

Funding of Highway Trust Fund Needs Fixing

by Todd Johnston,
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Memorial Causeway Bridge in Florida.
Photo: Portland Cement Association.

As Congress weighs implementation of a \$1.5 trillion infrastructure package, supporters of infrastructure spending are pushing for a long-term funding mechanism for the Highway Trust Fund (HTF).

As with many federal programs, the intent of the HTF was good, but its funding is insufficient to maintain the current system of U.S. highways and bridges, let alone build a modern system. In fact, Congress has had to transfer \$140 billion into the HTF since 2008 to prevent its insolvency.

The HTF is funded through a number of sources, including a fixed-rate per-gallon excise tax on the sale of gasoline and diesel fuel; a sales tax on heavy trucks, trailers, and tires; and an annual heavy vehicle use tax for vehicles weighing more than 55,000 pounds. The primary source of funding is fuel fees, which have not been increased since 1993. According to the Congressional Budget Office, the HTF is projected to face a more than \$100 billion shortfall over the next decade. Because of this shortfall, a wide-ranging coalition of transportation, business, and labor organizations—including the Portland Cement Association (PCA) and the Precast/Prestressed Concrete Institute (PCI)—are urging lawmakers to fix the funding of the HTF as part of an infrastructure package.

Among other reasons, it is imperative that Congress provide funding for the HTF to pay for the thousands of bridges that are needed across the nation. By adding lanes or building new bridges, the total area of bridges in the United States has been growing during the past 10 years at an annual rate of nearly 42 million square feet. Unfortunately, even this level of new bridge construction and expansion has not kept pace with demographic growth. A 2017 analysis by PCA noted several factors that underpin the need for more bridges. By 2040, PCA forecasts:

- An increase in the nation's baseline population of 59 million people (a 17.4% increase)
- Nearly 40 million more licensed drivers
- Nearly 53 million more vehicles on the roads
- An increase in the total number of annual vehicle miles traveled of 600 billion

There are currently more than 610,000 highway bridges in the United States. As population and the number of drivers on the road increase, so will the total number of vehicle miles traveled and the number of bridge crossings. PCA's forecast shows that the number of bridge crossings is expected to increase from 733 billion in 2015 to nearly 867 billion by 2040. The combination

of increased crossings and rising vehicle weights will accelerate bridge wear and tear, meaning more existing bridges will become structurally deficient earlier in their lives. Thus, PCA anticipates the need for 140,000 new or replacement bridges by 2040, with at least 70% of these having concrete superstructures.

Our nation's bridges are just one of the critical needs of our transportation system. None of the issues will be adequately addressed, however, if the HTF remains insolvent. That is why lawmakers need to take advantage of this opportunity to address the HTF's long-term funding challenges.

Talk of funds, bridges, and highways obscures the fundamental issue in the infrastructure debate—in the final analysis, the issue is about people. A robust, modern transportation system stimulates economic development and raises standards of living. That is good for everyone, including the men and women who work in the cement and concrete industry and the communities where they live.

Cement and concrete product manufacturing, directly and indirectly, employ approximately half a million people, and our collective industries contribute approximately \$100 billion to the U.S. economy. The U.S. cement industry has an extensive presence across the country, with more than 90

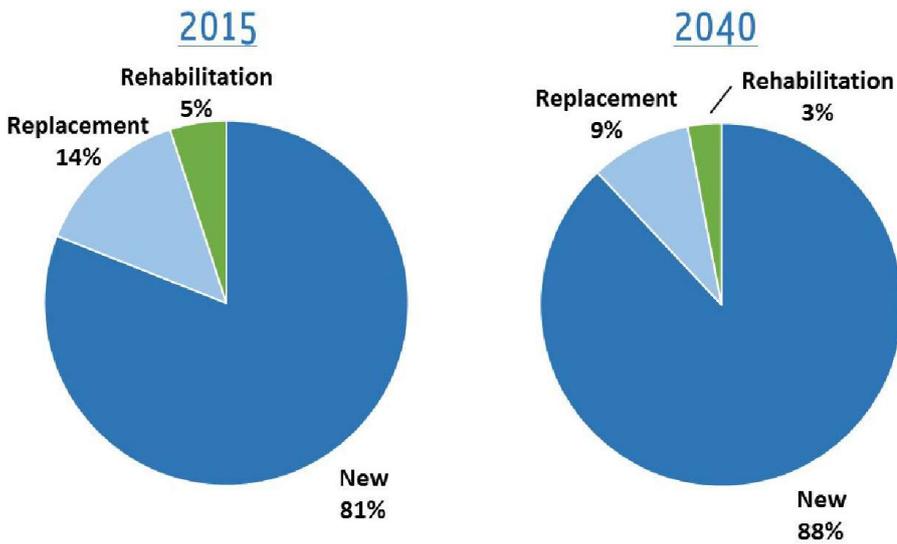
manufacturing plants in 32 states and distribution facilities in every state.

As part of PCA's message to lawmakers on the need for a robust infrastructure package, we stress the direct economic

benefits for the cement workforce and its communities. In terms of the bridge market's importance to the entire U.S. cement industry, the bridge market now accounts for 7.5% of the total United States cement market—up

from 3.7% in 2000. In 2015, roughly 81% of bridge cement consumption was attributed to new construction, 14% to bridge replacement, and 5% to bridge rehabilitation. In 2040 PCA projects that 88% will be attributed to new bridges, 9% to bridge replacement, and 3% to bridge rehabilitation. To meet that demand PCA expects cement consumption in the bridge sector to increase by an average of 0.3% annually through 2040. ▲

Cement Consumption in Bridge Construction



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EDITOR'S NOTE

The term "structurally deficient," which has been used for many years to characterize the condition of U.S. bridges that are in some state of disrepair, is no longer used in federal regulations, as discussed in the FHWA article appearing on this issue of ASPIRE®.



2018 CONCRETE BRIDGE AWARDS COMPETITION



The Portland Cement Association invites entries for its
Sixteenth Biennial Bridge Awards Competition
 to recognize excellence in design and
 construction of concrete bridges.



ELIGIBILITY: Eligible structures for the 2018 competition must have been essentially completed between October 2015 and December 2017 and must be located within the United States.

BRIDGE CRITERIA: All types of bridges—highway, rail, transit, pedestrian, and wildlife crossing—in which the basic structural system is concrete are eligible. Entries are equally encouraged for cast-in-place or precast concrete bridges with short, medium, or long spans. Newly constructed, reconstructed, or widened structures qualify for the competition.

WHO MAY ENTER: Any organization, public or private, may enter and may submit multiple entries. Note that written evidence of the agreement by the owner agency to the submission of each entry shall be included with each entry.

RULES OF ENTRY: See online entry form at www.cement.org/bridges.

Entry fee of \$250 per submission.

Deadline: Entries are due July 31, 2018.

JUDGING: Selection of winners will be made by a jury of distinguished professionals. Awards will be made in recognition of creativity and skillfulness in the structural, functional, aesthetic, sustainable, and economic design of concrete bridges. Consideration will also be given for innovative construction methods, including accelerated bridge construction.

AWARDS:

Multiple Awards of Excellence will reflect the diverse ways concrete is used in bridges.