



Hood Canal Bridge West-Half Retrofit and East-Half Replacement Project

Pontoons

The flat, floating portion of the bridge consists of 36 concrete pontoons, held together with permanently set steel cable and anchored in place by massive concrete anchors sunk below the water. The heaviest pontoon weighs over 8,000 tons, but can float in just 12 feet of water.

The reason that concrete can float is that anything that weighs less than the total amount of water it displaces will float. A concrete pontoon's weight is heavy, but its weight is spread out over a broad area, so it displaces a lot of water. The total amount of water the pontoon displaces weighs more than the pontoon itself, so the pontoon floats.

Old age and severe storms have caused the east-half pontoons to age, and the time has come to replace them. The old pontoons were sold to the public to be used for docks, jetties and for other personal uses.

Pontoon mockups, or full-scale models, are constructed before the real pontoons are built. During the mockup, the crew collects vital information about the best construction process and materials to use in order to build the strongest pontoons.



An aerial view of the Hood Canal Bridge.

West-Half Pontoons

Replaced in 1980s

name	length	width	height	weight* in tons
A	60'	180'	21'	5,179
B	325'	60'	21'	9,360
C	360'	60'	21'	10,358
D	360'	60'	21'	10,358
E	360'	60'	21'	10,358
F	360'	60'	21'	10,358
G	360'	60'	21'	10,358
H	360'	60'	21'	10,358
J	360'	60'	21'	10,358
K	92'	154'	21'	6,783
LA	312'	40'	21'	5,984
LB	312'	40'	21'	5,984
MA	194'	40'	21'	3,711
MB	194'	40'	21'	3,711
YA	60'	152'	17'	4,956
YB	60'	152'	17'	4,956
YC	60'	152'	17'	4,956
ZA	248'	60'	21'	7,135
ZB	248'	60'	21'	7,135

* Weight is calculated with the superstructure and roadway on top of the pontoons.

East-Half Pontoons

To be replaced in 2009

name	length	width	height	weight* in tons
PA	312'	40'	21'	5,980
PB	312'	40'	21'	5,980
Q	90'	153'	21'	6,645
NA	193'	40'	21'	3,709
NB	193'	40'	21'	3,709
YD	60'	152'	16'	4,665
YE	60'	152'	16'	4,665
YF	60'	152'	16'	4,665
ZD	248'	60'	21'	7,121
ZC	248'	60'	21'	7,121
U	360'	60'	18'	10,351
V	198'	60'	21'	5,189
W	325'	60'	18'	9,350
X	60'	180'	18'	5,179
R	360'	60'	21'	10,358
S	360'	60'	21'	10,358
T	180'	60'	21'	5,179

* Weight is calculated with the superstructure and roadway on top of the pontoons.