

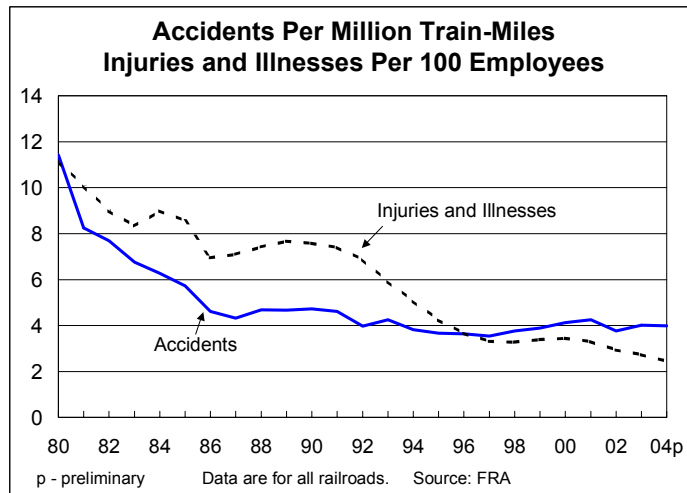
# Railroads: The Safe Way to Move

## Summary

Nothing is more important to our nation's freight railroads than the safety of their employees, customers, and the communities they serve. Through massive investments in technology and research and development, and by working cooperatively with their employees, the FRA, and others, railroads have made tremendous safety gains. Railroads today are one of our nation's safest industries.

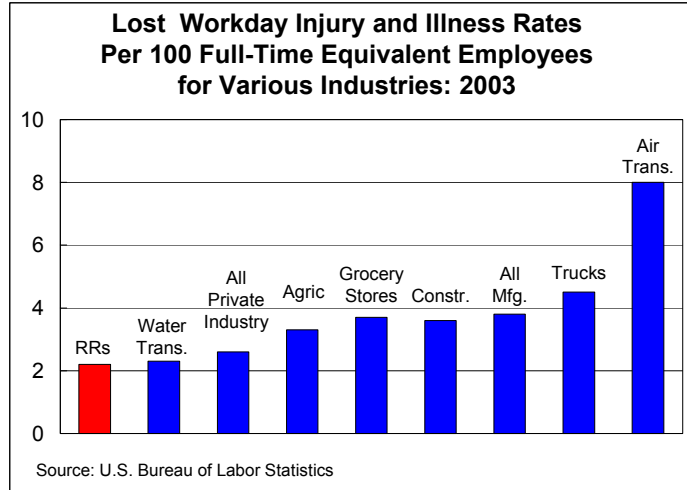
### Railroad Safety — A Record of Dramatic Improvement

- ▶ The overall rail industry safety record is excellent, reflecting the extraordinary importance railroads place on the safety of their employees and the communities they serve. The Federal Railroad Administration (FRA), the agency within the U.S. Department of Transportation (DOT) responsible for railroad safety, recognizes this point. In a June 2004 publication, the FRA stated "By nearly every indicator, long-term safety trends on the Nation's railroads appear very positive. Overall, the safety performance record of the nation's railroads has been one of continuous improvement."



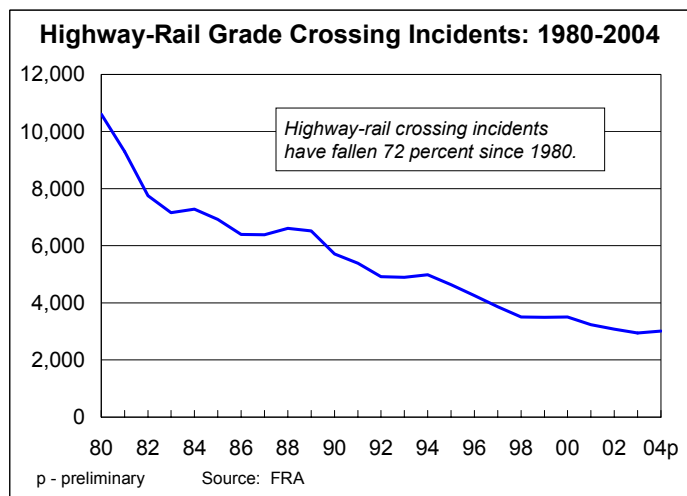
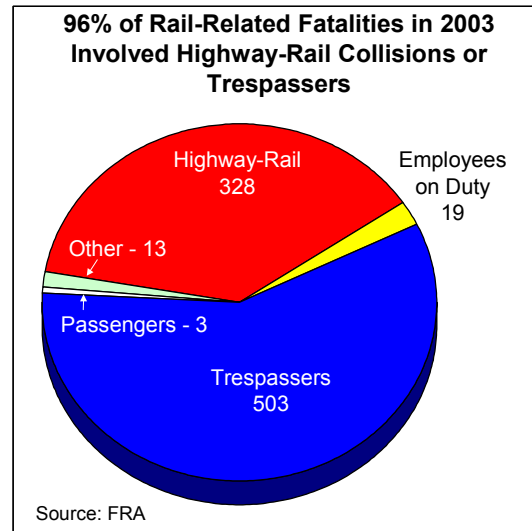
- ▶ FRA safety data confirm railroads' positive safety trends. From 1980-2004, railroads reduced their overall train accident rate by 65 percent and their rate of employee casualties by 78 percent. 2004 had the lowest rate of employee casualties on record.
- ▶ According to U.S. Bureau of Labor Statistics data, railroads have lower employee injury rates than other modes of transportation and most other major industry groups, including agriculture, construction, manufacturing, and private industry as a whole. Railroad injuries are no more severe than injuries in U.S. industry as a whole, and U.S. railroads have employee injury rates well below those of most major European railroads.

- ▶ These major improvements have come about precisely because railroads recognize their responsibilities regarding safety and devote enormous resources to its advancement. Through comprehensive employee training; massive investments in infrastructure and technology; cooperative efforts with labor, suppliers, customers, communities, and the FRA; cutting-edge research and development; and steadfast commitment to applicable laws and regulations, railroads are actively at the forefront of advancing safety.



### Highway-Rail Grade Crossings and Trespassers on Railroad Rights-of-Way

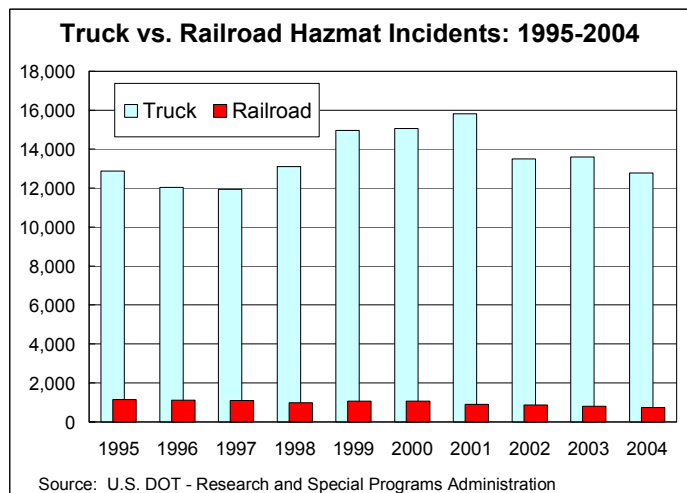
- ▶ Collisions at highway-rail grade crossings and incidents involving trespassers on railroad rights-of-way are critical safety problems. In 2003, these categories accounted for 96 percent of rail-related fatalities. Although these incidents generally arise from factors largely outside railroad control, railroads are determined to help find ways to reduce the frequency of crossing and trespasser accidents.
- ▶ The number of grade crossing accidents and casualties has fallen steadily over the years. From 1980 to 2004, the number of grade crossing collisions fell 72 percent, injuries fell 73 percent, and fatalities fell 56 percent. These reductions are the direct result of intensive efforts by railroads and others (especially Operation Lifesaver) to educate the public about the dangers of grade crossings; the closure or grade separation of thousands of grade crossings; and the Section 130 program, which provides federal funding for crossing improvements.



- ▶ Motorist behavior causes the vast majority of grade crossing accidents. According to a June 2004 report by the DOT's Office of Inspector General, "Risky driver behavior or poor judgment accounted for 31,035 or 94 percent of public grade crossing accidents" from 1994-2003. (The remaining 6 percent apparently consisted of vehicles stuck, stalled, or abandoned at crossings; pedestrian accidents; and accidents whose cause was unknown.) Consequently, grade crossing accident prevention has centered on improved warnings and educating the public about the consequences of their actions at crossings.
- ▶ States are responsible for surveying grade crossings and prioritizing them for improvement according to the level of hazard. The decision concerning which type of warning devices to install at which crossings is made by the state and approved by the Federal Highway Administration. Railroads provide information on train operations as an input to the governments' decisions. This allocation of responsibility is appropriate because grade crossing warning devices are highway traffic control devices there to protect motor vehicles, not trains, and because state highway officials, not railroads, possess the requisite data and expertise concerning traffic volumes and road building plans.
- ▶ Railroads spend more than \$200 million each year maintaining grade crossings, plus millions more on educational programs. They cooperate closely with state agencies to install and upgrade grade crossing warning devices and signals, and they (along with rail suppliers and the DOT) provide significant financial support to Operation Lifesaver.
- ▶ The high cost of active warning devices — approximately \$150,000, on average, per installation — limits the number of crossings at which they are installed. Research into improved low-cost grade crossing warning systems is continuing, but increased federal funding for highway-rail crossing hazard abatement through an expansion of the Section 130 program would permit additional crossings to be protected immediately.

### Railroads Work Hard to Ensure Hazmat Safety

- ▶ Railroads are the safest way to transport hazardous materials. Railroads and trucks carry roughly equal hazmat ton-mileage, but trucks have 16 times more hazmat releases than railroads. Railroads transport around 1.7 million carloads of hazmat each year, and 99.998 percent of such shipments reach their final destination without a release caused by an accident. Rail hazmat accident rates are down 90 percent since 1980 and 49 percent since 1990.
- ▶ Railroads use a variety of means to help ensure hazmat safety. For example, railroads and tank car builders and owners jointly fund the Tank Car Safety Research and Test Project. Among numerous other initiatives, the Project is participating in efforts to develop better steels for tank cars, over-the-road testing to measure the railroad operating



environment to refine tank car design requirements, and investigating the forces generated in accidents to better understand ways to further improve tank car damage resistance. Railroads also provide training to local emergency responders that assists communities in developing and evaluating emergency response plans.

### **Other Ways Railroads Are Improving Safety**

- ▶ Railroads are also actively pursuing technological advances to improve safety. These advances include new generation metallurgy for rails, trackside detectors that identify wheel bearing defects through acoustic signatures, improved draft gears and cushioning devices, improved tie fastening systems, wayside detectors that identify defects on passing rail cars before structural failure occurs, wheel profile monitors that use lasers and optics to show if wheel tread or flanges are worn, and many more.
- ▶ Many of these technological advances will be incorporated in the rail industry's new Advanced Technology Safety Initiative (ATSI), a predictive and proactive maintenance system designed to detect and report potential safety problems and poorly performing equipment before they result in accidents or undue rail damage.
- ▶ Railroads are addressing fatigue in the workplace by, for example, offering fatigue education programs, assigned work and rest days, sleep disorder screening, improved crew rest facilities, and more predictable crew calling windows; returning crews home rather than lodging them away from home; and running more scheduled trains.
- ▶ Railroads are actively pursuing reliable, cost-effective automatic train control systems. For example, the FRA, the Illinois DOT, and the Association of American Railroads are jointly funding, developing, testing, and implementing a train control system for a portion of a Union Pacific rail line from Chicago to St. Louis.
- ▶ Major U.S. railroads are deploying remote control locomotive technology (RCL) to improve safety. With RCL, personnel on the ground operate and control locomotives in rail yards through the use of hand-held transmitters that send signals to microprocessors on board the locomotives. In a May 2004 report on RCL safety, the FRA stated that "Preliminary data ... indicate the safety record of RCL operations over the past seven months ... has been quite positive, RCL train accident rates were found to be 13.5 percent lower than the train accident rates for conventional switching operations over the same time period, while employee injury rates were found to be an impressive 57.1 percent lower for RCL operations than for conventional switching operations."
- ▶ Railroads have developed a comprehensive Terrorism Risk Analysis and Security Management Plan. In recognition of the thoroughness of the plan and the dedication with which it has been put into effect, in June 2003 the Association of American Railroads was named a recipient of the U.S. Department of Defense's James S. Cogswell Award for Industrial Security, the most prestigious award in the industrial security field.
- ▶ Railroads work collaboratively with the FRA's Railroad Safety Advisory Committee to develop new regulatory standards, and with the FRA's Safety Assurance and Compliance Program to find the root causes of safety problems, develop cooperative solutions, and focus inspections and enforcement on the most serious safety risks.