

CHESAPEAKE BAY BRIDGE–TUNNEL

The Chesapeake Bay Bridge–Tunnel (CBBT) is a 17.6-mile (28.3 km) bridge–tunnel crossing at the mouth of the Chesapeake Bay, the Hampton Roads harbor, and nearby mouths of the James and Elizabeth rivers in the U.S. state of Virginia. It connects Northampton County on the Delmarva Peninsula and Eastern Shore with Virginia Beach, Norfolk, Chesapeake, and Portsmouth on the western shore and south side/Tidewater, which are part of the Hampton Roads metropolitan area of eight close cities around the harbor's shores and peninsula. The bridge–tunnel originally combined 12 miles (19 km) of trestle, two one-mile-long (1.6 km) tunnels, four artificial islands, four high-level bridges, approximately two miles (3.2 km) of causeway, and 5.5 miles (8.9 km) of northeast and southwest approach roads crossing the Chesapeake Bay and preserving traffic on the Thimble Shoals and Chesapeake dredged shipping channels leading to the Atlantic. It replaced vehicle ferry services that operated from South Hampton Roads and from the Virginia Peninsula since the 1930s. Financed by toll revenue bonds, the bridge-tunnel was opened on April 15, 1964, and remains one of only 12 bridge–tunnel systems in the world, three of which are located in the water-dominated Hampton Roads area of Tidewater Virginia.



HISTORY

In December 1606, the Virginia Company of London sent an expedition to North

America to establish a settlement in the Colony of Virginia. After sailing across the Atlantic Ocean from England, they reached the New World at the southern edge of the mouth of what is now known as the Chesapeake Bay.[4] They named the two flanking Virginia points of land /capes like gateposts at the entrance to the long extensive estuary after the sons of their king, James I, the southern Cape Henry, for the eldest and presumed heir, Henry Frederick, Prince of Wales, and the northern Cape Charles, for his younger brother, Charles, Duke of York (the future King Charles I). A few weeks later they established their first permanent settlement on the southern, mainland, side of the bay, several miles upstream along the newly named James River at Jamestown on the northern shore on a close-in island for protection, the first permanent settlement in English North America.

Across the bay, the area north of Cape Charles was located along what became known later as the Delmarva Peninsula. As it bordered the Atlantic Ocean to its east, the region became known as Virginia and neighboring Maryland's Eastern Shore. As the entire colony grew, the bay was a formidable transportation obstacle for exchanges with the Virginia mainland on the Western Shore. One of the eight original shires of Virginia, Accomac Shire was established there in 1634, eventually becoming the two counties of modern times, Accomack County in the north and Northampton County to the south. In comparison to mainland regions, commerce and growth was limited by the need to cross the Bay. Consequently, little industrial base grew there, with the oceanfront peninsula staying predominantly rural with small towns and villages oriented towards life on the waters, and most residents made their living by farming and working as watermen, both on the bay (locally known as the "bay side") and in the Atlantic Ocean ("sea side").

CONSTRUCTION

In mid-1960, the Chesapeake Bay Ferry Commission sold \$200 million in toll revenue bonds (equivalent to \$1.35 billion in 2019 dollars) to private investors, and the proceeds were used to finance the construction of the bridge-tunnel. Funds collected by future tolls were pledged to pay the principal and interest on the bonds. No local, state, or federal tax funds were used in the construction of the project.

Construction contracts were awarded to a consortium of Tidewater Construction Corporation and Merritt-Chapman & Scott Corporation. The steel superstructure for the high-level bridges near



the north end of the crossing were fabricated by the American Bridge Division of United States Steel Corporation. Construction of the bridge–tunnel began in October 1960 after a six-month process of assembling necessary equipment from worldwide sources. The tunnels were constructed using the technique refined by Ole Singstad with the Baltimore Harbor Tunnel, whereby a large ditch was first dug for each tunnel, into which was lowered pre-fabricated tunnel sections cable-suspended from overhead barges. Interior chambers were filled with water to lower the sections, the sections then aligned, bolted together by divers, the water pumped out, and the tunnels finally covered with earth.

The construction was accomplished under the severe conditions imposed by nor'easters, hurricanes, and the unpredictable Atlantic Ocean. During the Ash Wednesday Storm of 1962, much of the partially completed work and a major piece of custom-built equipment, a pile driver barge called "The Big D", were destroyed. Seven workers were killed at various times during the construction. In April 1964, 42 months after construction began, the Chesapeake Bay Bridge–Tunnel opened to traffic and the ferry service discontinued.