Vehicle (MTV) was utilized to minimize mixture segregation and temperature segregation – resulting in the smoothest possible pavement.

Paving started on June 12 and was completed June 28. Testing for pavement smoothness indicates the completed runway far exceeds project specifications.

There is no doubt that asphalt pavements are a crucial element in military preparedness and our air-field facilities. Asphalt continues to be the medium of choice for its smoothness, speed of application, cost and durability.

Central KY Home To More Than Horses

Take a drive out Ironworks Pike in northern Fayette County and you'll see plenty of evidence of what Lexington is known for: rolling hills, plank fences and lots of horses. The Kentucky Horse Park is also there housing more than 20 national equine association headquarters.

What a lot of people don't know is that across the street is another national trade association—the Asphalt Institute, the international trade association of petroleum asphalt producers, manufacturers and affiliated businesses. Its mission is to promote the use, benefits and quality performance of petroleum asphalt, through engineering, research, marketing and educational activities, and through the resolution of issues affecting the industry.

Founded in 1919, the Institute's members represent 90 percent of the liquid asphalt produced in North America and an increasing percentage in international markets. The Institute provides five essential core services to Members—member connectivity, environmental oversight, represent industry and influence policy, member technical support and promote increased use of asphalt.

Asphalt Institute publications and seminars educate users and specifiers on proper practices for the design, construction, maintenance and rehabilitation of all types of asphalt pavements. Asphalt magazine (www.asphaltmagazine.com) reaches over 18,000 industry professionals with straightforward information on the very latest in materials and techniques for the asphalt industry.

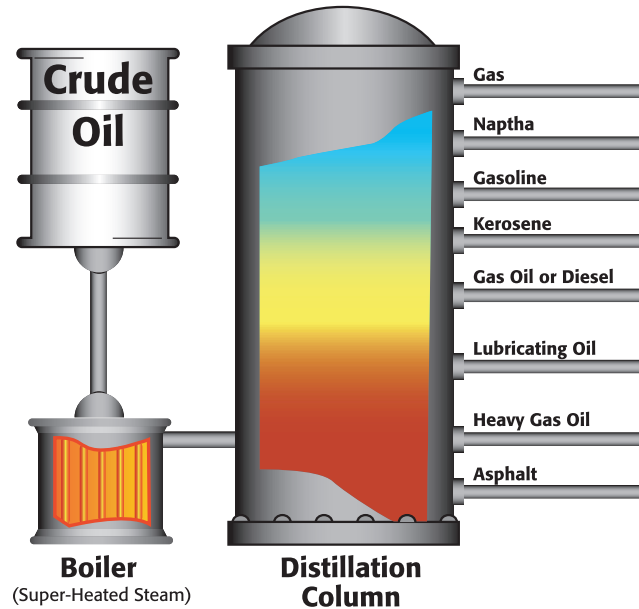
Learn more about the Institute and its work at:
<http://www.asphaltinstitute.org/index.asp>

A Barrel Of Crude Oil is a Marvelous Thing

During the refining process, crude oil is super-heated and different products are produced at different temperatures. For example, petroleum gases, such as propane, butane and methane, start separating at temperatures of less than 104 degrees.

As the temperature of the boiling crude continues to rise, other hydrocarbon-based fuels are recovered, including gasoline, kerosene and diesel, as well as lubricating and heavy oils.

At the end of the process, residuals are left, which include



liquid asphalt. The liquid asphalt is then used as a binder when mixed with aggregate and that's the hot mix asphalt we're all familiar with as a paving medium.

Since it is a product of the refining process, asphalt is subject to the volatility of crude oil prices, which can have a significant impact on a project's bottom line. Although it's only 5 percent of the materials in a standard mix, it represents about half of the cost.

PLANTMIX ASPHALT INDUSTRY OF KENTUCKY

P.O. Box 286
119 W. Broadway, Depot Place
Frankfort, KY 40602

PRESORT STD
U.S. POSTAGE
PAID
LEXINGTON, KY
PERMIT NO. 01

Tel (502) 223-3415
Fax (502) 223-2370
e-mail: info@paiky.org
www.paiky.org

Serving Kentucky Since 1938