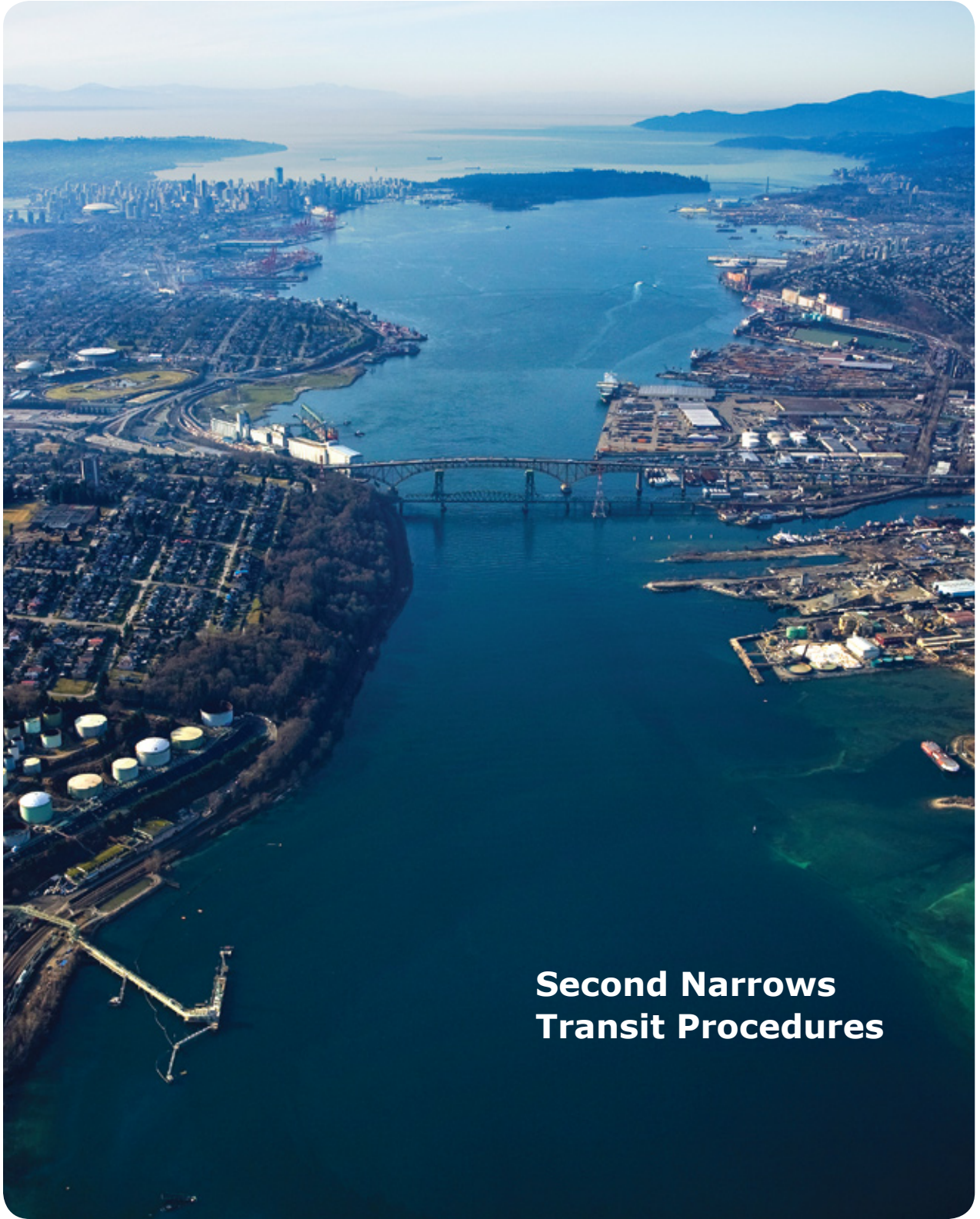




PORT METRO  
**vancouver**



## **Second Narrows Transit Procedures**



Port Metro Vancouver is Canada's largest port and the fourth largest tonnage port in North America, stretching over more than 600 kilometres of shoreline. The navigational safety of ships and cargo is a top priority for Port Metro Vancouver.

### **Navigational Safety Procedures**

Port Metro Vancouver has worked closely with its marine industry and government stakeholders over the past five years to develop new ways to further strengthen existing safety procedures when escorting all vessels through the Second Narrows. The review included comprehensive simulation exercises and live trials with an Aframax vessel. This led to a number of modifications to the procedures in place, and a higher standard of safety.

The new procedures involve new tug escort requirements, installation of new aids to navigation, and development of an enhanced training program for tug captains and ship pilots. These procedures and additional aids to navigation are now in place.

The new, innovative procedures further strengthen navigational safety within Port Metro Vancouver controlled waters.

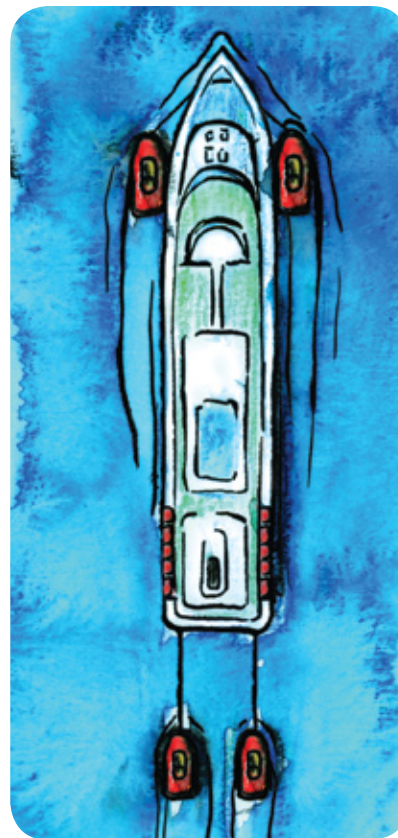
### **Oil tanker movement**

Port Metro Vancouver has served as Canada's Pacific Gateway for bulk oil for more than 50 years. Vancouver has never had a navigational issue with an oil tanker. All oil tankers calling in Vancouver are doubled hulled and subject to strict international, national and port authority standards:

- Crew training requirements for vessels transporting petroleum products and chemicals are far more stringent than those of other vessels.

- Oil terminals thoroughly inspect every ship against strict international standards before permitting them to call at their facilities.
- Transport Canada participates in the Port State Control program under which ships are inspected and any inspection reports are shared internationally. Severe deficiencies result in forcing immediate corrective action. Minor deficiencies are logged and timelines for repairs are given.
- National regulations require all ships to have an approved oil response contractor, such as Burrard Clean, available to assist them.
- Port Metro Vancouver's harbour regulations include special requirements for oil tankers that outline what they can and cannot do, and requirements for tug escorts.

Aframax class tankers of roughly 110 deadweight tonnes are the largest tankers to call in Vancouver. Port Metro Vancouver is working with stakeholders to enable Aframax tankers to improve their capacity utilization per vessel.



**Tug escort configuration**



Simulator training graphics  
Courtesy of Pacific Maritime Institute



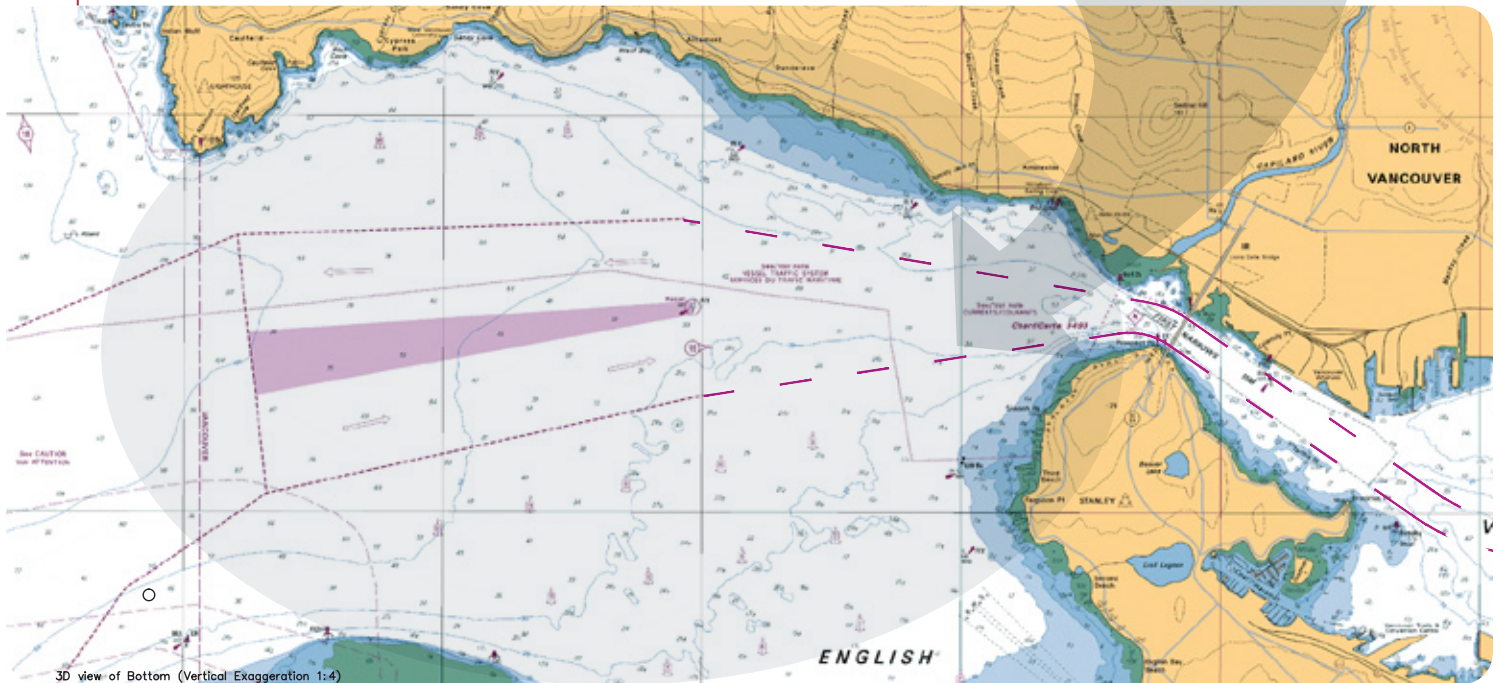
Live trial

### Vessel transit safety standards:

- Tug escort requirements
- Pilotage requirements (two pilots)
- Training standards
- Transit windows
- Navigational aid system
- Transit safety controls
- Marine Communications and Traffic Services (MCTS)
- Vessel traffic scheme
- Decision support tools (First and Second Narrows)
- Clear Narrows requirements

### Vessel requirements upon approach:

- Pilotage requirements
- Port tanker notification/Narrows permits
- Tug escort requirements
- Navigation aids
- Bridge Resource Management (BRM)/ Engine Resource Management (ERM)
- Marine Communications and Traffic Services (MCTS), Canadian Coast Guard





**Vessel alongside:**

**Existing legislation and standards** - statutory requirements (international and national) and industry standards:

- SOLAS, ISPS, MARPOL, International Safety Management (ISM) Code
- OCIMF - focused on the safe and environmentally responsible operation of oil tankers and terminals, promoting continuous improvement in standards of design and operation
- Ship Inspection and Reporting Programme
- Double hulls for tankers
- Structural integrity

**Port and terminal safety**

- Marine oil terminal regulations (Transport Canada)
- ISGOT – guide to the safe carriage and handling of crude oil and petroleum products on tankers and at terminals
- Transport Canada Marine Safety & Port State Control
- Loading operations – cargo surveyor
- BRM/ERM – vessel voyage planning
- Port standards - Port Operation Regulations

**Vessel Movement Procedures**

The new method of tug assist requires a deepsea vessel to be fully tethered during transit, which allows vessels to increase capacity utilization, while improving the safety of their transit through Second Narrows. Vessels can load to 13.5 metres draft and carry additional cargo, reducing the number of ship calls required. The Port and its marine stakeholders continue to find efficiencies in capacity utilization and to further strengthen safety procedures.

**Benefits include:**

- Better risk identification
- Improved overall safety
- Fewer vessel movements for the same throughput
- Decreased wait times for ships
- Reduced air emissions
- More efficient usage of the waterway and port anchorages

