

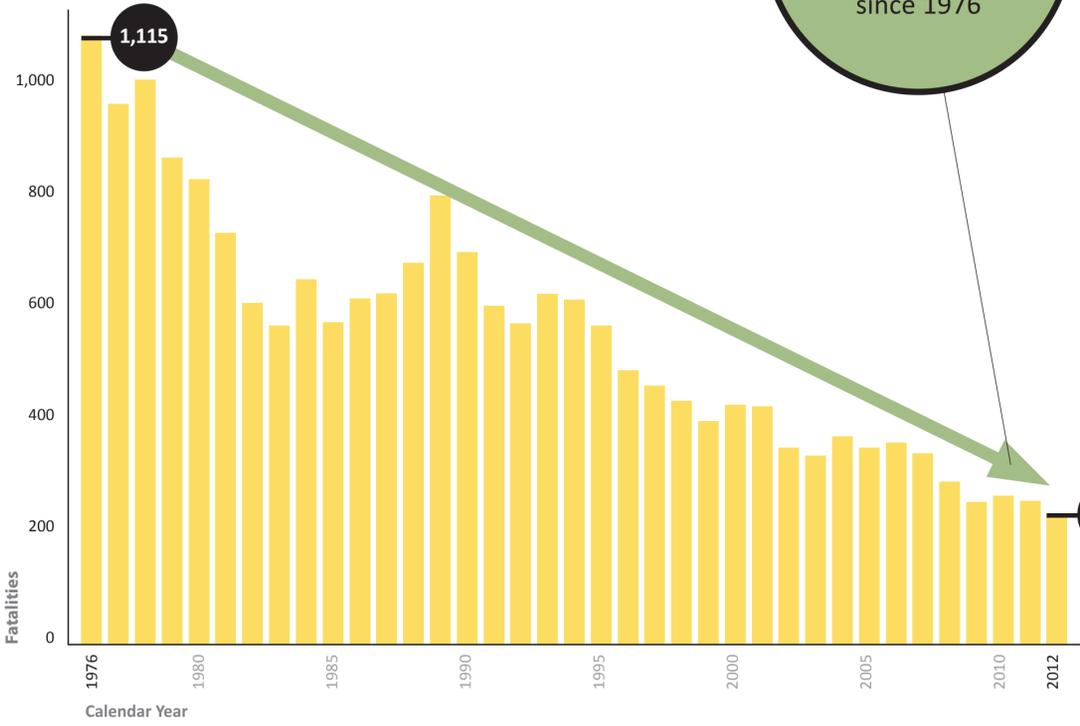
Highway-Rail Grade Crossing Safety and Trespass Prevention

Keeping People Safe Around Trains

For over 40 years, the U.S. DOT's **Federal Railroad Administration (FRA)** has looked to **Volpe, The National Transportation System Center**, to help reduce highway-rail grade crossing and trespassing incidents. Highway-rail crossing and trespasser deaths account for **95%** of all rail-related deaths—and most of these deaths are avoidable.

Highway-rail grade crossing fatalities have **dropped 79%** since 1976

Fatalities at U.S. Highway-Rail Grade Crossings



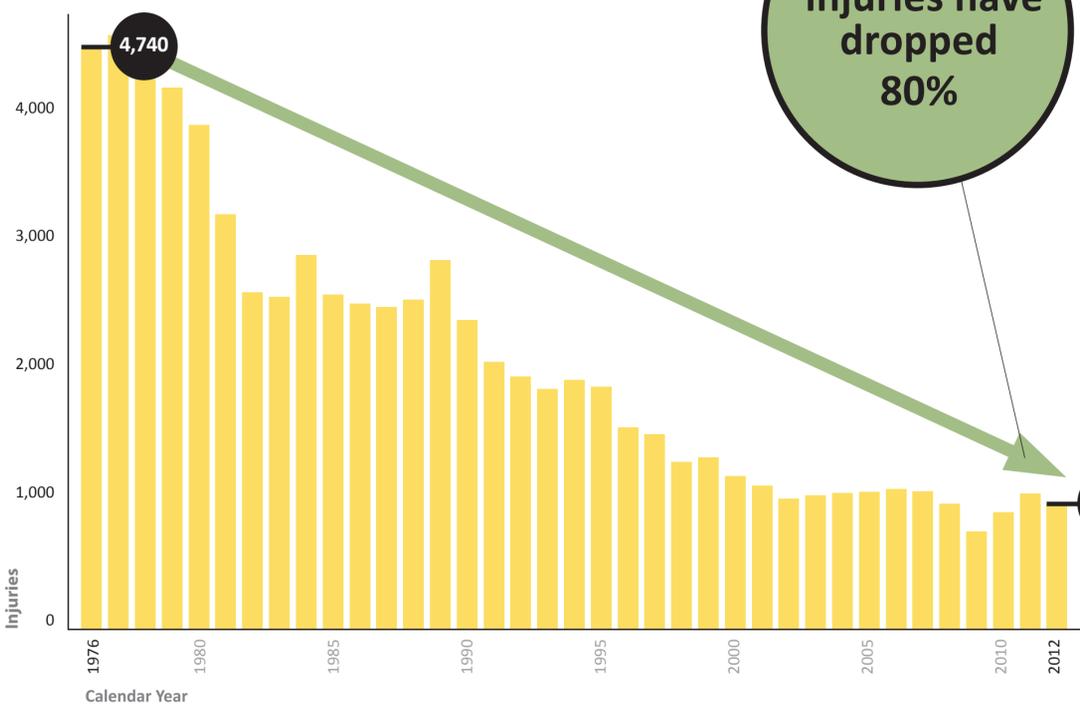
These reductions occurred while U.S. rail activity has significantly increased:

	1976	2012
Passenger Miles	5.6 billion	20.5 billion
Class 1 Ton-Miles	794 billion	1.7 trillion

- A **highway-rail grade crossing** is a location where railroad tracks intersect a public or private thoroughfare, sidewalk, or pathway.
- Every day, trains travel across more than 212,000 **highway-rail grade crossings**.

And, injuries have **dropped 80%**

Injuries at U.S. Highway-Rail Grade Crossings



Source: <http://safetydata.fra.dot.gov/officeofsafety/default.aspx>

The Volpe Role in Support of FRA



Volpe authors have contributed to more than **70 publications** on highway-rail grade crossing safety and trespass prevention



A second train pedestrian and motorist warning sign—an effort to reduce the number of fatalities by providing additional warnings about approaching rail traffic—is being tested by New Jersey Transit and evaluated by Volpe.



Florida DOT demonstrated and Volpe evaluated the safety impact of special pavement markings that create dynamic envelope zones. They are designed to reduce instances of vehicles stopping on crossings. Results show a significant safety improvement.



Volpe, in support of FRA and in collaboration with Vermont transportation entities, is conducting research into the effectiveness of enhanced grade crossing signs—a low-cost safety enhancement that could increase driver awareness at crossings without gates.



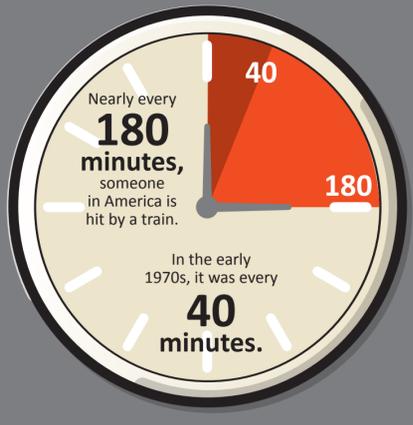
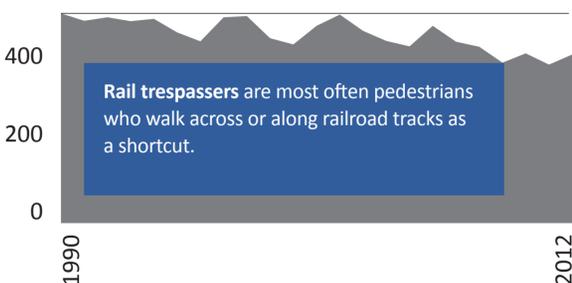
Volpe's evaluation of a pedestrian gate enhancement demonstrated by New Jersey Transit shows positive early results—a **55% reduction** in pedestrian violations at highway-rail grade crossings.

Work is Underway to Reduce Trespassing

As highway-rail grade crossing fatalities have declined, **trespassing on railroad property and along transit, commuter, and freight rail rights-of-way** has emerged as the leading cause of rail-related deaths in America.

Volpe is helping FRA develop a set of national recommendations or guidelines to address the trespass problem.

Railroad Trespassing Fatalities



always expect a train