

Fascinating Facts about the Grand Haven Bascule Bridge

The US-31 drawbridge is one of the state's biggest drawbridges playing host to six lanes of interstate traffic and averages about 60,000 vehicles daily. Its official navigation number is #B0270014, and it was built in 1958, replacing a wooden swing bridge. Unlike most drawbridges in Michigan, it is the only bridge that spans the navigable waterway of the Grand River for nearly 16 miles (the next bridge crossing is Eastmanville). The bridge opened 458 times in 2008 and 500 times in 2009, each time reconnecting the main motoring artery north/south from Indiana to northwest Michigan.

The drawbridge follows rules established by both the U.S. Coast Guard and the Michigan Department of Transportation since it must meet the needs of both boating and motoring public.

The drawbridge functions as a bascule structure which relies upon a complex balance of weights and counterweights which cause the bridge to naturally want to drift open when all the safety locks are withdrawn including the original tail locks and the newer span locks which were added in 1998. These new span locks serve as giant dead bolts that secure the north and south spans together.

In 1998 about 13 miles of electrical wire were replaced, new safety circuits and a generator were installed, new main motors, auxiliary motors, clutches, brakes, limit switches and an intercom were built into each motor room, advance communications were set up in the tower as well as the new generator shed and each motor room, emergency lighting was added, new motor control cabinets were attached to all four levels of the bridge house, and new solar navigational lights replaced rusty old units. More significantly, the bridge was literally cut into four individual spans so that each leaf can now be opened independently, allowing traffic to continue flowing in one direction even if a leaf malfunctions in the other direction. Most importantly, a bathroom was built in the tower!

Boaters typically request an opening by hailing the operator on a marine radio (we monitor channel 16 and dial down to channel 14 to converse), although boaters also use air horns or boat horns on occasion, though the operator can rarely hear horns blown on the west side since six lanes of fast flowing traffic tend to drown out such toots. The bridge opens once an hour only on the half hour for pleasure craft from 6:30 a.m. - 8:30 p.m. after which time the bridge opens on demand. During rush hours at 7:30 a.m. and noon there are no openings, so vessels sometimes have to wait for 2 hours if they're late for a scheduled opening. The bridge does not open if no eligible boat is waiting (You would be surprised to know how many people think we open the bridge every hour even if there is no boat!). The bridge opens on demand for commercial vessels such as the Coast Guard, Department of Natural Resources, Port City Princess, barges, tugs fishing trawlers for hire, and the Harbor Steamer if there is high water.

A \$3.5 million bike path was erected on the east span of the drawbridge in 2001, causing a considerable task in rebalancing the bridge. The bridge now has buttons that also lower the bike path's gate.