

# NTSB Most Wanted List

Critical changes needed to reduce transportation accidents and save lives.

## *Preserve the Integrity of Transportation Infrastructure*

The National Transportation Safety Board is an independent Federal agency charged by Congress with investigating every civil aviation accident the United States and significant accidents in other modes of transportation – railroad, highway, marine and pipeline. The NTSB determines the probable cause of the accidents and issues safety recommendations aimed at preventing future accidents. In addition, the NTSB carries out special studies concerning transportation safety and coordinates the resources of the Federal Government and other organizations to provide assistance to victims and their family members impacted by major transportation disasters.



**National  
Transportation  
Safety Board**

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# Preserve the Integrity of Transportation Infrastructure

## What is the issue?

The transportation system is the backbone of America's economy. Every day, people, goods, and services move across the country through our skies, and on our highways, pipelines, railways, and waterways. The system includes more than 3,300 airports, more than 3.9 million miles of public roads, 2 million miles of oil and gas pipelines, 120,000 miles of major railroads, and over 25,000 miles of commercially navigable waterways. It is imperative that our more than 6 million miles of roadways, pipelines, track, and waterways be adequately inspected and maintained.

With aviation's rapid movement of people, goods and services it is vital that investments in technology, facilities, and runways be made. While inspection guidance exists in the United States, the inspection guidance provided for the owners and inspectors of the 600,000 bridges across the country is sometimes incomplete— which has contributed to disasters such as the 2007 collapse of a bridge in Minneapolis, Minnesota, which killed 13 people. Our pipeline infrastructure was installed decades ago, yet it continues to transport resources and energy supplies to residential and commercial customers. Eight people were killed in San Bruno, California, in 2010 due to a pipeline rupture and subsequent fire. On the railways, a cracked segment of track caused a train to derail 22 cars in February 2003 in Tamaroa, Illinois, which released toxic chemicals and required the evacuation of 850 people. These incidents are clear indicators that it is imperative to maintain the integrity of our infrastructure.

## What can be done...

We must invest in, maintain, and allocate appropriate resources to preserve our transportation infrastructure. When making these critical decisions, safety needs to have a seat at the table.

We are seeing a lot of recent investments in aviation infrastructure, but there are some key areas on which we should be focusing. For example, because of the encroachment on airports by their surrounding communities, appropriate airport runway safety areas should be proactively upgraded using an engineered materials arresting systems to prevent aircraft runway overruns that can lead to human injury and aircraft damage. The Federal Aviation Administration (FAA) can also take steps to improve weather information, particularly in harsh weather climates. For example, the FAA should correct deficiencies with the in-service automated weather sensor system (AWSS) stations, specifically the problems with present weather sensors and ceilometers, to ensure that the AWSS stations provide accurate information as soon as practical.

Other transportation modes also need to take steps to ensure that infrastructure can age gracefully and retain its structural integrity. For example, the Pipeline and Hazardous Materials Safety Administration can promote pipeline integrity management by requiring pipeline operators to establish robust and effective route inspection procedures. Operators should also make sure that supervisory

control and data acquisition systems are equipped to detect leaks and breaks. Railways also require periodic, standard inspection— from the tracks used to replace defective segments, to the track originally laid down, to even the railcars. But the highway network may present the largest problem in ensuring structural integrity. Although state and local governments control most roadways and bridges in the United States, highways serve as part of an integrated national network. It is, therefore, imperative that the Federal Highway Administration ensure that bridge inspector training is comprehensive and consistent across the country so that no issues are overlooked. Despite state and local governments owning roadways and bridges, there must be a national inspection standard that raises the bar of infrastructure integrity.

## Statistics

Consider the following information from the Bureau of Transportation Statistics. In 2010, 4.2 trillion passenger miles were traveled on our nation's roadways. With that mileage, you could take over 750 roundtrips to the planet Neptune. Another 389 million passenger miles occurred on ferryboats and 6.4 billion passenger miles on Amtrak and intercity rail. Domestic freight traffic carried by air, truck, rail, water, and pipeline totaled more than 4.3 trillion ton-miles. Maintaining the integrity of the roads, waterways, rails, and pipelines is critical to ensuring the safety of our families and friends and the security of our commercial goods.



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