

# VANCOUVER AQUATIC CENTRE RENEWAL

Report Back 50m Training Pool Options Analysis

# Park Board Committee Meeting Monday, March 31, 2025





- Purpose
- Background
- User Group Requirements
- 50-m Standards and Best Practice
- Test Fits
- Project Considerations
- Next Steps



• Response to **February 25, 2025,** Board motion:

THAT the Vancouver Park Board approve the recommended Vancouver Aquatic Centre (VAC) renewal program as described in this report, except to include a 50 meter training pool to ensure compliance with the BC and Federal Accessibility Act and the Rick Hansen Gold Standard, large hot pool, dive towers, and other aquatic and recreation amenities, and for the leisure pool expansion to remain as part of Phase 2 of the renewal program, consistent with VanSplash, for the 2027-2030 Capital Plan; and report back within one month with related program details for Board approval.

Seeking Board decision for the Vancouver Aquatic Centre (VAC) renewal



Year	Milestone
1974	<ul> <li>VAC opens to the public</li> </ul>
2019	<ul> <li>VanSplash identifies VAC nearing the end of its lifespan</li> </ul>
2022	<ul> <li>Façade failure prompts acceleration of renewal</li> <li>\$140M allocated toward VAC renewal including \$103M through voter plebiscite and \$37M in the 2023-2026 Capital Plan</li> </ul>
2024	<ul> <li>Q1: Project launches with an accelerated schedule</li> <li>Q4: Feasibility study completed</li> </ul>
2025	<ul> <li>Discussions with VAC user groups to review proposed program</li> <li>Board decision to proceed with project, including 50m training pool</li> </ul>

## Background: 50m Option Analysis

- In response to the Board decision, the project team:
  - Consulted VAC user groups to identify minimum requirements;
  - Analyzed 50m industry standards and best practices;
  - Conducted test-fits with functional and operational requirements;
  - Reviewed project considerations (i.e. building footprint, funding, schedule)
- Key Take-Away:
  - Delivering a 50-metre training pool within the existing building footprint (key constraint to hold to schedule and budget) that meets minimum aquatic industry standards while providing the recommended renewal program is not feasible.
  - In order to provide program details such as timelines and budgets associated with the Board direction (a project that is delivered outside building footprint), staff would require more than a months time to complete this work and report back.



## **User Group Requirements**

- **Consultation:** Jan & Mar 2025: Park Board staff engaged five private user groups
- Key Take-Aways
  - Min. 8-lane 50-m (nominal)
  - Min. 1 x 1.0m bulkhead with 2 x 2.0m bulkheads preferred
  - 2-m primary depth with 3-m deep end for artistic swimming
  - Targeting a full men's Olympic field (30-m field / 34-m open water)

CLUB NEEDS	100000000000000000000000000000000000000	IBER Anes		LEN	GTH			WIDT	Ή	DE	PTH	BUI HE		71.6	LKHE VIDTI	11.4	10-10-10-10-10-10-10-10-10-10-10-10-10-1	TING CKS		TEMP. FACILITY	i.	SYSTEM	ETITON NG TIMING I, CLOCK, NG ETC)	WARM- UP TANK	STOR- AGE
CLUB/ ORGANIZATION	8	10	70m	50m	30m 1	25m	15m	20m	2.5 LANES	2m	Зm	1	2	1m	1.5m	2m	1 END	BOTH ENDS	10 LANE X 50m	8 LANE X 25m	8 LANE X 50m	25m	50m	50m	
CANADIAN DOLPHINS SWIM CLUB	N	w		N,W					N	N		N.W		N			N	w	N				w	w	
ENGLISH BAY SWIM CLUB	N	w		N,W					N	N		N,W		N			N	w		w	w	w	w		W
PACIFIC LIFESAVING CLUB	N,W	w	w	N					N	N		w		N		w	N	w	N				w	W	N
VIPERS WATER POLO CLUB				w	N			N		N		w	w			w									w
PACIFIC WAVES ARTISTIC SWIM CLUB				w		N	N	w			N	N	w	N		w				w					

NOTES: N = NEED / W = WANT



# **EXPERIENCE:**

## TED WATSON MJMA

PARTNER | ARCHITECT AIBC, OAA, AAA, SAA, NSAA, AANB, FRAIC, INT'L A. AIA, SCUP, LEED AP

**28+YRS** EXPERIENCE DESIGNING PUBLIC RECREATION + AQUATICS PROJECTS

### **30+** AQUATIC CENTRES

FOR COMMUNITY, HIGHER EDUCATION, AND HIGH PERFORMANCE USERS

**1.5 + YRS** CONSULTING TEAM HAS SPENT 1.5 YEARS WORKING ON THE VAC SITE













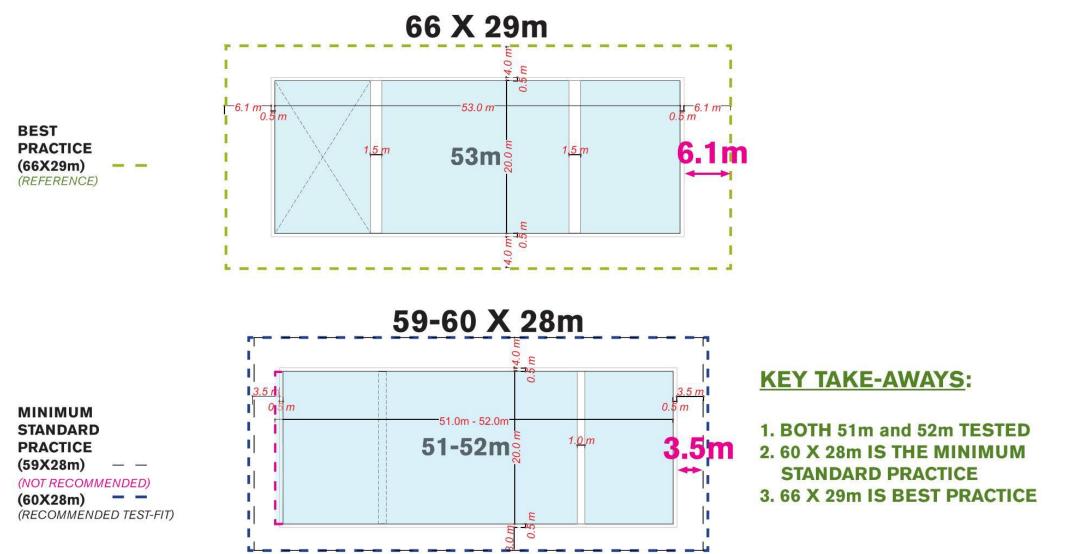






		1	2	3	
	EXISTING VAC 50M LONG COURSE	LONG COURSE TEST-FIT: WITH <u>52m</u> BASIN	ROTATED LONG COURSE TEST-FIT: WITH 52m BASIN	SHIFTED TO NORTH LONG COURSE TEST-FIT: WITH 52m BASIN	PROPOSED CURRENT DESIGN: 25m LAP POOL, DIVING & LEISURE
PROGRAM	50m BASIN (NON-COMPLIANT) DIVE BASIN (NON-COMPLIANT), SMALL TEACH POOL, SMALL HOT TUB SMALL FITNESS	51m or 52m BASIN (WORLD AQUATICS COMPLIANT) (DOES NOT FIT), DIVE BASIN (COMPLIANT), LARGE HOT TUB LARGE FITNESS	51m or 52m BASIN (WORLD AQUATICS COMPLIANT) DIVE BASIN (DOES NOT FIT), LARGE HOT TUB (DOES NOT FIT), LARGE FITNESS	51 m or 52m BASIN (WORLD AQUATICS COMPLIANT) DIVE BASIN (DOES NOT FIT), LARGE COMMUNITY HOT TUB (DOES NOT FIT), LARGE FITNESS	25m PRIMARY BASIN (WORLD AQUATICS COMPLIANT) DIVE BASIN (COMPLIANT), LARGE LEISURE/TEACH POOL, LARGE COMMUNITY HOT TUB LARGE FITNESS
1. <b>EXISTING FOOTPRINT</b> RENEWAL PROGRAM FITS WITHIN	×	×	×	×	
2. MIN STANDARD PRACTICE SAFE CIRCULATION (3.5m FROM GUTTER)	×	×	×	×	
3. <b>MAINTENANCE</b> HIGH LIFT VEHICLE ACCESS	×	×	×	×	

### LONG COURSE TRAINING POOL - BEST PRACTICE & VAC MIN. REQUIREMENTS COMPARISON



## **BASIS OF DESIGN:**

#### **1. MINIMUM STANDARD OF PRACTICE:**

- UNIQUE TYPOLOGY
- DESIGNED TO MEET REQUIREMENTS
- STANDARDS OF PRACTICE
- RICK HANSEN GOLD

### 2. COMPREHENSIVE AQUATIC BASIN PROGRAMMING:

- 50M CLUB USERS
- DIVING CLUBS

#### ALL MEMBERS OF THE COMMUNITY :

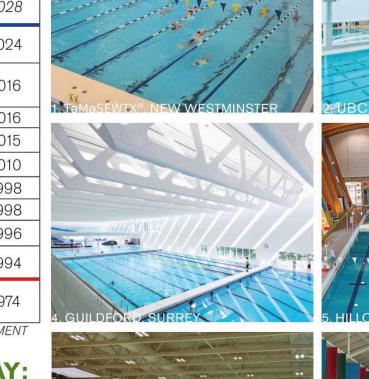
- LEARN-TO-SWIM
- AQUAFIT
- THERAPY
- RECREATIONAL SWIMS

#### **KEY TAKE-AWAYS**:

### 1. DESIGN TO (AT LEAST) THE MINIMUM STANDARDS 2. DESIGN FOR BROADEST COMMUNITY USE

## LONG COURSE POOL: PRECEDENTS (LOWER MAINLAND BUILT IN LAST 50 YRS)

AC	QUATIC CENTRE	YEAR BUILT
-	NEWTON COMM. CENTRE *	2030
-	BURNABY LAKE AQUATIC CENTRE *	2028
1	<b>təməseẁtx<sup>w</sup></b> NEW WESTMINSTER	2024
2	UBC AQUATIC CENTRE	2016
3	GRANDVIEW	2016
4	GUILDFORD	2015
5	HILLCREST	2010
6	WALNUT GROVE	1998
7	SOUTH SURREY	1998
8	WATERMANIA	1996
9	CITY CENTRE COQUITLAM	1994
	VANCOUVER AQUATIC CENTRE	1974









**KEY TAKE-AWAY**:

1. SIGNIFICANT LONG COURSE PRECEDENTS TO REFERENCE





RICHN

**ATERMANIA** 

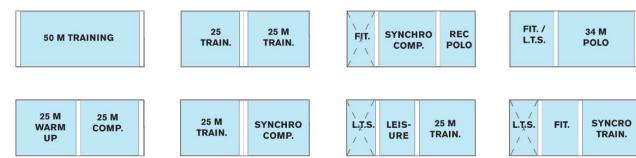


# LONG COURSE POOL: BASIN LENGTH & BULKHEADS

AO	UATIC CENTRE	YEAR BUILT	BASIN LENGTH	BULKHEADS
-	NEWTON COMM. CENTRE *	2030	53	2 @ 1.5m
	BURNABY LAKE AQUATIC CENTRE *	2028	53	2 @ 1.5m
1	<b>təməseẁtx<sup>w</sup></b> NEW WESTMINSTER	2024	53m	2 @ 1.5m
2	UBC AQUATIC CENTRE	2016	54m INC. 2X RAISED HEAD WALLS	1 @ 1.0m
3	GRANDVIEW	2016	52m	2 @ 1.0m
4	GUILDFORD	2015	52m	2 @ 1.0m
5	HILLCREST	2010	53m	2 @ 1.5m
6	WALNUT GROVE	1998	53m	2 @ 1.5m
7	SOUTH SURREY	1998	52m	2 @ 1.0m
8	WATERMANIA	1996	57m	2 @ 1.0m
9	CITY CENTRE COQUITLAM	1994	52m	2 @ 1.0m
	VANCOUVER AQUATIC CENTRE	1974	50m	n/a

\*IN CONSTRUCTION / DEVELOPMENT

#### POTENTIAL PROGRAM CONFIGURATIONS : 52m BASINS



- MIN. STAND. PRACTICE 52m LENGTH:
- BEST PRACTICE BASIN 53-54m LENGTH:

#### • TWO BULKHEADS REQUIRED FOR:

- 1. FLEXIBLE PROGRAMMING
- 2. MAXIMIZED REVENUE
- 3. OPTIMIZED OPERATION OF MOVABLE FLOOR
- 4. 50+25m FLIP-TURN TRAINING
- **5. SHORT COURSE COMPETITION**
- 6. FLAT FLOOR FOR EVENTS

#### KEY TAKE-AWAYS:

1. LONG COURSE BASINS RUN <u>AT LEAST 52m</u> IN LENGTH. 2. 53m IS PREFERRED 3. TWO BULKHEADS REQUIRED

# LONG COURSE POOL: FLUSH GUTTERS

AO		YEAR BUILT	BASIN LENGTH	BULKHEADS	FLUSH GUTTER
2-	NEWTON COMM. CENTRE *	2030	53	2 @ 1.5m	YES
iii	BURNABY LAKE AQUATIC CENTRE *	2028	53	2 @ 1.5m	YES
1	<b>təməsewtx</b> w NEW WESTMINSTER	2024	53m	2 @ 1.5m	YES
2	UBC AQUATIC CENTRE	2016	54m INC. 2X RAISED HEAD WALLS	1 @ 1.0m	YES
3	GRANDVIEW	2016	52m	2 @ 1.0m	YES
4	GUILDFORD	2015	52m	2@1.0m	YES
5	HILLCREST	2010	53m	2 @ 1.5m	YES
6	WALNUT GROVE	1998	53m	2 @ 1.5m	YES
7	SOUTH SURREY	1998	52m	2@1.0m	YES
8	WATERMANIA	1996	57m	2 @ 1.0m	YES
9	CITY CENTRE COQUITLAM	1994	52m	2 @ 1.0m	YES
	VANCOUVER AQUATIC CENTRE	1974	50m	n/a	NO

REASONS FOR FLUSH GUTTERS: 1.ACCESSIBILITY 2.WAVE QUELLING 3.AIR QUALITY 4.WATER FILTRATION QUALITY 5.REGIONAL PRECEDENT 6.COMPETITION PERFORMANCE

\*IN CONSTRUCTION / DEVELOPMENT



UBC AQUATIC CENTRE - 2016, MJMA+AOA

GRANDVIEW HEIGHTS - 2016 - SURREY BC

### **KEY TAKE-AWAY:**

### 1. FLUSH GUTTERS ARE STANDARD PRACTICE

# LONG COURSE POOL: DECK CLEARANCE AT STARTS

AC	UATIC CENTRE	YEAR BUILT	BASIN LENGTH	BULKHEADS	FLUSH GUTTER	CLEAR DECK AT STARTS
-	NEWTON COMM. CENTRE *	2030	53	2 @ 1.5m	YES	6.1 <i>m</i>
-	BURNABY LAKE AQUATIC CENTRE *	2028	53	2 @ 1.5m	YES	5.0m
1	<b>təməsewtx</b> <sup>w</sup> NEW WESTMINSTER	2024	53m	2 @ 1.5m	YES	3.75m
2	UBC AQUATIC CENTRE	2016	54m INC. 2X RAISED HEAD WALLS	1 @ 1.0m	YES	6.1m
3	GRANDVIEW	2016	52m	2 @ 1.0m	YES	3.5m
4	GUILDFORD	2015	52m	2 @ 1.0m	YES	5.0m
5	HILLCREST	2010	53m	2 @ 1.5m	YES	+/- 3.0m**
6	WALNUT GROVE	1998	53m	2 @ 1.5m	YES	+/- 3.0m**
7	SOUTH SURREY	1998	52m	2@1.0m	YES	4.5-5.0m
7	WATERMANIA	1996	57m	2 @ 1.0m	YES	+/- 3.0m**
9	CITY CENTRE COQUITLAM	1994	52m	2 @ 1.0m	YES	+/- 3.0m**
	VANCOUVER AQUATIC CENTRE	1974	50m	n/a	NO	2.8m

\*IN CONSTRUCTION / DEVELOPMENT \*\* DIMENSION ESTIMATED



UBC AQUATIC CENTRE - 2016, MJMA+AOA - VANCOUVER BC

təməsewtxw- 2024 - NEW WEST. BC

#### • CLEAR DECK AT STARTS FOR:

- SWIM TRAINING
- 25m COMPETITIONS
- SAFE CIRCULATION
- EXITING

• BEST PRACTICE DECK: 6.1m

- MIN. STANDARD
- PRACTICE DECK: 3.5m
   ALL FACILITIES
   SINCE 2015

### **KEY TAKE-AWAYS**:

### 1. 6.1m PREFERRED 2. 3.5m CLEAR DECK SPACE AT THE ENDS IS MINIMUM STANDARD.

# LONG COURSE POOL: DECK SPACE STANDARDS

1. DECK SPACE CLEARANCE FROM GUTTER - BY CODE

- 2. FLUSH GUTTER RECOMMENDED FOR ACCESSIBILITY (0.45m REQUIRED EACH END, OVERALL 0.9m ADDED TO DECK CLEARANCE)
- 3. STARTING BLOCKS REQUIRED 1m CLEAR AT EACH END

## 4.3.5m MINIMUM STANDARD PRACTICE FOR SAFE CIRCULATION:

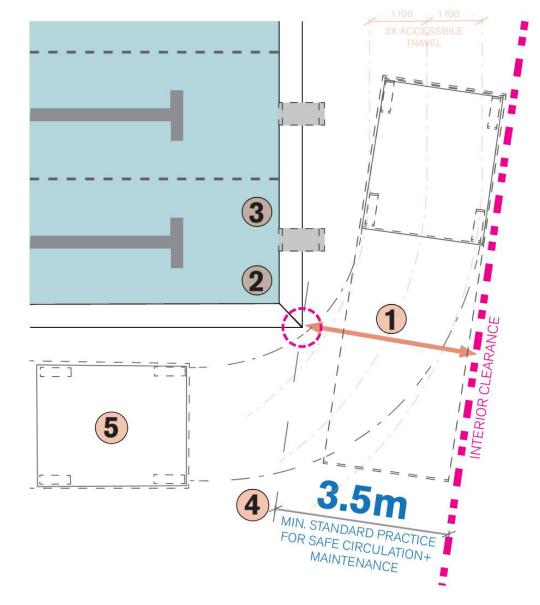
SWIM TRAINING, SAFETY, ACCESSIBILITY & 25m SWIM COMPETITIONS

**5. MAINTENANCE** CLEARANCE OF AT LEAST 3.5m FOR HIGH REACH ARTICULATING BOOM-LIFT ACCESS

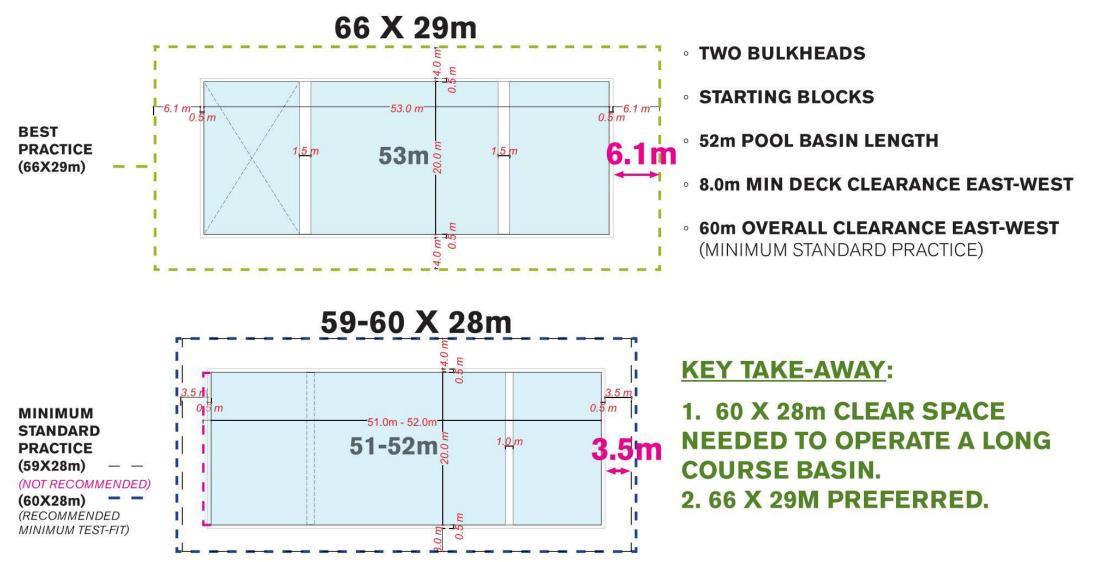
6. ACCESSIBILITY MINIMUM STANDARD PRACTICE MEETS OR EXCEEDS ACCESSIBILITY CODES, STANDARDS, AND GUIDELINES (VBBL, BCBC, BC POOLS GUIDELINE, CSA, ETC.) AND MINIMUM GUIDANCE FOR RICK HANSEN FOUNDATION

**KEY TAKE-AWAY:** 

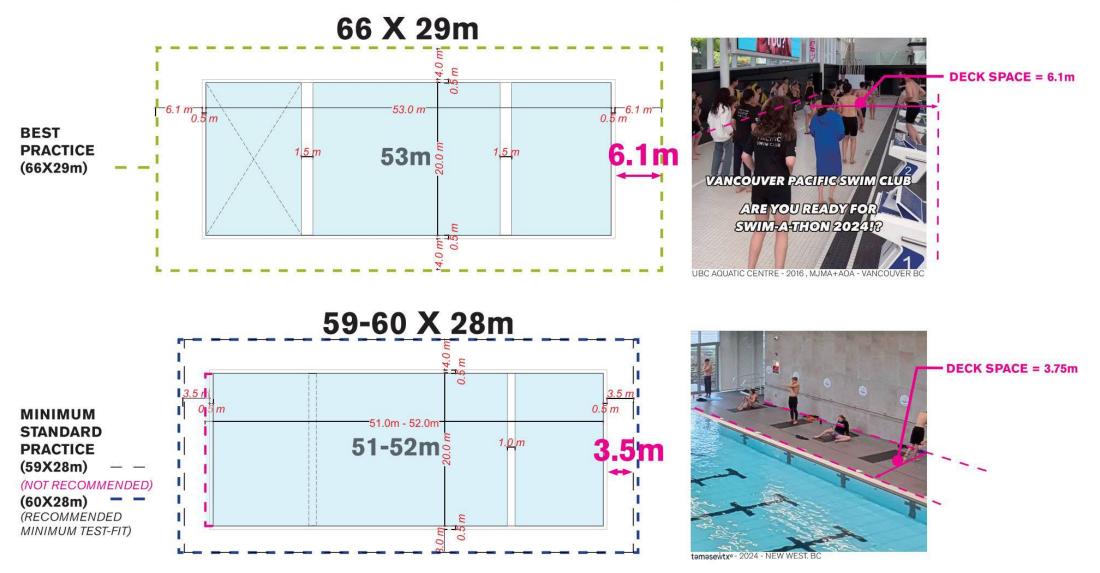
### 1. AT LEAST 3.5m CLEAR IS NEEDED AT ALL POINTS ALONG THE DECK



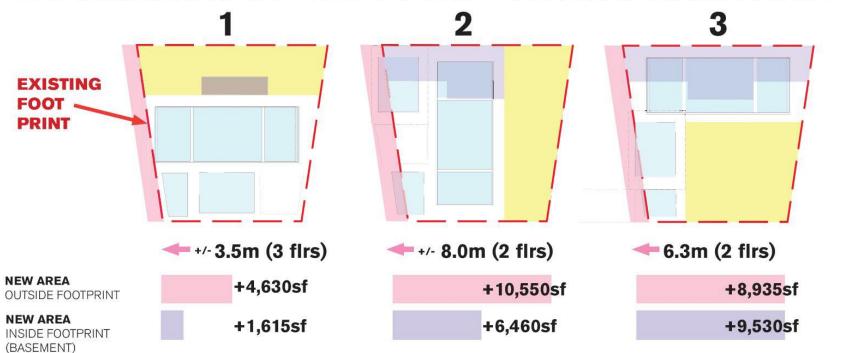
### LONG COURSE TRAINING POOL - BEST PRACTICE & VAC MIN. REQUIREMENTS COMPARISON



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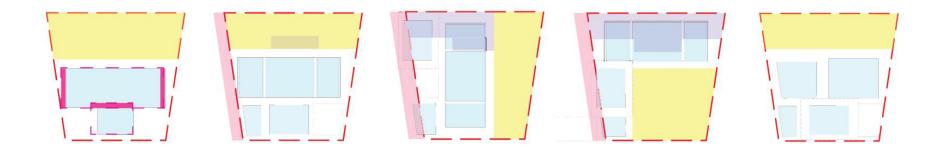




RISK



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	EXISTING VAC 50M LONG COURSE	LONG COURSE TEST-FIT: WITH <u>52m</u> BASIN	ROTATED LONG COURSE TEST-FIT: WITH <u>52m</u> BASIN	SHIFTED TO NORTH LONG COURSE TEST-FIT: WITH <u>52m</u> BASIN	PROPOSED CURRENT DESIGN: 25m LAP POOL, DIVING & LEISURE
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1. <b>EXISTING FOOTPRINT</b> RENEWAL PROGRAM FITS WITHIN	×	×	×	×	
2. MIN STANDARD PRACTICE SAFE CIRCULATION (3.5m FROM GUTTER)	×	×	×	×	
3. MAINTENANCE HIGH LIFT VEHICLE ACCESS	×	×	X	×	



# **Project Considerations**



Consideration	Impacts – Recommended Program	Impacts – 50m Option
Plebiscite	<ul><li>Requires construction start by Q4 2026</li><li>\$103M approved</li></ul>	Requires new plebiscite vote – amount TBD
Budget	<ul> <li>\$140M approved</li> <li>Requires additional \$30M (Council approval required)</li> </ul>	<ul> <li>Uncertainty around redesign costs</li> <li>Expected delayed delivery of project will result in additional inflationary costs not planned for</li> </ul>
Site	Recommended program fits within building footprint	Unknown cost of expanding beyond the building footprint
Facility Condition	Adherence to project schedule provides more certainty and ability to plan for service disruptions	Project delays increase chances of unpredictable service disruption due to facility being at the end of life
Upcoming Capital Plan Priorities	<ul> <li>\$140M Capital Plan allocation</li> <li>Contingent on construction start by Q4 2026</li> </ul>	Requires funding allocation from upcoming 2027 – 2030 Capital Plan and other priorities will be competing for funding (e.g. Kits Pool, RayCam renewal, Hastings CC renewal)

## Next Steps: Service Loss Mitigations



- New proposed citywide approach to maintain 50m pool services
  - Increase 50m configuration at Hillcrest to support swim club and public access continuity
- Network reallocation during construction phase will help mitigate loss
- 50m pool will be considered for future aquatic projects
  - Kits Pool feasibility study underway (including pool length)



Hillcrest 50m pool



### Seeking Board decision on how to proceed with VAC renewal

### **RECOMMENDED PROGRAM**

- Q2 2025: Council decision on additional funding
- Q3 2026: Tender drawings & construction RFP
- Q4 2026: Construction start
- Q4 2029: New facility opens

### **ALTERNATE DIRECTION**

- Pivot to re-design
- **Q2-Q4 2025:** Revise project scope (3-6 months depending on revisions)
- **Q3 2026:** 2027-2030 Capital Plan submission
- Q4 2026: New plebiscite vote



- A. THAT the Vancouver Park Board direct staff to proceed with the February 24, 2025 recommended program, as presented in the report titled, Vancouver Aquatic Centre Renewal – Recommended Program; and
- B. FURTHER THAT the Vancouver Park Board approve a Capital Plan reallocation of \$7,600,000 from the West End Waterfront Parks Phase 1 Implementation Project.

Should the Vancouver Park Board not approve the recommendation above, the following alternate direction may be considered.

THAT the Vancouver Park Board direct staff to place the Vancouver Aquatic Centre Renewal on hold, until additional funding can be secured to deliver a 50-metre training pool to ensure compliance with the BC and Federal Accessibility Act and the Rick Hansen Gold Standard, including a large hot pool, dive towers, and other aquatic and recreation amenities, with a leisure pool to be delivered in a future phase.