

# GAO Highlights

Highlights of [GAO-17-707](#), a report to congressional committees

## Why GAO Did This Study

Over 600,000 bridges carry the nation's passenger car, bus and commercial vehicle traffic over waterways, highways, and railways. Large bridges are typically located on heavily used highways and some are in need of repair or replacement, which can be resource intensive. In addition, the nation's surface transportation system is under growing strain and funding it is on GAO's High Risk list.

GAO was asked to review major bridge projects. This report examines (1) condition trends over the past 10 years for the nation's large bridges and (2) challenges states reported facing in constructing or completing major bridge projects in the past 5 years, as well as state and FHWA strategies to address those challenges.

GAO analyzed federal bridge data for the top 1 percent of bridges defined by deck area and surveyed transportation departments in all 50 states, the District of Columbia, and Puerto Rico to identify recent and ongoing major bridge projects. For those states identifying applicable major bridge projects, the survey asked for further information on challenges faced. GAO also conducted interviews with federal and state transportation officials involved with 8 projects in 5 states, selected to include various design and contracting methods, among other criteria.

GAO provided a draft of this report to the U.S. Department of Transportation (DOT) for comment. DOT provided technical comments, which were incorporated as appropriate.

View [GAO-17-707](#). For more information, contact Mark Goldstein at (202) 512-2834 or [GoldsteinM@gao.gov](mailto:GoldsteinM@gao.gov).

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## HIGHWAY BRIDGES

### Major Projects Present Challenges for States, but Strategies Exist to Overcome Them

## What GAO Found

The condition of the nation's "large bridges"—defined as those that make up the top 1 percent of bridges in deck area (the surface area that carries vehicles)—has improved since 2007, based on GAO analysis of federal bridge data. From 2007 through 2016, the percentage of deck area on those bridges that the Federal Highway Administration (FHWA) identified as structurally deficient (i.e., one or more components of the bridge is in poor condition) declined from 11.2 to 7.5 percent. However, the condition of large bridges varies by location and age. Some states have substantially higher percentages of deck area that is structurally deficient on large bridges than other states. This could be due to bridge age, climate, or other factors. Because the number of large bridges and amount of total deck area increased dramatically from the 1950s through the 1970s, with bridges generally built with a design-life of 50 years, the condition of large bridges may become more challenging to address as these bridges age. GAO analysis of federal bridge data shows that the amount of deck area on large bridges that is structurally deficient is greatest for bridges built from 1957 through 1976, indicating a need for maintenance, rehabilitation, or replacement.

State departments of transportation reported facing challenges on major bridge projects they constructed or completed in the past 5 years, but identified state and FHWA strategies used to address them. Specifically, 13 of the 52 transportation departments GAO surveyed, including the District of Columbia and Puerto Rico, reported constructing or completing 19 major bridge projects in the past 5 years. GAO defined a "major bridge project" as a project on a large bridge that: (1) receives federal financial assistance, (2) meets or exceeds \$500 million in total cost, and (3) focuses primarily on the bridge. See examples of major bridge projects below. State respondents rated four factors—public opposition, availability of funding, right-of-way acquisition, and obtaining environmental permits—as the most challenging. However, for each of these factors, states and FHWA identified strategies they used to address it. For example, to overcome public opposition to tolling on the Ohio River Bridges project, Kentucky officials held numerous public meetings and provided access to the project and the decision-making process through social media. Other states reported benefiting from FHWA's project oversight manager program, which assigns an FHWA manager to a major bridge project to help the state transportation department navigate federal requirements.

#### Examples of Major Bridge Project Designs in California, Indiana and Kentucky, and Washington

**Self-anchored suspension bridge:** San Francisco-Oakland Bay Bridge, East Span

**Cable-stayed bridge:** Louisville-Southern Indiana Ohio River Bridges Project, Downtown Crossing

**Floating bridge:** State Route 520 Floating Bridge



Sources: Federal Highway Administration (left), GAO (middle), and Washington State Department of Transportation (right). | GAO-17-707