

ROTARY BEACH PIER

CONCEPT OPTIONS

JUNE 26, 2023



CONCEPT OPTIONS

Three design options exploring different directions.

BASIC

- Seating
- Electrical service

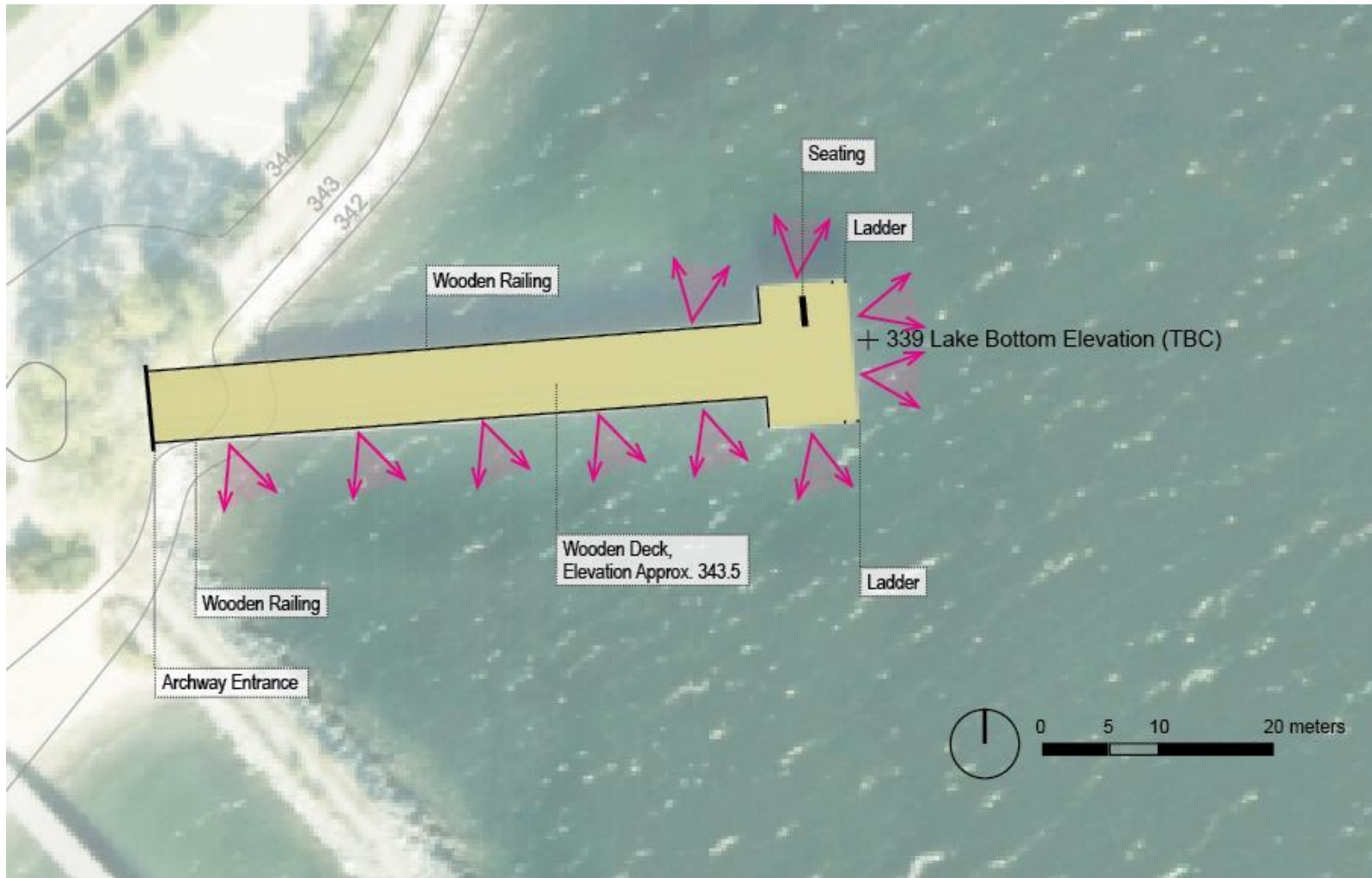
ENHANCED

- Seating
- Solar Lighting
- Memorial Plaques
- Shade structure
- Improved water access
- Jumping board

PREMIUM

- Seating
- Electrical Lighting
- Interpretive signage
- Shade structure
- Improved water access
- Play elements
- Floating dock

SITE ANALYSIS



SITE PLAN

- Deck elevation approximately 343.5m
- Lake bottom elevation 339m (TBC)

Key

— 345 — Land Contour

↗ View Cone

URBAN
S Y S T E M S

WATER LEVELS & DEPTHS

- Between 1943 and 2021, Okanagan Lake level fluctuated from 340.82m to 343.25m
- Factoring in climate change and future flood management regulations, the projected lake levels will likely range between 341.4m and 343.6m in the years from **now until 2055**.
- Current pier elevation is at approximately 343.5m
- The safety standard for jumping activities from a surface more than 1m above water level requires a water depth of 3.8m
- Water depths to be confirmed in future studies

BASIC



Existing entrance archway



Electrical distribution (no fixtures)



Memorial signage embedded into wood railing



Seating embedded into wood railing



Swim ladder

ENHANCED



Wood railing with cable



Aquatic stairs



Jump board



Step down platform



Step down platform 6



Solar lighting fixtures in shade structure



Metal shade structure with perforated metal sheet (proposed 3m high)

PREMIUM



Metal frame construction with wood exterior; custom steel frame raised platform seating



Climbing wall



Stepped seating



Rope swing



Custom bench island seating arrangement



Floating dock and ramp



Floating dock



Slide



Interpretive signage embedded into railing



LED strip light embedded in railing

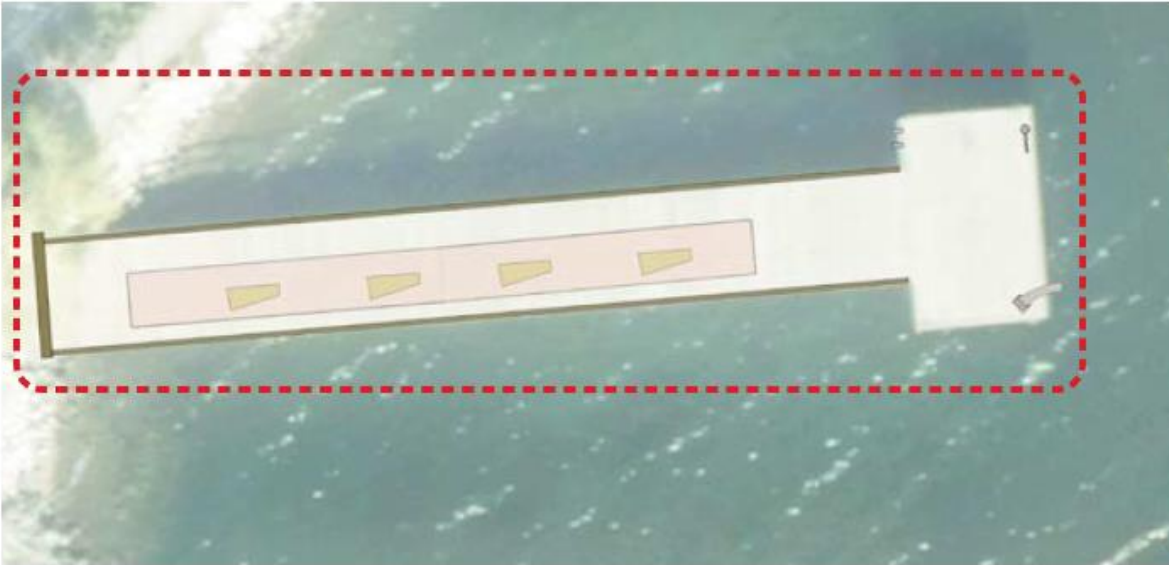


Pre-fabricated steel railing

PREMIUM

PHASING

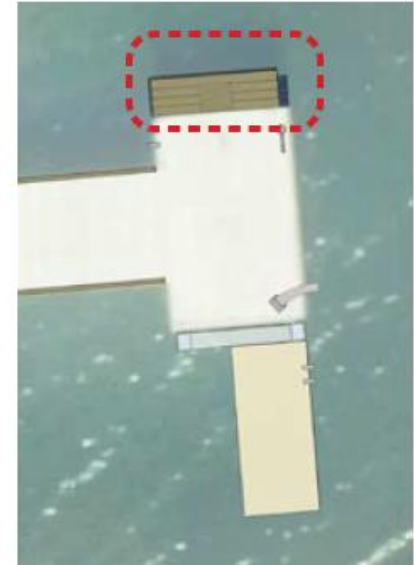
Phase 1



Phase 2



Phase 3



DESIGN CONSIDERATIONS: COMPARISON

PIER CONSTRUCTION

EXISTING



Wood Piles, Frame & Decking

\$605,600

- Est. service life of piles 10-25 years
- Untreated wood piles, treated wood frame & decking

BASIC



Steel Piles, Wood Frame & Decking

\$701,100

- Est. service life of piles 50-70 years
- 12" steel piles

ENHANCED



Steel Piles, Metal Frame & Wood Decking

\$828,700

- Est. service life of piles 50-70 years
- 12" steel piles
- Decking can be replaced without affected structural component

PREMIUM



Steel Piles, Metal Frame & Thruflow Decking

\$828,700

- Est. service life of piles 50-70 years
- 12" steel piles
- Decking can be replaced without affected structural component
- Mitigates shadowing impact on marine environment

DESIGN CONSIDERATIONS: COMPARISON

RAILINGS

EXISTING



Wood

\$25,100

BASIC



Wood With Embedded Seating

\$49,400

ENHANCED



Wood With Cable

\$39,200

- Cable prevents children from climbing through but people can still climb over

PREMIUM



Pre-fabricated Metal

\$91,000

- Design prevents people from climbing over
- Can meet bridge standards

COST COMPARISON

EXISTING	BASIC	ENHANCED	PREMIUM
<u>Pre-Construction Allowance</u>			
\$23,100	\$23,100	\$23,100	\$23,100
<u>Pier Construction & Decking</u>			
Wood Piles, Frame & Decking \$605,600	Steel Piles, Wood Frame & Decking \$701,100	Steel Piles, Metal Frame & Wood Decking \$828,700	Steel Piles, Metal Frame & Thruflow Decking \$828,700
<u>Railings</u>			
Wood Railing \$25,100	Wood Railing \$22,000	Wood Railing With Cable \$39,200	Pre-fabricated Metal Railing \$91,000
<u>Seating</u>			
Typ. Wood Bench (1 no.) \$3,500	Wood Bench Embedded in Railing (7 no.) \$27,400	Typ. Wood Bench (7 no.) \$24,500	Custom Bench (4 no.) \$25,200
<u>Interpretive & Memorial Signage</u>			
-	-	Memorial Plaques (16 no.) \$3,400	Interpretive Sign Embedded in Railing (2 no.) \$4,200
<u>Water Access</u>			
Swim Ladder (2 no.) Swimming Buoy System \$9,800	Swim Ladder (2 no.) Swimming Buoy System \$9,800	Aquatic Steps (1 no.) Metal Construction Step Down Platform Swimming Buoy System \$32,200	Aquatic Steps (1 no.) Swim Ladder (2 no.) Floating Dock Swimming Buoy System \$91,000
<u>Lighting</u>			
-	Electrical Servicing \$14,000	Solar LED Embedded in Shade Structure \$15,400	Electrical Servicing & Distribution LED Strip Light Recessed into Railing \$59,500

EXISTING	BASIC	ENHANCED	PREMIUM
<u>Play Elements</u>			
-	-	Jumping Board (1 no.) \$1,400	Rope Swing (1 no.) Slide (1 no.) \$14,000
<u>Shade Structure</u>			
-	-	Perforated Pattern Metal Sheet \$140,000	Custom Structural Design \$252,000
<u>Raised Platform Seating & Climbing Wall</u>			
-	-	-	\$79,800
<u>TOTAL</u>			
(Subtotal) \$476,500	(Subtotal) \$569,600	(Subtotal) \$791,300	(Subtotal) \$1,048,900
(40% Contingency) \$190,600	(40% Contingency) \$227,800	(40% Contingency) \$316,600	(40% Contingency) \$419,600
\$667,100	\$797,400	\$1,107,900	\$1,468,500

Notes

- Class D Cost Estimate (40% contingency) accounts for general Engineering/Design and Construction.
- Enhanced and Premium options may require additional costs for permitting and specialist consulting.
- Figures are rounded up to the nearest hundred.