



Client

Port Metro Vancouver - Centerm

Vessel Type

Neo-Panamax & Ultra-Large Containers

Location

Vancouver, British Columbia, Canada

Neo-Panamax Containership First Narrows Transit - Centerm Berthing

The Centerm expansion project team requested the services of the Maritime Simulation and Resource Centre (MSRC) to conduct a preliminary analysis to determine the feasibility of transiting neo-Panamax design ship through First Narrows in order to call on Centerm.

The primary objective of the simulated manoeuvres was to determine if a neo-Panamax vessel could safely transit through Frist Narrows given the existing limitations of the channel with respect to width and depth. Secondary goals included:

- Conducting a preliminary assessment as to whether transit restrictions would need to be imposed due to tidal stream velocity;
- Whether navigational risks would be mitigated by using tug escort; and
- Whether berthing operations could be conducted in a safe manner.

The study was conducted on the MSRC's Class "A", DNV approved, full mission simulator by an experienced BCCP pilot using, among others,, ship models developed by the MSRC's expert team:

- Quebec Endeavour, a Neo-Panamax Container: 366.5m x 48m x 14.5m
- Hydrus, an Ultra-Large Container: 350.0m x 43m x 12.2m

The MSRC's database development team modified their high-fidelity, 3D geographical area model to include the new dock and the proposed bottom dredging work.

Dynamic water flow predictions, including the vertical height of tide as well as current direction and velocity values (at 9 different horizontal depth levels and a 25-metre gris spacing) were used.

