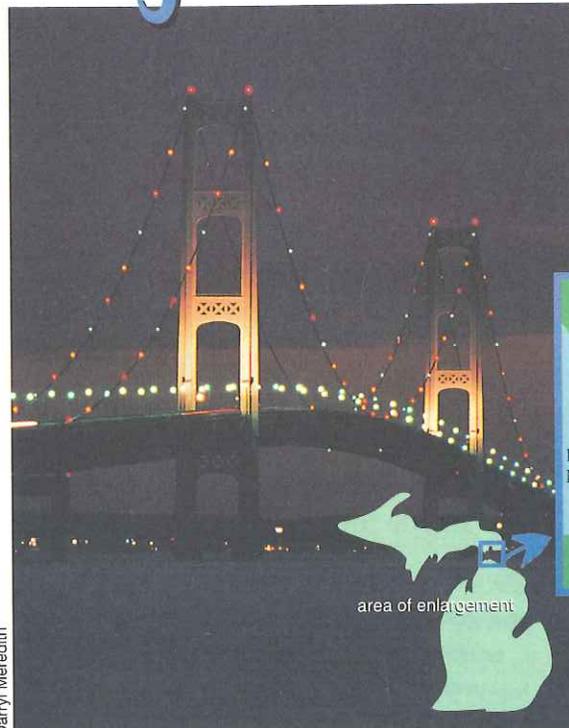




THE Mighty MAC

For years, the Straits of Mackinac presented a difficult barrier to travel between the Upper and Lower Peninsulas. When railroads introduced car ferries (boats that carried railroad cars) in the 1880s, it became easier to cross the straits. In 1923, the State Highway Department started a ferry service for passenger cars. However, as more people wanted to cross the straits, especially during deer-hunting season, the wait to board a ferry took hours.

People discussed building a bridge across the five-mile straits for years. One early plan called for a series of bridges linking the peninsulas via Mackinac and Bois Blanc islands. In the 1950s, Governor G. Mennen Williams established the Mackinac Bridge Authority.



Darryl Meredith

They decided to build a bridge across the Straits of Mackinac.

To deal with the area's high winds and grinding ice, engineers proposed a suspension bridge. A suspension bridge is where the roadway is hung or suspended from cables that are held in place by the bridge's two towers.

Construction of the Mackinac Bridge began in March 1954. Except for

the winter months, work continued for more than three years.

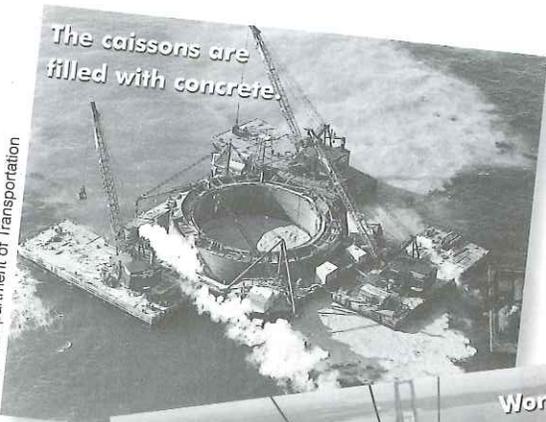
When the Mackinac Bridge opened to traffic on November 1, 1957, it became the world's longest suspension bridge. The Golden Gate Bridge in California and the Verrazano-Narrows Bridge in



New York both have longer suspension spans than the Mackinac Bridge, but "Mighty Mac" (as the bridge was soon called) is the longest overall. It measures 8,614 feet between the cable **anchorages** on either end. The total length of the bridge, including the **approaches**, is about five miles.

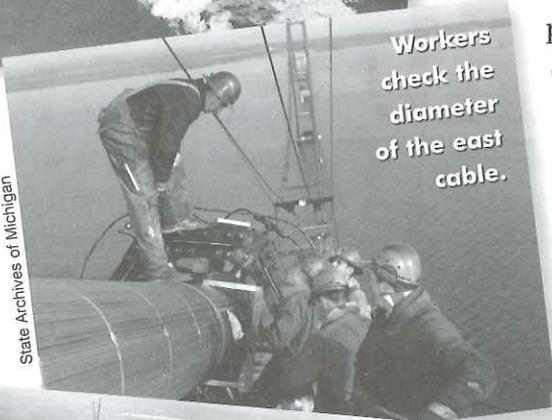
The Mackinac Bridge made travel between the Upper and Lower Peninsulas much easier. Today, it is one of Michigan's best-known landmarks.

Michigan Department of Transportation



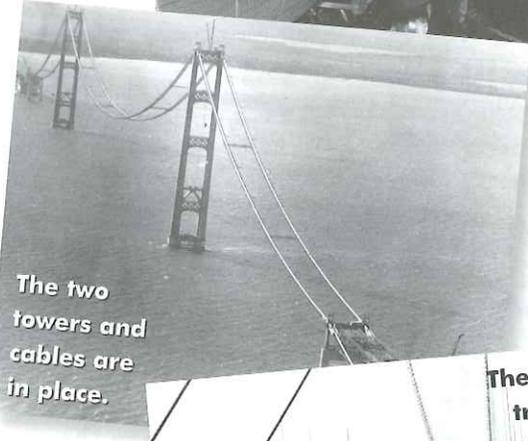
The caissons are filled with concrete

State Archives of Michigan



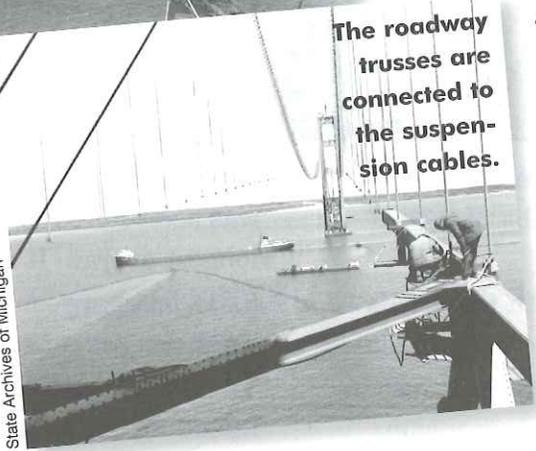
Workers check the diameter of the east cable.

State Archives of Michigan



The two towers and cables are in place.

State Archives of Michigan



The roadway trusses are connected to the suspension cables.

In 1954, five million rivets, one million bolts, steel cables long enough to circle the equator twice, hundreds of steel beams and more than a thousand workers were brought to Michigan from all over the country. For the next three and one-half years, workers assembled the pieces—like an erector set—across the Straits of Mackinac.

The first step was to build the underwater supports called caissons. These caissons supported the entire weight of the bridge, so they needed a solid footing on the bedrock beneath the muddy lake bottom. The caissons were made by sinking steel frames to the bottom of the lake and filling them with crushed rock and concrete. The mud and water were scooped out as they sank.

The towers were made in sections and brought to Mackinac on railroad flatcars. “The Creeper,” a platform with a 90-foot lifting boom, built the towers. The machine lifted pieces of the tower up into place and workers welded them together.

Narrow “catwalks” were built from tower to tower. Workers walked out on these to build the main cables. Each cable had to be “spun” on-site because its total weight of 12,500 tons could not be lifted all at once. A wheeled trolley, or “spinning wheel,” took four wires on each trip across the straits. When finished, the giant cable was made of 12,580 wires. The cable ends were buried in concrete.

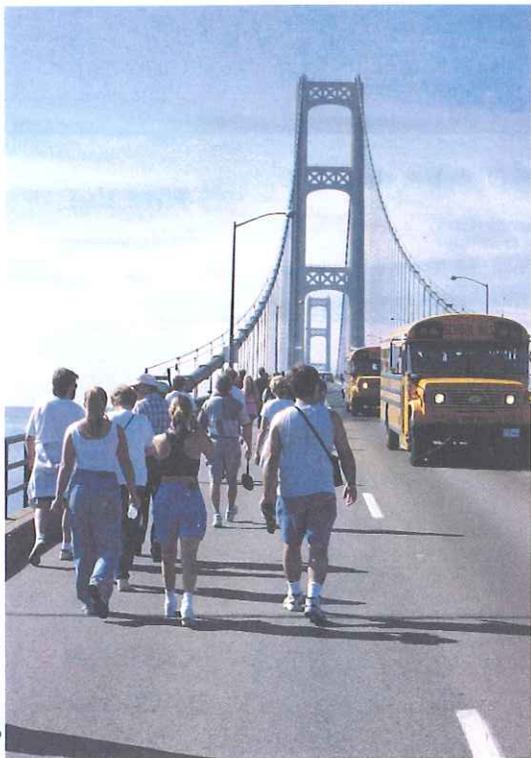
Long suspension cables were hung from the large cable to support the road. Steel **truss** spans were built from the north and south shores. The center trusses were brought out on barges. The trusses were then attached to the cables. Curbs, railings and asphalt were added. The bridge was painted and the Mighty Mac was complete.

Building Bridge

Labor Day BRIDGE WALK

The Labor Day Bridge Walk is an annual tradition for many Michiganians. It is the only time people are allowed to walk across the bridge. The walk is an adventure; the highest point above water is 199 feet and it is often windy.

The first walk was held in June 1958 as part of the Mackinac Bridge dedication activities. Governor G. Mennen Williams participated in the first walk, along with about 65 other people. In 1959, the date of the event was changed to Labor Day and it has been held on that day ever since. The record number of walkers was set in 1992 at about 82,000 persons.



Roger L. Rosentreter



The walk begins at 7:00 A.M. and is always led by Michigan's governor. Bridge walkers start at St. Ignace and head south to Mackinaw City. Buses drop walkers off before the walk, or provide the return trip afterwards. Everyone receives a bridge walk certificate upon completion of the five-mile trek.

One of the traditions of the Labor Day Bridge Walk is to buy a patch (above). Walkers enjoyed good weather in 1997 (left).

Where to Take Your Family

There is much to do and see in the bridge area. Mackinac State Historic Parks operate **Colonial Michilimackinac, Mill Creek, Fort Mackinac**, and other historic sites in the area. For visitor information about any of these places, telephone (231) 436-4100 or (906) 847-3328. Visit on-line at www.mackinacparks.com.

The official Web site of the **Mackinac Bridge** has live bridge cams, a photo gallery and information about the Labor Day Bridge Walk. The site also offers information about the eight-acre **Bridge View Park** scheduled to open in spring 2002. The park, located west of the toll plaza on the Upper Peninsula side, will include an observation building, a walking path and picnic areas. Visit on-line at www.mackinacbridge.org.

The **Michigan Historical Museum's** Upper Peninsula gallery has a display case with artifacts, construction plans and photographs relating to the bridge.

Telephone (517) 373-3559,
TDD: (800) 827-7007 or
visit on-line at
www.michiganhistory.org.



Tom Sherry

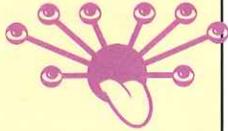
What Did You Learn?

BONUS:

Who was the first Michigan governor to walk across the bridge?

- a. G. Mennen Williams
- b. John Engler
- c. Stevens T. Mason

Vocabulary WORDS



Anchorage: a place or structure for anchoring (holding) something

Approach: a way or means of reaching something

Truss: a rigid framework designed to support a structure

1. The Mackinac Bridge is _____ miles long.
2. When did the Mackinac Bridge open to traffic?
 - a. November 1, 1957
 - b. November 1, 1923
 - c. November 1, 1990
3. What kind of bridge did engineers decide to build across the Straits of Mackinac?
 - a. a stone bridge
 - b. a lift bridge
 - c. a suspension bridge
4. How long did it take to build the Mackinac Bridge?
 - a. one summer
 - b. more than three years
 - c. twenty years

S M I O O S B R I F I A E O R L R I I F E
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Find the following MACKINAC BRIDGE words

BRIDGE
 CABLE
 SUSPENSION
 FERRY
 TRAFFIC
 CAISSON
 MACKINAC