Visibility and Warning

- Consider motorcyclist hazard warning signs. Signage targeted toward motorcyclists can warn of conditions that are especially hazardous for them. These might include uneven pavement surfaces, rumblestrips or crosswinds.
- Ensure visibility of signs and roadway markings. Keep in mind that many motorcycles have only a single headlamp for illumination.

The Integrated Safety Solution—Safe Drivers, Safe Vehicles, Safe Roads

Safer roadways are just a small part of the solution to reducing the alarming trend toward increased motorcyclist injuries and fatalities. Motorcyclists should equip themselves with helmets and other protective clothing and equipment, get professional training, maximize their conspicuity through lighting and apparel, obtain the proper motorcycle license, and absolutely never drink and ride. Motorcycles should be properly maintained and operated. All road users, including drivers, motorcycle riders, and pedestrians need to obey the rules of the road and respect the rights of all. Only by addressing the problem from all angles can we achieve the desired result of safer roadways for all users.

For More Information

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Roadway Safety for Motorcycles

Tips for Designing, Constructing, and Maintaining Roadways for Increased Motorcycle Safety

Safe Roads for a Safer Future
Investment in roadway safety saves lives

Motorcyclist Fatalities are Increasing Dramatically

The number and rate of motorcyclist deaths on U.S. roads are rising dramatically. Motorcycle rider fatalities rose 115 percent between 1997 and 2005. During the same time, fatality numbers and rates for passenger car crashes dropped (Figure 1).

In just one year—2005—motorcycle crash-related fatalities increased by 13 percent (to 4,553), making motorcycle rider fatalities a leading contributor, along with pedestrian fatalities, to the slight overall increase that year in the national highway fatality rate.

Trends accompanying the rising motorcyclist death toll include a dramatic increase in motorcycle ownership, particularly by riders over 40, along with changes in other factors such as motorcycle size and rider experience. The rate of increase in fatalities has outpaced the rate of increase in motorcycle registrations, and the death and injury rates among middle-aged motorcycle riders have increased most rapidly.

Roadway Factors for Safer Riding

Road design and maintenance factors can, and do, affect motorcycle crashes, injuries and fatalities. Design, construction, maintenance, and roadway practitioners can reduce hazards to motorcyclists and other road users by considering motorcyclist safety.

Pavement Surface

- Patch potholes promptly. Potholes pose a greater hazard to the operation of motorcycles than to larger vehicles.
- Specify pavement surfaces with adequate pavement friction. Examine the friction characteristics of asphalt sealants and of intersection markings. The use of thermoplastics, particularly for broad, horizontal intersection lines, can create slippery surfaces for motorcycles that stop at the intersections. Metal road surface components — either temporary or permanent — offer limited traction in many cases, and, when wet, are difficult to see.
- Reduce uneven road surfaces. Milled surfaces, parallel paving lane joints, parallel grids on bridges, steel plates, and other uneven roadway surfaces can be especially hazardous for motorcycles.
- Require tidy crack repairs. A motorcycle's traction can be seriously compromised by "tar snakes"—excess asphalt or other sealants used for crack repair.
- Remove debris and fluid spills quickly and thoroughly. Roadway debris and fluid spills pose greater hazards to the operation of motorcycles than to larger vehicles. Debris can deflect a motorcycle's wheel or hit the motorcyclist. Fluid spills can easily cause loss of traction.

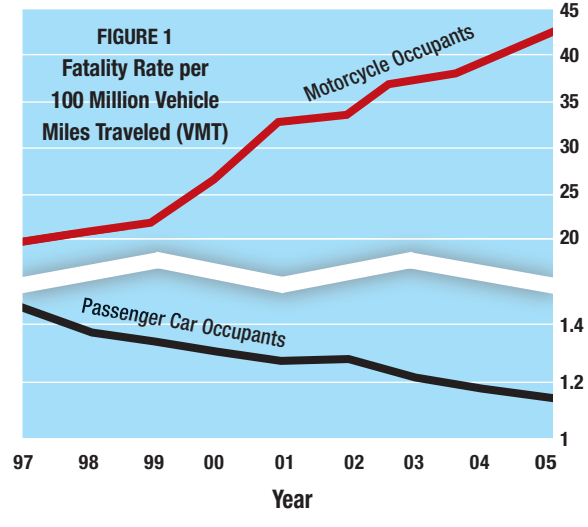

Figure 1 shows fatality rate trends for motorcycle occupants versus passenger car occupants. Between 1997 and 2005, fatality rates for motorcycle occupants rose 115 percent, to 42 fatalities per 100 million motorcycle VMT. During the same period, fatality rates for car occupants dropped steadily, to less than 1.2 fatalities per 100 million passenger car VMT.

Roadside Safety

- Install safety edges. Untapered vertical shoulder drop-offs are even more dangerous for motorcycles than for other vehicles. Adopting a standard contract specification requiring a 30-35° angle asphalt wedge along each side of the roadway in all construction and resurfacing projects is a simple and cost-effective way to assure pavement edge safety.
- Consider motorcyclist safety when designing roadsides. The potential impact on motorcycle riders should be considered in design and placement of roadside safety hardware, clear zones and side slopes, and other roadside safety strategies.