

WELLINGTON OUTDOOR AQUATIC FACILITY

TOWNSHIP OF WELLINGTON NORTH

Wellington, Ontario

tillmann
architects ruth
robinson 

DESIGN REPORT

OCTOBER 5, 2023



TABLE OF CONTENTS

EXECUTIVE SUMMARY | 1 ◀ 03

DESIGN DRAWINGS | 2 ◀ 04

- Site Plan/Survey 2.1
- Site Assessment/Context Plan 2.2
- Floor Plan 2.3
- Room Information Sheets 2.4
- Elevations 2.5
- Renderings 2.6

DESIGN BRIEFS | 3 ◀ 20

- Pool Design Brief 3.1
- Mechanical Design Brief 3.2
- Electrical Design Brief 3.3

COST ESTIMATE | 4 ◀ 35

architects Tillmann Ruth Robinson inc.
PRIME CONSULTANT / ARCHITECT

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1. EXECUTIVE SUMMARY

The Township of Wellington North is embarking on a new Outdoor Aquatic Facility. The new state-of-the-art pool will create an exciting community amenity that will replace an existing and decommissioned pool in Mount Forest.

The proposed location, adjacent to the existing recreational complex, will help contribute to creating a synergistic recreation and social hub for the community.

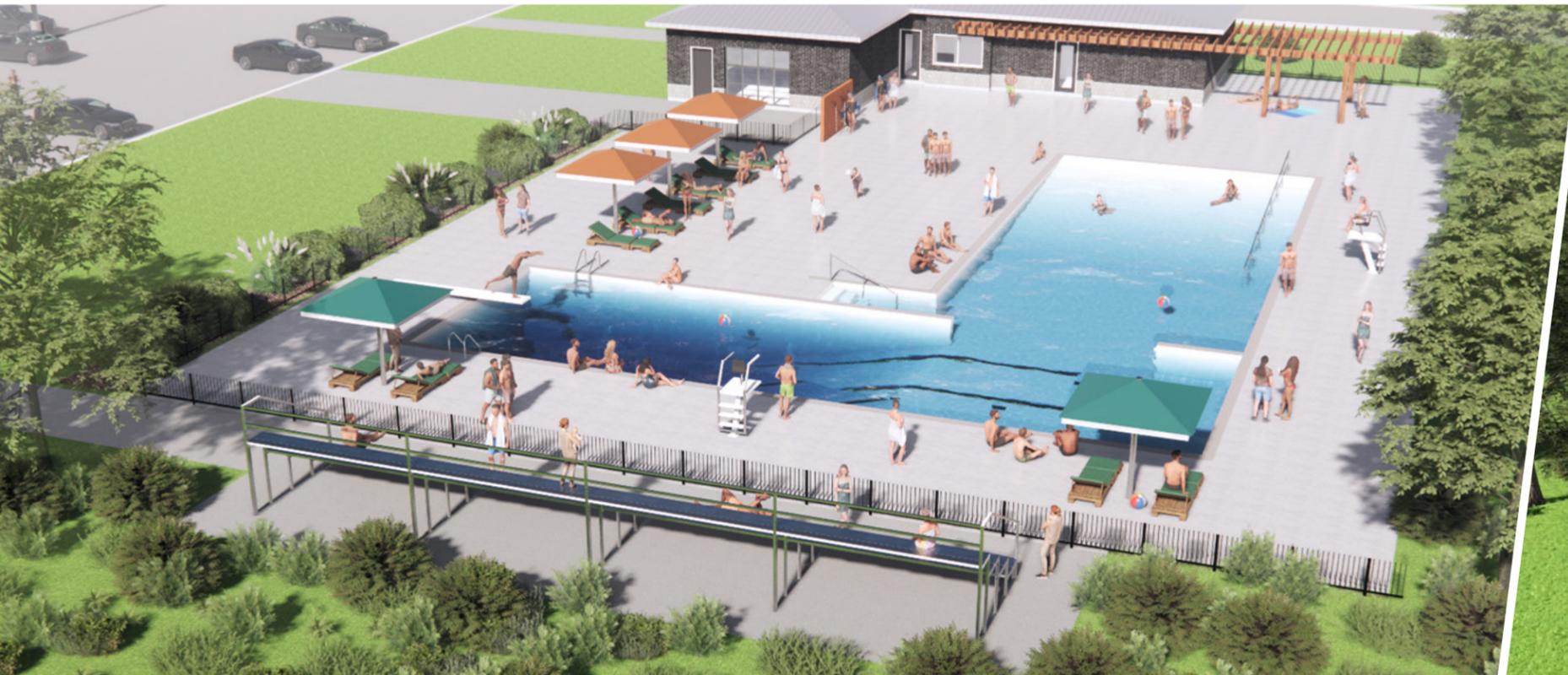
The new pool will provide an accessible beach entry, lap swimming, a diving tank, and a kids' play area, as well as areas for swim lessons and aquafit classes. Activities can be observed from new shaded social areas on the deck, as well as spectator seating areas.

The new bathhouse will include fully accessible shower and change room facilities as well as staffing and guard areas.

The following documents represent the completion of the Design Development phase of this project.

Along with the architectural drawings, we have also included mechanical and electrical design briefs and associated drawings. The pool tank is also described within the following pages.

Additionally, we have engaged Marshall & Murray as cost consultant to complete the Class 'C' pricing, included in Section 4 of this document.



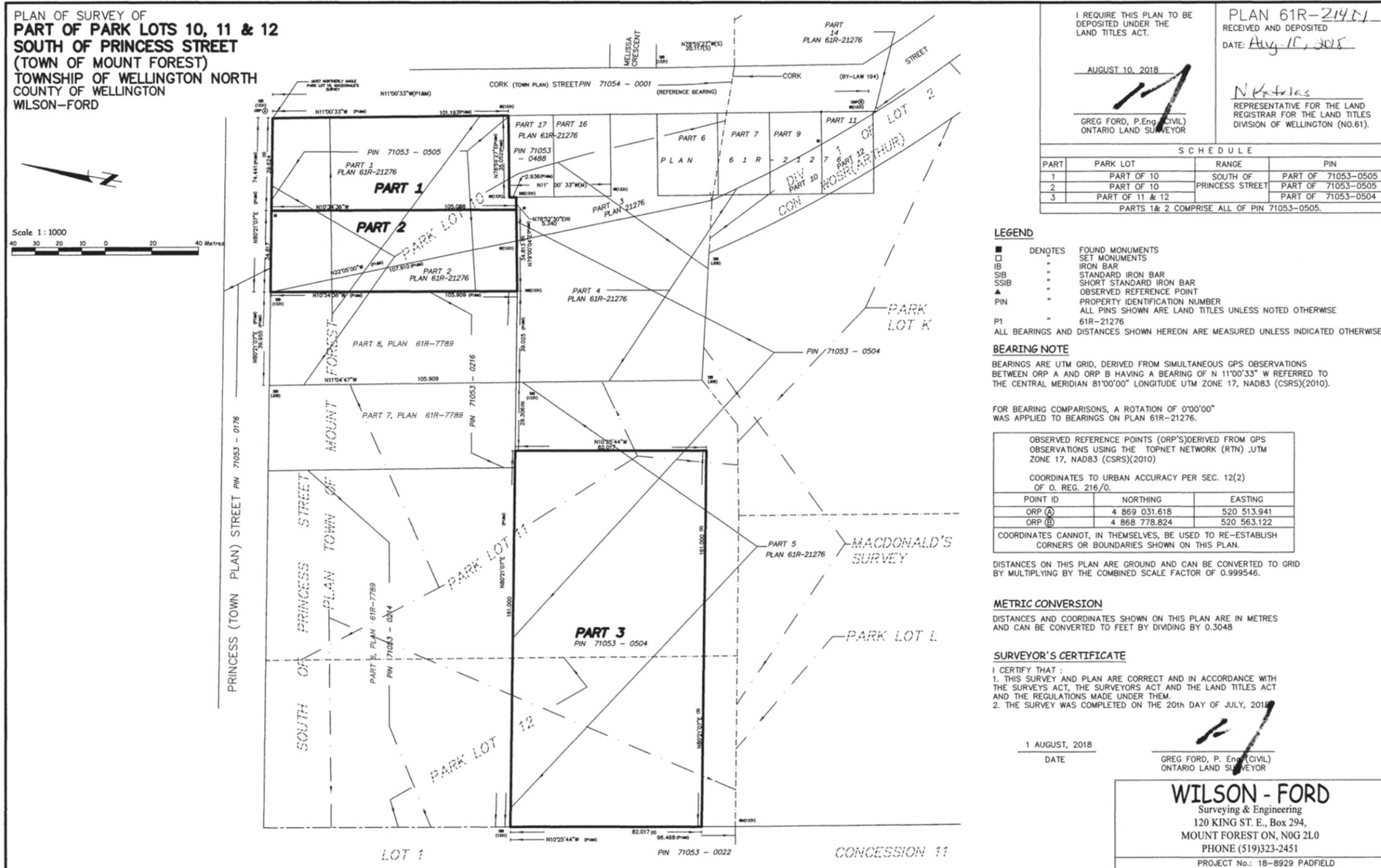
Pool looking North



Looking South

2. DESIGN DRAWINGS

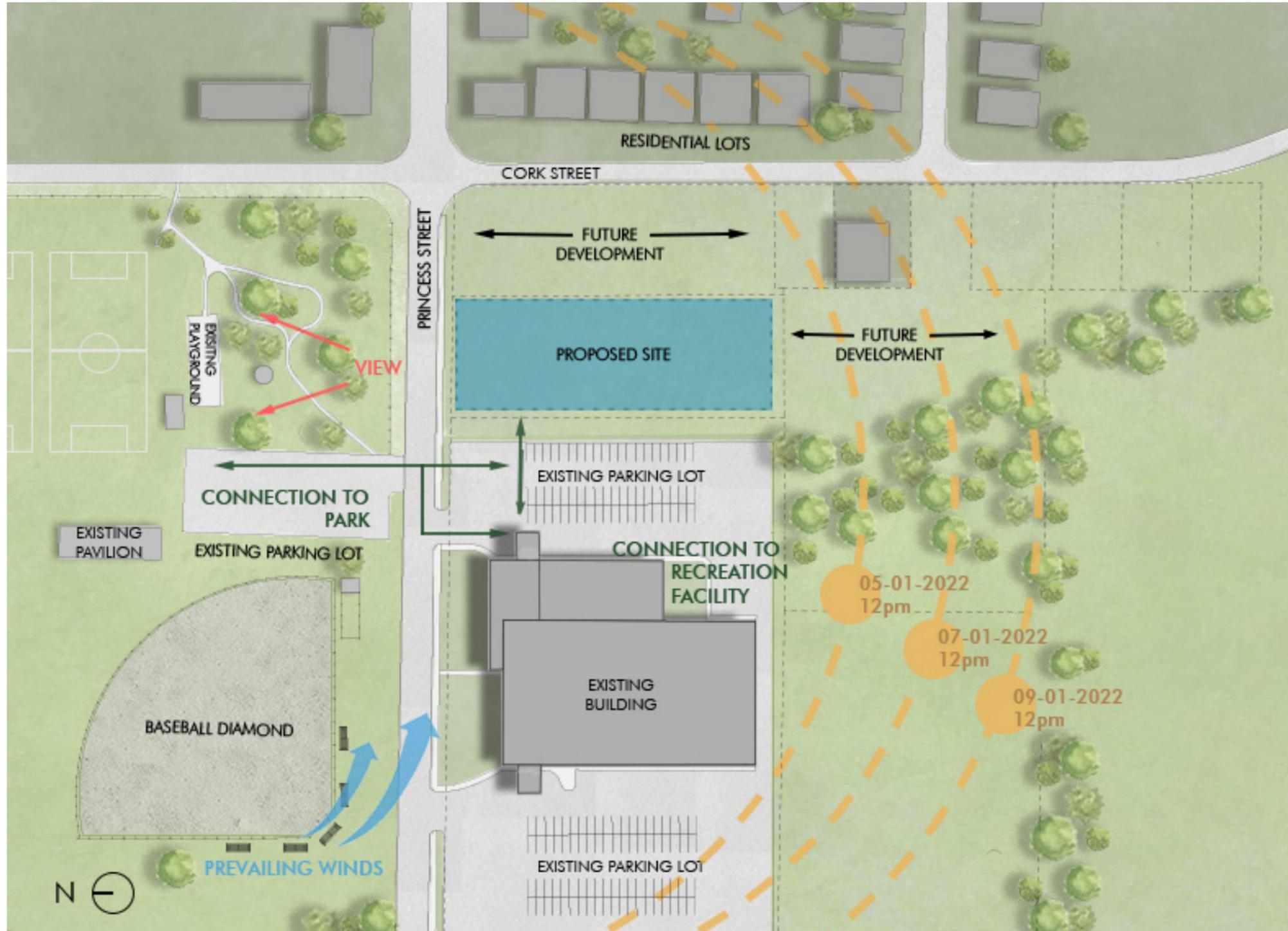
2.1 SITE PLAN/SURVEY



2. DESIGN DRAWINGS

CONTINUED

2.2 SITE ASSESSMENT



2. DESIGN DRAWINGS

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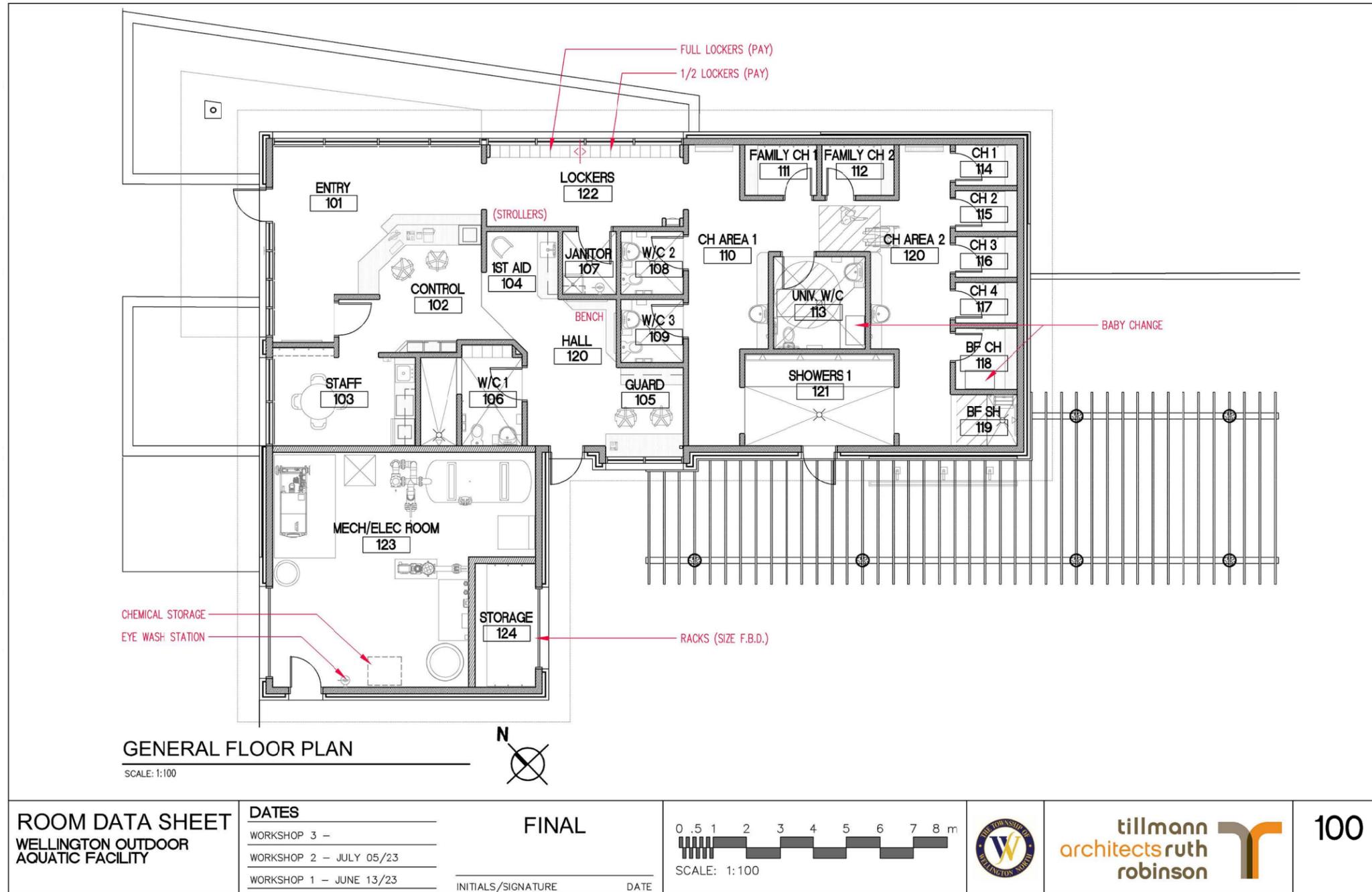
2.4 ROOM INFORMATION SHEETS (BATHHOUSE)

 <p>WELLINGTON OUTDOOR AQUATIC FACILITY</p>		<p>ROOM DATA SHEETS</p> <hr/> <p>100 GENERAL FLOOR PLAN</p> <p>101 ENTRY</p> <p>102 CONTROL</p> <p>103 STAFF</p> <p>104 FIRST AID</p> <p>105 GUARD</p> <p>106 W/C 1</p> <p>107 JANITOR</p>	
ROOM DATA SHEET	<p>DATES</p> <p>WORKSHOP 3 – _____</p> <p>WORKSHOP 2 – JULY 05/23</p> <p>WORKSHOP 1 – JUNE 13/23</p>	<p>FINAL</p> <p>_____ INITIALS/SIGNATURE</p> <p>_____ DATE</p>	<p>tillmann architects ruth robinson </p> <p>000</p>

2. DESIGN DRAWINGS

CONTINUED

2.4 ROOM INFORMATION SHEETS



2. DESIGN DRAWINGS

CONTINUED

2.4 ROOM INFORMATION SHEETS

DRAWING LEGEND			
ARCHITECTURAL		NEW MILLWORK	
	GWB	GYPSUM WALL BOARD	
	PT	PAINT	
	RSF	RESILIENT SHEET FLOORING	
	SC	SEALED CONCRETE	
	ACT	ACOUSTIC CEILING TILE	
	PWC	PROTECTIVE WALL COVERING	
	CG	CORNER GUARD	
	MIR	MIRROR	
	TB	TACK BOARD	
WB	WHITEBOARD		
RS	ROLLER SHADES		
MECHANICAL / ELECTRICAL	FD	FLOOR DRAIN	
		OUTLET RECEPTACLE	
		POWER RECEPTACLE (OVER COUNTER)	
		POWER RECEPTACLE (UNDER COUNTER)	
		POWER RECEPTACLE (GROUND FAULT INTERRUPTER)	
		DATA OUTLET	
		VOICE OUTLET	
		DATA/VOICE OUTLET	
		CABLE OUTLET	
		WIFI	
		WAP	
		PUSH BUTTON	
	EQUIPMENT LIST	TAG	EQUIPMENT
		QTY.	
		1	CHAIR (NIC)
NOTES			
ROOM DATA SHEET WELLINGTON OUTDOOR AQUATIC FACILITY			
DATES WORKSHOP 3 – _____ WORKSHOP 2 – JULY 05/23 WORKSHOP 1 – JUNE 13/23			
FINAL _____ INITIALS/SIGNATURE		_____ DATE	
		104	

FIRST AID

PROG. NO.: 104 ROOM SIZE: 4.2m²
 FUNCTION: FIRST AID
 ANTICIPATED OCCUPANT LOAD:

FINISHES

WALL FINISH: PAINTED BLOCK
 FLOOR FINISH: CONC EPOXY (EP)
 WALL BASE: EPOXY
 CEILING FINISH: PAINT GYP
 MILLWORK FINISH: SOLID SURFACE
 COMMENTS:

DOORS AND ACCESS

PASSAGE SET CARD READER
 KEYED LOCK ELECTRIC STRIKE

TAG	DOOR TYPE

MECHANICAL

TEMPERATURE:
 HUMIDITY:
 HEPA FILTER:
 PRESSURIZATION:
 AIR CHANGES/HR:
 COMMENTS:

FIRE PROTECTION

SPRINKLER HEAD TYPE: CONCEALED
 COMMENTS:

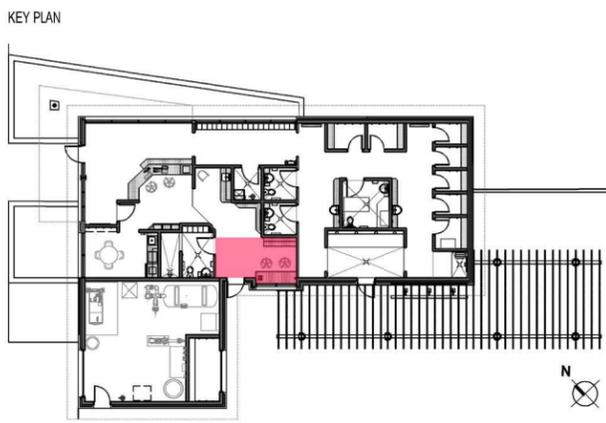
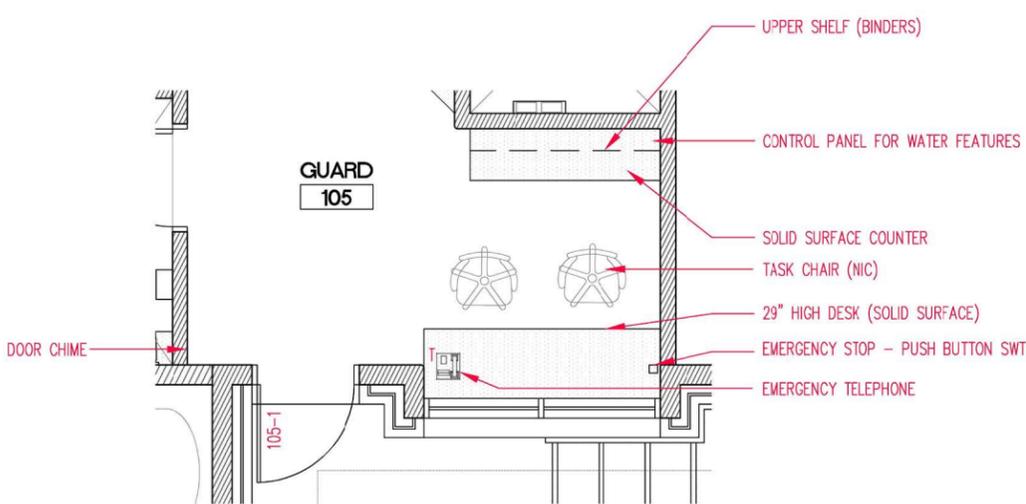
ELECTRICAL

LIGHT LEVEL:
 FIXTURE TYPE: RECESSED DOWNLIGHT
 DIMMING:
 SWITCHING:
 COMMENTS:

2. DESIGN DRAWINGS

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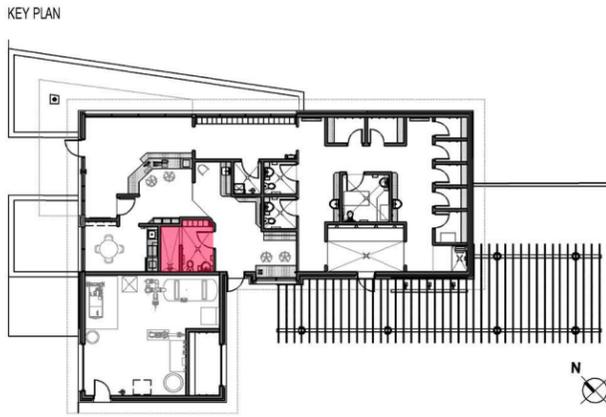
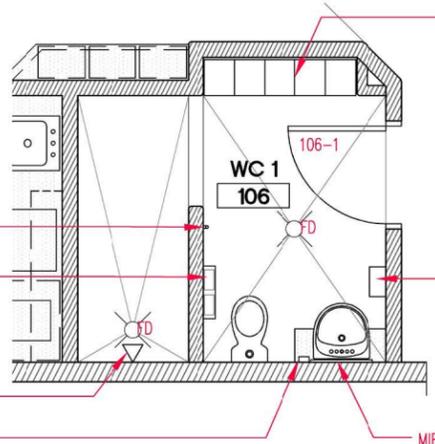
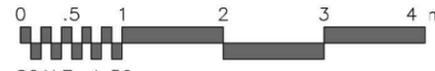
2.4 ROOM INFORMATION SHEETS

DRAWING LEGEND																		
ARCHITECTURAL	[Symbol]	NEW MILLWORK																
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	[Symbol]	DATA/VOICE OUTLET																
	[Symbol]	CABLE OUTLET																
	[Symbol]	WIFI																
EQUIPMENT LIST	TAG	EQUIPMENT	QTY.															
	2	TASK CHAIR (NIC)	2															
	1	TELEPHONE (NIC)	1															
NOTES																		
<p>ROOM DATA SHEET WELLINGTON OUTDOOR AQUATIC FACILITY</p>			<p>DATES</p> <p>WORKSHOP 3 – _____</p> <p>WORKSHOP 2 – JULY 05/23</p> <p>WORKSHOP 1 – JUNE 13/23</p>	<p>FINAL</p> <p>INITIALS/SIGNATURE _____</p> <p>DATE _____</p>	  <p>UPPER SHELF (BINDERS)</p> <p>CONTROL PANEL FOR WATER FEATURES</p> <p>SOLID SURFACE COUNTER</p> <p>TASK CHAIR (NIC)</p> <p>29" HIGH DESK (SOLID SURFACE)</p> <p>EMERGENCY STOP – PUSH BUTTON SWT</p> <p>EMERGENCY TELEPHONE</p> <p>DOOR CHIME</p> <p>105-1</p> <p>SCALE: 1:50</p>	<p>GUARD</p> <p>PROG. NO.: 107 ROOM SIZE: 11.6m²</p> <p>FUNCTION: GUARD</p> <p>ANTICIPATED OCCUPANT LOAD: 2</p> <p>FINISHES</p> <p>WALL FINISH: PAINTED BLOCK</p> <p>FLOOR FINISH: CONC EPOXY (EP)</p> <p>WALL BASE: EPOXY</p> <p>CEILING FINISH: PAINT GYP/STAIN WD</p> <p>MILLWORK FINISH: SOLID SURFACE</p> <p>COMMENTS:</p> <p>DOORS AND ACCESS</p> <p>[P] PASSAGE SET [CR] CARD READER</p> <p>[K] KEYED LOCK [ES] ELECTRIC STRIKE</p> <table border="1"> <thead> <tr> <th>TAG</th> <th>DOOR TYPE</th> </tr> </thead> <tbody> <tr> <td>105-1</td> <td>FULL GLASS DOOR (ALUM.)</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table> <p>MECHANICAL</p> <p>TEMPERATURE:</p> <p>HUMIDITY:</p> <p>HEPA FILTER:</p> <p>PRESSURIZATION:</p> <p>AIR CHANGES/HR:</p> <p>COMMENTS:</p> <p>FIRE PROTECTION</p> <p>SPRINKLER HEAD TYPE: CONCEALED</p> <p>COMMENTS:</p> <p>ELECTRICAL</p> <p>LIGHT LEVEL:</p> <p>FIXTURE TYPE: RECESSED DOWNLIGHT</p> <p>DIMMING:</p> <p>SWITCHING:</p> <p>COMMENTS:</p>	TAG	DOOR TYPE	105-1	FULL GLASS DOOR (ALUM.)								
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			<p>tillmann architects ruth robinson</p> 	<p>105</p>														

2. DESIGN DRAWINGS

CONTINUED

2.4 ROOM INFORMATION SHEETS

DRAWING LEGEND							
ARCHITECTURAL	[Symbol]	NEW MILLWORK					
	GWB	GYPHUM WALL BOARD					
	PT	PAINT					
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[Symbol]		WIFI					
[Symbol]		PUSH BUTTON					
EQUIPMENT LIST		TAG	EQUIPMENT	QTY.			
NOTES							
ROOM DATA SHEET WELLINGTON OUTDOOR AQUATIC FACILITY			DATES WORKSHOP 3 – _____ WORKSHOP 2 – JULY 05/23 WORKSHOP 1 – JUNE 13/23	_____ INITIALS/SIGNATURE	_____ DATE		WASHROOM 1 PROG. NO.: 106 ROOM SIZE: 8.0m ² FUNCTION: WASHROOM AND SHOWER ANTICIPATED OCCUPANT LOAD: 1
			RECESSED 1/2 LOCKERS (10 UNITS)	ROBE HOOK TOILET PAPER DISPENSER	HAND DRYER (TYP.) MIRROR (TYP.)	FINISHES WALL FINISH: EPOXY BLOCK FLOOR FINISH: EPOXY (EP) WALL BASE: EPOXY CEILING FINISH: EPOXY MILLWORK FINISH: SOLID SURFACE COMMENTS:	
DOORS AND ACCESS [P] PASSAGE SET [CR] CARD READER [K] KEYED LOCK [ES] ELECTRIC STRIKE			TAG DOOR TYPE 106-1 SLAB (FLUSH) DOOR	MECHANICAL TEMPERATURE: HUMIDITY: HEPA FILTER: PRESSURIZATION: AIR CHANGES/HR: COMMENTS:	FIRE PROTECTION SPRINKLER HEAD TYPE: CONCEALED COMMENTS:	ELECTRICAL LIGHT LEVEL: FIXTURE TYPE: RECESSED DOWNLIGHT DIMMING: SWITCHING: COMMENTS:	
ROOM DATA SHEET WELLINGTON OUTDOOR AQUATIC FACILITY			_____ INITIALS/SIGNATURE	_____ DATE	 SCALE: 1:50		106

2. DESIGN DRAWINGS

CONTINUED

2.6 RENDERINGS



Pool looking North

2. DESIGN DRAWINGS

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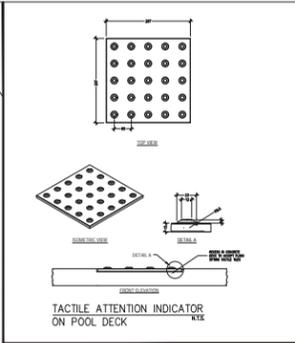
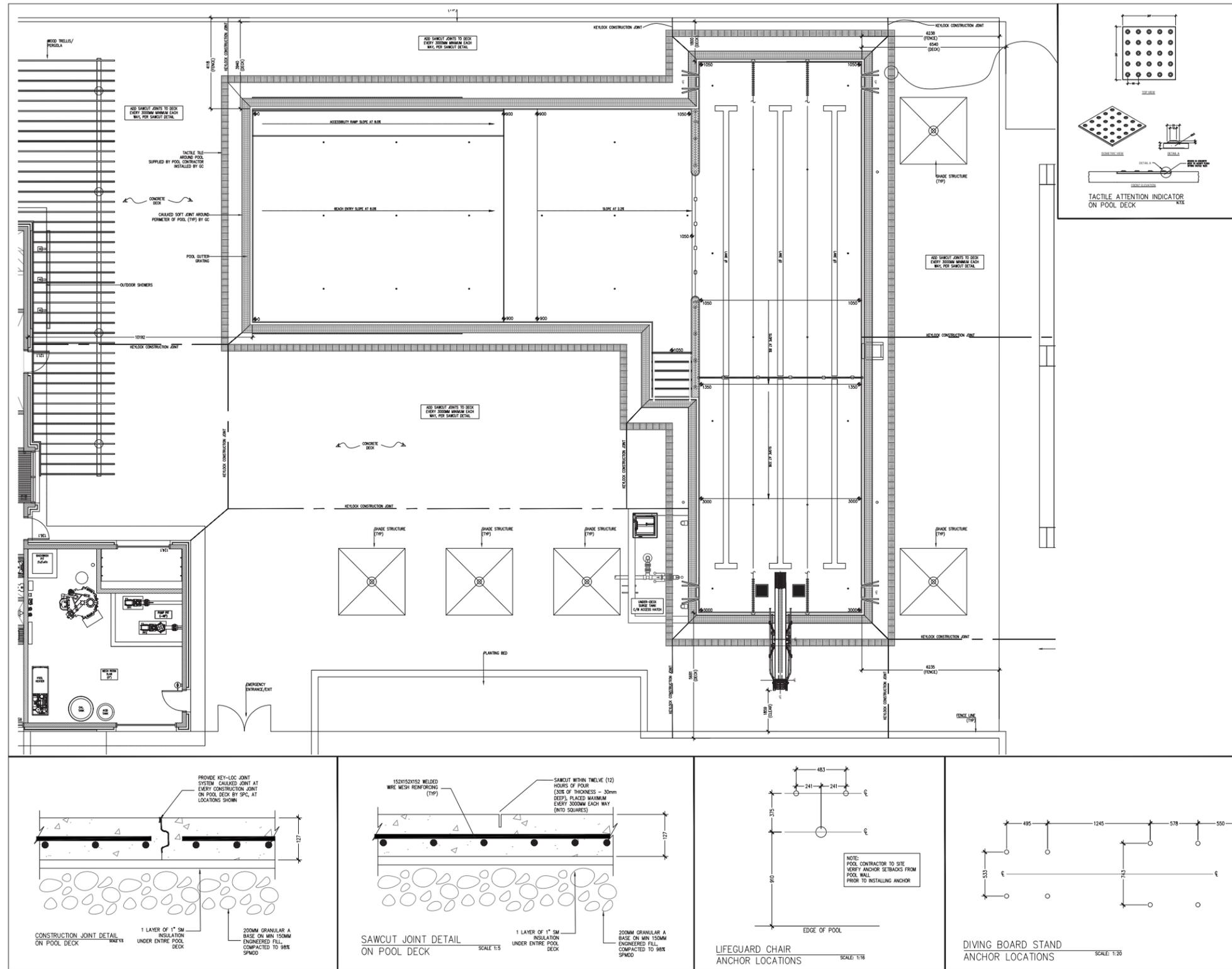
2.6 RENDERINGS



Looking South

3. DESIGN BRIEFS

3.1 POOL DESIGN BRIEF



Wellington Outdoor Aquatic Facility
 CLIENT PROJECT NO. 2476-21

AQUA PLANS
 aquatic consultants inc.

tillmann architects ruth robinson

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NO.	ISSUED FOR	DATE

NO. ISSUED FOR DATE
 DRAWING TITLE:
POOL SITE PLAN

DATE: 08-01-23
 SCALE: AS SHOWN
 PROJECT NO: 023030
 DRAWN: LB
 CHECKED: MS
 COMP. FILE NO.:
 DRAWING NO:
PL1.0

3. DESIGN BRIEFS

CONTINUED

GENERAL NOTES:

- COORDINATE POOL LAYOUT DIMENSIONS WITHIN THE POOL NATATORIUM WITH LATEST ARCHITECTURAL CONSTRUCTION DRAWINGS. IN CASE OF DISCREPANCIES, ARCHITECTURAL DRAWINGS SHALL GOVERN.
- FOR ALL EQUIPMENT, REQUIREMENTS, ACCESSORIES AND ALL MATERIAL ASSEMBLIES, SEE SPECIFICATIONS AND DRAWINGS.
- ALL ASSEMBLIES, LAYOUTS, EQUIPMENT AND MATERIALS SHALL MEET LOCAL, PROVINCIAL, OR PREVAILING CODES, AMENDMENTS AND HEALTH DEPARTMENT REQUIREMENTS (MOST STRINGENT OF SUCH).
- SPC SHALL VERIFY ALL DIMENSIONS, CONDITIONS AND COORDINATE / VERIFY ALL MECHANICAL, ELECTRICAL, STRUCTURAL, EQUIPMENT AND FINISH REQUIREMENTS AS NECESSARY PER CODE AND CONSTRUCTION DOCUMENTS.
- ALL CONDITIONS, CLEARANCES, FINISHES, EQUIPMENT AND ACCESSORIES SHALL COMPLY WITH PREVAILING ACCESSIBILITY REQUIREMENTS IN JURISDICTION.
- SEE SPECIFICATIONS AND ALL DRAWING DETAILS FOR SPC SCOPE OF WORK LIMITS.
- DRAWINGS AND DETAILS DEFINE LIMITS, SCOPE, DETAILS AND DATA FOR POOLS AND POOL-RELATED EQUIPMENT AND ACCESSORIES ONLY.

DEPTH MARKINGS:

- DEPTH MARKERS ON POOL DECK SUPPLIED AND INSTALLED BY SPC. CONFIRM SPACING WITH PROVINCIAL CODE AND / OR LOCAL BY-LAWS.
- HEIGHT OF MARKERS TO BE 100mm MINIMUM IN CONTRASTING COLOUR AND SLIP RESISTANT.
- UNITS TO BE SHOWN AS "M" OR AS GOVERNED BY PROVINCIAL CODE AND / OR LOCAL BY-LAWS.
- DEPTH OF POOL AND DEPTH MARKERS ARE TO BE VERIFIED ON SITE BY THE SPC AND POOL CONSULTANT PRIOR TO INSTALLATION.

PIPING DESIGN NOTES:

- ALL PIPING TO BE SCHEDULE 40 PVC (BURIED) AND SCHEDULE 80 (EXPOSED), NSF APPROVED, ASTM A10785, UNLESS OTHERWISE NOTED.
- ALL PIPING TO AND FROM HEAT EXCHANGERS SHALL BE CPVC WITH 3050mm OF THE EXCHANGER UNIT.
- ALL VISIBLE PIPING MUST BE LABELED WITH DIRECTIONAL ARROWS & TYPE OF WATER IT CARRIES (I.E. SKIMMERS, MAIN DRAINS, ETC.) IDENTIFICATION AT 304mm MAXIMUM O.C. INTERVALS.
COLOUR CODE:
CHLORINE (LIQUID OR GAS) - YELLOW
POTABLE WATER - GREEN
(AS PER ONTARIO REGULATION - P.R.O. 1990, REG. 565, S. 6(4))

- PRESSURE PIPING:
• MAX. 3.0 m/s (10 FPS)
5. SUCTION PIPING:
• MAX. 1.8 m/s (6 FPS)
• MAX. 0.9 m/s (3 FPS)
- DRAIN AND SUCTION GRATES FREE OPEN AREAS TO PROVIDE FLOW VELOCITIES NOT TO EXCEED 0.45 m/s (1.12 FPS). ALL DRAIN GRATES SHALL BE SIZED FOR FULL PUMP FLOW.
- STRUCTURAL SUPPORT FOR PIPING AS SPECIFIED BY MANUFACTURER. REFER TO DETAIL SHEETS.

ELECTRICAL NOTES:

- PRIMARY GROUNDING LOOP MUST BE PROVIDED BY CERTIFIED ELECTRICAL CONTRACTOR.
- ALL REINFORCING BAR IN POOL STRUCTURE MUST BE BONDED TO PRIMARY GROUNDING LOOP BY CERTIFIED ELECTRICAL CONTRACTOR.
- ALL METAL POOL FITTINGS AND ACCESSORIES WITHIN 1524mm OF POOL WATER MUST BE BONDED TO PRIMARY GROUNDING LOOP.
- ALL PUMPS SHALL BE WIRED BY CERTIFIED ELECTRICAL CONTRACTOR.
- GROUNDING OF CONCRETE REINFORCEMENT BY CERTIFIED ELECTRICAL CONTRACTOR.

STANDARD RAILINGS:

- ALL RAILINGS, GRAB RAILS, AND GUARD CHAIRS ARE TO BE 30mm O.D. STAINLESS STEEL, 1.65mm WALL THICKNESS, TYPE 304 POLISHED TO #320 GRIT FINISH (ALL LOCATIONS).
- JOINTS TO BE CONTOUR CUT AND FUSION WELDED.
- ALL WELDS TO BE GROUND SMOOTH WITH NO SHARP EDGES OR BURRS.
- RADIUS OF ALL BENDS IS 150mm UNLESS OTHERWISE NOTED.
- ALL VERTICALS TO PENETRATE INTO FLOOR 100mm DEEP.
- PROVIDE BRASS WEDGE ANCHORS C/W STAINLESS STEEL ESCUTCHEON COVERS FOR ALL RAILINGS EXCEPT WHERE NOTED.
- ALL RAILINGS TO HAVE GROUNDING CLIP ATTACHED FOR STANDARD ELECTRICAL CONNECTOR.
- GROUNDING OF ALL RAILINGS SHALL BE BY CERTIFIED ELECTRICAL CONTRACTOR.

BACKWASH DISCHARGE:

- WASTE DISCHARGE FROM ALL POOLS ARE DRAINED TO THE SANITARY SEWER THROUGH A 6" AIR GAP AT THE BACKWASH DRAIN PIT.

PRESSURE TESTING:

- ALL PIPING TO BE PRESSURE TESTED AT 240 kPa FOR 2 HOURS.
- ALL PRESSURE TESTING WITH WATER. TESTING WITH AIR IS NOT PERMITTED.

POOL STRUCTURAL NOTES:

- ALL POOLS ARE DESIGNED TO WITHSTAND ANTICIPATED HYDRAULIC STRUCTURAL LOADING FOR BOTH FULL, AND EMPTY CONDITIONS.
- FINAL CONSTRUCTION BENEATH SLABS ON GRADE SHOULD CONSIST OF 200 MM OF UNIFORMLY COMPACTED GRANULAR A UNIFORMLY COMPACTED TO 98 PERCENT OF SPEC'D. THE MODULI OF SUBGRADE REACTION APPROPRIATE FOR SLAB ON GRADE DESIGN ON THE AFOREMENTIONED SOILS ARE AS FOLLOWS:
1.1. PROOF-ROLLED EARTH FILL: 18,000 KPA/M
1.2. CLAYEY SILT FILL: 30,000 KPA/M

FOUNDATION DESIGN:

- FOUNDATION DESIGN IS BASED ON THE FOLLOWING CRITERIA:

- SOIL REPORT BY: TARRAPROBE
DATE OF REPORT: APRIL 1ST, 2021
REPORT NUMBER: 7-21-0014-01
REFERENCE THE GEOTECHNICAL REPORT FOR SUB GRADE IMPROVEMENT, ENGINEERED BACKFILL, GRANULAR MATERIALS SHOULD BE PLACED IN MINIMUM 150mm LAYER LOOSE THICKNESS AND COMPACTED, AS PER SOIL REPORT.

- SOIL BEARING SHALL BE 150 KPa PRIOR TO NEW SOIL REPLACEMENT.
- THE SUBSURFACE CONDITIONS WITHIN THE INVESTIGATED AREA ARE EXPECTED TO COMPRISE OF EXISTING FILL MATERIALS AND TOPSOIL. BASED ON THE FINDINGS OF THE SOIL INVESTIGATION, THE EXISTING FILL IS NOT CONSIDERED SUITABLE FOR CONSTRUCTION OF A SLAB-ON-GRADE. STRUCTURE AND SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLY COMPACTED ENGINEERED FILL. TEST PITS MAY BE REQUIRED IN THE SLAB ON GRADE AREA TO DETERMINE THE EXISTING FILL THICKNESS AND TO ASSESS THE SUB-EXCAVATION REQUIREMENTS. ALSO, SOME LOCALIZED WEAK ZONES OF NATIVE OR SUITABLE FILL SOILS MAY BE ENCOUNTERED AT THE DESIGN SUBGRADE FOR THE SLAB THAT SHOULD BE SUB-EXCAVATED AND REMOVED PRIOR TO BACKFILLING FOR CONSTRUCTION AND REPLACED WITH SUITABLE FILL MATERIALS COMPACTED TO A MINIMUM OF 98 PERCENT OF SPEC'D.
- ALL SOIL, CONCRETE, AND ANY OTHER TESTING WILL BE DONE AT GC'S EXPENSE.
- PROVIDE HYDROSTATIC RELIEF VALVES IN EVERY MAIN DRAIN SUMP AT THE BOTTOM OF POOLS TO RELIEVE HYDROSTATIC PRESSURE.
- CONTRACTOR SHALL VERIFY THAT EXISTING BUILDING FOUNDATIONS WILL NOT BE UNDERMINED BY THE PROPOSED EXCAVATION. A MINIMUM SLOPE OF 1:1 FROM THE BOTTOM OF EXISTING FOOTING SHALL NOT BE UNDERMINED. SHOULD EXCAVATION INFRINGE UPON THIS AREA, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGN OF SHORING, A LICENSED STRUCTURAL ENGINEER HAVING JURISDICTION IN THE PROVINCE WHERE PROJECT IS LOCATED, SHALL BE RETAINED FOR THIS PURPOSE BY THE CONTRACTOR.

CODES:

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST ISSUES AND AMENDMENTS OF THE FOLLOWING CODES:
- PROVINCIAL BUILDING CODE
- PROVINCIAL BUILDING CODE ACT
- OCCUPATIONAL HEALTH AND SAFETY ACT
- PROVINCIAL PLUMBING CODE
- ELECTRICAL SAFETY AUTHORITY
- LOCAL BUILDING REGULATIONS AND BY-LAWS
- REQUIREMENTS FOR CONCRETE TO COMPLY WITH CSA A23.3 DESIGN OF CONCRETE STRUCTURES.
- CONCRETE AND REINFORCING STEEL CANVESA A23.4 PRE-CAST CONCRETE MATERIALS AND CONSTRUCTION.
- WHERE CONFLICTS OCCUR BETWEEN THE BUILDING CODE AND MATERIAL CODES, THE BUILDING CODE SHALL GOVERN.

REINFORCEMENT:

- HOOKS AND BENDS SHALL CONFORM TO CAN/CSA A23.4 STANDARDS FOR MINIMUM BEND RADIUS AND EXTENSIONS. LENGTHS GIVEN FOR BENT BARS DO NOT INCLUDE THE RADIUS AND MINIMUM EXTENSION FOR STANDARD HOOKS.
- BARS SHALL BE LAPPED 36 BAR DIAMETERS AT SPLICES UNLESS DETAILED OTHERWISE. NO SPLICES SHALL BE PERMITTED IN SQUARE FOOTINGS.
- PROVIDE CORNER BARS AT ALL INTERSECTIONS OF BEAMS AND WALLS PER TYPICAL DETAILS.
- COVER REQUIREMENTS FOR REINFORCING:
A) POOL SLABS: 75mm RE DETAILS
B) POOL WALLS: 75mm RE DETAILS
- REINFORCING IN SLABS ON GRADE SHALL BE PLACED AT THE CENTER OF THE SLAB, UNLESS NOTED OTHERWISE.

CAST-IN-PLACE CONCRETE:

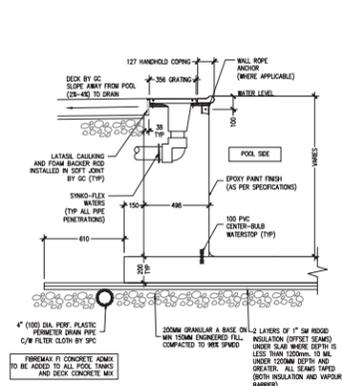
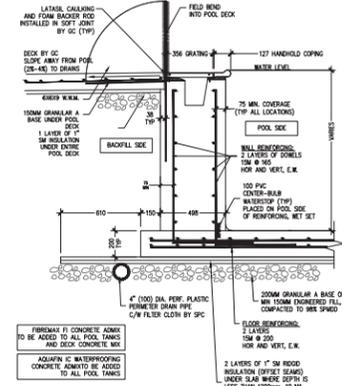
- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CAN/CSA A23.1 CONCRETE MATERIALS AND METHODS OF CONCRETE CONSTRUCTION.
CONCRETE MIX SCHEDULE
PORTLAND CEMENT: ASTM C150, TYPE F-1
PLASTICIZING ADMIXTURE: ASTM C494, TYPE A
FIBRE REINFORCING ADMIXTURE
WATERPROOFING ADMIXTURE
WATER TO CEMENT RATIO: 0.50
275kg CEMENT WITH A MAXIMUM OF 65kg OF FLY ASH
- STRENGTH LISTED SHALL BE MINIMUM DESIGN STRENGTH AT TWENTY EIGHT (28) DAYS OF 30 MPa.
- FIVE TO EIGHT PERCENT (5-8%) AIR ENTRAINMENT SHALL BE ADDED TO CONCRETE MIXES FOR STRUCTURAL ELEMENTS PERMANENTLY EXPOSED TO WEATHER.
- CALCIUM CHLORIDE SHALL NOT BE ADDED TO CONCRETE MIXTURES WITHOUT WRITTEN APPROVAL.
- DO NOT ADD WATER ON SITE.
- MAX SLUMP 75mm BEFORE ADDITION OF PLASTICIZER. PLASTICIZER TO BE SITE ADDED.
- ALL CONCRETE TO BE CONTINUOUSLY WET CURED FOR 14 DAYS

WATER STOPS:

- WATER STOP AT WALL AND FLOOR INTERSECTION SHALL BE 100MM PVC, RIBBED WITH CENTER BULB, TYPE 3A.
- WATER STOP IN FLOOR CONTROL JOINTS SHALL BE 150MM PVC, RIBBED WITH LARGE CENTER BULB, TYPE 4.
- WATER STOP IN WALL CONTROL JOINTS SHALL BE 150MM PVC, RIBBED WITH LARGE CENTER BULB, BY CPD OR DURAJOINT, TYPE 4.

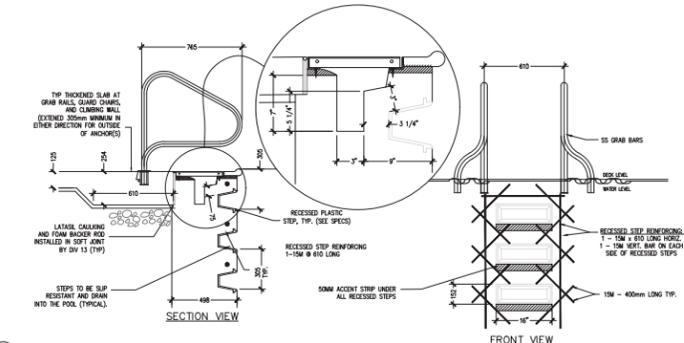
CONTROL JOINTS:

- PROVIDE SAW CUT CONTROL JOINTS IN FLOOR AND WALLS OF POOLS AS SHOWN IN DRAWINGS & PER SPECIFICATIONS.
- SAW CUT SHALL BE FILLED WITH A HIGH PERFORMANCE, ONE COMPONENT, NEUTRAL CURE 100% SILICONE SEALANT WHICH IS COMPATIBLE FOR USE IN WET APPLICATIONS.

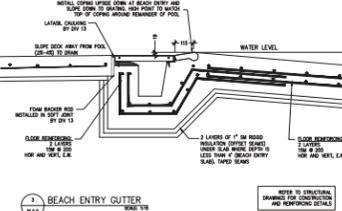


14 TYP. REINFORCING DETAIL OUTDOOR POOL

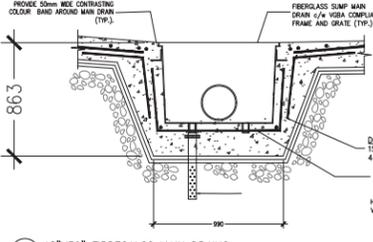
15 TYP. WALL DETAIL OUTDOOR POOL



7 RECESSED STEP DETAIL OUTDOOR POOL



1 BEACH ENTRY CUTTER



4 18\"/>

Wellington Outdoor Aquatic Facility
CLIENT PROJECT NO. 2476-21

AQUA PLANS aquatic consultants Inc.

NO. ISSUED FOR DATE

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NO.	ISSUED FOR	DATE

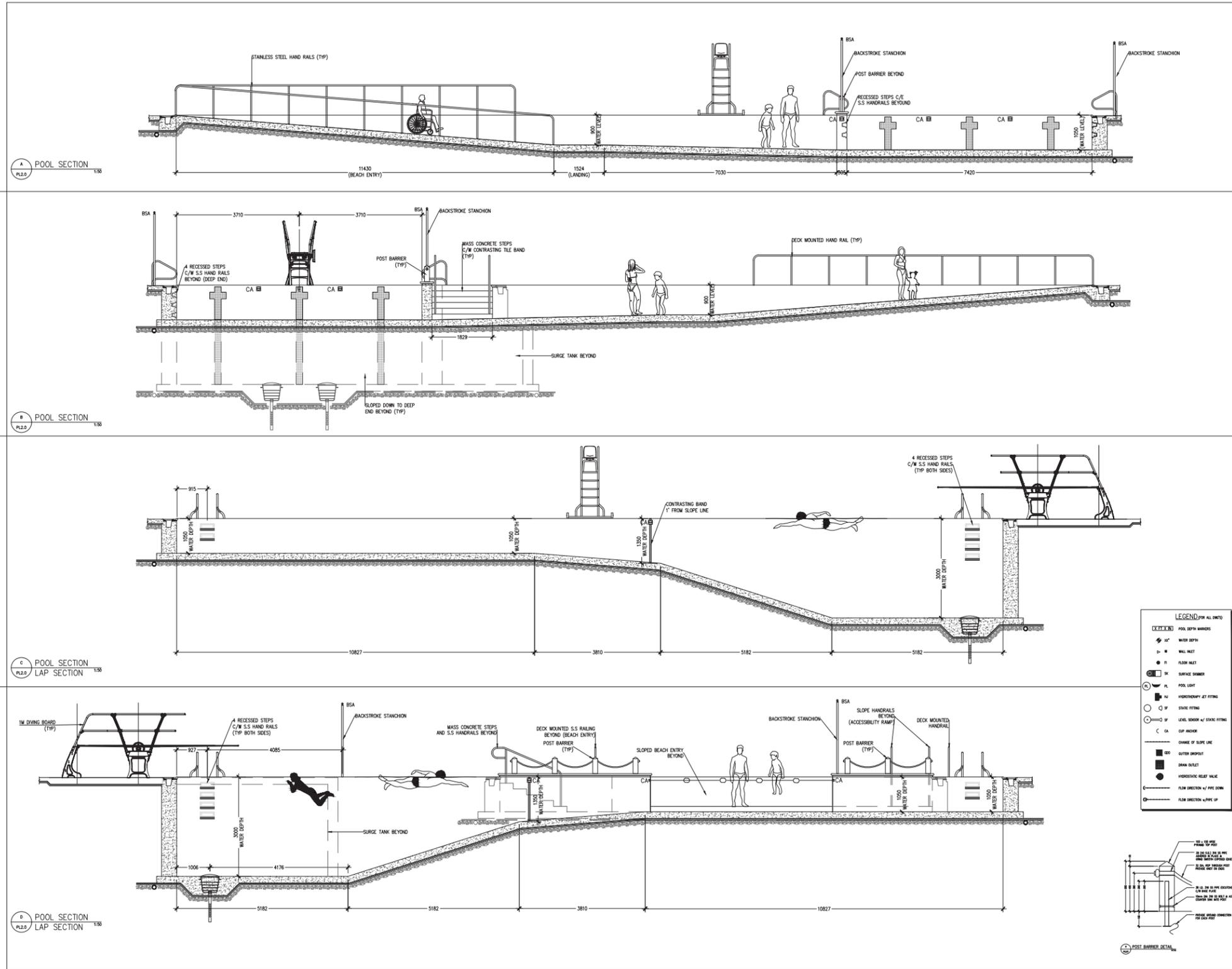
DRAWING TITLE:
GENERAL NOTES & DETAILS

DATE: 08-01-23	SCALE: AS SHOWN	PROJECT NO: 023030
DRAWN: LB	CHECKED: MS	COMP. FILE NO.:

DRAWING NO:
PL1.2

3. DESIGN BRIEFS

CONTINUED



Wellington Outdoor Aquatic Facility
CLIENT PROJECT NO. 2476-21

AQUA PLANS
aquatic consultants Inc.

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NO. ISSUED FOR DATE

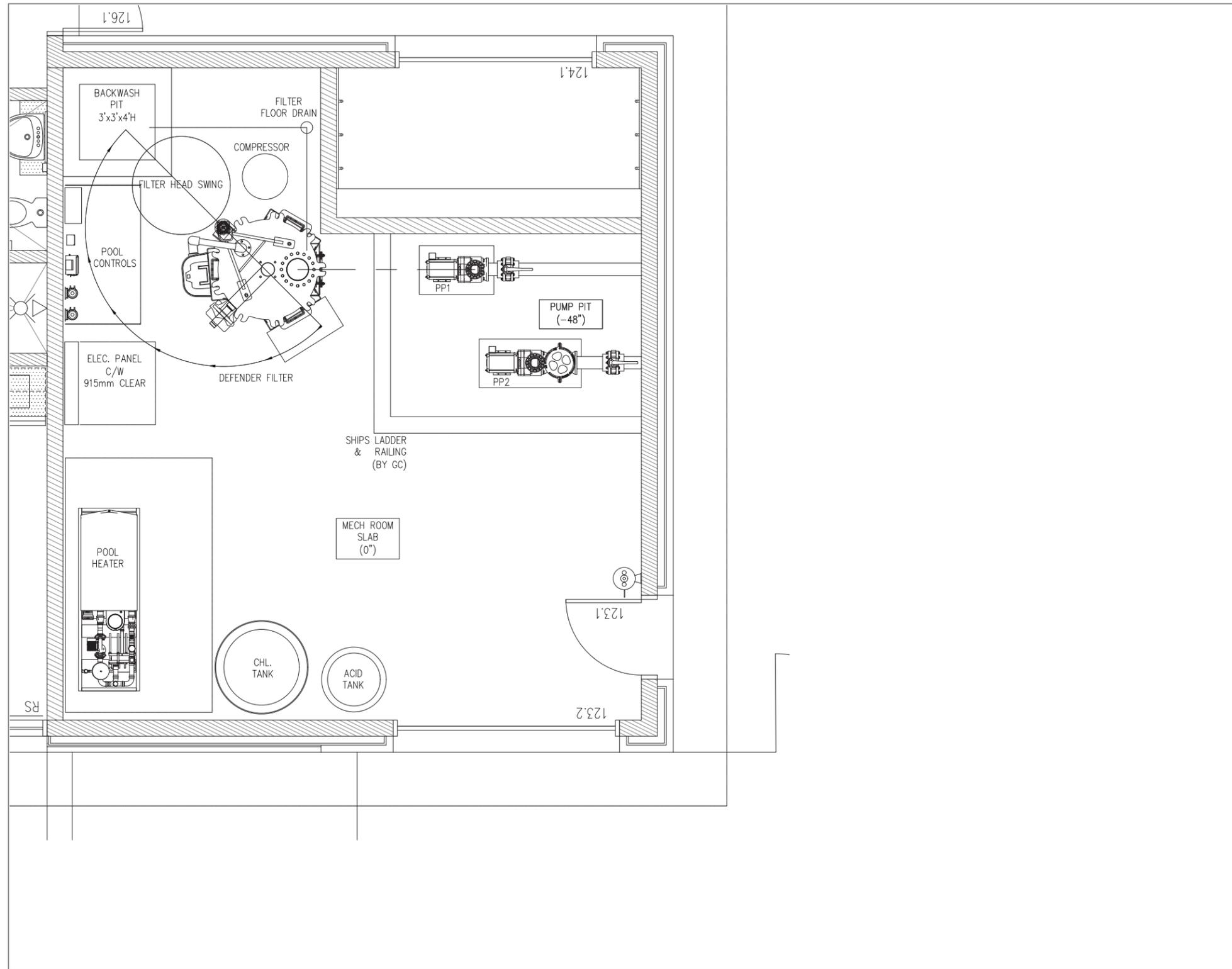
DRAWING TITLE:
POOL SECTIONS

DATE: 08-01-23 SCALE: 1:50 PROJECT NO: 023030
DRAWN: LB CHECKED: MS COMP. FILE NO.:

DRAWING NO:
PL2.1

3. DESIGN BRIEFS

CONTINUED



Wellington Outdoor
Aquatic Facility
CLIENT PROJECT NO. 2476-21



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NO.	ISSUED FOR	DATE

Prepared by: Lee Bottema
DRAWING TITLE:
POOL MECH.
ROOM LAYOUT

DATE: 08-01-23	SCALE: 1:20	PROJECT NO: 023030
DRAWN: LB	CHECKED: MS	COMP. FILE NO.:
DRAWING NO: PL5.0		

3. DESIGN BRIEFS

3.2 MECHANICAL DESIGN BRIEF

INTRODUCTION

DESCRIPTION

- A proposed Group A Division 2 pool and change room construction located in Mount Forest, Ontario.
- The building will be approximately 260 square metres (SM) or 2800 square feet (SF) above grade and one story tall. The exterior or pool area is approximately 1393 square meters (SM) or 15000 square feet (SF). Approximate building height is 3.7 metres (12 feet) from average grade to the floor of the roof level.

DESIGN STANDARDS

GENERAL

- Mechanical systems shall be designed and installed to maximize usable space within the building while maintaining optimum service clearances for maintenance and repair.
- All equipment and materials shall be designed and installed in a neat and orderly fashion. In finished areas all mechanical systems shall be concealed unless specifically exposed as part of the architectural design.

LEED/ENERGY CONSERVATION

- The project shall not follow LEED process.

CODES AND STANDARDS

Mechanical systems shall be in accordance with applicable codes and standards including, but not limited to:

- Authorities Having Jurisdiction (local building department requirements, local fire department requirements, local by-laws)
- National:
 - Air Conditioning and Refrigeration Institute (ARI)
 - American National Standards Institute (ANSI)
 - American Standard for Testing and Materials (ASTM)
 - American Society of Mechanical Engineers (ASME)
 - American Society of Heating Refrigeration and Air Conditioning Engineers (ASHRAE):

- Canadian/American Air Balance Council (CAABC)
 - Canadian Standards Association (CSA):
 - Model National Energy Code for Buildings (MNECB)
 - Natural Gas Utilization Code
 - National Fire Protection Association (NFPA)
 - Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
- Ontario
 - Ontario Building Code (OBC)
 - Ontario Fire Code (OFC)
 - Ontario Electrical Safety Code
 - Operating Engineers Act

OUTDOOR DESIGN CONDITIONS

The sizing of mechanical systems shall be based on the outdoor air conditions shown in the following table:

	DRY BULB DEG.C (DEG.F)	WET BULB DEG.C (DEG.F)	
Cooling	29.0 (84.2)	23.0 (73.4)	OBC 2.5%
Heating	-24.0 (-11.2)		OBC 1%

VENTILATION FOR ACCEPTABLE INDOOR AIR

Ventilation to meet acceptable indoor air quality shall be in accordance with ASHRAE Standard 62 and the applicable building code.

Specific minimum outdoor air (OA) ventilation rates are identified in the following table and are equal to the sum of a per person rate and per SM (SF) rate:

	L/s (CFM) Per Person	L/s-SM (CFM/SF)	Minimum OA-ACH	Comment
Office	2.4 (5)	0.3 (0.06)		
Change Rooms / Lockers	0 (0)	0.47 (1.0)		

INDOOR DESIGN CONDITIONS

The indoor space conditions shall be in accordance with the following table:

	SUMMER		WINTER	
	Temp. Deg.C. (Deg.F)	Relative Humidity Note 1	Temp. Deg.C. (Deg.F)	Relative Humidity
Office, First, Aid, Staff, Guard and Control	22.2 (72) +/-1 Deg.C.	60% +/- 5%	Not Controlled (Seasonal facility)	
WC, Shower, Change Rm, Lockers and Entry	Not Controlled - Ventilation Only		Not Controlled (Seasonal facility)	
Mechanical Rm	Not Controlled - Ventilation Only		10 (50) +/-1 Deg.C.	

NOISE DESIGN CRITERIA

All mechanical systems and components shall be designed and installed with attention to reducing sound and vibration levels to meet noise criteria and provide a space that is comfortable, acoustically, for the occupants.

Noise levels due to mechanical equipment, duct work, grilles, registers, terminal devices, and diffusers shall be design not to exceed the recommended ASHRAE limit listed below for the areas indicated:

	NC (low)	NC (high)	Comments
Office	30	35	
Property Line		45	

The identified noise criteria resulting from the operation of mechanical systems assumes a finished room with all the final architectural finishes (e.g. ceilings and floor finishes) and furniture in place.

HVAC

GENERAL

The heating, ventilation and air conditioning (HVAC) design

and installation shall conform to current applicable codes and standards and shall be sized by recognized computation procedures referenced in ASHRAE.

HEATING SYSTEMS

No heating (seasonal facility) except for mechanical room; a ceiling hung unit heater will be utilized to maintain temperature of the mechanical room at 10 deg C during winter.

COOLING SYSTEMS

The Office/First Aid Room/Staff room shall be provided with a split unit, complete with ceiling concealed ducted evaporator and rooftop air-cooled condenser with a nominal capacity of 2 Tons (7.0 kW). Split units shall be Mitsubishi, Daikin, or LG.

The remainder of the facility will be unconditioned, seasonal space with ventilation systems only.

MISCELLANEOUS SYSTEMS

- New separate washroom exhaust systems shall be provided for the washroom groups. The make-up shall be transferred from the adjacent corridors and intake louvers. The capacity of the exhaust fan will be approximately 1,500 cfm (710 L/s) with a 2 Hp fan motor.
- An exhaust fan shall be provided in the mechanical/chlorine room. Capacity of the fan will be approx. 471 L/s (1,000 cfm) with a 2 Hp fan motor.

NOISE AND VIBRATION CONTROL

All mechanical equipment shall be equipped with vibration isolation control measures to reduce the transfer of vibration generated noise into the building structure.

HVAC SYSTEMS INSULATION

Insulation for HVAC systems shall be in accordance with ASHRAE 90.1.

3. DESIGN BRIEFS

CONTINUED

PLUMBING AND DRAINAGE

► GENERAL

The Plumbing System shall conform to the Ontario Building Code (OBC).

All exterior site services shall be provided under the "Site Works" division or "Civil" contract. Scope of work for this Division shall end at 1500 mm (59 inch).

Above floor storm drains, sanitary drains and vents, 65 mm (2-1/2 inch) and larger shall be cast iron.

Above floor sanitary drains and vents, 50 mm (2 inch) and smaller shall be hard temper DWV copper drainage tubing.

Buried storm piping within the building shall be PVC.

Buried sanitary piping within the building shall be PVC.

Domestic water piping shall be copper type L.

Valves shall be Crane or equal of type and construction to suit service and working pressures.

For all services 50 mm (2 inch) and smaller 4,136 kPa (600 psig) WOG ball valves shall be used.

► STORM SYSTEMS

A complete system of roof drains and storm drainage piping shall be provided.

A series of pool deck drains, spaced at approximately every 15 m (50 ft) will be located around the pool and connected to the storm system.

► SANITARY SYSTEMS

A complete system of plumbing fixtures and sanitary drainage and vent piping shall be provided.

New above grade drains shall be collected and drained by gravity to site sanitary sewers.

A local sanitary sump in the pool mechanical room will be constructed to accept pool drain down will be provided. This drain down will be sized to accommodate the required flow of the pool 12 hour drain down requirement. The facility sanitary drain will be based on this volume flow.

► PLUMBING FIXTURES

The following plumbing fixtures are anticipated for the project:

	Group	Description	Comments
W-1	Water Closet	Wall mounted, electronic flush valve	
W-2	Water Closet	Wall mounted, barrier free, electronic flush valve	
L-1	Lavatory	Counter mounted, semi-recessed electronic "no touch" 100 mm (4 inch)centre set	
JS-1	Janitor Sink	Precast floor mounted, faucet with hose set	
SH-1	Shower	Pressure balanced mixing valve, floor or trench drain. Push button / metered	
SH-2	Shower	Pressure balanced mixing valve, barrier free with three fixed showerheads mounted at different heights with diverter valve, floor drain. Fold down bench	
Add exterior shower description			
DF-1	Drinking Fountain	Wall mounted, barrier free, non-refrigerated with bottle filter.	

Refer to Architectural section for description of washroom accessories. All washroom fixtures specified shall be AODA compliant.

Plumbing fixtures shall be water conserving type. Minimum (Refer to LEED/ENERGY CONSERVATION) baseline requirements:

	Metric	Imperial	Comments
Water Closets	4.8 Litres per flush	1.28 Gallons per flush	
Lavatories (Public)	1.5 LPM @ 414 kPa	0.4 GPM @ 60 psig	
Showerheads	7.6 LPM @ 550 kPa	2.0 GPM @ 80 psig	

► DOMESTIC COLD WATER

A 65 mm (2½ inch) domestic water service shall be brought into the facility for domestic water and Pool. The domestic water shall be isolated from the municipal water supply by approved back flow prevention devices.

Domestic water will be distributed to all plumbing fixtures throughout the facility.

1. A master thermostatic mixing valve will be provided with dedicated DHW distribution to the shower.

► DOMESTIC HOT WATER

Domestic hot water shall be generated for the shower and washroom areas using two gas fired water heater storage tanks.

1. Tank for main building shall be 450 Litre (119 gallons) electric and capable of 300 GPH recovery.

A replaceable bladder expansion tank suitable for domestic hot water shall be installed on the domestic hot water system to accommodate thermal expansion.

► NATURAL GAS

A low pressure natural gas metering station shall be provided. Natural gas shall be distributed to the pool heater/boiler room and miscellaneous unit heaters. All gas piping shall be schedule 40. Piping 64 mm (2-1/2 inch) and larger shall be welded. All gas piping shall be painted yellow in its entirety including concealed areas.

► INSULATION

Insulation for plumbing systems shall be in accordance with ASHRAE 90.1.

All exposed insulation shall be complete with PVC jacket or canvas lagging suitable for painting.

POOL WATER SYSTEMS

► GENERAL

Please refer to the documents provided by Aqua-Plans Inc. for pool system documentation.

FIRE PROTECTION AND LIFE SAFETY SYSTEMS

► GENERAL

The Fire Protection System shall conform to the Ontario Building Code (OBC).

The facilities will not be sprinklered.

► PORTABLE FIRE EXTINGUISHERS

General areas including offices shall be covered by water type extinguishers. Mechanical rooms, electrical rooms and similar spaces shall be provided with chemical fire extinguishers.

AIR AND WATER BALANCING

All air and water systems shall be balanced prior to building turn-over. Balancing reports shall be submitted for review by the consultant and owner.

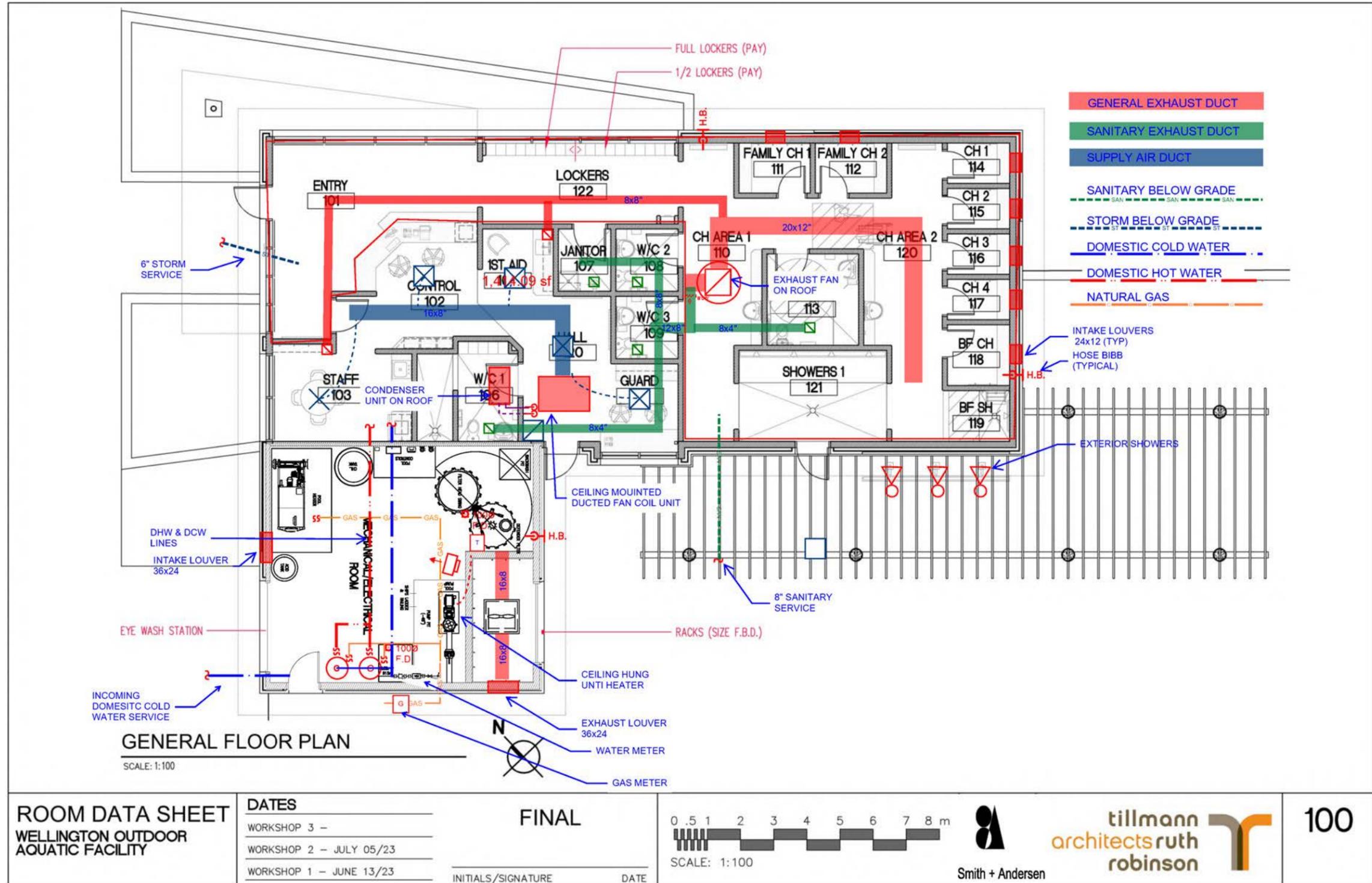
COMMISSIONING

► CONTRACTOR COMMISSIONING

Contractor shall perform equipment testing (piping, duct work) and obtain sign-offs, equipment start-up and check sheet (with manufacturers), arrange for training on equipment (provided to owner) and coordinate with independent commissioning agent.

3. DESIGN BRIEFS

CONTINUED



3. DESIGN BRIEFS

CONTINUED

3.3 ELECTRICAL DESIGN BRIEF

INTRODUCTION

A proposed Group A Division 2 construction located in Mount Forest, Welland, ON.

The facility is to be operated by City of Welland.

The facility is comprised of the bathhouse/changeroom building and exterior pool area:

- Bathhouse/changeroom building is to be approximately 260 square meters, including showers, change rooms, guard/first aid/control area, and mechanical/electrical room for pool mechanical and electrical services.
- Exterior pool area is to be approximately 1400 square meters, including pool, outdoor showers, and shade structures.

The facility includes the following unique features:

- Outdoor pool with dive stand and pool laps.

DESIGN STANDARDS

The Electrical systems will be designed in accordance with the current edition of the following Codes and Standards:

- Ontario Building Code
- Ontario Electrical Safety Code
- National Fire Protection Authority (NFPA)
- Ontario Fire Code
- Local Ordinances and Authorities
- Institute of Electrical and Electronic Engineers (IEEE) standards
- Illumination Engineering Society (IES) Standards
- ASHRAE 90.1 "Energy Standard for Buildings Except Low-Rise Residential Buildings"

NORMAL POWER DISTRIBUTION

The local distribution authority is Wellington North Power Inc.

A new incoming service will be provided at 100A, 600V, 3 phase, 4 wire.

The primary utility feeders will come from a new pole mounted

transformer on hydro pole P721 on the north side of Princess St. This transformer will be supplied and installed by the utility.

The primary feeder could run in a ductbank under the road, or overhead across the street. This will be further coordinated with Wellington North Power.

A 7-jaw meter base will be provided on the exterior of the mechanical/electrical room, to utility requirements.

Our design will be based on power density calculations as required by the Ontario Electrical Safety Code (OESC) rule 8-210 for 'othertypes of occupancies' and OBC for lighting power densities.

Main electrical room will be located in the bathhouse/changeroom building.

The primary distribution voltage, throughout the facility will be 600V and 120/208V.

Main electrical room will have a 1-hour fire rating.

All electrical equipment is to be sprinkler proof.

All electrical conductors are to be copper. All equipment to be copper bus.

FIRE ALARM

No fire alarm system is required for this building.

LIGHTING

High efficiency luminaires will be provided as per the recommendations of the IES.

Lighting will be designed to OBC requirements.

Primary interior lighting will be provided by LED luminaires.

Luminaires in outdoor parking area are to provide 22 lux average at driving areas with a uniformity of 3:1 (avg./min.) and 10 lux minimum with a uniformity of 4:1 (avg./min.) at the parking and pedestrian areas. Accessible parking spots and accessible path of travel from accessible parking to building entrance to have an average of 50 lux with a uniformity of 3:1 (avg./min.). Maximum/minimum uniformity will be 15:1.

Washrooms/change rooms will be finished and contain recessed/

surface mounted luminaires appropriate for their environment, designed to 250 lux.

Shower area luminaires are to be LED surface mounted linear fixtures or down lights with lenses, suitable for wet environments.

Service rooms will be lit with chain hung, LED luminaires.

Emergency lighting will be provided to meet building code and will be provided in mechanical/electrical service rooms. Battery packs will be installed in main mechanical/electrical room and exit corridors and exit paths from the change rooms and the guard office.

Exterior lighting will be complete with shielding to ensure glare control and light trespass to passers by and neighbouring properties. Full cut-off LED luminaires to ensure illumination with no spillage of light above the horizontal plane or onto adjacent properties.

The facility is considered not to be operating at night and thus, pool night time lighting is not considered for this project.

Emergency lighting will be provided by battery packs with remote heads throughout. Remote heads are to be provided in public areas and all required exit paths.

Battery units will be provided in mechanical/electrical room as supplementary lighting for emergency purpose.

Exit lights will be energy efficient LED type.

LIGHTING CONTROL

A low voltage lighting control system will be provided for the facility, including LV switches, occupancy sensors, photo sensors and time-clocks.

Washrooms, storage rooms, and any other areas with transient occupancy will be provided with ceiling or wall mounted occupancy sensors.

Exterior lighting shall be automatically controlled capable of turning off exterior lighting when sufficient daylight is available or when the lighting is not required during night time hours.

Motion sensor to be PIR, Ultrasonic or a combination sensor with a capability to add slaves. These will be optional wall mounted in small rooms and ceiling mounted in all other areas.

Mechanical and electrical room lighting shall be controlled by standard wall switches.

METERING

Metering will be provided via the main meter from the local distribution company.

No digital metering network (i.e. submetering) is anticipated for this project.

GROUNDING SYSTEM

An AC grounding system with new main ground electrode that will consist of a minimum of four 3m ground rods spaced 3m apart and connected to the main electrical ground bus located in the main electrical room with two separate #3/0AWG ground connections. The grounding system for the building will be provided connecting each typical electrical room to the main grounding system in the main electrical room in a radial connection. A ground bar will be provided in each electrical room. All transformer neutrals will be connected to the grounding bar and a common cable connected back to the system ground.

Grounding will be provided following IEEE 1100 and Electrical Code Section 10 standards.

2 grounding loops for the pool will be provided – one for the lower portion (below pool water level) and one for the upper portion. The loops will be interconnected via #6 AWG minimum copper conductor.

EMI CONSIDERATIONS

All wiring will be in conduit and routing of power cables will be selected to minimize the effect of magnetic fields on other equipment.

COMMUNICATIONS

A 4'x8' communications backboard will be provided in the mechanical/electrical room. A 2" conduit will be provided from the mechanical/electrical room to the property line. Cap and stake at property line.

27mm (1") conduit drops from accessible ceiling space to a single gang box will be provided. Conduit shall be provided from each data outlet back to the main communications backboard.

3. DESIGN BRIEFS

CONTINUED

SECURITY SYSTEM

Exact security requirements to be confirmed with client.

Rough in conduit and junction box system will be provided for the security system by the Electrical Contractor. All electronic devices and installation will be provided by others.

All security devices will be connected as per the security consultant's drawings. Infrastructures will be installed by electrical contractor to support this.

Door contacts, electric strikes, magnetic locks, and security cameras will be roughed in by the electrical division as directed by the Owner.

CO-ORDINATION OF MECHANICAL AND ELECTRICAL AND OTHERS

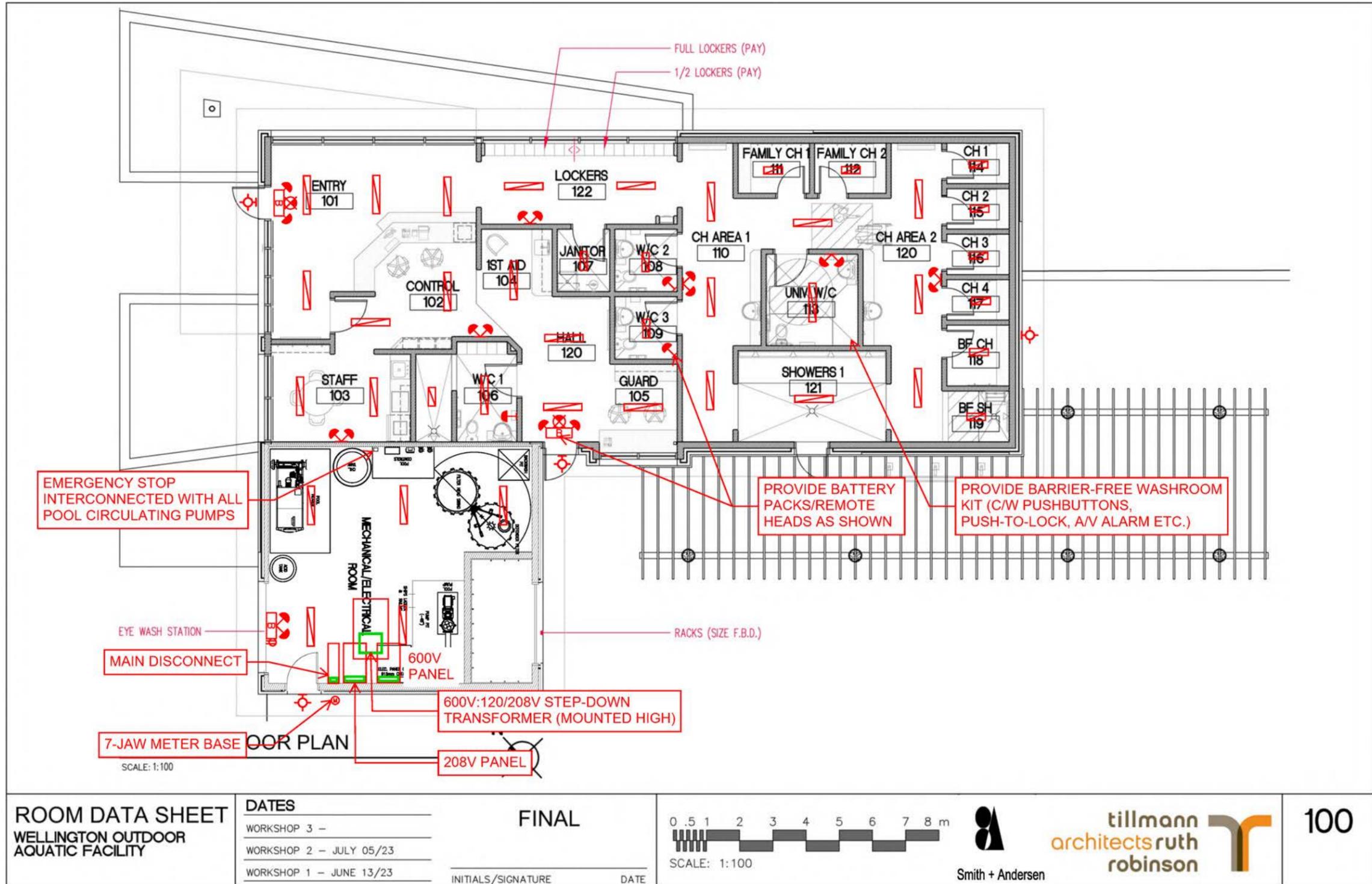
All starters and power wiring shall be by the electrical division except for units with starters as part of a package or for VFDs.

All power wiring shall be by the Electrical contractor including power wiring from variable speed drives to motors. VFDs to be mounted on or near the equipment and VFD cable will be run from the VFD drive to the motor with no disconnect between them.

All control wiring and controls shall be by Mechanical contractor. The Electrical contractor will provide 15A, 120V, 1 phase circuits at designated panels and they will be terminated in a junction box near the respective electrical panels. The Mechanical/Controls contractor is required to extend the 120V circuits to all of their respective equipment.

3. DESIGN BRIEFS

CONTINUED



4. COST ESTIMATE



WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

CLASS "C" ESTIMATE "R1"

prepared for:

TILLMAN RUTH ROBINSON ARCHITECTS
200 Queens Ave - Suite 200
London, Ontario
N6A 1J3

prepared by:

MARSHALL & MURRAY INCORPORATED
625 Wellington Street
London, Ontario
N6A 3R8

October 4, 2023

L2461/1/Class C/8/Outdoor Pool & Change Room R1.xlsx

Quantity Surveyors and Development Consultants
625 Wellington Street, London, Ontario N6A 3R8 Tel: (519) 433-3908 Fax: (519) 433-9453
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1379 Bank Street, Suite 301, Ottawa, Ontario K1H 8N3 Tel: (613) 230-3115 Fax: (613) 230-4091
E-mail: main@marshallmurray.com Website: www.marshallmurray.com



October 4, 2023

TILLMAN RUTH ROBINSON ARCHITECTS
200 Queens Ave - Suite 200
London, Ontario
N6A 1J3

Attention: **Mr. Scott Robinson**

Re: **WELLINGTON NORTH - NEW OUTDOOR POOL & AQUATIC FACILITY -
Mount Forest, Ontario**

Dear Scott,

Please find enclosed a copy of our Class "C" Estimate "R1" for the above note project for your review and comment.

If you have any questions or require further information, please do not hesitate to contact our office.

Yours truly,

MARSHALL & MURRAY INC.

Stephen Cahill
Cost Consultant

Colleen Pollock, PQS, GSC
Senior Cost Consultant

Quantity Surveyors and Development Consultants
625 Wellington Street, London, Ontario N6A 3R8 Tel: (519) 433-3908 Fax: (519) 433-9453
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1379 Bank Street, Suite 301, Ottawa, Ontario K1H 8N3 Tel: (613) 230-3115 Fax: (613) 230-4091
E-mail: main@marshallmurray.com Website: www.marshallmurray.com

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

CLASS "C" ESTIMATE "R1"

Table of Contents

	<u>Page No.</u>
SECTION 1 Project Overview	1 - 5
a) Executive Summary	
b) Projected Construction Cost Summary	
c) Method of Measurement	
d) Gross Floor Area	
e) Pricing	
f) Taxes	
g) Mechanical and Electrical Costs	
h) Site Services	
i) Contingency	
j) General Requirements and Fees	
k) Exclusions to Construction Cost	
l) Statement of Probable Costs	
m) Ongoing Cost Control	
n) Documents List	
SECTION 2 Change Room Addition	
- Elemental Cost Summary	6
- Estimate Detail	7 - 19
SECTION 3 Site Work	
- Elemental Cost Summary	20
- Estimate Detail	21 - 23
SECTION 4 Scope Of Work Drawing	1 page

SECTION 1

PROJECT OVERVIEW

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

a) EXECUTIVE SUMMARY

This report prepared by Marshall & Murray Inc. is classified as a Class "C" Estimate "R1".

Marshall & Murray Inc. were retained to provide a realistic **Total Projected Construction Cost** budget for the redevelopment at Wellington North.

The project is located in Mount Forest, Ontario.

The proposed redevelopment would consist of a new addition of an aquatic change room facility, outdoor pool and associated sitework.

The proposed redevelopment is being designed by Tillman Ruth Robinson Architects Inc.

The estimate presented here is based on the drawings received from the design team, meetings, and oral information.

The **Total Projected Construction Cost** is estimated at: **\$5,372,860**

The above amount excludes Separate and Alternate prices. A detailed breakdown of the amount can be found in the following Section 1b).

This estimate is priced in October 2023 dollars. Escalation during construction has been included in the estimate. Projected escalation to time of tender is identified separately if requested.

We are currently experiencing a very active construction market which could result in bids varying greatly from our indicated amount due to lack of bidders, escalating material costs and lack of suppliers holding prices or delivery dates.

This estimate has been priced, based on a standard CCDC 2 – Stipulated Sum Contract. It does not include for any additional costs associated with the Alternate Financing Procurement method.

The construction cost includes all labour, materials, plant, sub-contractors' overheads and profit, and the general contractor's overheads and profit.

Please review the exclusions as noted in Section 1 k) Exclusions to Construction Cost.

If you have any questions or require further information, please do not hesitate to contact our office.

Stephen Cahill
Email: scahill@marshallmurray.com
Ph: 519-433-3908
Fax: 519-433-9453

Colleen Pollock, PQS, GSC
Email: cpollock@marshallmurray.com
Ph: 519-433-3908
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WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

b) PROJECTED CONSTRUCTION COST SUMMARY

DESCRIPTION	CLASS "D" ESTIMATE			"DRAFT" CLASS "C" - Sept 19			CLASS "C" ESTIMATE "R1"		
	GFA	COST/SF	AMOUNT	GFA(SF)	COST/SF	AMOUNT	GFA(SF)	COST/SF	AMOUNT
A. NEW OUTDOOR POOL & AQUATIC FACILITY									
1.0 NEW BUILD	2,873	628.10	1,804,525	2,942	669.94	1,970,966	2,942	640.86	1,885,414
NEW AQUATIC FACILITY	2,873	628.10	1,804,525	2,942	669.94	1,970,966	2,942	640.86	1,885,414
2.0 OTHER ASSOCIATED COSTS			3,473,956			3,541,970			3,487,446
SITE DEVELOPMENT / LANDSCAPING			3,473,956			3,541,970			3,487,446
ABNORMAL SOIL CONDITIONS / CONTAMINATED SOIL			EXCLUDED			EXCLUDED			EXCLUDED
PREMIUM TIME / AFTER-HOURS WORK			EXCLUDED			EXCLUDED			EXCLUDED
CONSTRUCTION PHASING			EXCLUDED			EXCLUDED			EXCLUDED
LEED CERTIFICATION			EXCLUDED			EXCLUDED			EXCLUDED
SIGNAGE & WAYFINDING			EXCLUDED			EXCLUDED			EXCLUDED
MOVING COSTS			EXCLUDED			EXCLUDED			EXCLUDED
MARKET / SUPPLY CHAIN CONDITIONS			EXCLUDED			EXCLUDED			EXCLUDED
ART INSTALLATION			EXCLUDED			EXCLUDED			EXCLUDED
3.0 ESCALATION			0			0			0
ESCALATION TO TIME OF TENDER (ALLOW 10.0% P.A.)			EXCLUDED			EXCLUDED			EXCLUDED
TOTAL NEW OUTDOOR POOL & AQUATIC FACILITY	2,873	1,837.27	\$5,278,481	2,942	1,873.87	\$5,512,936	2,942	1,826.26	\$5,372,860
ANCILLARY COSTS (PROFESSIONAL FEES, PERMITS, TAXES, ETC.)			EXCLUDED			EXCLUDED			EXCLUDED
FURNISHINGS AND EQUIPMENT			EXCLUDED			EXCLUDED			EXCLUDED
LOCATION FACTOR			EXCLUDED			EXCLUDED			EXCLUDED
SCOPE CONTINGENCY			EXCLUDED			EXCLUDED			EXCLUDED
POST CONTRACT CONTINGENCY (ON CONSTRUCTION)			EXCLUDED			EXCLUDED			EXCLUDED
TOTAL PROJECT COST			5,278,481			5,512,936			5,372,860

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

c) METHOD OF MEASUREMENT

This estimate has been prepared by measurement of quantities from the drawings received from the design team, Tillman Ruth Robinson Architects Inc.

Unit costs, allowances, and contingencies were applied to these quantities to reflect market conditions and provide a realistic budget based on comparable projects with similar size and scope of works.

d) GROSS FLOOR AREA

NEW CHANGE ROOM	273	M2	2,942 SF
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e) PRICING

This estimate is priced in October 2023 dollars expecting 3-6 qualified competitive General Contractors and Sub-Contractors. Bids will vary due to fluctuating market conditions, proprietary product vendors, lack or surplus bidders and bidder's perception of risk.

We are unable at this time to determine the projected construction cost implications due to the Coronavirus COVID-19 but have included any allowances for this impact if any.

We are currently experiencing a very active construction market which could result in bids varying greatly from our indicated amount due to lack of bidders, escalating material costs and lack of suppliers holding prices or delivery dates.

f) TAXES

The Harmonized Sales Tax (H.S.T.) is excluded.

g) MECHANICAL AND ELECTRICAL COSTS

Mechanical and Electrical Costs included in this estimate were based on information provided by the Consultants.

h) SITE SERVICES

This includes allowances for mechanical, electrical, civil site services, soft, and hard landscaping.

i) CONTINGENCY

At this stage of the project, a 6.0% design contingency has been allowed. This is to cover unknown details in design and construction, layout variations and material selections but excludes any scope increases.

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

j) GENERAL REQUIREMENTS AND FEES

General Requirements - General Contractors Overhead is taken at:	12.0%
Fee - General Contractors Profit is taken at:	4.0%

k) EXCLUSIONS TO CONSTRUCTION COST

- | | |
|------------------------------------|----------------------------------------|
| - Phasing | - Abnormal Soil Conditions |
| - Price Escalation | - Contaminated Soil |
| - Soft Costs | - Project Management |
| - Professional and Design Fees | - Harmonized Sales Tax (H.S.T.) |
| - Furniture and Loose Equipment | - Inspection and Testing |
| - Development Charges and Levies | - Post Contract Contingencies |
| - Financing Costs | - Window Drapes/Curtains, and Art Work |
| - Relocation Costs | - Premium Labour |
| - Market volatility | - Project Scope Contingency |
| - Escalation to Time of Tender | - Winter heat to shell construction |
| - COVID-19 / Pandemic Impact Costs | - Asbestos Abatement |

l) STATEMENT OF PROBABLE COSTS

This estimate represents a professional opinion of the probable costs for this project. Marshall & Murray Incorporated cannot guarantee that the actual project cost will not vary from this opinion.

m) ONGOING COST CONTROL

The project is still within the early stages of design and thus the full scope and design specifications have not been clearly determined. The estimate makes assumptions for all elements not clearly defined on the drawings. These assumptions are listed within the detailed estimate.

To alleviate a portion of the risk, a design and pricing contingency allowance has been included to accommodate for future design tweaks. However if there is a significant amount of design changes as the project progresses, they could result in an increase in cost that cannot be covered by the design and pricing contingency allowance. At this stage we consider the risk high, and would request that the design team review and provide comment with regards to the design detail included within the estimate.

We recommend that the estimate contained herein be reviewed thoroughly by the project team. Any comments or suggestions should be forwarded as soon as possible. We also recommend that further estimates be prepared once a firm design has been established.

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

n) DOCUMENTS LIST

The following list of drawings was received from Tillman Ruth Robinson Architects Inc.
The noted drawings were used to complete Marshall and Murray's Class "C" Estimate "R1".

	<u>Printed / Revision Date</u>	<u>Date Received</u>
Architectural		
A000	Site plan July 4, 2023	September 1, 2023
A001	Gen notes & symbols July 4, 2023	September 1, 2023
A002	Assemblies July 4, 2023	September 1, 2023
A001	Proposed floor plan July 4, 2023	September 1, 2023
A101	Site plan July 4, 2023	September 1, 2023
A201	Floor plan September 1, 2023	September 1, 2023
A202	Trellis plan July 4, 2023	September 1, 2023
A301	Exterior elevations July 4, 2023	September 1, 2023
A401	Building section July 4, 2023	September 1, 2023
A501	Interior elevations July 4, 2023	September 1, 2023
A601	Reflected ceiling plan July 4, 2023	September 1, 2023
A701	Room finish plan July 4, 2023	September 1, 2023
Mechanical		
	Mechanical brief - R1 August 25, 2023	September 1, 2023
	Mechanical plans (2 no.) July, 2023	September 1, 2023
Electrical		
	Electrical brief - R1 August 25, 2023	September 1, 2023
	Electrical plans (2 no.) July, 2023	September 1, 2023
	Lighting cut sheets	September 1, 2023

SECTION 2

CHANGE ROOM ADDITION

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH NEW OUTDOOR POOL & AQUATIC FACILITY Mount Forest, Ontario		ELEMENTAL COST SUMMARY NEW AQUATIC FACILITY CHANGE ROOM		October 4, 2023 CLASS "C" ESTIMATE "R1"		GFA : 2,942 sf	
ELEMEN/Sub Element		Ratio to GFA	Elemental Cost	Elemental Amount	Rate/sf		
			Quantity	Unit Rate	Sub-total	Total	%
A SHELL					\$707,819	\$240.59	37.54%
A1 SUBSTRUCTURE					\$145,774	\$49.55	7.73%
A11 Foundations	1.00	2,942 sf	49.55	\$145,774	\$49.55	\$49.55	
A112 Special Foundations	0.00	0 m³	0.00	nil	\$0.00	\$0.00	
A12 Basement Excavation	0.00	0 m³	0.00	nil	\$0.00	\$0.00	
A2 STRUCTURE					\$92,979	\$31.60	4.93%
A21 Lowest Floor Construction	1.00	2,942 sf	9.01	\$26,507	\$9.01	\$9.01	
A22 Upper Floor Construction	0.00	0 m²	0.00	nil	\$0.00	\$0.00	
A222 Stair Construction	0.00	0 flts	0.00	nil	\$0.00	\$0.00	
A23 Roof Construction	1.23	3,624 sf	18.34	\$66,472	\$22.59	\$22.59	
A3 EXTERIOR ENCLOSURE					\$469,067	\$159.44	24.88%
A31 Walls Below Grade	0.00	0 m²	0.00	nil	\$0.00	\$0.00	
A32 Walls Above Grade	0.76	2,246 sf	65.21	\$146,494	\$49.79	\$49.79	
A33 Windows & Entrances	0.09	277 sf	241.62	\$66,880	\$22.73	\$22.73	
A34 Roof Covering	1.23	3,624 sf	37.82	\$137,058	\$46.59	\$46.59	
A35 Projections	0.11	310 sf	382.69	\$118,634	\$40.32	\$40.32	
B INTERIORS					\$281,895	\$95.82	14.95%
B1 PARTITIONS & DOORS					\$137,777	\$46.83	7.31%
B11 Partitions	1.23	3,623 sf	24.90	\$90,227	\$30.67	\$30.67	
B12 Doors	0.00	13 #	3,657.69	\$47,550	\$16.16	\$16.16	
B2 FINISHES					\$84,951	\$28.88	4.51%
B21 Floor Finishes	0.83	2,440 sf	10.91	\$26,628	\$9.05	\$9.05	
B22 Ceiling Finishes	0.94	2,764 sf	12.44	\$34,376	\$11.68	\$11.68	
B23 Wall Finishes	2.96	8,699 sf	2.75	\$23,948	\$8.14	\$8.14	
B3 FITTINGS & EQUIPMENT					\$59,167	\$20.11	3.14%
B31 Fittings & Fixtures	1.00	2,942 m²	20.11	\$59,167	\$20.11	\$20.11	
B32 Equipment	0.00	0 m²	0.00	nil	\$0.00	\$0.00	
B33 Conveying Systems	0.00	0 stp	0.00	\$0	\$0.00	\$0.00	
C SERVICES					\$543,641	\$184.79	28.83%
C1 MECHANICAL					\$388,417	\$132.02	20.60%
C11 Plumbing & Drainage	1.00	2,942 sf	93.20	\$274,190	\$93.20	\$93.20	
C12 Fire Protection	1.00	2,942 sf	0.60	\$1,765	\$0.60	\$0.60	
C13 HVAC	1.00	2,942 sf	31.29	\$92,062	\$31.29	\$31.29	
C14 Controls	1.00	2,942 sf	6.93	\$20,400	\$6.93	\$6.93	
C2 ELECTRICAL					\$155,224	\$52.76	8.23%
C21 Service & Distribution	1.00	2,942 sf	15.64	\$46,000	\$15.64	\$15.64	
C22 Lighting, Devices & Heating	1.00	2,942 sf	19.60	\$57,675	\$19.60	\$19.60	
C23 Systems & Ancillaries	1.00	2,942 sf	17.52	\$51,549	\$17.52	\$17.52	
NET BUILDING COST - EXCLUDING SITE & ANCILLARY WORK					\$1,533,356	\$521.20	81.33%
D SITE & ANCILLARY WORK					\$0	\$0.00	0.00%
D1 SITE WORK					\$0	\$0.00	0.00%
D11 Site Development	0.00	0 m²	0.00	nil	\$0.00	\$0.00	
D12 Mechanical Site Services	0.00	0 m²	0.00	nil	\$0.00	\$0.00	
D13 Electrical Site Services	0.00	0 m²	0.00	nil	\$0.00	\$0.00	
D2 ANCILLARY WORK					\$0	\$0.00	0.00%
D21 Demolition	0.00	0 m²	0.00	nil	\$0.00	\$0.00	
D22 Alterations	0.00	0 0	0.00	nil	\$0.00	\$0.00	
D23 Cash Allowances	0.00	0 sf	0.00	nil	\$0.00	\$0.00	
NET BUILDING COST - EXCLUDING GENERAL REQUIREMENTS					\$1,533,356	\$521.20	81.33%
Z GENERAL REQUIREMENTS					\$245,337	\$83.39	13.01%
Z1 GENERAL REQUIREMENTS & FEE					\$245,337	\$83.39	13.01%
Z11 General Requirements (%)		12.0%		\$184,003	\$62.54	\$62.54	
Z12 Fee (%)		4.0%		\$61,334	\$20.85	\$20.85	
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING ALLOWANCES					\$1,778,693	\$604.59	94.34%
Z2 ALLOWANCES					\$106,722	\$36.28	5.66%
Z21 Design & Pricing (%)		6.0%		\$106,722	\$36.28	\$36.28	
Z22 Escalation Allowance (%)		0.0%		\$0	\$0.00	\$0.00	
Z23 Construction Allowance (%)		0.0%		\$0	\$0.00	\$0.00	
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING TAXES					\$1,885,414	\$640.86	100.00%
HARMONIZED SALES TAX					\$0	\$0.00	
Harmonized Sales Tax					\$0	\$0.00	
TOTAL CONSTRUCTION ESTIMATE					\$1,885,414	\$640.86	

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

Description	Qty	Unit	Rate	Amount
A1 SUBSTRUCTURE				
A11 Foundations				
1.0 Earthwork	2,942	sf	5.00	14,710
2.0 Foundations	2,942	sf	42.00	123,564
3.0 Inserts, steps, tie-ins, etc.		allow		7,500
Total A11 Foundations	2,942	sf		145,774
A112 Special Foundations				
A112 Special Foundations				nil
A12 Basement Excavation				nil
A2 STRUCTURE				
A21 Lowest Floor Construction				
1.0 Concrete slab on grade (150mm concrete with WWM) - pool & pool deck by others	2,942	sf	8.50	25,007 In site work
2.0 Inserts, slab thickening, equipment bases, misc. reinforcing		allow		1,500
Total A21 Lowest Floor Construction	2,942	sf		26,507
A22 Upper Floor Construction				
A222 Stair Construction				nil
A23 Roof Construction				
1.0 Roof structure - wood trusses - plywood sheathing - structural steel	3,624 3,986 1,622	sf sf lbs	10.00 5.00 4.50	36,240 19,932 7,300
2.0 Reinforced concrete block wall				see A32 & B11
3.0 Inserts, curbs, misc. reinforcing, tie-ins		allow		3,000
Total A23 Roof Construction	3,624	sf		66,472

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/B/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
A3 EXTERIOR ENCLOSURE				
A31 Walls Below Grade				
				nil
A32 Walls Above Grade				
1.0 Brick veneer - W1 - 90mm brick veneer - 25mm airspace - 90mm rigid insulation - self adhered vapour barrier - 190mm CMU	1,355	sf	61.00	82,631
2.0 Stone Veneer - W1* - 90mm stone veneer - 25mm airspace - 90mm rigid insulation - self adhered vapour barrier - 190mm CMU	394	sf	71.00	27,988
3.0 Corrugated metal siding - W2 - corrugated metal panel - z-girt system - 25mm airspace - 90mm rigid insulation - self adhered vapour barrier - 190mm CMU	498	sf	51.00	25,375
4.0 Signage to exterior cladding		allow		2,500
5.0 Lintels, caulking, flashing, tie-in to existing		allow		8,000
Total A32 Walls Above Grade	2,246	sf		146,494
A33 Windows & Entrances				
1.0 Insulated hollow metal doors c/w hardware	1	#	2,700.00	2,700
2.0 Glazed aluminum entrance doors c/w hardware	3	#	3,500.00	10,500
3.0 Overhead doors - solid panel w. auto opener - 9' 0" x 8' 0" - 8' 0" x 8' 0"	1 1	# #	12,500.00 10,000.00	12,500 10,000
4.0 Aluminum windows	277	sf	100.00	27,680
5.0 Supports, caulking, flashing, etc.		allow		3,500
Total A33 Windows & Entrances	277	sf		66,880
A34 Roof Covering				
1.0 Metal standing seam roof	3,624	sf	35.75	129,558
2.0 Gutters and downspouts		allow		1,500
3.0 Flashing, tie-ins, anchors, etc.		allow		6,000
Total A34 Roof Covering	3,624	sf		137,058

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/B/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
A3 EXTERIOR ENCLOSURE				
A35 Projections				
1.0 Wood look canopy (including steel columns & footing)	310	sf	200.00	62,000
2.0 Prefinished vented metal soffit to u/s of roof	682	sf	75.00	51,134
3.0 Flashing, caulking, tie-in to existing		allow		5,500
Total A35 Projections	310	sf		118,634
B1 PARTITIONS & DOORS				
B11 Partitions				
1.0 Block partitions - P1 - 140mm block - P2x - 190mm block	3,133 490	sf sf	22.00 20.00	68,934 9,793
2.0 Drywall partitions		allow		5,000
3.0 Glazing		allow		2,500
4.0 Lintels, supports, caulking, firestopping		allow		4,000
Total B11 Partitions	3,623	sf		90,227
B12 Doors				
1.0 Fibreglass doors with a paint finish set within a painted frame	13	lvs	800.00	10,400
2.0 Fully glazed aluminum door c/w hardware				nil
3.0 Extra / over for: - finish hardware - fire rating - glazing - automatic door operators - card readers, door closers, kick plates etc	13 3 1	# # #	1,800.00 300.00 350.00	23,400 900 350
		allow		7,500
		allow		2,500
4.0 Supports, misc. finish hardware		allow		2,500
Total B12 Doors	13	#		47,550

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/B/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
B2 FINISHES				
B21 Floor Finishes				
1.0 Sealed concrete	548	sf	3.50	1,918
2.0 Epoxy flooring	1,145	sf	10.00	11,450
3.0 Vinyl Composite Tile	747	sf	6.50	4,856
4.0 Porcelain tile to storage (Pool area by pool vendors)				By others
5.0 Bases				
- epoxy cove base	454	lf	14.00	6,356
- rubber base	228	lf	3.50	798
6.0 Special finishes, patterns, etc.		allow		1,250
Total B21 Floor Finishes	2,440	sf		26,628
B22 Ceiling Finishes				
1.0 Gypsum board ceiling	2,473	sf	10.00	24,730
2.0 Cement board ceiling	258	sf	12.00	3,096
3.0 Feature wood ceiling	33	sf	50.00	1,650
4.0 Moisture resistant ceiling board		allow		2,500
5.0 Drywall bulkheads		allow		1,200
6.0 Special finishes, patterns, etc.		allow		1,200
Total B22 Ceiling Finishes	2,764	sf		34,376
B23 Wall Finishes				
1.0 Paint block walls	8,699	sf	2.50	21,748
2.0 Ceramic tile - Backsplash		allow		1,000
3.0 Special finishes, patterns, etc.		allow		1,200
Total B23 Wall Finishes	8,699	sf		23,948

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/B/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
B3 FITTINGS & EQUIPMENT				
B31 Fittings & Fixtures				
1.0 Entry/ vestibule				
- recessed aluminum grille		allow		3,000
2.0 Shower/ Change area				
- double tier lockers	19	#	350.00	6,650
- coat hooks to shower area	6	#	55.00	330
- paper towel dispenser	2	#	275.00	550
- soap dispenser	2	#	75.00	150
- mirror	6	#	300.00	1,800
- solid surface countertop (2 no.) w. backsplash	19.0	ft	200.00	3,800
- solid surface countertop (2 no.)	7.4	ft	150.00	1,107
- grab bars	1	#	275.00	275
- grab bars 'L-shape'	1	#	450.00	450
- fold down shower seat	1	#	500.00	500
3.0 Change room (4 no.)				
- benches/millwork to change room	16	ft	100.00	1,600
- coat hooks	8	#	55.00	440
- mirror	4	#	300.00	1,200
4.0 Family change room (2 no.)				
- benches/millwork to change room	10	ft	100.00	990
- coat hooks	8	#	55.00	440
- baby change tables				nil
- mirror	2	#	300.00	600

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/B/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
B3 FITTINGS & EQUIPMENT				
B31 Fittings & Fixtures (Cont'd)				
5.0 BF change room (1 no.)				
- benches/millwork to change room	6	ft	100.00	600
- coat hooks	1	#	55.00	55
- mirror	1	#	300.00	300
6.0 Universal WR				
- toilet tissue dispenser	1	#	85.00	85
- soap dispenser	1	#	75.00	75
- paper towel dispenser	1	#	275.00	275
- tilted mirror	1	#	325.00	325
- sanitary napkin disposal	1	#	110.00	110
- sanitary napkin dispenser (OSCI)	1	#	50.00	50
- coat hooks	1	#	55.00	55
- solid surface countertop	3.0	ft	150.00	443
- privacy divider	1	#	400.00	400
- baby change table	1	#	550.00	550
- wall shelf	1	#	250.00	250
- grab bars	3	#	275.00	825
- grab bars 'L-shape'	1	#	450.00	450
7.0 Washroom (2 no.)				
- toilet tissue dispenser	2	#	85.00	170
- soap dispenser	2	#	75.00	150
- paper towel dispenser	2	#	275.00	550
- mirror	2	#	300.00	600
- sanitary napkin disposal	2	#	110.00	220
- coat hooks	2	#	55.00	110
- solid surface countertop	7.0	ft	150.00	1,044
8.0 Staff Washroom				
- prefabricated shower stall				nil
- shower curtain and rod				nil
- double tier lockers	5	#	350.00	1,750
- toilet tissue dispenser	1	#	85.00	85
- soap dispenser	1	#	75.00	75
- paper towel dispenser	1	#	275.00	275
- mirror	1	#	300.00	300
- sanitary napkin disposal	1	#	110.00	110
- coat hooks	1	#	55.00	55
- solid surface countertop	3.0	ft	150.00	443
9.0 Janitor room				
- mop rack and shelf		allow		300

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/B/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
B3 FITTINGS & EQUIPMENT				
B31 Fittings & Fixtures (Cont'd)				
10.0 Guard/ Staff/ First Aid				
- whiteboards	2	#	250.00	500
- two tier custom desk millwork w. cabinets	1	#	6,500.00	6,500
- first aid locker/ equipment				nil
- lower cabinetry - plastic laminate	24.0	ft	275.00	6,606
- upper cabinetry - plastic laminate	5.0	ft	200.00	1,000
- upper shelves	17.6	ft	120.00	2,112
- solid surface countertop	7.7	ft	150.00	1,154
11.0 Mechanical & electrical room				nil
12.0 Pool storage room				
- coat hooks	6	#	55.00	330
13.0 Signage and wayfinding		allow		3,000
14.0 Blinds				Excluded
15.0 Various fittings, fixtures, millwork and specialty components not specifically detailed on the current drawings		allow		3,000
Total B31 Fittings & Fixtures	2,942	m²		59,167
B32 Equipment				by owner
B33 Conveying Systems				nil

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/8/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
C1 MECHANICAL				
C11 Plumbing & Drainage				
PLUMBING FIXTURES:				
1.0	4	#	1,650.00	6,600
2.0	6	#	1,450.00	8,700
3.0	2	#	850.00	1,700
4.0	1	#	1,600.00	1,600
5.0	5	#	1,300.00	6,500
6.0	3	#	2,500.00	7,500
7.0	1	#	2,800.00	2,800
8.0	1	#	800.00	800
9.0				nil
TOTAL - PLUMBING FIXTURES			\$36,200	
			\$12.30 /sf	
DOMESTIC HOT AND COLD WATER				
10.0	3	#	650.00	1,950
11.0	3	#	250.00	750
12.0	2	#	10,000.00	20,000
13.0	1	#	3,640.00	3,640
14.0	1	#	1,600.00	1,600
15.0	1	#	2,200.00	2,200
16.0	1	#	3,800.00	3,800
17.0	3	#	1,400.00	4,200
18.0	3	#	1,600.00	4,800
19.0				nil
20.0				60,400
21.0				15,100
TOTAL - DOMESTIC HOT AND COLD WATER			\$118,440	
			\$40.26 /sf	
SANITARY WASTE AND VENT				
22.0	8	#	375.00	3,000
23.0	2	#	450.00	900
24.0				nil
25.0	14	#	1,200.00	10,000
26.0				nil
27.0	1	#	10,000.00	10,000
28.0	1	#	1,400.00	1,400
29.0				45,200
30.0				nil
31.0				nil
TOTAL - SANITARY WASTE AND VENT			\$70,500	
			\$23.96 /sf	
STORM				
32.0	3	#	450.00	1,350
33.0				nil
34.0				10,500
35.0				2,100
36.0				nil
TOTAL - STORM			\$13,950	
			\$4.74 /sf	

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/8/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
C1 MECHANICAL				
NATURAL GAS				
37.0		allow		12,000
TOTAL - NATURAL GAS			\$12,000	
			\$4.08 /sf	
DEMOLITION				
TOTAL - DEMOLITION			nil	
			- /sf	
MISCELLANEOUS				
38.0				2,600
39.0				by pool supplier
40.0				20,500
TOTAL - MISCELLANEOUS			\$23,100	
			\$7.85 /sf	
Total C11 Plumbing & Drainage	2,942	sf		274,190
C12 Fire Protection				
1.0	2,942	sf	0.60	1,765
Total C12 Fire Protection	2,942	sf		1,765
C13 HVAC				
AIR HANDLING UNITS AND DUCTWORK				
1.0				nil
2.0	2	#		5,000
3.0				33,600
4.0	19	#	90.00	1,710
5.0				5,400
6.0				nil
7.0	1	#	16,500.00	16,500
8.0	1	#	5,500.00	5,500
9.0	9	#	320.00	2,880
10.0				nil
TOTAL - AIR HANDLING UNITS & DUCTWORK			\$70,590	
			\$23.99 /sf	
EXHAUST AND VENTILATION				
TOTAL - EXHAUST AND VENTILATION			incl.	
			- /sf	
LIQUID HEAT TRANSFER				
TOTAL - LIQUID HEAT TRANSFER			nil	
			\$0.00 /sf	

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/8/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
C1 MECHANICAL				
BALANCING				
11.0	Balancing			2,500
12.0	Verification			1,500
13.0	Labour for Mechanical Contractor to coordinate with commissioning agent			2,000
TOTAL - BALANCING			\$6,000	
			<u>\$2.04 /sf</u>	
SILENCING/VIBRATION ISOLATION				
14.0				nil
TOTAL - SILENCING/VIBRATION ISOLATION			nil	
			<u>\$0.00 /sf</u>	
MOTOR CONTROL & MECHANICAL WIRING				
TOTAL - MOTOR CONTROL & MECHANICAL WIRING			By electrical	
			<u>\$0.00 /sf</u>	
MISCELLANEOUS				
15.0	Identification			672
16.0	Cranage/haulage			8,000
17.0	Pool mechanical and heater c/w interconnecting piping		by pool supplier	
18.0	Seismic restraint			nil
19.0	Miscellaneous fitments, rentals, as built, etc			6,800
TOTAL - MISCELLANEOUS			\$15,472	
			<u>\$5.26 /sf</u>	
Total C13 HVAC	2,942	sf		92,062
C14 Controls				
1.0	Controls to area	allow		20,400
Total C14 Controls	2,942	sf		20,400

C2 ELECTRICAL

C21 Service & Distribution

1.0	Normal power distribution	1	#	24,000.00	24,000
2.0	Emerg distribution				nil
3.0	Mechanical (motor) wiring c/w pool equipment	1	sum	15,000.00	15,000
4.0	Miscellaneous distribution				
	- hydro metering cabinet in separate W/P enclosure, W/M	1	#	1,000.00	1,000
	- testing, inspection & commissioning	1	sum	2,000.00	2,000
	- arc flash hazard analysis	1	#	2,000.00	2,000
	- short circuit & co-ordination study	1	#	2,000.00	2,000
Total C21 Service & Distribution	2,942	sf			46,000

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/8/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount	
C2 ELECTRICAL					
C22 Lighting, Devices & Heating					
1.0	Lighting including exit & emerg lights, LED				
	- L1	29	#	575.00	16,675
	- L2	12	#	550.00	6,600
	- X4, 1x12w single remote emerg LV lighting heads, W/M	3	#	300.00	900
	- X3, 2x12w dual remote emerg LV lighting heads, W/M	6	#	325.00	1,950
	- X2, 1x360w emerg battery pack c/w Integral dual LV lighting heads, W	3	#	650.00	1,950
2.0	Switching c/w occupancy sensors				
	- LV single pole, W/M	6	#	200.00	1,200
	- LV single pole, W/M, waetherproof	2	#	200.00	400
	- LV 3way, W/M	2	#	250.00	500
	- 1200sf dual technology occupancy sensor (PIR & ultrasonic), W/M	8	#	300.00	2,400
	- 2000sf dual technology occupancy sensor (PIR & ultrasonic) c/w intelligent slave power pack, C/M	8	#	375.00	3,000
3.0	Receptacles				
	- duplex, W/M	16	#	350.00	5,600
	- duplex, C/M	2	#	350.00	700
	- GFCI, W/M	12	#	350.00	4,200
	- quad, W/M	4	#	350.00	1,400
	- 20a housekeeping, W/M	4	#	450.00	1,800
	- GFCI, W/M, weatherproof	2	#	450.00	900
4.0	Equipment hard wired power connections				
	- electrical no touch faucet c/w 50va 120v/24vac TX in ceiling space	6	#	200.00	1,200
	- electrical no touch flush valve c/w 50va 120v/24vac TX in ceiling space	4	#	200.00	800
	- electrical no touch shower c/w 50va 120v/24vac TX in ceiling space	2	#	200.00	400
	- barrier free motorized door operator c/w pushbuttons, C/M	2	#	400.00	800
	- electronic trap seal primer, F/M	3	#	400.00	1,200
	- 1.5kw hot air hand dryer c/w pushbutton, W/M	2	#	350.00	700
	- 1.5kw hot air hair dryer, W/M	2	#	350.00	700
	- remote emergency shut-off mushroom pushbutton, latching type	1	#	650.00	650
	- BAS mechanical controls c/w 50va 120v/24vac TX in ceiling space	2	#	275.00	550
5.0	Electrical resistance heating, connections only				
	- 5.00kw gas fired unit heater GFH-1 c/w built-in non-programmable electrical thermostat, W/M	1	#	500.00	500
Total C22 Lighting, Devices & Heating	2,942	sf			57,675

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/B/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
C2 ELECTRICAL				
C23 Systems & Ancillaries				
1.0				excluded
2.0				
- Telecommunications, conduit only				
- 1voice & 2data, W/M	1	#	150.00	150
- 2data, W/M	3	#	150.00	450
3.0				
- Telecommunications, Cat6 FT6 multipair plenum rated cabling				
- voice, R/M	1	#	300.00	300
- data, R/M	14	#	300.00	4,200
- 48port patch panel in data rack, R/M	1	#	750.00	750
- PDU unit & UPS equipment, modem, network switch, etc.				by others
- network audit after completion	1	sum	500.00	500
4.0				
- Wireless communications, power only				
- Wi-Fi network access points, C/M	3	#	300.00	900
- PoE wireless router, C/M				by owner
5.0				
- CATV system, conduit only				
- CATV outlet, W/M	1	#	200.00	200
6.0				
- Barrier-free universal washroom flashing unit	1	#	2,000.00	2,000
7.0				
- Intrusion control system	1	sum	5,000.00	5,000
8.0				
- Door access control system, conduit & power only				
- proximity card reader, unsecured side, W/M	3	#	125.00	375
- electric strike, D/M	3	#	125.00	375
- electro-magnetic door holder, D/M	4	#	125.00	500
- door open-detect contact, D/M	4	#	125.00	500
- door bell c/w step-down transformer, C/M	3	#	125.00	375
- power assisted pushbutton, W/M	3	#	125.00	375
- infra-red egress motion detector, W/M	3	#	125.00	375
- security junction box, C/M	3	#	150.00	450
- door power & security controller on secure side, C/M	3	#	500.00	1,500
9.0				by others
10.0				
- CCTV system, power & conduit only				
- indoor CCTV camera, indoor fixed, W/M	4	#	500.00	2,000
- outdoor CCTV camera, indoor PTZ, W/M	2	#		see site
11.0				by others
12.0				
- Cable tray, main conduit, hangers & support channels,				
- 305x305x205mm EMT power pull box, C/M	1	#	200.00	200
et805x305x205mm EMT power pull box, C/M,	1	#	250.00	250
lockable	8	#	200.00	1,600
- EZ path fire rated pathway, W/M	1	sum	1,500.00	1,500
- various conduit, sleeves & channel support, etc.				
13.0				nil
- Public address & paging system				

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

NEW AQUATIC FACILITY CHANGE ROOM

FILE: L2461/1/Class C/B/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
C2 ELECTRICAL				
C23 Systems & Ancillaries (Cont'd)				
13.0				excluded
14.0				
- Secondary grounding & bonding system	2,942	sf	1.00	2,942
15.0				by general
16.0				
- Testing & inspection	1	sum	2,000.00	2,000
17.0				
- Labour for commissioning agent	1	sum	1,000.00	1,000
18.0				nil
- Seismic & vibration restraints				
19.0				
- Miscellaneous fitments, fire stops, rentals, etc.	1	sum	5,000.00	5,000
20.0				
- Job start up & close out	1	sum	15,017.00	15,017
Total C23 Systems & Ancillaries	2,942	sf		51,549

D1 SITE WORK

D11 Site Development	separate
D12 Mechanical Site Services	separate
D13 Electrical Site Services	separate

D2 ANCILLARY WORK

D21 Demolition	nil
D22 Alterations	nil
D23 Cash Allowances	nil

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH NEW OUTDOOR POOL & AQUATIC FACILITY Mount Forest, Ontario		ELEMENTAL COST COMPARISON		October 4, 2023 CLASS "C" ESTIMATE "R1"		
NEW AQUATIC FACILITY CHANGE ROOM						
FILE: L2461/1/Class C/Outdoor Pool & Change Room R1.xlsx						
ELEMENT/Sub Element	Class C - Sep 19, 2023		Elemental Amount		VARIANCE	
	Sub-total	Total	Sub-total	Total	Amount	%
A SHELL		\$707,819		\$707,819	\$0	0.00%
A1 SUBSTRUCTURE		\$145,774	\$145,774	\$145,774	\$0	0.00%
A11 Foundations	\$145,774		\$145,774		\$0	
A112 Special Foundations	nil		nil		\$0	
A12 Basement Excavation	nil		nil		\$0	
A2 STRUCTURE		\$92,979	\$92,979	\$92,979	\$0	0.00%
A21 Lowest Floor Construction	\$26,507		\$26,507		\$0	
A22 Upper Floor Construction	nil		nil		\$0	
A222 Stair Construction	nil		nil		\$0	
A23 Roof Construction	\$66,472		\$66,472		\$0	
A3 EXTERIOR ENCLOSURE		\$469,067	\$469,067	\$469,067	\$0	0.00%
A31 Walls Below Grade	nil		nil		\$0	
A32 Walls Above Grade	\$146,494		\$146,494		\$0	
A33 Windows & Entrances	\$66,880		\$66,880		\$0	
A34 Roof Covering	\$137,058		\$137,058		\$0	
A35 Projections	\$118,634		\$118,634		\$0	
B INTERIORS		\$281,895	\$281,895	\$281,895	\$0	0.00%
B1 PARTITIONS & DOORS		\$137,777	\$137,777	\$137,777	\$0	0.00%
B11 Partitions	\$90,227		\$90,227		\$0	
B12 Doors	\$47,550		\$47,550		\$0	
B2 FINISHES		\$84,951	\$84,951	\$84,951	\$0	0.00%
B21 Floor Finishes	\$26,628		\$26,628		\$0	
B22 Ceiling Finishes	\$34,376		\$34,376		\$0	
B23 Wall Finishes	\$23,948		\$23,948		\$0	
B3 FITTINGS & EQUIPMENT		\$59,167	\$59,167	\$59,167	\$0	0.00%
B31 Fittings & Fixtures	\$59,167		\$59,167		\$0	
B32 Equipment	nil		nil		\$0	
B33 Conveying Systems	\$0		\$0		\$0	
C SERVICES		\$613,218	\$543,641	\$543,641	-\$69,577	-11.35%
C1 MECHANICAL		\$388,417	\$388,417	\$388,417	\$0	0.00%
C11 Plumbing & Drainage	\$274,190		\$274,190		\$0	
C12 Fire Protection	\$1,765		\$1,765		\$0	
C13 HVAC	\$92,062		\$92,062		\$0	
C14 Controls	\$20,400		\$20,400		\$0	
C2 ELECTRICAL		\$224,801	\$155,224	\$155,224	-\$69,577	-30.95%
C21 Service & Distribution	\$53,000		\$46,000		-\$7,000	
C22 Lighting, Devices & Heating	\$61,350		\$57,675		-\$3,675	
C23 Systems & Ancillaries	\$110,451		\$51,549		-\$58,902	
NET BUILDING COST - EXCL. SITE & ANCILLARY	\$1,602,933	\$1,602,933	\$1,533,356	\$1,533,356	-\$69,577	-4.34%
D SITE		\$0	\$0	\$0	\$0	#DIV/0!
D1 SITE WORK		\$0	\$0	\$0	\$0	#DIV/0!
D11 Site Development	nil		nil		\$0	
D12 Mechanical Site Services	nil		nil		\$0	
D13 Electrical Site Services	nil		nil		\$0	
D2 ANCILLARY WORK		\$0	\$0	\$0	\$0	#DIV/0!
D21 Demolition	nil		nil		\$0	
D22 Alterations	nil		nil		\$0	
D23 Cash Allowances	nil		nil		\$0	
NET BUILDING COST - EXCLUDING GENERAL REQUIREMENTS	\$1,602,933	\$1,602,933	\$1,533,356	\$1,533,356	-\$69,577	-4.34%
Z GENERAL REQUIREMENTS		\$256,469	\$245,337	\$245,337	-\$11,132	-4.34%
Z1 GENERAL REQUIREMENTS & FEE		\$256,469	\$245,337	\$245,337	-\$11,132	-4.34%
Z11 General Requirements (%)	\$192,352		\$184,003		-\$8,349	
Z12 Fee (%)	\$64,117		\$61,334		-\$2,783	
TOTAL CONSTR. ESTIMATE - EXCL. ALLOWANCES	\$1,859,402	\$1,859,402	\$1,778,693	\$1,778,693	-\$80,709	-4.34%
Z2 ALLOWANCES		\$111,564	\$106,722	\$106,722	-\$4,843	-4.34%
Z21 Design & Pricing (%)	\$111,564		\$106,722		-\$4,843	
Z22 Escalation Allowance (%)	\$0		\$0		\$0	
Z23 Construction Allowance (%)	\$0		\$0		\$0	
TOTAL CONSTRUCTION ESTIMATE - EXCL. TAXES	\$1,970,966	\$1,970,966	\$1,885,414	\$1,885,414	-\$85,552	-4.34%
HARMONIZED SALES TAX		\$0	\$0	\$0	\$0	#DIV/0!
Harmonized Sales Tax	\$0		\$0		\$0	
TOTAL CONSTRUCTION ESTIMATE		\$1,970,966	\$1,885,414	\$1,885,414	-\$85,552	-4.34%
	Area (sf)	2,942	Area (sf)	2,942		
	/sf	\$669.94	/sf	\$640.86		

SECTION 3

SITE WORK

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH NEW OUTDOOR POOL & AQUATIC FACILITY Mount Forest, Ontario		ELEMENTAL COST SUMMARY SITE WORK				October 4, 2023 CLASS "C" ESTIMATE "R1"		
FILE: L2461/1/Class C/Outdoor Pool & Change Room R1.xlsx		GFA :		N/A m ²				
ELEMEN/Sub Element	Ratio to GFA	Elemental Cost		Elemental Amount		Rate/m ²		%
		Quantity	Unit Rate	Sub-total	Total	Sub-Total	Total	
A SHELL								
A1 SUBSTRUCTURE								
A11 Foundations				separate				
A112 Special Foundations				separate				
A12 Basement Excavation				separate				
A2 STRUCTURE								
A21 Lowest Floor Construction				separate				
A22 Upper Floor Construction				separate				
A222 Stair Construction				separate				
A23 Roof Construction				separate				
A3 EXTERIOR ENCLOSURE								
A31 Walls Below Grade				separate				
A32 Walls Above Grade				separate				
A33 Windows & Entrances				separate				
A34 Roof Covering				separate				
A35 Projections				separate				
B INTERIORS								
B1 PARTITIONS & DOORS								
B11 Partitions				separate				
B12 Doors				separate				
B2 FINISHES								
B21 Floor Finishes				separate				
B22 Ceiling Finishes				separate				
B23 Wall Finishes				separate				
B3 FITTINGS & EQUIPMENT								
B31 Fittings & Fixtures				separate				
B32 Equipment				separate				
B33 Conveying Systems				separate				
C SERVICES								
C1 MECHANICAL								
C11 Plumbing & Drainage				separate				
C12 Fire Protection				separate				
C13 HVAC				separate				
C14 Controls				separate				
C2 ELECTRICAL								
C21 Service & Distribution				separate				
C22 Lighting, Devices & Heating				separate				
C23 Systems & Ancillaries				separate				
NET BUILDING COST - EXCLUDING SITE & ANCILLARY								
D SITE & ANCILLARY WORK								
					\$2,836,244			81.3%
D1 SITE WORK								
D11 Site Development	0.00	0 m2	0.00	\$2,620,496	\$2,836,244			81.3%
D12 Mechanical Site Services	0.00	0 m2	0.00	\$110,000				
D13 Electrical Site Services	0.00	0 m2	0.00	\$105,748				
D2 ANCILLARY WORK								
D21 Demolition	0.00	0 m2	0.00	\$0	\$0			0.0%
D22 Alterations	0.00	0 m2	0.00	separate				
D23 Cash Allowances	0.00	0 m2	0.00	separate				
NET BUILDING COST - EXCLUDING GENERAL REQUIREMENTS					\$2,836,244	\$2,836,244		81.3%
Z GENERAL REQUIREMENTS						\$453,799		13.0%
Z1 GENERAL REQUIREMENTS & FEE						\$453,799		13.0%
Z11 General Requirements (%)		12.0%		\$340,349				
Z12 Fee (%)		4.0%		\$113,450				
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING ALLOWANCES					\$3,290,043	\$3,290,043		94.3%
Z2 ALLOWANCES						\$197,403		5.7%
Z21 Design & Pricing (%)		6.0%		\$197,403				
Z22 Escalation Allowance (%)		0.0%		\$0				
Z23 Construction Allowance (%)		0.0%		\$0				
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING TAXES					\$3,487,446	\$3,487,446		100.0%
HARMONIZED SALES TAX						\$0		
Harmonized Sales Tax					0.0%	\$0		
TOTAL CONSTRUCTION ESTIMATE						\$3,487,446		

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

WELLINGTON NORTH NEW OUTDOOR POOL & AQUATIC FACILITY Mount Forest, Ontario		SITE WORK				October 4, 2023 CLASS "C" ESTIMATE "R1"		
FILE: L2461/1/Class C/Outdoor Pool & Change Room R1.xlsx		GFA :						
Description	Qty	Unit	Rate	Amount				
D1 SITE WORK								
D11 Site Development								
1.0 Clear & grub site		allow		6,500				
2.0 Removals								
- sod/ topsoil	20,431	sf	2.50	51,078				
- curbs	38	lf	50.00	1,920				
- existing asphalt		allow		5,000				
- misc items		allow		1,000				
3.0 Earthwork		allow		17,000				
4.0 Concrete walkway	2,260	sf	13.00	29,380				
- extra over for tactile plates				1,000				
5.0 Light-duty asphalt to building entrance	159	sf	6.00	954				
6.0 Concrete curbs	38	lf	35.00	1,338				
7.0 Concrete planter walls	375	lf	38.00	14,250				
8.0 New decorative metal fence	420	lf	75.00	31,500				
- new metal gate in metal fence		allow		2,000				
9.0 Bleachers				35,000				
10.0 Custom wood trellis		allow		40,000				
11.0 Signage		allow		2,000				
12.0 Shade structures		allow		65,000				
13.0 Shower wall		allow		15,000				
14.0 Pool accessories and equipment				Excluded				
15.0 Outdoor leisure pool & pool deck		allow		2,200,000				
- earthworks: excavation, removal, backfill, drainage								
- concrete supply, place, forming pool foundations & substructure								
- concrete supply, place, forming slab on grade (pool & pool deck)								
- finishes to pool and pool deck								
- mechanical, electrical & chemical equipment								
- pool accessories, deck, maintenance and safety equipment								
- chemical treatments & testing								
16.0 Diving board		allow		10,000				
17.0 Lifeguard chairs (2no.)		allow		6,000				
18.0 Landscaping								
- planting medium	1,644	sf	4.00	6,576				
- flora to new plant beds		allow		4,500				
- trees		allow		5,000				
- sod		allow		8,500				
- planter walls				nil				

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

SITE WORK

FILE: L2461/1/Class C/8/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
D1 SITE WORK				
D11 Site Development (Cont'd)				
19.0		Miscellaneous siteworks not shown / identified	allow	10,000
20.0		Grading, repairs to adjacent/existing, soil control, temporary barriers, etc.	allow	50,000
Total D11 Site Development				2,620,496
D12 Mechanical Site Services				
1.0		Demolition	allow	5,000
2.0		Domestic/fire water	allow	30,000
3.0		Sanitary	allow	40,000
4.0		Storm	allow	25,000
5.0		Irrigation		nil
6.0		Snow melting		nil
7.0		Natural gas		by utility
8.0		City charges		excluded
9.0		Miscellaneous fitments, inspection, flushing, locates		10,000
Total D12 Mechanical Site Services				110,000
D13 Electrical Site Services				
1.0		Hydro charges (dip pole, 75kva TX, HV primary cables c/w terminations)	1 sum	20,000.00
2.0		Hydro pole c/w pole guys, cross arms & 28kv class insulators		by hydro
3.0		HV 28kv U/G copper 3#2/0 Cu primary cables, TR-XLPE 90, PVC jacket from existing hydro pole to 75kva primary TX		by hydro
4.0		28kv 600a full loadbreak interrupter switches c/w fused cut-outs & lighting arrestors, pole mounted		existing
5.0		75kva 28kv->347/600v 60hz oil filled pad mounted transformer c/w terminations of primary & secondary cables		by hydro

WELLINGTON NORTH
NEW OUTDOOR POOL & AQUATIC FACILITY
Mount Forest, Ontario

October 4, 2023
CLASS "C" ESTIMATE "R1"

SITE WORK

FILE: L2461/1/Class C/8/Outdoor Pool & Change Room R1.xlsx

Description	Qty	Unit	Rate	Amount
6.0		4#3 + #6g overhead lines from 75kva oil filled primary TX to 100a 347/600v entrance switch	50 m	125.00
7.0		1#53mm type DB II PVC comms ductbank, sand encased sloped c/w prefabricated spacers, 2x6" yellow warning tape & pullstring, native backfill, bellow & above 150x500mm sand bedding, min 10mpa concrete, from existing hydro pole to IT room	50 m	150.00
8.0		Copper & fibre backbone cabling from existing hydro pole to IT room	1 sum	8,000.00
9.0		Light standards c/w base, U/G feeder, grounding & luminaries, LED - L2, 1x79w 20LEDbar, 6.12m steel pole	4 #	8,000.00
10.0		Wall mounted outdoor luminaries, LED - L3, 1x19w 20LEDbar, 254mm x 350mm, wall mounted	4 #	1,000.00
11.0		Outdoor lighting standards & wallpacks controls	1 sum	2,000.00
12.0		CCTV system, conduit & power only - outdoor CCTV camera c/w heater, PTZ, W/M	2 #	1,500.00
13.0		Power, data & EMT conduit to outdoor electronic sign, W/M		excluded
14.0		Power, data & U/G schedule4 conduit to outdoor electronic sign, P/M		excluded
15.0		Power & U/G schedule4 conduit to outdoor GFCI receptacles, P/M		excluded
16.0		Secondary grounding grid for aquatic pool c/w grounding test	1 sum	7,500.00
17.0		Testing & inspection	1 sum	2,000.00
18.0		Miscellaneous fitments, firestops, rentals, etc.	1 sum	5,000.00
19.0		Job start up & close out	1 sum	8,498.00
Total D13 Electrical Site Services				105,748

D2 ANCILLARY WORK

D21 Demolition	nil
D22 Alterations	nil
D23 Cash Allowances	nil

4. COST ESTIMATE

CONTINUED

WELLINGTON NORTH NEW OUTDOOR POOL & AQUATIC FACILITY Mount Forest, Ontario		ELEMENTAL COST COMPARISON SITE WORK		October 4, 2023 CLASS "C" ESTIMATE "R1"			
ELEMEN/Sub Element		Cass C - Sep 19, 2023		CLASS "C" ESTIMATE "R1"		VARIANCE	
		Sub-total	Total	Sub-total	Total	Amount	%
A SHELL							
A1 SUBSTRUCTURE							
A11 Foundations	separate			separate			
A112 Special Foundations	separate			separate			
A12 Basement Excavation	separate			separate			
A2 STRUCTURE							
A21 Lowest Floor Construction	separate			separate			
A22 Upper Floor Construction	separate			separate			
A222 Stair Construction	separate			separate			
A23 Roof Construction	separate			separate			
A3 EXTERIOR ENCLOSURE							
A31 Walls Below Grade	separate			separate			
A32 Walls Above Grade	separate			separate			
A33 Windows & Entrances	separate			separate			
A34 Roof Covering	separate			separate			
A35 Projections	separate			separate			
B INTERIORS							
B1 PARTITIONS & DOORS							
B11 Partitions	separate			separate			
B12 Doors	separate			separate			
B2 FINISHES							
B21 Floor Finishes	separate			separate			
B22 Ceiling Finishes	separate			separate			
B23 Wall Finishes	separate			separate			
B3 FITTINGS & EQUIPMENT							
B31 Fittings & Fixtures	separate			separate			
B32 Equipment	separate			separate			
B33 Conveying Systems	separate			separate			
C SERVICES							
C1 MECHANICAL							
C11 Plumbing & Drainage	separate			separate			
C12 Fire Protection	separate			separate			
C13 HVAC	separate			separate			
C14 Controls	separate			separate			
C2 ELECTRICAL							
C21 Service & Distribution	separate			separate			
C22 Lighting, Devices & Heating	separate			separate			
C23 Systems & Ancillaries	separate			separate			
NET BUILDING COST - EXCLUDING SITE							
D SITE			\$2,880,587		\$2,836,244	-\$44,343	-1.5%
D1 SITE WORK			\$2,880,587		\$2,836,244	-\$44,343	-1.5%
D11 Site Development		\$2,620,496		\$2,620,496		\$0	
D12 Mechanical Site Services		\$110,000		\$110,000		\$0	
D13 Electrical Site Services		\$150,091		\$105,748		-\$44,343	
D2 ANCILLARY WORK			\$0		\$0	\$0	#DIV/0!
D21 Demolition		\$0		\$0		\$0	
D22 Alterations	separate			separate		\$0	
D23 Cash Allowances	separate			separate		\$0	
NET BUILDING COST - EXCLUDING GENERAL REQUIREMENTS		\$2,880,587	\$2,880,587	\$2,836,244	\$2,836,244	-\$44,343	-1.5%
Z GENERAL REQUIREMENTS CONTINGENCIES			\$460,894		\$453,799	-\$7,095	-1.5%
Z1 GENERAL REQUIREMENTS & FEE			\$460,894		\$453,799	-\$7,095	-1.5%
Z11 General Requirements (%)		\$345,670		\$340,349		-\$5,321	
Z12 Fee (%)		\$115,223		\$113,450		-\$1,774	
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING CONTINGENCIES		\$3,341,481	\$3,341,481	\$3,290,043	\$3,290,043	-\$51,438	-1.5%
Z2 ALLOWANCES			\$200,489		\$197,403	-\$3,086	-1.5%
Z21 Design & Pricing (%)		\$200,489		\$197,403		-\$3,086	
Z22 Escalation Contingency (%)		\$0		\$0		\$0	
Z23 Construction Contingency (%)		\$0		\$0		\$0	
TOTAL CONSTRUCTION ESTIMATE - EXCLUDING TAXES		\$3,541,970	\$3,541,970	\$3,487,446	\$3,487,446	-\$54,524	-1.5%
HARMONIZED SALES TAX			\$0		\$0	\$0	#DIV/0!
Harmonized Sales Tax		\$0		\$0		\$0	
TOTAL CONSTRUCTION ESTIMATE			\$3,541,970		\$3,487,446	-\$54,524	-1.5%

SECTION 4

SCOPE OF WORK DRAWING

4. COST ESTIMATE

CONTINUED

