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Baltimore Bridge Collapse: Frequently Asked Questions (FAQ)

At about 1:30 a.m. on March 26, 2024, the MV *Dali*, a container ship departing the Port of Baltimore, struck a support tower of the Francis Scott Key Bridge in Baltimore, MD, causing the bridge to collapse into the Patapsco River. The bridge is a segment of Interstate 695—Baltimore’s beltway—and spans over the Patapsco shipping channel into the harbor.

A pothole repair crew of eight was on the bridge at the time of the collision. Two have survived; one with injuries. Authorities were able to stop traffic over the bridge right before the vessel strike. There were 23 mariners aboard the ship and none sustained injury. A Unified Command and Joint Information Center have been established by the U.S. Coast Guard and Maryland state officials to coordinate response and disseminate information on the incident.

Who Owns and Controls the Ship?

The *Dali* is being chartered (leased) by Maersk, a Danish shipping firm that provides container shipping services worldwide in addition to other types of shipping. The ship is managed by the Synergy Marine Group and owned by Grace Ocean Private Ltd., both based in Singapore. The ship’s crew are from India. It is flagged and homeported in Singapore and was “classed” (meaning certified as meeting construction and maintenance standards) by a Japanese firm, Nippon Kaiji Kyokai (Class NK). The multitude of nationalities involved in operating and administering the ship is typical of the industry.

The ship was built in 2015 by Hyundai Heavy Industries in South Korea (IMO identification number 9697428) with a MAN-manufactured engine. It is almost 950 feet in length and about 160 feet in breadth with a capacity to carry 10,000 TEUs of containers (a TEU is a 20-foot container). It could be considered an average-sized container ship today but would be considered a large ship compared with the fleet in the late 1970s when the bridge was built. The ship had sailed from Asia through the Panama Canal and had called at Norfolk and New York before its Baltimore port call. When it struck the bridge, the ship was departing Baltimore for Sri Lanka.

How Do Ships Navigate Through Harbors?

A preliminary report stated that the ship lost power as it was approaching the bridge, meaning the ship may have lost propulsion. Two Baltimore harbor pilots were aboard the ship; harbor pilots navigate ships in and out of harbors because they have expertise with local navigation conditions. Even when harbor pilots are at the helm, the captain of the ship and the shipping line (Maersk) remain responsible for the safety of the vessel. Tugs typically assist in moving ships into and out of their berths (docking and

undocking) and rarely escort ships through harbors as an emergency safety measure. This ship released the tugs before reaching the bridge as is reportedly normal in the harbor.

How Will Port Traffic Be Affected?

The Port of Baltimore was the 17th busiest port by total tonnage in the United States in 2021, the most recent year for which data are available. It was the 10th busiest by dry bulk tonnage and the 15th busiest container port in TEUs. According to the Maryland Port Administration, the port ranks first among the nation’s ports for autos and light truck volume, roll on/roll off farm and construction machinery, and imported gypsum. It is also responsible for nearly \$3.3 billion in personal wages and salaries, \$2.6 billion in business revenue, and nearly \$400 million in state and local tax revenue annually.

Containers currently at the port awaiting export could be moved to other ports by truck or rail; one of the Port of Baltimore’s two container terminals is served by on-dock rail access. Dry bulk—such as coal, the largest commodity by volume handled by the port—and roll on/roll off may be more difficult to move through other ports, as specialized facilities are needed for loading and unloading. The closest large ports to Baltimore are Wilmington, DE; Philadelphia, PA; and Camden, NJ, all of which may be accessed via the Chesapeake and Delaware Canal provided the vessels have a shallow enough draft. Another nearby port, not draft restricted, is the port of Norfolk near the entrance to Chesapeake Bay.

Currently, commercial vessels are unable to enter or exit the Port of Baltimore. Also, the U.S. Coast Guard shipyard at Hawkins Point on Curtis Bay is upriver from the bridge, and six vessels of the U.S. Department of Transportation’s Ready Reserve Force (available to provide surge sealift capacity to the Department of Defense, if needed) were berthed in Baltimore as of January 2024 and presumably are currently unable to exit the port.

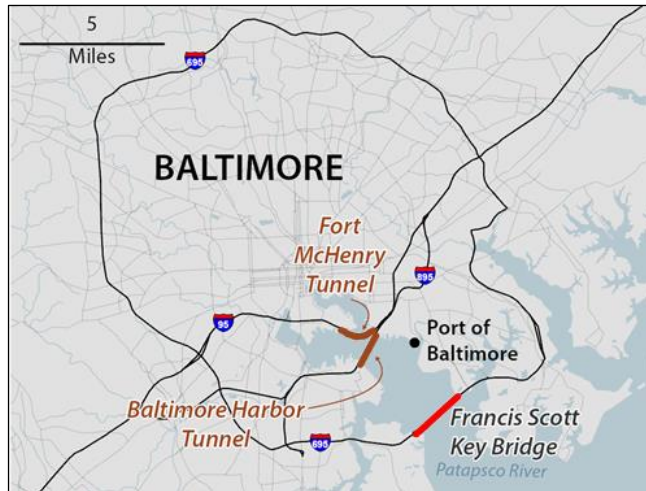
How Will Road Traffic Be Affected?

The Key Bridge first opened to traffic in 1977, spanning the Patapsco River connecting Interstate 695 on the southeastern side of Baltimore (see **Figure 1**). It had annual average daily traffic over 30,000 vehicles in 2023, including over 3,000 trucks per day. It was less heavily used than the Fort McHenry and Baltimore Harbor Tunnels running under the Patapsco River further north.

Highway traffic could be rerouted through the Baltimore Harbor or Fort McHenry Tunnels or on Interstate 695 to the north of Baltimore City. Some larger vehicles, including all double-trailers, and most shipments of hazardous materials

are not permitted in the tunnels, and trucks are not allowed through the Baltimore Harbor Tunnel.

Figure 1. Map of Baltimore Transportation Facilities



Source: Created by CRS using data from the U.S. Census Bureau and ESRI.

Notes: The Fort McHenry and Baltimore Harbor Tunnels are marked in brown on the map, and the location of the Key Bridge is marked in red. The Key Bridge location is in line with the southeastern edge of Interstate 695.

Has Anything Like This Happened Before?

In May 1980, the bulk freighter MV *Summit Venture* struck a support column of the Sunshine Skyway Bridge in Tampa, FL, causing a large portion of the bridge span to collapse and resulting in 35 fatalities. Federal investigators concluded that the probable cause of the collision was unexpectedly sudden and severe weather. Other bridges have collapsed, leading to disruptions in maritime and highway transportation as well. The Tampa incident led to the publication of new bridge design guidance for withstanding vessel impacts, but it is not yet known whether the Key Bridge—built before this guidance existed—could have withstood the *Dali*'s impact even if it conformed to current design best practices.

What Immediate Actions Can the Federal Government Take?

The U.S. Coast Guard shares responsibilities with the National Transportation Safety Board (NTSB) to investigate major safety incidents. Under the NTSB's governing statutes and regulations, the agency shall investigate any "major marine casualty," defined as one that results in the loss of six or more lives, the loss of a vessel larger than 100 gross tons, property damage initially estimated as at least \$0.5 million, or a release of hazardous materials deemed to be a serious threat. The U.S. Coast Guard is directed to conduct a preliminary investigation to determine whether a major marine casualty event has occurred and notify the NTSB accordingly. The NTSB has stated it will take 12 to 24 months to fully investigate this incident and has released an initial timeline of the incident.

The U.S. Army Corps of Engineers (USACE) is managing bridge debris removal for the congressionally authorized

50-foot-depth navigation channel, initially using existing USACE Baltimore Harbor and Channels project funds. No timeline or cost estimate for clearing the federal channel is currently available. USACE anticipates employing both federal and contracted assets and expertise (e.g., U.S. Navy Supervisor of Salvage and Diving team and heavy-lift cranes).

What Is the Federal Government's Role in Rebuilding the Bridge?

Rebuilding the Key Bridge would require permits from federal agencies, and these authorizations would normally require review under the National Environmental Policy Act (NEPA). However, replacement of a damaged or destroyed bridge may be granted a "categorical exclusion" (CE) exempting it from further NEPA reviews if certain conditions are met. To qualify for a CE, work must begin within two years of an emergency declaration and occur "within the existing right-of-way and in a manner that substantially conforms to the preexisting design, function, and location as the original (which may include upgrades to meet existing codes and standards as well as upgrades warranted to address conditions that have changed since the original construction)."

After the I-35W bridge in Minneapolis collapsed in 2007, a new bridge was completed in 11 months, which was 3 months ahead of schedule. The Federal Highway Administration (FHWA) credits a project scope that qualified for a CE with accelerating project delivery. A new Sunshine Skyway Bridge took five years to complete, but traffic could resume at reduced capacity on a parallel span that did not collapse.

Federal funding may also be available for bridge replacement. FHWA's Emergency Relief (ER) Program receives approximately \$100 million per year from the Highway Trust Fund. Congress has periodically provided additional funds to respond to specific incidents. Any damages or insurance payouts recouped by a bridge owner would be used to offset any ER funds awarded. Before submitting a standard ER application, state transportation officials can submit a streamlined application for "Quick Release" funds to cover emergency operations; the state of Maryland has applied for and received \$60 million in such funds.

Under the ER Program, federal funds can cover 90% of project costs for interstate highways and 80% for other federal-aid highways. Although the Key Bridge is a segment of Interstate 695, the portion that includes the bridge is a state highway, so the maximum federal share could be 80%. However, if the total expenses Maryland incurs to deal with disaster-damaged roads in FY2024 exceed the state's total federal-aid highway formula funds (\$828,287,771 for FY2024), the maximum federal share could increase to 90%. In the past, Congress has made exceptions allowing ER funds to cover 100% of costs for specific projects, as it did for the I-35W bridge project (see P.L. 110-56).

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