



# **Floating Cruise Ship Docks & The Nanaimo Cruise Ship Terminal**

**Presented by Todd Nottingham, P.E., Vice President  
PND Engineers, Inc.**



# Home Port Mechanical Ramps



Above: Long Beach Passenger  
Boarding System  
Long Beach, California

Right: Terminal 91 Passenger  
Boarding Ramp  
Seattle, Washington





# Boarding Ramps: Platform Docks and Destination Ramps

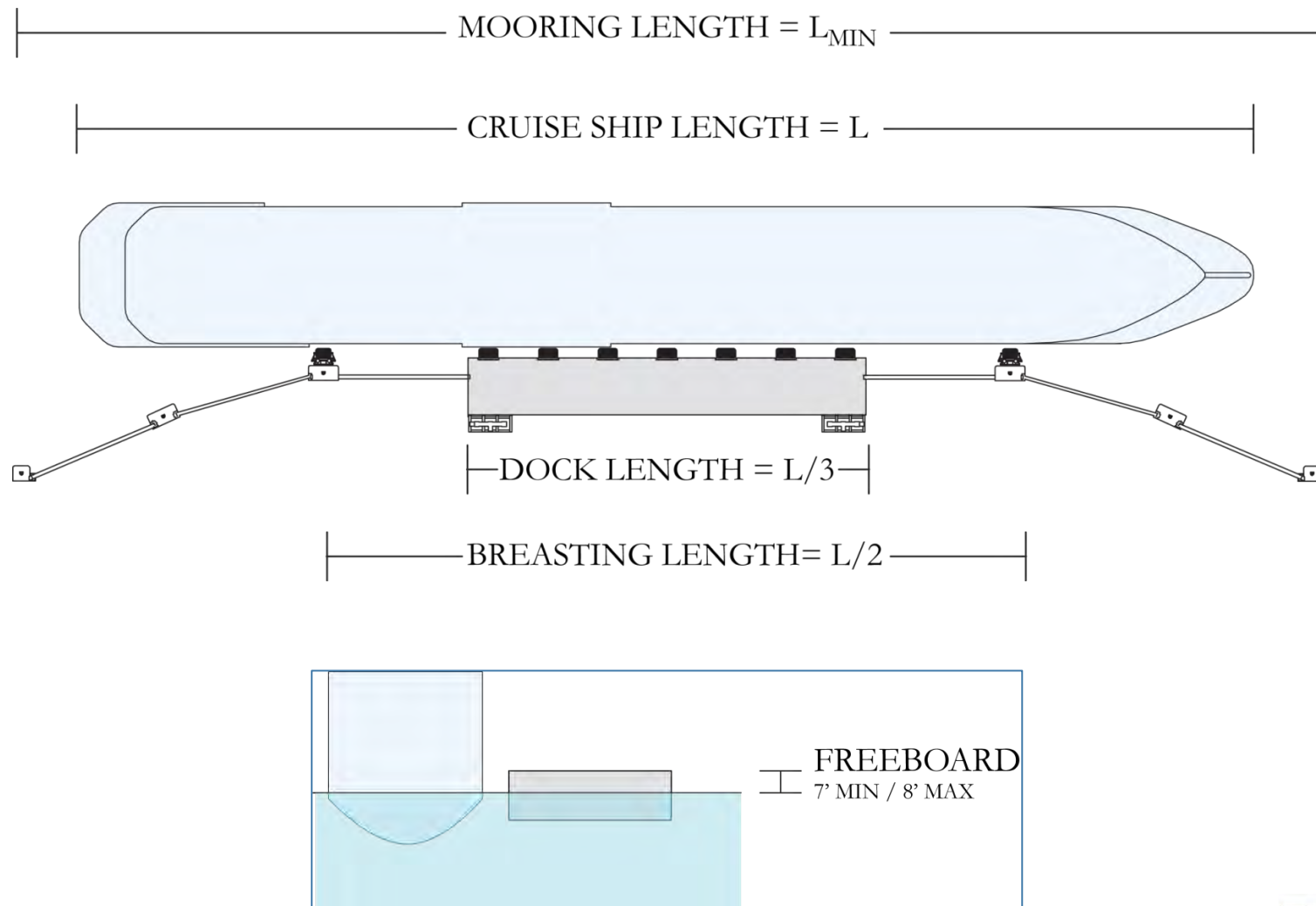




# Boarding Ramps: Floating Docks & Simple Ramps



# Generic Floating Cruise Ship Dock





# Juneau Cruise Terminals



AJ Dock | Juneau, Alaska

# Juneau Cruise Terminals

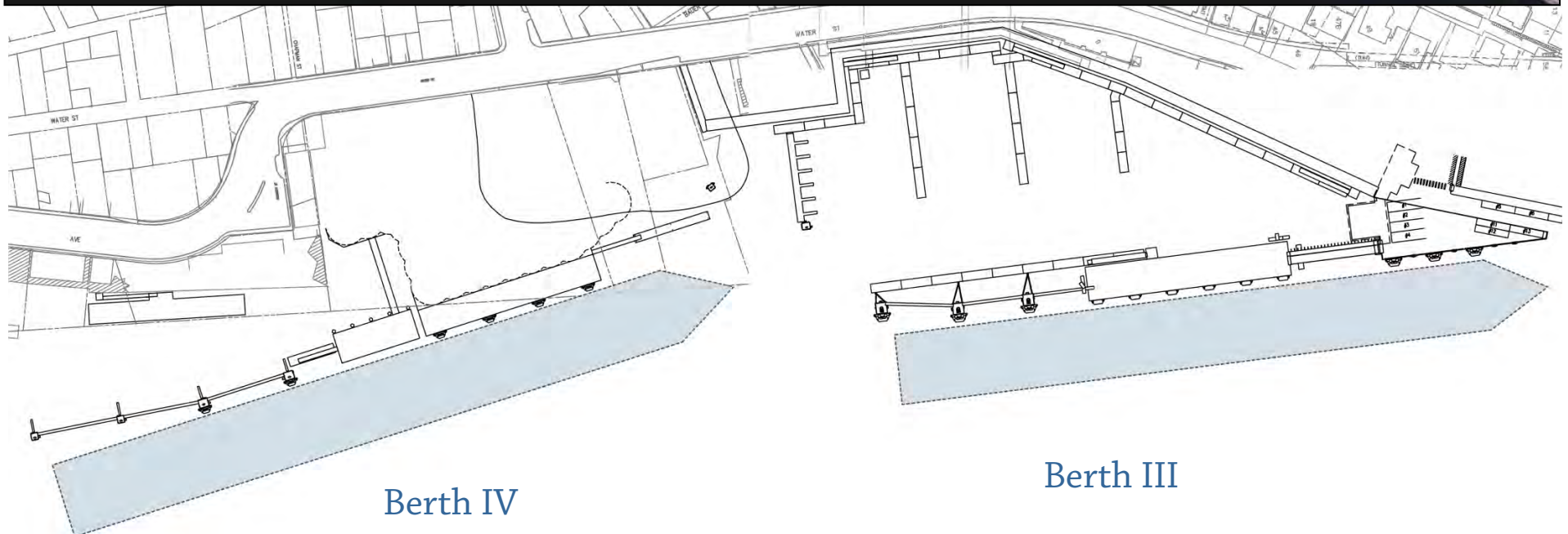


Cruise ship berth expansion in Juneau. Berth on right is existing South Franklin dock.



# Ketchikan Port Berth Expansion

© 2012 Google



Berth IV

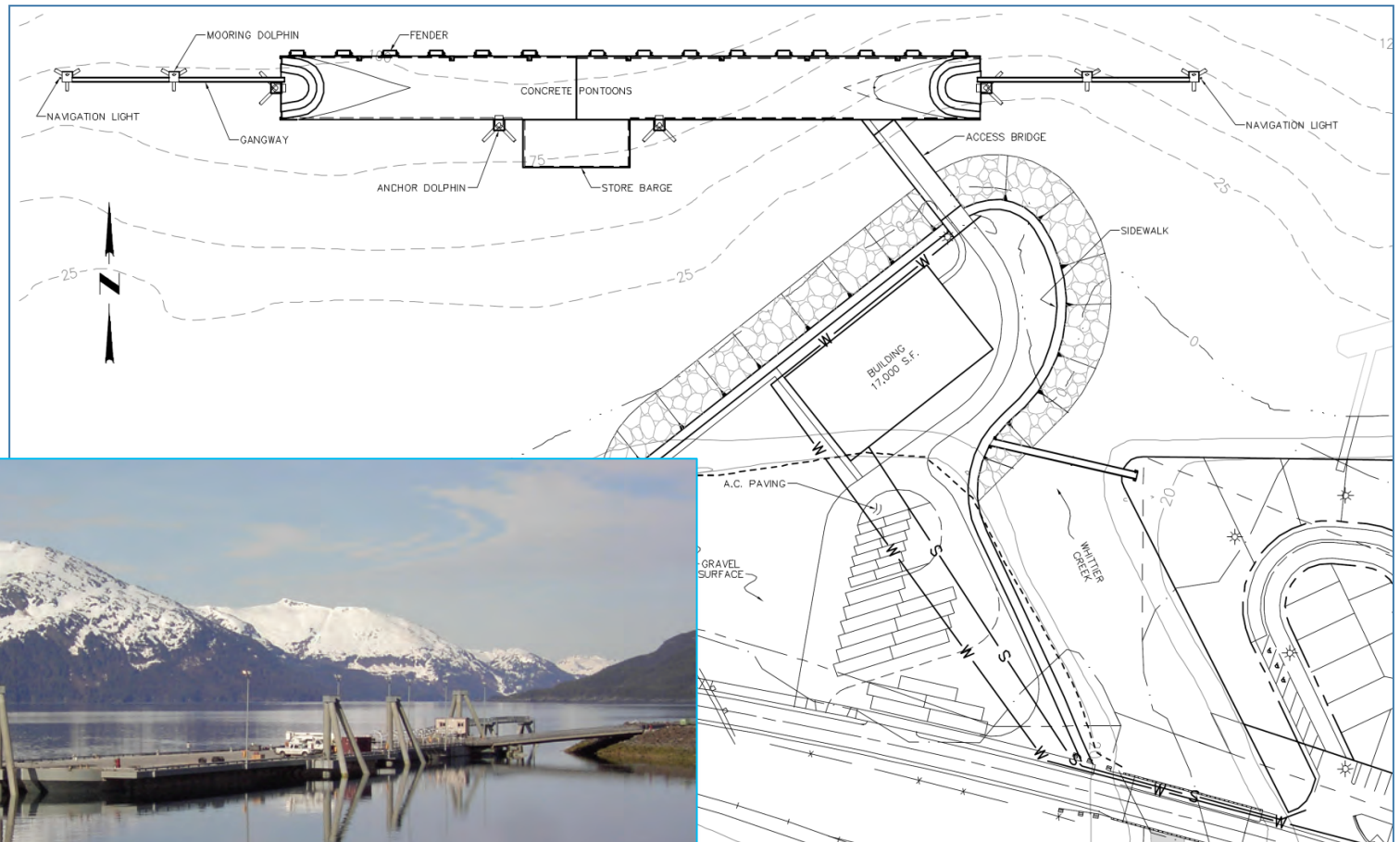
Berth III



# Ketchikan Port Berth Expansion



# Whittier Cruise Ship Dock

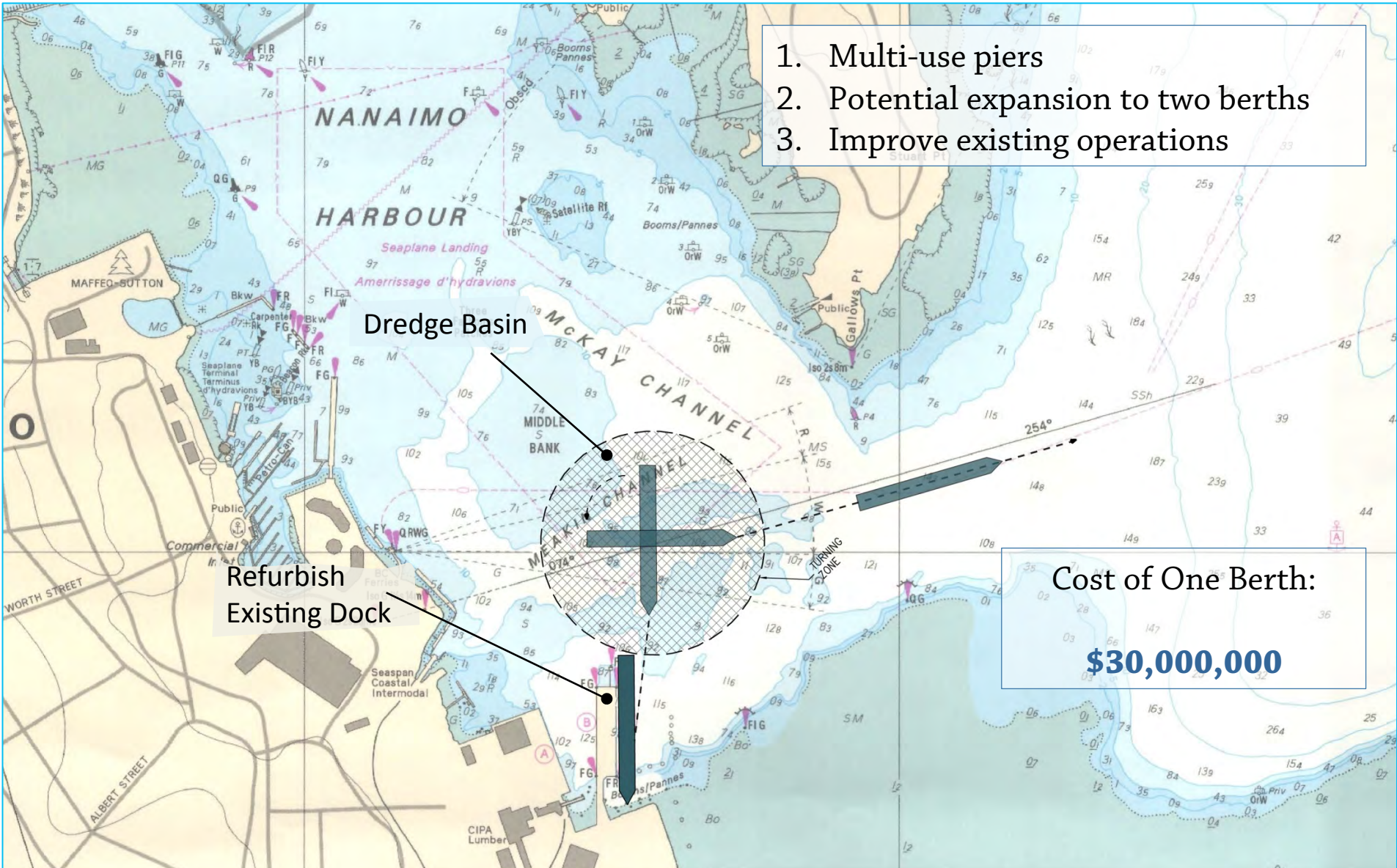


Mooring Length: 1055'  
Dock Length: 655'





# Nanaimo Berth Design – Concept 1



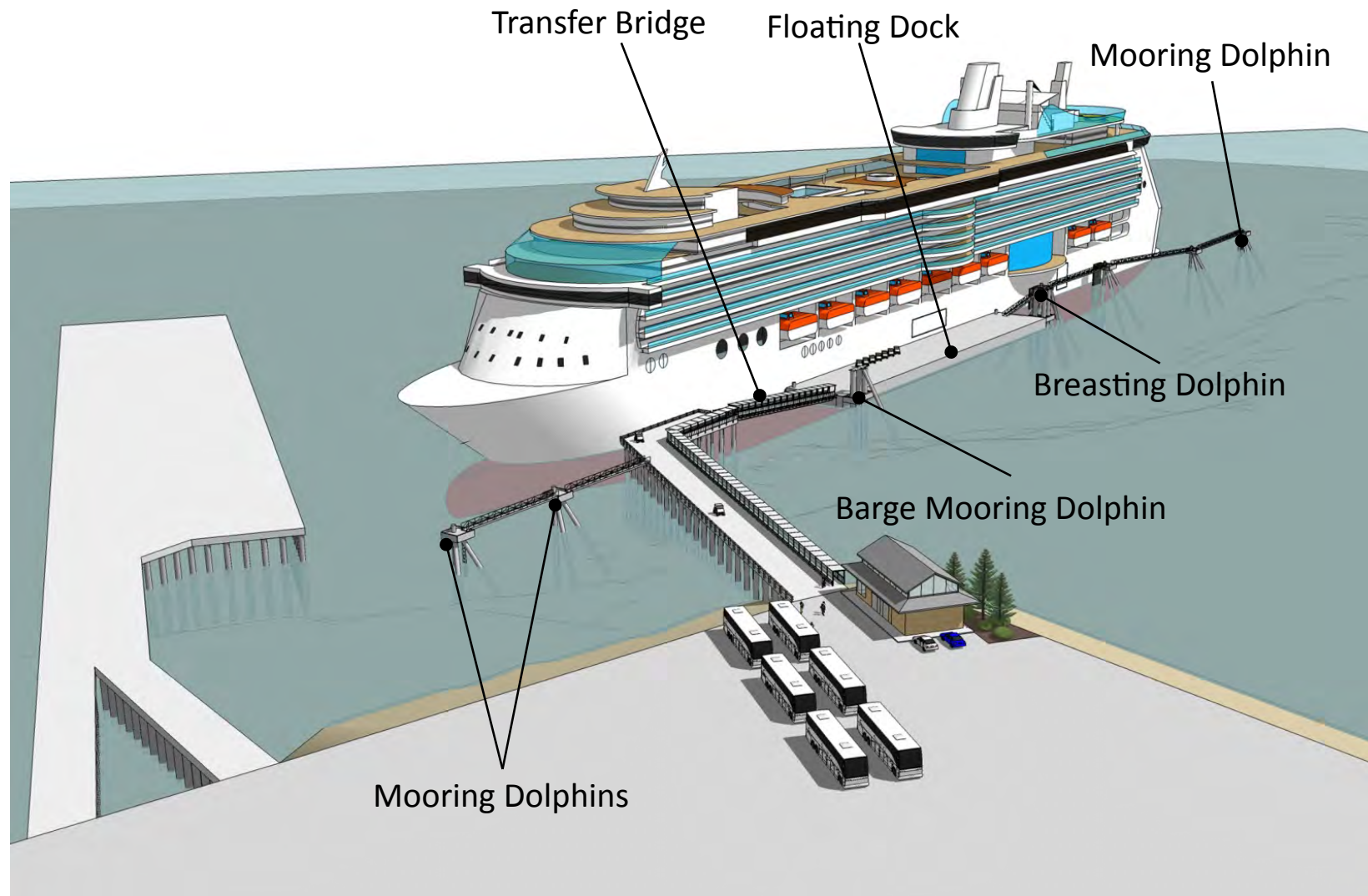


# Nanaimo Berth Design – Concept 2



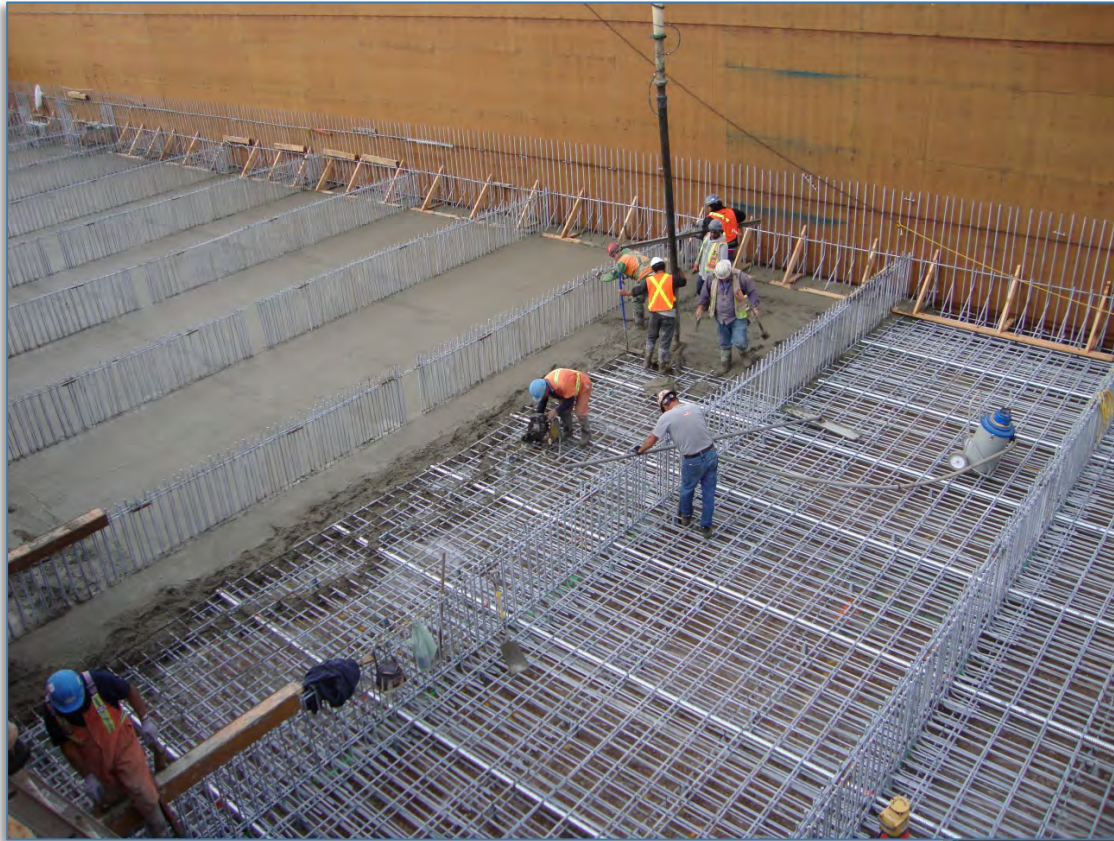


# Nanaimo Marine Components





# Float Fabrication



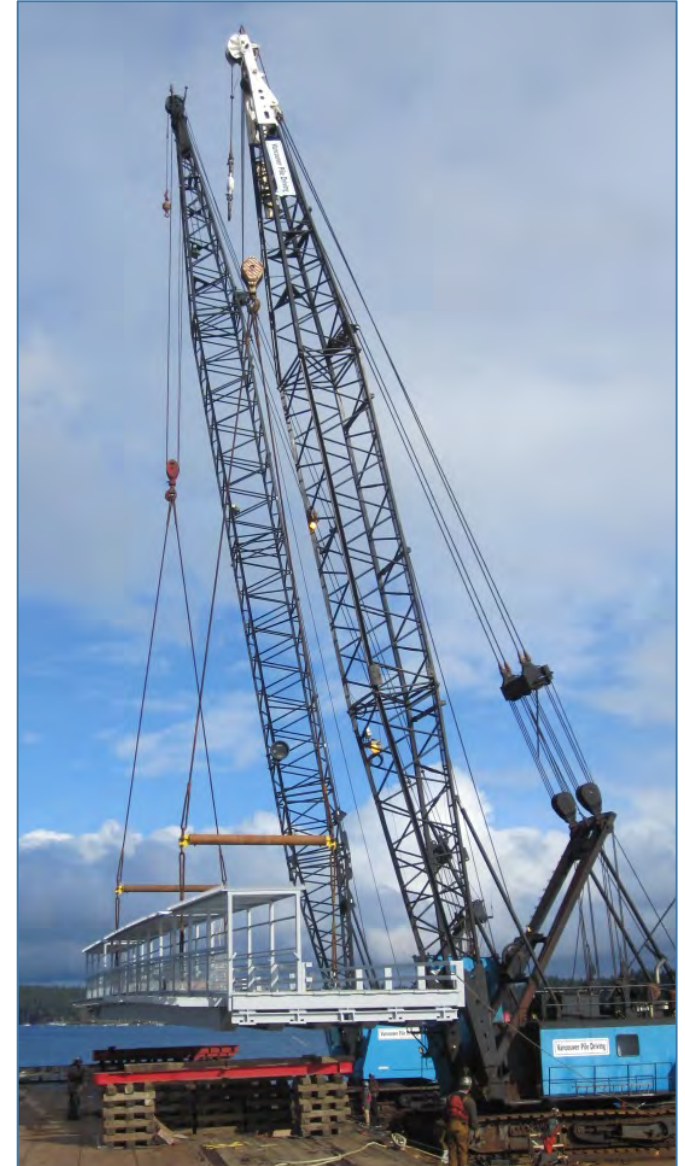
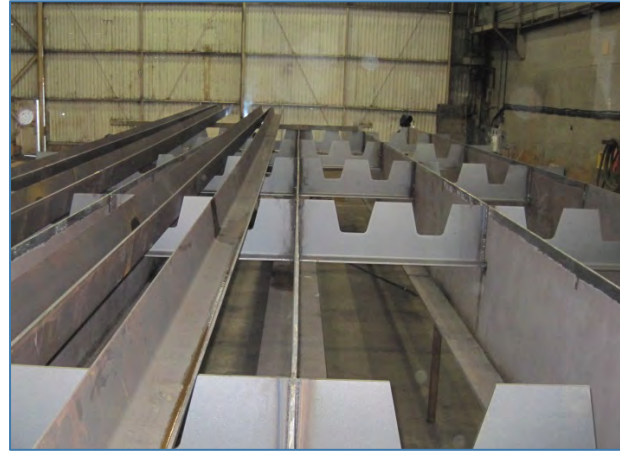


# Nanaimo Cruise Ship Terminal





# Ramp Fabrication & Placement





# Lofting Pile



# Pile Installation Methods





# Construction Aerial





# Transfer Bridge



Separated vehicle and pedestrian ramps



# Benefits & Cost Saving Elements



1. Separate facility savings = \$15 million (USD)
2. SPIN FIN® pile savings = \$1 Million (USD) total
3. Lower operating cost (Gangway)



# Contact Us



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