



PROPERTY CONDITION ASSESSMENT

Summerland Aquatic and Fitness Centre

13205 Kelly Avenue
Summerland, BC, V0H 1Z0

Lot 1, Plan 6221, and Lot 2, Plan 287A
D.L. 3640
O.D.Y.D.



Prepared for:

District of Summerland

District of Summerland Municipal Hall
PO Box 159, 13211 Henry Avenue
Summerland, BC V0H 1Z0

Prepared by:

Stantec Consulting Ltd.

400 - 1620 Dickson Avenue
Kelowna, BC, V1Y 9Y2



November 2, 2018

Project No.: 155618238

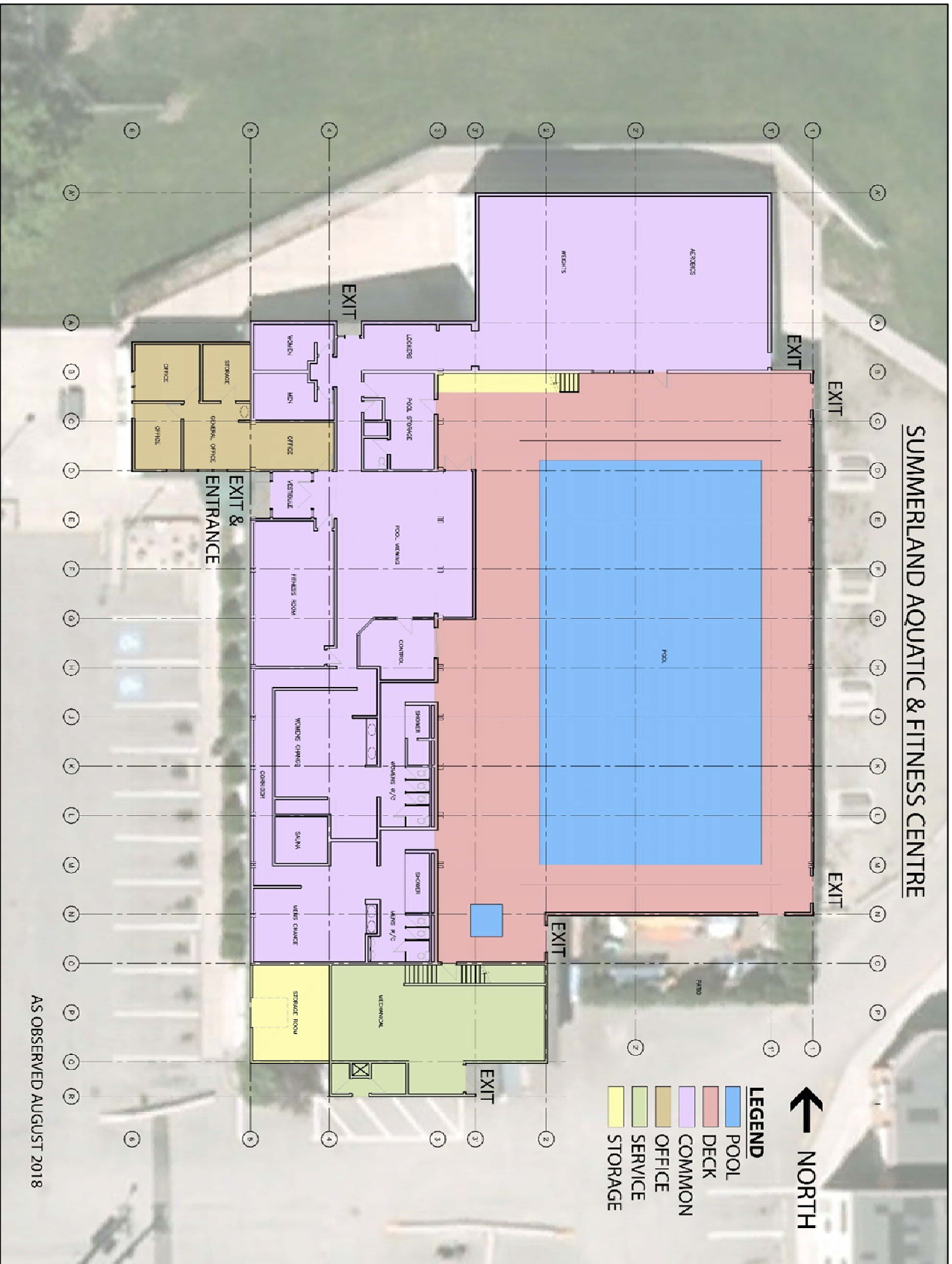
TABLE OF CONTENTS

| | | |
|----------|---|-----------|
| 1 | EXECUTIVE SUMMARY | 3 |
| 2 | INTRODUCTION..... | 4 |
| 3 | SITE DESCRIPTION..... | 5 |
| 4 | GENERAL PHYSICAL CONDITION | 5 |
| 4.1 | ARCHITECTURAL | 5 |
| 4.1.1 | General Description | 5 |
| 4.1.2 | Observations | 6 |
| 4.1.3 | Recommendations..... | 8 |
| 4.2 | STRUCTURAL | 8 |
| 4.2.1 | Observations | 8 |
| 4.2.2 | Recommendation | 12 |
| 4.3 | MECHANICAL..... | 12 |
| 4.3.1 | Observations | 12 |
| 4.3.2 | Recommendations..... | 16 |
| 4.3.3 | Estimated Service lives | 16 |
| 4.4 | ELECTRICAL | 17 |
| 4.4.1 | Observations | 17 |
| 4.4.2 | Recommendations..... | 21 |
| 4.5 | BUILDING ENVELOPE | 21 |
| 4.5.1 | Observations | 21 |
| 4.5.2 | Building Envelope Assessment | 25 |
| 4.5.3 | Energy Assessment of the Building Enclosure | 25 |
| 4.5.4 | Energy Use and Efficiency | 25 |
| 4.5.5 | Recommendations..... | 27 |
| 4.6 | POOL SYSTEM | 27 |
| 4.6.1 | Observations | 27 |
| 4.6.2 | Recommendations..... | 29 |
| 5 | PROJECT TEAM | 29 |
| 6 | DOCUMENTS REVIEWED | 29 |
| 7 | INTERVIEWS..... | 30 |
| 8 | CLOSURE..... | 31 |

LIST OF APPENDICES

| | | |
|-------------------|---|-------------|
| APPENDIX A | SITE PHOTOGRAPHS | A.1 |
| APPENDIX B | SCOPE OF WORK AND LIMITATIONS..... | B.23 |
| B.1 | Scope of Work and Limitations | B.24 |
| B.1.1 | Scope of Work..... | B.24 |
| B.1.2 | Limiting Conditions | B.25 |
| APPENDIX C | OPINION OF PROBABLE COST / CONCEPTUAL ESTIMATE | C.1 |
| C.1 | Schedule A – Facility Assessment Estimate | C.2 |
| C.2 | Schedule B – Replacement Building Estimate..... | C.3 |
| C.3 | Schedule C – Replacement Building Estimate 50 % LARGER..... | C.4 |
| C.4 | Schedule D – Life Cycle Cost Analysis | C.5 |

SUMMERLAND AQUATIC & FITNESS CENTRE



← NORTH

LEGEND

- POOL
- DECK
- COMMON
- OFFICE
- SERVICE
- STORAGE

AS OBSERVED AUGUST 2018

1 EXECUTIVE SUMMARY

Stantec Consulting Ltd. (Stantec) was retained by the District of Summerland (the “Client”) to conduct a Property Condition Assessment (PCA) of the facility referred to as Summerland Aquatic and Fitness Centre, located at 13205 Kelly Avenue, in Summerland, BC (referred to herein as the “site” or “property”).

The original facility was constructed in 1976. All major building Mechanical, Electrical and pool systems have exceeded their expected usable life. Most of the building envelope is in poor condition with significant air and water leakage and potential for mold. The facility is consuming approximately 86% more energy per unit of floor area than the average swimming pool. Spaces have been adapted to meet increased program demands and do not function properly.

Two scenarios have been provided to address the physical deficiencies of the existing facility. A third scenario has been provided as an option to address the apparent operational deficiencies.

Scenario 1 would replace the building envelope, repair the pool structure, replace most mechanical systems, and add more washrooms to meet current code within the existing building area. Some program area would be lost due to additional washrooms. The renovation would cause a significant interruption to services provided to the community and suspend revenues. It would have a short term positive economic impact for local construction trades, but it would also have a short term negative economic impact for current staff. Upon conclusion of the renovation, the facility would meet current codes but would be the same size.

Scenario 2 would construct a new aquatic facility on a new site designed to current codes with the same area. The advantage of this scenario is that the existing facility could remain operational during construction of the new facility provided it was built in a new location. It would have a short term positive economic impact for local construction trades and not interrupt services to the community or current staff employment.

Scenario 3 would construct a new facility 50 percent larger than the current facility on a new site.

Stantec’s recommendation is to explore options for Scenario 3 to address the physical and programmatic deficiencies without interruption of the current services to the community. It is still recommended that current potential health and safety issues identified in this assessment be further investigated as soon as possible.

Another scenario could be to upgrade the existing building and add more area to the facility. It is expected that a renovation to the existing facility with an addition would have a similar cost to a new facility of the same size however it would not be as efficient use of area as a new facility and it would lack the attraction of a new facility.

At the time the original aquatic facility was constructed in 1976, the population of Summerland was 6,724. Today the population of Summerland is almost 12,000. The scope of this facility assessment does not include a review of market demand however during our review it appeared that the current program demand exceeds the capacity and program area of the existing facility. A new larger facility designed to current standards and codes is recommended to better meet the needs of the community it serves.

Based on the data provided and the estimates provided under the Building Envelope Assessment section below, a new facility of the same size would result in a reduction of approximately \$32,000 / year in energy costs and 76 Tonnes / year of Green House Gas emissions compared to the existing facility.

Energy costs continue to increase. The BC Energy Step Code came into force in April 2017. The District of Summerland consulted on the BC Energy Step Code and is expected to reference the Step Code by the end of 2019. It is recommended that a new Energy Code compliant facility would be the best way for the District of Summerland to demonstrate its commitment to sustainability and reduce energy costs.

2 INTRODUCTION

The primary purpose of this PCA report is to -

- a. Determine the existing physical condition and remaining life of Facility assets through an audit of the building's structural integrity, mechanical systems, electrical systems, building envelope and energy efficiencies, including a full life-cycle plan for the Facility.
- b. Identify and prioritize required upgrades as well as provide costing and recommended timelines to meet operational requirements and applicable code compliance.
- c. Produce a Cost-Benefit analysis to determine if future funds should be invested in further building upgrades or the construction of a new facility. This analysis shall be a standalone section of the final report and shall address the following –
 - o Analysis of investment dollars required to upgrade versus build a new facility
 - o Consultant's determination and recommendation on whether to upgrade or build new
 - o Analysis and recommendation with sufficient detail to be used to support grant applications for future capital infrastructure grant opportunities.
- d. Identify an existing or potential health and safety concerns, including recommendations on requirements to meet applicable code requirements.

The PCA identified actions that are required to investigate, or address observed or reported "physical deficiencies", and to repair or replace systems or components that have already surpassed or are anticipated to achieve their Expected Useful Life (EUL). Recommendation for upgrades have been itemized into three categories; Now, 2-5 years, and 5+ years, and are required to address "physical deficiencies" such as material existing or potentially unsafe conditions, a possible Code violation, or conditions that if left uncorrected may result in or contribute to critical element or system failure, or a significant escalation of the remedial cost. (refer to **Appendix C - Schedule B – Replacement Building Estimate**)

The PCA includes a replacement cost estimate to build a new aquatic and fitness centre with the same building area and program elements. (refer to **Appendix C - Schedule B – Replacement Building Estimate**)

A cost estimate for new aquatic and fitness centre 50 percent larger than the current facility has been included. (refer to **Appendix C - Schedule B – Replacement Building Estimate 50 % Larger**)

The PCA also includes a 40 year life cycle cost analysis comparing Net Present Value to upgrade the existing facility and to replace the existing facility with a new facility with the same building area. (refer to **Appendix C – Schedule D – Life Cycle Cost Analysis**)

Note that the renovation scenario does not include replacement of all interior elements while the new facility scenario includes all interior elements. The replacement scenarios include demolition cost.

3 SITE DESCRIPTION

The site is developed with a single-storey structure, that consists of a pool area, a fitness room, change rooms, sauna, hot tub, offices, and a two-storey mechanical space. The building is understood to have been originally constructed in 1975. An office area was added in 1988 and a larger fitness room was added in 1996. A storage shed was also added later at the South-West corner. The current combined building has a total floor area of approximately 17,810 ft² including the storage shed and is located at the North-East corner of the lot, which is comprised primarily of surface-level, asphalt-paved parking.

4 GENERAL PHYSICAL CONDITION

A visual “walk-through” assessment of the site was carried out to conduct interviews with the site representative(s) and to observe and document existing physical conditions at the property. Documentation that was made available by the Client or the site representative(s) was also reviewed to assist in establishing our opinion on the current physical condition of the site’s systems/components.

Supporting photographs of findings presented in this PCA report are provided in **Appendix A - Site Photographs**.

Scope of Work is outlined in **Appendix B - Scope of Work and Limitations**.

Cost and conceptual estimate is provided in **Appendix C - Opinion of Probable Cost / Conceptual Estimate**.

4.1 ARCHITECTURAL

4.1.1 General Description

The Summerland Aquatic Centre is a one-storey building with mezzanine constructed on a slab on grade. The building is clad with a mixture of Portland cement stucco and cedar siding. The roof is approximately 4 in 12 pitch and is constructed of asphalt shingles on wood decking. Windows are generally metal frame double glazed units and doors are metal.

At the time of the most recent major addition in 1996, the building was classified as Assembly Building, Division 3, one-storey, conforming to BCBC 3.2.2.25 with a total area of 17,551 square feet without the storage shed. It is constructed of Combustible Construction, facing 2 streets, and is not Sprinklered. The roof and walls supporting the roof for the 1988 addition have a 45-minute Fire Resistance Rating.

Based on information gathered and observations made during the assessment, we consider the site to be in fair to poor condition, overall.

4.1.2 Observations

4.1.2.1 Original Pool Facility (1975)

The original building appears to be well maintained. A review of the original drawings indicates a building envelope with only limited areas of insulation. Upon review on site it became apparent that the building envelope has failed and does not provide adequate environmental separation. (refer to **Photo Client4**) The inadequate building envelope means that the mechanical systems are not able to maintain a suitable conditioned space. Air and vapour loss through the envelope (refer to **Photo Client3**) in the winter leads to large areas of ice buildup which is a significant safety concern at entrances and exits. (refer to **Photo Client1**) Moisture buildup inside the walls and inside the building (refer to **Photo Client5**) are a significant concern for the presence of mold and deterioration of the building materials. Destructive investigation and testing for mold is recommend but was not conducted as part of this review. In the summer temperatures in the pool area exceed 30°C. Temperatures in the mechanical room are even higher making it difficult to perform maintenance duties.

Exiting from the building appears adequate in public areas with doors and hardware functioning properly. (refer to **Photo A13 to Photo A20**). Exit signage, pull stations, emergency lighting, alarm bells, fire extinguishers, and panic hardware are present for most doors. The services spaces and the mechanical room did not have exit signage and the hardware in these areas appeared original to the building.

Barrier Free accessibility is consistent with the age of building but does not meet current code requirements. The main entrance doors are equipped with auto operators and push buttons. (refer to **Photo Client2**) There are several grab bars in the change rooms and shower areas. (refer to **Photo A24**) Washroom stalls do not meet current code for barrier free clearances. (refer to **Photo A22**).

It is apparent that the current programming requirements and equipment needs, exceed the capacity of the building. (refer to **Photo A3 to Photo A8**) The guard room is used as a first aid room and as a change room for parents with infants. The infants are changed on the floor of the guard room. The two staff washrooms serve as janitor rooms and storage rooms. The male staff washroom no longer has a toilette and the lavatory has been adapted to serve janitorial equipment. The female staff washroom has one toilette and one lavatory. The remainder of the space is storage. The guard room has one functioning staff washroom with a shower, but it is not barrier free. A portion of the mezzanine is used as a staff room with salvaged millwork. Temporary walls have been constructed under the stairs to the staff room to store life jackets and other pool equipment. (refer to **Photo A25**)

4.1.2.2 Administration Addition (1988)

The Office area is well maintained and appears in good condition overall. The addition has its own HVAC system. It appears that the mechanical air distribution was installed within the slab on grade. In general, this is not a good design practice. During the winter subsurface temperatures and therefore the ductwork will be cooler. Moisture in the warm air distribution can condense within the ductwork and create an environment for mold. During the summer, cold air will be distributed through the ductwork for cooling. Temperature differential between the subsurface ductwork and the cold air can also cause condensation within the ductwork and create an environment for mold. Occupants noted evidence of insects which could be termites.

The addition does not include washrooms and the original staff washrooms as part of the 1975 building are in poor to unacceptable condition as noted above.

4.1.2.3 Fitness Room Addition (1996)

The new fitness room appears to be in good condition. Some cracks were noted in the drywall ceiling and on the North wall. These align with structural members supporting the roof. It is expected that structural members will deflect with snow load in the winter and then relax again in spring. No drywall reveals were noted in the ceiling or walls. Drywall reveals at these deflection lines would control cracking.

The addition includes an open change area with lockers and a drinking fountain. There are no showers, sinks, or public washrooms available near the fitness room. It is assumed that users need to use the washrooms in the pool change rooms.

4.1.2.4 Occupant load and Washrooms

The occupant load of the building in its current configuration is estimated to be 656 based on calculations listed below. It is assumed that the occupants load is divided equally between male and female (328 each). Table 3.7.2.2.A of the 2012 BC Building Code requires 6 water closets for 328 men and 11 water closets for 328 women. Currently the facility offers 3 water closets and 2 urinals for men and only 4 water closets for women. Additionally, there is one female staff water closet and one unisex staff water closet.

Basis of occupant load calculation –

0 – Mechanical service spaces

1 – Storage areas at 46.0 square meters per person (2012 BCBC Table 3.1.17.1)

8 – Office area at 9.3 square meters per person (2012 BCBC Table 3.1.17.1)

75 - Pool and hot tub area at 50 sq. ft. per person (IBC Table 1004.1.1)

306 – Pool deck area at 15 sq. ft. per person (IBC Table 1004.1.1)

266 – Remainder of facility at 0.40 square meters per person (2012 BCBC Table 3.1.17.1)

Note that according to the BC Guidelines for Pool Operations, maximum bather load for the pool and hot tub would be approximately 300. However, a bather load calculation for the deck area is not provided. Therefore the IBC was used as a reasonable estimate of occupant load for the entire pool area.

4.1.3 Recommendations

It is recommended that a hazardous material survey and an indoor air quality assessment be conducted as soon as possible to ensure the health of the staff and patrons.

Although a replacement facility would appear to be the more appropriate solution, it is doubtful that either a complete renovation or a new facility of the same size would meet the current demands. Both scenarios presented would only address the material and energy use deficiencies. In order to meet the current program and user demands a larger facility is recommended. It is expected that a new facility by its nature of being new would also increase user demand.

See further recommendation under Summary.

4.2 STRUCTURAL

Refer to **Site Photographs** found on pages A7 to A8

4.2.1 Observations

4.2.1.1 Original Pool Facility (1975)

Original Pool Foundations

Foundations are shown on structural drawings to be conventional shallow reinforced concrete strip footings. Stantec did not observe any signs of excessive foundation settlement or heave during the visual review of the subject property.

Floor slabs are shown on drawings to be 4" thick grade-supported concrete slab reinforced with rebar. The slabs-on-grade were detailed to be isolated from foundation walls and column pedestals. Most slabs are covered with floor finishes and no major cracks were observed in the interior of the building. Minor rotation of some column pedestals was observed which appear to have been previously repaired. Unless movement is worsening, there is no immediate structural concerns.

Pool base and walls are shown on drawings to be 8" thick complete with reinforcement. The pool deck slab is also a 4" slab-on-grade which sits on but is isolated from the pool walls by a slip joint. Hence, slight rotation of the pool walls inward can be expected when pool is de-watered for schedule maintenance as observed by pool staff from a previous occurrence. Staff explained that the some tiles on the pool deck popped during the incident which had coincided with the neighboring property compacting the soil for their foundation construction. (refer to **Photo S2**)

Original Pool Superstructure

The superstructure of the Original Pool Facilities consists of several different roof components.

The high roof over the pool on the east portion of the facility has a 4 in 12 pitch from west to east. It is framed with 3" T&G timber decking on 6-3/4"x37-1/2" deep glulam beams at 10'-0" spacing supported on pairs of 3"x12" glulam columns along the east perimeter and on pairs of 5"x15" glulam columns at the roof ridge along the demising walls west of the pool.

The low roof on the west portion of the facility consists of a 4 in 12 pitch from east to west covers most of the remaining Original Pool Facilities. The drawings show that ridge of this roof is stepped down approx. 12'-8" from the ridge of the high roof. This roof is framed with 3" T&G timber decking on 5"x25-1/2" deep glulam beams at 10'-0" spacing supported on pairs of 3"x12" glulam columns along the west perimeter and on same pairs of glulam columns that support the high roof along the demising walls west of the pool. The roof beams cantilever into the interior space to hang a mechanical mezzanine for duct spaces. (refer to **Photo S5**)

The beam to column connections typically consist of through bolts with shear plates sandwiching the glulam beam within the pair of glulam columns. Where the low roof beams cantilever into the interior space, the beams are connected indirectly by sitting on bearing blocks connected to the columns with similar typical beam-column connections.

Most roof decking elements show signs of water stains which likely have been resulted from failure of the building envelope. Signs of minor rusting at the connection bolts and water stains on columns were also observed. These elements appear to still be in good conditions without signs of decay or damage. Structural repair of these elements is not warranted at this point. Situation where moisture is being trapping should be remediated as soon as possible to prevent further damage to structural elements. (refer to **Photo S4**)

The column base connections are by single bolts through knife plates concealed within the glulam columns welded to base plates anchored to the concrete pedestals. Minor bolt rusting and rot at column bases in the pool area were observed; however, the column elements appear to be sound and urgent repair is not warranted.

Termite damage was observed at exposed column south of the front entrance. The termite-affected portion of the column requires remediation as soon as possible to prevent further damage and to limit the extent and cost of future repair.

The mechanical room is located on the south side of the building. The ground level of the room is partially sunken below grade. There is a mezzanine above this which serves as the fan room. The floor of this mezzanine consists of 3" concrete topping on 3x6 T&G decking on 15" deep glulam beams at 7'-0" to 8'-0" spacing. These beams are supported on concrete masonry unit (CMU) wall on the north side of the space. The CMU wall is shown on architectural to have only horizontal ladder reinforcement and a reinforced bond beam at the top. On the perimeter, the glulam floor beams are supported on 2x built-up columns.

The fan room roof, framed with glulam beams and girders, shares the same profile as the low roof over the amenities areas on the west. On the east portion, the roof steps down to create space for a mechanical louvre and slopes down towards the east. The glulam beams and girders are supported on either glulam or 2x built-up columns.

Similar to the pool areas, most roof decking elements show signs of water stains which likely have been resulted from failure of the building envelope. Signs of minor rusting at the bolted connections and water stains on some beams were also observed. These elements appear to still be in good conditions without signs of decay or damage. Structural repair of these elements is not warranted at this point.

The exterior walls of the Original Pool Facility are framed with 2x studs of varying depths at 16" on centers. The east and west perimeter walls are sheathed with 1/2" plywood on the exterior face and horizontal cedar board on the interior. The rest of the perimeter walls are sheathed with 1/2" plywood on both faces. These walls, connected to 8"

thick foundation walls by ½" anchor bolts at 4'-0" o/c, serve as shear walls to resist lateral loads from wind and seismic forces.

The interior partition walls are typically framed with 2x4 at 16" o/c except at showers and water closets where they are 8" concrete masonry unit (CMU) walls supported on slab thickening. It is unknown whether the CMU partition walls contain any reinforcing; however, they are likely restraint at the top with the ceiling framing as discussed below.

The framing to support ceilings over the pool viewing lounge and the changing rooms were not shown on structural drawings. Some framing components are shown on architectural drawings but without details nor loading requirements. It is our understanding these areas are now used as mechanical service mezzanine and maintenance staff can readily access these spaces through an access stair on the north and the mezzanine (fan room) above the mechanical room on the south. The architectural drawings show the floor framing to consist of 2x6 wood joists at 2'-0" o/c which appears to be supported on interior partition walls and are hung at the edges by 2x4 at 2'-0" o/c wood stud wall.

It is unknown if this framing for this service mezzanine or the access stairs has been engineered properly and if so to what load was it designed for. It would be possible to complete a load rating study provided all member sizes and connection details can be field verified. A load rating study is beyond the scope of this assessment.

4.2.1.2 Administration Addition (1988)

Administration Foundations

Foundations are shown on architectural drawings to be conventional shallow reinforced concrete strip. Stantec did not observe any signs of excessive foundation settlement or heave during the visual review of the subject property.

Floor slabs are shown on drawings to be 4" thick grade-supported concrete slab reinforced with rebar. Slabs-on-grade are not shown to be tied to the foundation walls. All slabs are covered with carpet; hence, their conditions could not be reviewed.

Administration Superstructure

The roof for the Administration slope from south to north at a pitch of 4V:12H and share a common eave elevation with the low roof over the pool amenities area. The roof framing consists of ¾" T&G plywood sheathing on wood trusses at 2'-0" spacing spanning in north-south direction that matches the roof profile at the top and the ceiling profile at the bottom. These trusses are supported by perimeter walls consisting of 2x6 wood studs at 16" o/c with ½" exterior plywood sheathing anchored with ½" dia anchor bolt at 4'-0" o./c to 8" concrete foundation walls. The perimeter walls also serve as shear walls to resist lateral loads from wind and seismic forces.

All structural elements are covered by drywall. No significant dry wall cracks or other structural deficiencies were observed during our field review.

4.2.1.3 Fitness Room Addition (1996)

Fitness Room Foundations

Foundations are shown on structural drawings to be conventional shallow reinforced concrete strip and pad footings. Stantec did not observe any signs of excessive foundation settlement or heave during the visual review of the subject property.

Floor slabs are shown on drawings to be 5" thick grade-supported concrete slab reinforced with rebar. The slabs-on-grade were detailed to dowelled from foundation walls. All slabs are covered with floor finishes.

Fitness Room Superstructure

The roof for the Fitness Room generally follows the same slope as the high roof over the pool but is stepped down by approx. 2'-6". There is a flat area to the south-west corner of the room to support a mechanical roof top unit. The roof framing consists of wood trusses at 2'-0" spacing spanning in the east-west direction that matches the roof profile at the top and the ceiling profile at the bottom. These trusses are supported by perimeter walls along the east and west and by steel beam midway. The perimeter walls which consist of 2x10 wood studs at 16" o/c with 3/8" exterior plywood sheathing and blocking are anchored with 1/2" dia anchor bolt at 2'-8" o/c to 10" concrete foundation walls. These walls also serve as shear walls to resist lateral loads from wind and seismic forces. The center W21 steel beam is supported by HSS6x6 steel columns on either end.

All structural elements are covered by drywall and not visible except for one exposed steel column. No significant dry wall cracks were observed during our field review. However, staff has mentioned that ceiling cracks had occurred, but were patched, along the transition between the flat and slope ceiling to the east. This location coincides with the steel beam which supports separate trusses to either side of it. Minor differential settlements between the footings along the east and west perimeters could cause the trusses to rotate and cause this drywall crack. No new visible cracks or other structural deficiencies were observed during our field visit.

4.2.1.4 Storage Shed Addition

There are no records for this Storage Shed Addition. It was not shown on the 1996 addition drawings; hence, it is believed to be constructed after that.

Storage Shed Foundations

There are no foundation elements, bottom plates for load bearing studs anchor directly on top of the pavement slabs.

Storage Shed Superstructure

The roof profile follows the Pool Amenities roof but is stepped down slightly for this storage shed. The framing appears to be 2x8 joists at approx. 2'-0" o/c, sheathed with plywood, supported on 2x4 load bearing studs at approx. 16" o/c. It is unknown if this framing has been engineered properly to withstand snow loads. It would be possible to complete a load rating study provided all member sizes and connection details can be field verified. A load rating study is beyond the scope of this assessment. (refer to **Photo S10**)

4.2.1.5 Exterior Elements

Exterior concrete paving elements on the frontage of the facility appears to be in poor condition. There is spalling of concrete at stair nosing and at locations where significant rain water spillage from roof is suspected. Cracks and differential settlements of pavement creating potential tripping hazard were also observed. The steps were painted yellow as visual warnings. (refer to **Photo S6**, **Photo S7** and **Photo S8**)

There is an exterior wood framed staff deck. This is currently being closed off from use due to deterioration and termite infestation. Due to its poor condition, it is recommended that this deck be removed and re-built as required. (refer to **Photo S9**)

4.2.2 Recommendations

Remediate the building envelope to mitigate moisture issues and prevent possible damage of structural elements. Remediate column at front entrance with termite damage. Conduct load studies on existing capacities of storage shed and mechanical service mezzanine. Remediate deteriorated exterior paving to reduce tripping hazards. Replace staff deck.

4.3 MECHANICAL

4.3.1 Observations

Overall the Mechanical systems appear to be operational and in adequate condition; however, most of the HVAC air handling systems and equipment have reached their life expectancy and it is suggest that replacement of these units be conducted soon. The plumbing systems piping and most components for the building are original. There have been some new systems added such as heat recovery and solar. Maintenance operations have indicated that there continues to be many types of maintenance replacements such as tempered water systems for showers that need to be replaced. This will be ongoing as the building and the main mechanical systems are over the life expectance of this type of facility.

4.3.1.1 Site Service Components

The building site services underground were not visible, but the incoming water entrance for Domestic water was visible in the mechanical room. It looked to be in reasonable condition. The exit of the sanitary drainage was not visible during the site visit. The storm system consists of exterior roof gutters that drain to down spouts along the exterior of the building. The downspouts then get piped underground and out to drywells around the perimeter of the building. It is not clear where the drywells are located around the site. The gas service to the site comes in on the Southwest corner to the existing gas meter and then serves the building. (refer to **Photo M11**)

4.3.1.2 Areas of Concern

The Mechanical systems installed for the facility have been in place and are original since the building was completed in 1976. There have been some Mechanical renovations that have happened over time in the building.

The building does not have a sprinkler system. There are fire extinguishers installed within the building.

Note: Given the age of the building, there is the potential for all interior finishes and material within the mechanical system that may contain lead-based paints and/or asbestos – a hazardous materials assessment is recommended.

4.3.1.3 Air Handling Systems Serving the Building:

Main Pool Area:

The pool area which is approximately 9,400 sq. ft (875 m²) is served by a dedicated existing air handling unit F-1 which is located in the upper mechanical room and consists of a supply fan which provides approximately 7,000 cfm, and a return fan with approximately 6,500 cfm with mixed air section, heating coil and filter section. Each of the two fans are interlocked and operate together for ventilation. The supply air is ducted to supply grilles at high level within the space. Branch ducts have balancing dampers. A large return grille is located in the Southeast corner of the pool area and is ducted back to the air handling unit. The current layout air circulation does not appear to be working very well and would recommend review of air distribution. There is no dehumidification in the pool area and would suggest that this be reviewed. There is a fire damper in the main supply duct through the fire separation at mechanical room wall.

This air handler and all the associated components are original and have reached their estimated service life and should be replaced. (refer to Photo M1A)

Intake louvres are located on the Southeast corner of the facility at high level in the upper mechanical room.

Main Floor Space:

Entry vestibule has a small air handling unit mounted above the ceiling and provides heating for the vestibule. Unit is controlled from a local wall mounted thermostat.

This air handler and all the associated components are original and have reached their estimated service life and should be replaced.

Main Pool Lobby Space:

The Main Pool Lobby and dressing rooms spaces are approximately 4,000 sq. ft (375m²) and are served from a dedicated air handling unit F-2 which is located in the upper mechanical room. The unit consists of a supply fan which is providing approx. 4,500 cfm, with mixed air section, heating coil and filter section. The heating coil is protected by a freeze protection stat. The supply air is ducted to supply grilles and diffusers at high level within the space. Branch ducts have balancing dampers. System appeared to be functional. Unit is controlled from a local wall mounted thermostat. There is no fire damper in the main supply duct through the fire separation at mechanical room wall. There needs to be a fire damper installed in this duct.

Air handler and all the associated components are original and have reached their estimated service life and should be replaced. (refer to Photo M1A)

Male and Female change rooms have an exhaust system that is ducted out through to an outside louver near the mechanical room on the south wall.

Exhaust fan is original and has reached its estimated service life and should be replaced.

General Office Space:

General office space at the West end of the space has a dedicated heat pump unit and a split dx cooling unit with outdoor condenser mounted on the roof area just above the office space. Unit is a down flow unit and has supply registers in the floor and return grilles in the ceiling. Unit is controlled from a local wall mounted thermostat.

Heat pump unit is estimated to be approx. 10-12 years old and does have some life left before it is scheduled to be replaced. (refer to Photo M2A and Photo M2A)

Meeting Room Space:

Meeting room at the west side (converted from old fitness area) of the facility is approximately 600 sq. ft (56m²) has a dedicated air handling unit located in the attic space above which provides heating and ventilation. Supply air is ducted to the space to side wall grilles and return grilles are side wall. The supply and return grilles are very close together which results in short circuiting of the air. There needs to be more separation between these grilles for space distribution.

This air handler and all the associated components are original and have reached their estimated service life and should be replaced. (refer to Photo M5)

Washroom Space:

Main floor smaller washrooms, and janitor room on the northwest corner have ceiling exhaust fans that are suspected to exhaust into the ceiling space; however, this was not confirmed. It is recommended that the washrooms be exhausted to outdoors as per BC building code. Plumbing fixtures are older and not in good condition and should be replaced.

Fitness Room Space:

The Fitness room is a more recent addition to the building which was completed in 1996. The space is approximately 2,050 sq. ft (190m²) is served from a dedicated York Model ZXG12 packaged 10-ton roof top unit, Airflow 4,000 cfm gas fired / cooling roof top unit air handling unit. (refer to Photo M3)

System seems to be working reasonably well and has only been in operation for 5 years. Unit is controlled from a local wall mounted thermostat.

4.3.1.4 Heating Systems Serving the Building:

Heating System:

Heating system is generated from the existing Cleaver brooks gas -fired boiler 3,000 MBH which is located on the lower level of the Mechanical room. The primary heating system serves three heating systems, General heating, domestic hot water and pool systems. There is damaged insulation jacketing and staining where there is and has been leakage.

General heating hot water circulation is provided by two circulation pumps P-1 and P-2. Primary loop P-1 (Approx. 40 gpm) serves each system including the air handling unit coils. Pump P-2 (Approx. 60 gpm) is serving the radiation

along perimeter, fan coil unit and unit heaters. There are no redundant pumps on the system and would suggest that for this type of facility there should be redundancy. The system has isolation valves and balancing valves to allow for proper flows to each of the various systems. The main control for water temperature is through an indoor / outdoor controller and master which controls a three-way mixing valve. Water supply temperature is scheduled for an increase in temperature when outside temperature drops.

Domestic water heating is through a direct heat exchanger from the convertors. Domestic water discharge water is controlled by a three-way mixing valve which is controlled by the water return temperature.

Main and Hydro pool heating is through a direct heat exchanger from the convertors. Pool discharge water is controlled by a three-way mixing valve which is controlled by the pool water return temperature.

Heating System and all the associated components are original and have reached their estimated service life and should be replaced.

Heat Recovery System:

Heat recovery system was installed to the existing air handling system in 2013. Added a heat recovery coil in the existing exhaust duct to reclaim heat for pre heat for the pool systems. There is a 10-ton heat pump Nordic unit installed between the pool heat exchanger and a storage tank. There is a pump that circulates to the heat exchanger from the heat pump unit. Pump is sized for 28 gpm. A pump that circulates from storage tank to the heat pump unit sized for 28 gpm. Also, there is a pump that circulates from the heat recovery coil to the storage tank.

System appears to be functional and is not expected to require replacement over the course of the valuation period.

Solar System:

Solar system was installed to the existing system in 2013. Solar collectors are installed on the roof above pool area. Solar pre-heats the domestic water and then switches and does pre-heating for the pools for the facility. The temperatures for the solar storage at the time of the visit was at 47°C and the collectors were at 56°C as indicated on the solar display.

The solar panels and system are recently installed and appear to be functioning as intended. No actions are recommended for the solar panels.

Controls:

There is an existing controls component to the project but is minimal. Controls are reliable and services pool temperatures, humidity, and water tank temperatures. All other controls are line thermostats to air handlers, pumps etc.

4.3.1.5 Plumbing and Storm Systems:

Plumbing:

Plumbing systems are original to the building. The piping is copper and is getting close to reaching its life expectancy. There are pin hole leaks starting to show up in some of the piping in the last while and will only get worse over time.

The piping where pin leaking was experienced has been replaced. It is recommended that the copper piping systems be replaced within a 5-year period. (refer to Photo M7, Photo M8, Photo M9 and Photo M10)

The plumbing fixtures in the dressing rooms are functional and are in reasonable condition but should be replaced within the next 3 to 5 years.

Storm System:

Storm System exterior roof gutters that drain to down spouts along the exterior of the building. The gutters that were spot checked were almost completely full of debris and were not effective for good drainage off the roof area. Recommend maintenance for gutters be completed. The downspouts then get piped underground and out to drywells around the perimeter of the building. It is not clear the exact locations of where the drywells are located around the site. The drywells will probably be full of sediment and could need flushing / cleaning as well. Noted that some downspouts daylight discharge directly against building foundation.

4.3.1.6 Other plans serving the Building:

Fire Extinguishers:

Fire extinguishers mounted on wall brackets in strategic locations. There are (9) extinguishers located around the building at entry locations service locations etc. The extinguishers have been checked and tested by the fire authorities within the past year.

Chemical Storage:

Exterior chemical storage room does not have any ventilation currently has a very strong chlorine smell. This room is a poor choice for the storage of chemicals.

4.3.2 Recommendations

Several spaces appear to be provided with less than the required ventilation air which indicates that the ventilation exchanges indoor for outdoor air which reduces indoor CO2 levels that is too low when compared to values specified in ASHRAE 62.1. There are some spaces that do meet the requirement. An increase amount of ventilation is required.

Replace tempered water systems for showers. Replace air handlers and all the associated components in for the pool area and meeting room. Exhaust washrooms to the outdoors. Replace heating system and all the associated components. Replace copper piping. Clean out gutters and drywells. Downspouts piped underground. Replace plumbing fixtures in the next 3 to 5 years.

4.3.3 Estimated Service lives

Estimated Service lives for Equipment that was part of this report that is recommended by ASHRAE.

| Equipment Item | Median Years | Current Age |
|-----------------------------|--------------|-------------|
| HVAC – Old fitness room | 15-20 | 41 |
| HVAC – Pool, lobby, change | 15-20 | 20 |
| HVAC – Office addition | 15-20 | 15 |
| HVAC – New fitness addition | 15-20 | 5 |
| Boilers (Cast Iron) | 30 -35 | 41 |
| Radiant Heaters (Hot Water) | 25 | 41 |

4.4 ELECTRICAL

4.4.1 Observations

4.4.1.1 Electrical Service

The facility is supplied by a 3 phase 208 volt 600 amp service which enters the building in the main mechanical room. The main service disconnect is original, manufactured by Square D, and dated around 1976. Documentation from 1996 indicates there is a 500A fuse in the 600A disconnect switch.

Note: Given the age of the building, there is the potential for all interior finishes and material within the mechanical system that may contain lead-based paints and/or asbestos – a hazardous materials assessment is recommended.

Main Switchboard - The main service is to a 600A 120/208V 3 phase 4-wire Square D QMB Saflex switchboard, also dating from 1976. The main distribution contains the following: (refer to **Photo E1** to **Photo E6**)

- 100A breaker supplying Panel 'A'
- 200A breaker supplying Panel 'B'
- 30A breaker supplying the Fire Alarm Panel
- 400A breaker supplying Splitter #1
- 100A breaker supplying Splitter #2table
- 100A breaker supplying Panel 'C'

4.4.1.2 Secondary Distribution and Branch Circuit Panels

All the distribution equipment, with the exception of the Fire Alarm Panel and Panel 'C', are original with the building, from 1976.

Panel 'A' is in the mechanical room, and supplies various lighting, power, and mechanical loads.

Panel 'B' is in the pool reception area. It feeds a phase 100A sub-panel 'SB', which is next to it. Panel 'B' itself provides power for both interior and exterior lighting. Sub-panel 'SB' provides power to miscellaneous small loads, primarily around the pool area, control room and staff room.

The Fire Alarm Panel is of a more recent vintage than the electrical distribution, however it still appears to be quite dated. (refer to **Photo E5**).

Splitter #1 is in the mechanical room next to the switchboard and supplies power to mechanical loads.

Splitter #2 is in the upstairs mechanical room. It distributes power to the air handling units.

Panel C is a newer panel which supplies power to the new fitness area, which was added in 1996. Loads are primarily lighting and receptacles, as well as Roof Top Unit #1.

Distribution equipment and branch circuit panels are generally either original equipment from the late 1976 or are equipment that was added during a building addition in 1996. As the distribution is at 120/208V there are no transformers.

The Expected Service Life (EUL) for this equipment is 25 years. With the exception of Panel 'C', which is approximately 22 years old, the entire distribution of the Aquatic Centre dates from 1976 and is now 42 years old. It is recommended to replace and standardize the entire distribution system as it has exceeded its end-of-service life. Additionally, due to the presence of chlorine the equipment is visibly corroded, and staff report difficulty in operating moving parts because of the corrosion and rust. While the distribution is operational, because of age and antiquated equipment it is highly recommended it be replaced within 1-2 years. Panel C is nearing the end of its EUL and if the rest of the distribution were to be replaced we would recommend replacing this one at the same time as well.

4.4.1.3 Standby Power (Generator Supply)

There is no standby backup standby power at the facility.

4.4.1.4 Building Exterior Lighting and Site Lighting

Building Exterior Lighting is provided by High Pressure Sodium (HPS) fixtures. The fixtures all appear to be quite dated. Three 150 watt HPS fixtures were added to the north side of the building as part of the fitness area addition in 1996. (refer to **Photo E7**)

There is no parking lot / site lighting at the facility.

HPS fixtures use significantly more electricity and require more maintenance than the more modern LED exterior fixtures. Upgrading the HPS fixtures to LED is recommended, both because of the age of the fixtures and for energy savings.

At the same time, to provide better lighting coverage, especially near the front entrance, we recommend adding 2-3 fixtures on the west side of the building, shielded to prevent light pollution to the adjacent residential area.

4.4.1.5 Emergency Lighting

Emergency lighting is provided by a system of 5 batteries and single remote lighting halogen heads throughout the facility. The system appears to have been upgraded over the years in an ad hoc manner, so the age of the devices may vary. Most of the batteries and remote heads appear to be at least 10 years old, with some remote heads being obviously much older.

A single large battery on the second-floor mechanical room supplies power to a number of remote heads. Some of the emergency lighting is provided by standard wall mounted battery packs with integral heads. The precise configuration of emergency lighting was not researched for this assessment. (refer to **Photo E8**)

While not immediately urgent, if a major renovation were to take place we would recommend replacing the entire emergency lighting system with new battery packs and LED heads.

4.4.1.6 Exit Signage

Exit signs are the standard, red letter type. It is assumed that the large battery in the mechanical room provides power to some of them. The precise configuration of power to egress signage was not researched for this assessment.

The 5 batteries that power the emergency lighting and egress signage are inspected on a regular basis and have been working as intended. However, standard EUL for these life safety devices is 10 years, and while their precise age is unknown they appear to be past their EUL. It is recommended to replace them with a modern battery packs and LED remote heads. The reduced power consumption of LED vs. halogen allows for much smaller battery packs was the case prior to LED technologies than was the case in the past. It is further recommended to eliminate the system of single head units and standardize on double-head LED's for failure / redundancy within 1-3 years.

Current building code requires exit signage the green pictogram type (aka "green running man"). If a major renovation were to take place in the facility, upgrading the exit signs to the pictogram type would become a code requirement.

4.4.1.7 Interior Lighting

Pool Area

The ceiling area directly above the swimming pool was upgraded with thirteen suspended LED fixtures in 2015.

To the west side of the pool, a number of interior soffit 70 watt metal halide potlights were added in 1996. As the original lamps burn out, they have been steadily replaced with LED retrofit lamps.

The original lighting fixtures from 1976 are wall mounted high above the same soffit. Originally 4 foot fluorescent tubes, most of these fixtures are still in place but are not used. (refer to **Photo E9**)

The pool area appears to be under lit and on-site staff concur with this assessment. We recommend adding more high bay pendant lighting over the pool to supplement the existing high bay LED fixtures.

Fitness Area

The fitness area lighting is original with the 1996 addition to the building. These are surface mount linear fixtures (1 x 4's), each housing 2 x 32 watt fluorescent tubes. (refer to **Photo E10**)

The area appears to be relatively well lit. If a major renovation were to take place we would recommend upgrading to LED fixtures in order to meet current building code standards for Lighting Power Density (LPD).

Rest of Building

With the exception of several suspended high bay LED fixtures in the pool viewing area, and surface mount fixtures with screw in type lamps in parts of the change rooms, the rest of the building is generally lit by linear fluorescent tubes.

The mechanical room, particularly on Level 1, is severely under lit. We recommend adding more strip lighting to raise the light level.

The fluorescent and metal halide light fixtures as originally designed would not meet current building code standards for energy efficiency. However, with LED retrofits being installed on a continuous basis, building code standards would be met eventually once the majority of them are replaced. Aesthetically, the light fixture styles are generally all quite dated, and we would recommend replacing with modern style fixtures, throughout the building but particularly in the publicly accessible spaces.

Lighting Controls

The entire building lighting is controlled by 120V light voltage light switches. In the pool control room there is a GE master sequencer relay control panel from 1976 through which the building's original lighting circuits are controlled.

This lighting control system currently functions as intended, however it is long past its EUL. If a renovation of lighting were to take place we would recommend upgrading the lighting control system at that time.

4.4.1.8 Fire Alarm System

The exact age of the EST (Chubb Edwards) Fire Shield fire alarm panel is not known but appears to be around 20 years old. (refer to **Photo E11**) It is tested regularly and appears to be functioning as intended.

Initiating devices include pull stations where appropriate and fire detection devices. Smoke detectors and heat detectors were added in and around the fitness area in 1996. Devices in the older building appear to be of similar vintage to the fire alarm panel.

Notification in both the older part and the newer part of the building are by Chubb Edwards standard 10" bells.

The fire alarm system is working as intended and is regularly tested, however there is no sprinkler system and there are areas where there is no fire detection installed.

Because of the age of the system and the corrosive nature of the environment, particularly near the pool area, we recommend replacing the entire system during the next major renovation. Minimum code requirements for fire detection appear to be met, however if the system were to be replaced we would recommend reviewing best practices and consider adding more devices to the system.

4.4.1.9 Security System

No card access or electronic security system.

4.4.1.10 Data and Voice Over IP (VOIP)

The communications system for the facility is located in the admin area on the west side of the building. The system is tied to a larger municipal system and is connected to a central system in a nearby municipal building. Conceptually, this facility's communication system could be considered as a secondary communication closet within the larger system.

The telephone system is Voice-Over-Internet-Protocol (VOIP). Wireless Access Points (WAP's) are distributed throughout the facility.

The communications system is working as intended and equipment appears to be of recent vintage. No action is required; however, we would suggest some organizing and cleanup of wiring around the rack as part of a general good practice. (refer to **Photo E12**).

4.4.1.11 Public Address System

The public-address system is original from 1976. The system was expanded to the fitness area in 1996.

The public-address equipment and speakers in the pool area are quite dated and long past their EUL. We recommend replacing the system. It would be less necessary to replace the newer fitness room speakers; however, it may be deemed preferable to simply reuse the wiring to the fitness rooms and make the entire new system's devices to be of the same make and model.

4.4.1.12 Solar Panels

Solar panels were installed on the roof in 2013. These provide electricity for pre-heating of domestic water and water in the pool. (refer to **Photo E13**)

The solar panels are recently installed and appear to be functioning as intended. No recommended actions for the solar panels.

4.4.2 Recommendations

Recommendations Summary – Replace and standardize the entire distribution system. Clean up / organize wiring system for clarity and safety. Upgrade the HPS fixtures around the building exterior to LED. Add 2-3 fixtures on the west side of the building near the entrance. Add more high bay pendant lighting over the pool to supplement the existing high bay LED fixtures. Replace public address system.

4.5 BUILDING ENVELOPE

4.5.1 Observations

4.5.1.1 Wood Cladding

The wood siding is cupped, the lap joints have failed, and the paint is deteriorated. Areas of rotten trim observed.

The condition of the wood siding is poor. Replacement of the wood cladding is recommended. (refer to **Photo Env5**)

4.5.1.2 Stucco Cladding

The stucco cladding appears to be three coat Portland cement stucco. Some areas are stone dash while other locations are trowel finish. Areas with stone dash were observed to have significant loss of stone finish. In many locations the stucco finish is in contact with the ground and at grade the stucco is deteriorated. Stucco was also observed to be buried in some locations. Minimum 100 mm clearance between bottom of stucco and grade is recommended as this can be a source of moisture and entry point for termites. The stucco adjacent to the pool exhaust and at the base of the wall was noted to be spalling.

Condition of stucco siding ranges from fair to poor. Deteriorated stucco at base of wall and at pool exhaust should be remediated. 100 mm clearance at base of wall should be implemented by either cutting stucco up or lowering grade. (refer to **Photo Env6**)

4.5.1.3 Wall Penetration

There are a number of electrical and mechanical penetrations through the walls. Daylight was visible through the duct penetration on the north mezzanine suggesting potential for air leakage, heat loss and ingress of precipitation.

Note in **Photo Env7** that the walls are insulated, there is no vapour barrier, which may result in condensation formation due to air leakage and vapour diffusion. Seal all wall penetrations is recommended.

4.5.1.4 Roof Shingles

The asphalt roof shingles range in age from 2003 for the main roof to 2015 for the office area roof.

Nails and debris were observed on the roof and areas with missing shingles were noted.

In general, the asphalt shingles are in fair condition. Cleaning of roof is recommended. If the building is to be retained for more than five years installation of roof insulation is recommended in the original portion of the building. (refer to **Photo Env8**)

4.5.1.5 Roof Penetrations

Sealant on storm collar of boiler flue has failed. Staining of the flue on building interior suggests the flue penetration is leaking.

Condition of roof penetrations is poor. Replacement of seals at roof penetrations is recommended. (refer to **Photo Env9** and **Photo Env10**)

4.5.1.6 Roof Flashing

Roof flashing was observed to be lap joints with no proper membrane underneath. Fasteners on flashing was observed to be corroded or missing – no standing seams or s-locks were used. Slip flashing is missing at roof to wall interface and inadequate laps were observed.

Areas where flashing was not lapped resulting in potential for leakage from wind driven rain or ice/snow build-up. This is particularly prevalent at wall to roof interfaces.

The building operator noted there are locations around the building with periodic leaks that can be attributed to the poor roof flashing.

The condition of roof flashings is poor. Repair or replacement of roof flashing is recommended.

4.5.1.7 Gutters and Downspouts

Gutters were observed to be clogged. Staining and water damage around downspouts suggests that there is leakage.

Sealant installation where downspout comes out of soffit suggests attempts to seal leaks.

The building operator noted that gutters overflow and leaks occur into the building during heavy precipitation events.

Overall condition of the gutters and downspouts is poor. Sealing of gutters and downspouts is recommended. (refer to **Photo Env14** and **Photo Env15**)

4.5.1.8 Perimeter Drain

Downspouts discharge to perimeter drains or is discharged onto the ground.

Perimeter drain appears to be a combination of "big-O" and PVC pipe.

Flexible "big-O" drain pipe is subject to being crushed and getting plugged.

Where downspouts discharge onto ground there is indication of moisture damage to the adjacent cladding.

In general, the condition of the perimeter drains is poor and connection from the downspouts to the perimeter drains is incomplete. Replacement of perimeter drains is recommended. (refer to **Photo Env16**)

4.5.1.9 Windows

Windows are aluminum frame with insulated glazing units. Sealants around windows has failed in multiple locations.

Glass and frames are in fair condition. Sealants around windows are in poor condition. Replacement of sealant joints around windows is recommended. (refer to **Photo Env17**)

4.5.1.10 Doors

Doors are generally pressed steel, a number having glass inserts.

Doors are in fair condition. (refer to **Photo Env18**)

4.5.1.11 Soffit and Fascia

Soffits are generally tongue and groove wood and fascias are a mixture of metal panel or cedar.

Signs of moisture damage are visible at roof and wall interfaces suggesting the facias may be permitting moisture to pass through. Repair of soffits is recommended. (refer to **Photo Env19**)

4.5.1.12 Exterior Walkways

Exterior walkways are cracked and showing signs of displacement. It is not clear from the current review if there is soil subsiding around the building.

The condition of exterior walkways is poor. Repair of the walkways is recommended.

4.5.1.13 Staff Deck

The staff deck is rotten and should be removed or repaired on a priority basis. Replacement of the staff deck is recommended.

4.5.1.14 Storage Shed

The storage shed was constructed directly on the sidewalk. Moisture damage and rot was observed at the roof decking and at the base of wall.

It is recommended to remove or repair the storage shed on a priority basis. Replacement of the storage shed is recommended.

4.5.1.15 Pool Area to Mezzanine Wall

The wall that separates the pool area from the mezzanine is uninsulated and there is no air vapour barrier. Given the high humidity condition of the pool area, this partition should be treated as an environmental separation for thermal, air leakage and vapour diffusion control. If the building is to be retained for more than five years, replacement of the wall that separated the pool area is recommended. (refer to **Photo Env24**)

4.5.1.16 Attic Space

Wall to roof spaces in the mezzanine exhibited signs of moisture staining, though no damage was observed. The lack of an air/vapour barrier at the building envelope will contribute to condensation issues that are likely causing the moisture stains. If the building is to be retained for more than five years, installation of insulation and air/vapour barrier is recommended. (refer to **Photo Env25**)

4.5.1.17 Pool Deck Perimeter Walls

The base of wall around the pool was reviewed. The building operator noted periodic termite problems, however, none were noted while on site.

However, the base of wall showed signs of moisture damage and it appears that the lack of an air/vapour barrier may contribute to moisture accumulation within the base of the wall which in turn will contribute to termite problems.

The pool deck perimeter walls are in poor condition. Detailed investigation of the base of wall condition is recommended.

4.5.2 Building Envelope Assessment

The condition of the building enclosure ranges from fair to poor. Newer portions of the building are in fair condition while the original building is in poor condition. In particular, the original pool area does not have insulation or an air/vapour barrier. Warm moist air from the pool is condensing within walls and roof assemblies. While this has not translated into significant structural damage, it has likely resulted in the ongoing termite problem. In addition, the absence of insulation in the original roof and exterior walls means there is a significant energy penalty for this building.

The storage shed, and patio deck have rot and should be removed on a priority basis.

Other areas of the building that were observed to have deferred maintenance and in poor condition include the wood cladding and fascias, metal flashing, and gutters and downspouts.

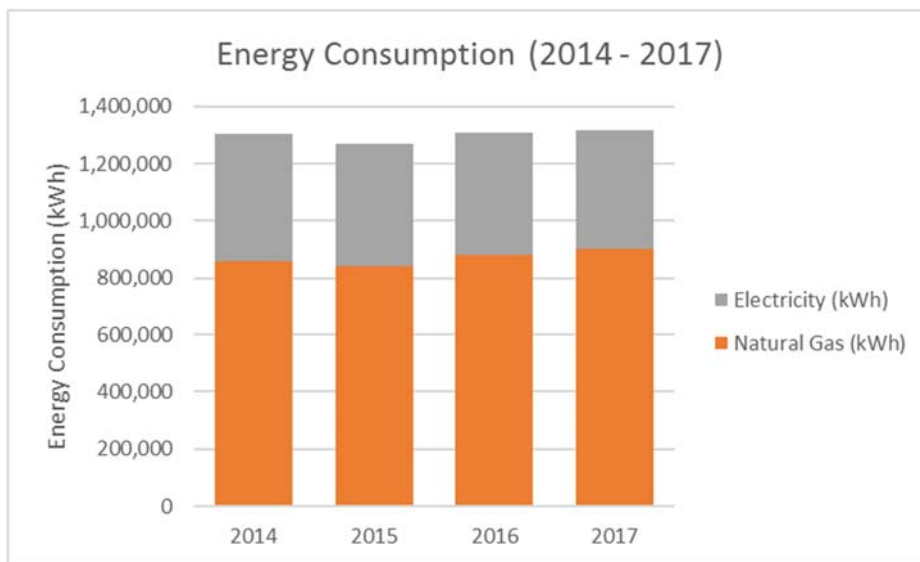
4.5.3 Energy Assessment of the Building Enclosure

While the building additions for the office and fitness room are insulated, the original pool building is largely un-insulated. In addition, there is no air barrier. The lack of thermal protection and air barrier of the original building result in a building that performs poorly in terms of energy efficiency.

4.5.4 Energy Use and Efficiency

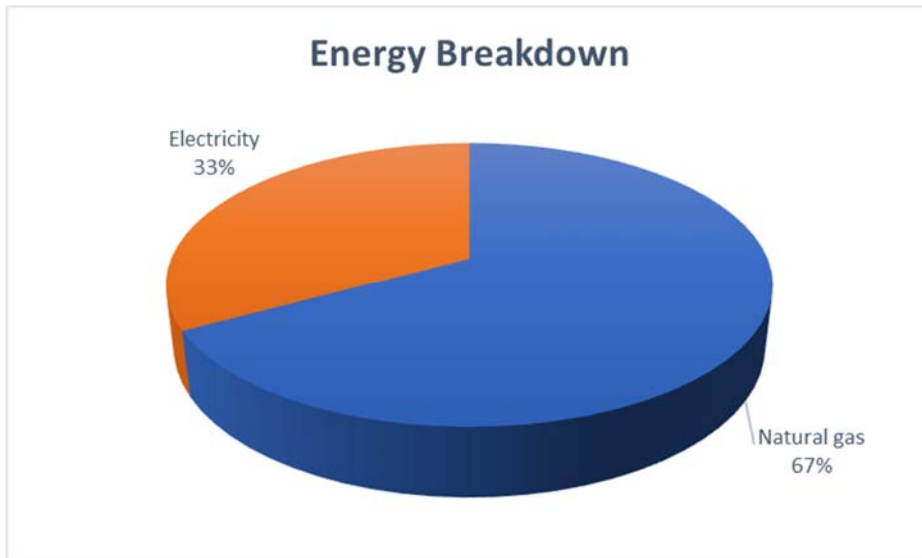
Annual energy consumption data was provided from 2009 to 2017. Natural gas and electricity use is presented in Table 1 for 2014 to 2017. On average, the building uses 3100 GJ per year of natural gas and consumes 429,000 kWh of electricity.

Table 1: Building Energy Use (2014 to 2017)



A breakdown of natural gas and electricity is presented in **Table 2**.

Table 2: Energy Use Breakdown by Fuel



Typically, approximately 67% of energy use is natural gas and 33% is electricity. The relatively high proportion of natural gas is attributable to pool heating, hot water use for showers, and space heat.

4.5.4.1 Energy Use Intensity

Dividing energy use by floor area provides an estimate of the energy use intensity (EUI) of the aquatic centre. Assuming a floor area of 1636 square meters, the energy use intensity of the facility is 781 kWh/sq m.

4.5.4.2 Energy Benchmark

Energy use of the Summerland aquatic Centre was compared against typical energy use for other swimming pools. Typical swimming pools in Canada consume approximately 420 kWh/sq m of energy on an annual basis compared to the Summerland Aquatic Centre that consumes 781 kWh/sq m per year. This means the Summerland Aquatic Centre is consuming approximately 86% more energy per unit of floor area than the average swimming pool.

4.5.4.3 Greenhouse Gas Emissions

Combining the energy use data above with emission factors (0.04987 Tonnes/GJ for natural gas and 10.67 Tonnes /GWh for electricity) the GHG emissions for the existing pool is estimated at 160 Tonnes per year.

4.5.4.4 Assessment of Building Energy Efficiency

Based on the site review and analysis of energy use data, the Summerland Aquatic Centre has a low level of energy efficiency. There are significant opportunities to reduce energy use and associated costs and GHG emissions. Specific examples of poor energy efficiency practices at the facility include minimal or missing insulation, no air barrier, low efficiency heating equipment, lack of heat recovery on the ventilation system and outdated plumbing fixtures.

Based on the data provided and the estimates above, a new facility of the same size would result in a reduction of approximately \$32,000 / year in energy costs and 76 Tonnes / year of GHG emissions compared to the existing facility.

4.5.5 Recommendations

The cost to repair the building envelope approaches the cost of a new facility when the other costs are factored in. It is recommended to invest in a new building in order to minimize the cost of the new building envelope and to maximize the expected usable life of the new building envelope.

Building Envelope Recommendation Summary - Detailed investigation of the base of wall condition. Replacement of the wood cladding. Remediate deteriorated stucco at base of wall and at pool exhaust. Implement 100 mm clearance at base of wall by either cutting stucco up or lowering grade. Seal all wall penetrations. Clean roof. Install roof insulation in the original portion of the building. Replace seals at roof penetrations. Repair or replace roof flashing. Seal gutters and downspouts. Replace perimeter drains. Replace sealant joints around windows. Repair soffits. Repair walkways. Replace the staff deck. Remove or replace the storage shed. Replace the wall that separates the pool area. Install insulation and air/vapour barrier.

4.6 POOL SYSTEM

4.6.1 Observations

Overall the Mechanical Aquatic systems are operational but are in poor condition. For the hot and main pools to remain operational extensive replacement of the mechanical aquatic systems need to be fully replaced including the piping. As well there is questions about the structural integrity of the pool bodies. When the main pool is emptied the wall of the pool bulges into the pool area. Due to the pipe failures on the pipes serving the hot pool undermining of the subgrade has taken place. The entire structure and systems of the existing pools need to be demolished and replaced.

4.6.1.1 Hot Pool

The hot pool is original to the building and was constructed in 1975 when the natatorium was constructed. The hot pool has a single main drain in the base of the pool and a basket strainer in the wall of the hot pool. The approximate volume of the pool is 1125 gallons. The hot pool is served by two pumps, one provides the filtration turnover rate and a second provides the hydro air flow to the hot pool. Primary chemical treatment is by means of gas chlorination.

The hot pool was piped with copper piping from the pool body to the mechanical room. Over the years of operation, the copper piping has corroded and failed causing leaking from the pool and washing away of the sub-grade. The slab has been opened and the copper piping has been replaced in the natatorium area and the pool mechanical room. The slab was replaced with stainless steel plating. Replacing of all of the pool piping to prevent further failure of the piping as well as upgrades to meet modern codes is recommended.

The single main drain in the base of the pool has a custom built main drain cover which is not VGB certified. The skimmer is original to the pool and is also not VGB certified. Both the main drain and skimmer are a risk of

entrapment, entanglement, ensnarement or evisceration. Replacing the main drain and skimmer to meet modern codes is recommended.

The hot pool filter is a high rate vertical sand filter with an approximate diameter of 36". The age of the filter is unknown however it doesn't appear to be original to the facility, but it does appear to be at the end of its serviceable life span. Replacing the filter due to its age and to allow for higher code required turnover rates is recommended.

The hot pool pump is a residential style pool pump with an integral basket strainer. The age of the pump is unknown however it doesn't appear to be original to the facility, but it does appear to be at the end of its serviceable life span. Replacing the pool pump due to its age and to allow it to meet the requirements of modern codes is recommended.

The hot pool hydro-air pump is an end suction top discharge commercial pump and is served by a basket strainer. The pump appears to be original to the facility and is at the end of its serviceable life span. Replacing the pump due to its age is recommended. (refer to **Photo PSys3, Photo PSys5, Photo PSys6, Photo PSys7** and **Photo PSys8**)

4.6.1.2 Main Pool

The main pool is original to the building and was constructed in 1975 when the natatorium was constructed. The main pool has two main drains in the base of the pool and a continuous skimming gutter around the perimeter of the pool. The approximate volume of the pool is 155,000 gallons. The main pool is served by one pump providing the filtration turnover rate. Primary chemical treatment is by means of gas chlorination.

The main pool piping is plastic piping where the piping is visible, and it is assumed that the piping is plastic throughout the facility. The piping is at the serviceable life span and replacing it due to its age and to allow for the requirements of modern codes is recommended.

The two main drains in the base of the pool have a custom built main drain covers which are not VGB certified. The skimmer is original to the pool and is a continuous skimming gutter around the edge of the pool. Both the main drains are a risk of entrapment, entanglement, ensnarement or evisceration. Replacing the main drain to meet modern codes is recommended.

The main pool filter is a high rate horizontal sand filter with an approximate length of 72". The age of the filter is unknown however it doesn't appear to be original to the facility, but it does appear to be at the end of its serviceable life span. As well the filter is passing sand the internal piping has failed and replacement equipment is not available. Replacing the filter due to its age, condition and to allow for higher code required turnover rates is recommended. (refer to **Photo PSys1, Photo PSys2** and **Photo PSys4**)

The main pool pump is a commercial style end suction top discharge pool pump with a separate basket strainer. The age of the pump is unknown it maybe original to the facility, and it appears to be at the end of its serviceable life span. The pump is rebuilt annually. Replacing the pool pump due to its age and to allow it to meet the requirements of modern codes is recommended.

4.6.2 Recommendations

Pool System Recommendation Summary – Demolish and replace the entire structure and systems of the existing pools. Replace all the pool piping to prevent further failure of the piping as well as upgrades to meet modern codes. Replace the main drain, skimmer, filter, pool pump, and piping due to age and to meet modern codes

5 PROJECT TEAM

The assessment was conducted by the following personnel shown in the table below.

Table 3: Project Team Details

| Stantec Staff | Qualifications | Project Role | Date of Site Visit |
|----------------|--|--|--------------------------------|
| Kyle Martens | M.Arch., Architect, AIBC, MAA | Architectural | July 23, 2018 / August 2, 2018 |
| Innes Hood | P. Eng., M.A.Sc., MSC, BEP, LEED AP | Building Envelope | July 23, 2018 |
| Benjamin Ellah | Senior Mechanical Technologist | Mechanical / Pool Systems | July 23, 2018 |
| Kitty Leung | P.Eng., Struct.Eng., PE, SE, LEED AP | Structural | July 23, 2018 |
| Richard Cooper | Senior Mechanical Technologist | Mechanical | July 23, 2018 |
| Jeff Verge | P. Eng | Electrical | August 2, 2018 |
| Brain Bengert | Architect, AAA, MRAIC, AIBC, LEED AP, BD+C | Technical Advisor Sports Facilities | - |
| Mike Plomske | P. Eng. | Technical Advisor Facility Assessments | |

| LTA Consultants | Project Role | Date of Site Visit |
|-----------------|--|--------------------|
| Lyndon Thomas | Quantity Surveyor & Construction Cost Consultant | - |

6 DOCUMENTS REVIEWED

Stantec requested relevant documentation from the Client and/or site representative(s) that could provide knowledge of the property's physical improvements, extent/type of use, and/or assist in identifying material discrepancies between reported information and observed conditions. Stantec's review of documents provided does not include commenting on the accuracy of such documents or their preparation, methodology, or protocol.

The following documents were reviewed, and information derived from these documents was included in the preparation of this report.

Table 4: Documentation Reviewed

| Document Title | Date | Author | Type of Document |
|--|---------------|-----------------|------------------|
| Summerland Aquatic Centre Utilities Summary | July 13, 2018 | Nicole Lawrence | Email |
| Summerland Aquatic Centre Termites | July 21, 2018 | Lori Mullin | Email |
| Summerland Aquatic Centre water and Ice Issues | July 21, 2018 | Lori Mullin | Email |
| Water and Snow #2 | July 21, 2018 | Lori Mullin | Email |
| Water and Snow #3 | July 21, 2018 | Lori Mullin | Email |

| Document Title | Date | Author | Type of Document |
|--|---------------|--|---|
| Water and Ice #4 | July 21, 2018 | Lori Mullin | Email |
| Architectural Drawings | Original 1975 | Hartley & Turik Architects | Photos of Large Plans |
| Structural Drawings | Original 1975 | Hartley & Turik Architects | Photos of Large Plans |
| Office Addition | 1988 | Turik & Crawford Architects | Photos of Large Plans |
| Architectural - Fitness Room Addition | 1996 | Meiklejohn Architects | Photos of Large Plans |
| Structural – Fitness Room Addition | 1996 | Meiklejohn Architects | Photos of Large Plans |
| Mechanical – Fitness Room Addition | 1996 | Meiklejohn Architects | Photos of Large Plans |
| Electrical – Fitness Room Addition | 1996 | Meiklejohn Architects | Photos of Large Plans |
| Exit Plan on Wall in Foyer | | | Photos of Large Plans |
| O&M Manual Drawings | 1975/1976 | Mark Hot Inc. / Honeywell / International Mechanical Survey Ltd. | Drawings |
| Summerland Pool Heat Recovery System | 2012/2013 | Pro Eco Energy Ltd. | Drawings |
| Summerland Community Swimming Pool, Summerland, BC | | Hartley & Turik Architects | Architectural Specifications & Services |
| Existing Swimming Pool Info | | | Pool Info |
| Specification of Mechanical Services for Summerland Community Pool | May 1975 | Hartley & Turik Architects | Mechanical Specification and Services |
| Summerland Community Pool – Mechanical 1 | Various | Various | Operating and Maintenance Manual |
| Summerland Community Pool – Mechanical 2 | Various | Various | Operating and Maintenance Manual |
| Summerland Community Pool – Mechanical 2 | March 1976 | | Operating and Maintenance Manual |

The subject property has had at least two additions since the original building was constructed in 1975. The team was provided Architectural and Structural drawings for the original pool facility, which included the swimming pool, hot tub, pool viewing lounge, sauna, change rooms, the original fitness room adjacent front entrance and the pool mechanical room with the fan room above. An Administration area was added in 1988. This addition consists of offices and a storage room and is located at the North-East corner of the complex next to the main entrance. Architectural and some Electrical drawings were available but not all structural information is included on the drawings.

Structural, Mechanical, Electrical, and Architectural drawings were provided for the Fitness Room Addition constructed in 1996. This addition was constructed to the North of the original building. Drawings were not available for the Storage Room Addition which is located at the South-West corner of the original building. A few Operations and Maintenance Manuals were available and included some schematic drawings for equipment.

7 INTERVIEWS

The following personnel were interviewed or contributed information that was used in the process of preparing this PCA report.

Table 5: Listing of Interviewees

| Name | Title/Position | Phone | Email |
|-------------|--------------------|--------------|--|
| Lori Mullin | Recreation Manager | 250-404-4084 | lmullin@summerland.ca |

| Name | Title/Position | Phone | Email |
|------------------|-------------------------|--------------|--|
| Mike Fetterer | Maintenance, Operations | 250-494-0447 | mfetterer@summerland.ca |
| Shawn Landriault | Life Guard, Operations | 250-494-0447 | slandriault@summerland.ca |
| Laura McCarron | Recreation Coordinator | 250-494-0447 | lmccarron@summerland.ca |
| Nicole Lawrence | Accounting Assistant | 250-494-0447 | nlawrence@summerland.ca |

8 CLOSURE

Stantec has completed a PCA of the site at the request of the Client utilizing methods and procedures that are consistent with customary commercial practice and industry standards. We have provided our opinion of the site's current physical condition and anticipated capital renewal requirements based on: conditions observed at the property during our site visit; information provided to us by the site representative(s); estimates of life expectancy for the site's systems and components; and, opinions of cost for repair and/or replacement of these systems and components. We believe this PCA report and its recommendations are accurate within the limitations inherent in the foregoing. However, due to numerous factors that can affect capital renewal requirements (such as actual costs/timing of work, etc.), we recommend that this report be reviewed annually to capture changes to the assumptions made in this report.

Should any clarification be required regarding the content or conclusions of this report, please contact the undersigned at the contact information provided below.

Respectfully submitted,

STANTEC CONSULTING LTD.

Kyle Martens

Architect AIBC, MAA, Associate
 Mobile: (250) 575-5877
 Email: kyle.martens@stantec.com

Jeff Verge, P.Eng.

Electrical Engineer
 Phone: (250) 470-4460
 Email: jeff.verge@stantec.com

Appendix A SITE PHOTOGRAPHS

Appendix A Site Photographs



Photo: A1
View of Pool use in high demand.



Photo A2
View of entrance reception and guard room.

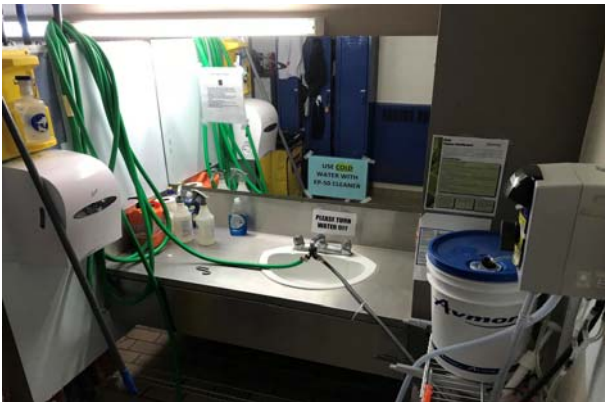


Photo A3
View of only vanity in the staff men's washroom converted to a make-shift janitor room.



Photo A4
View of the staff men's washroom. The water closet has been removed.

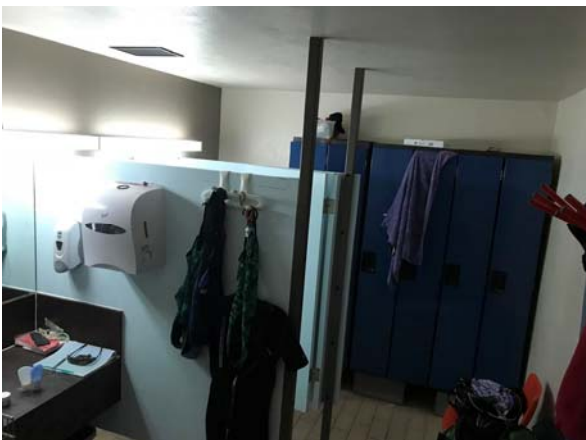


Photo A5
View of staff women's washroom. One water closet has been removed for storage.



Photo A6
View of vanity in staff women's washroom.



Photo A7
View of storage room added to exterior of the building.



Photo A8
View inside storage area looking toward exterior wall of original facility.



Photo A9
View of typical soffit to downspout condition.



Photo A10
View of typical soffit to downspout condition.



Photo A11
View of South mechanical room exterior door.



Photo A12
View of South mechanical room exterior door.

Appendix A Site Photographs



Photo A13
Interior view of South pool exit doors.



Photo A14
Exterior view of South pool exit doors.



Photo A15
Interior view of South-East pool exit doors.



Photo A16
Exterior view of South-East pool exit doors.



Photo A17
Interior view of North-East pool exit doors.

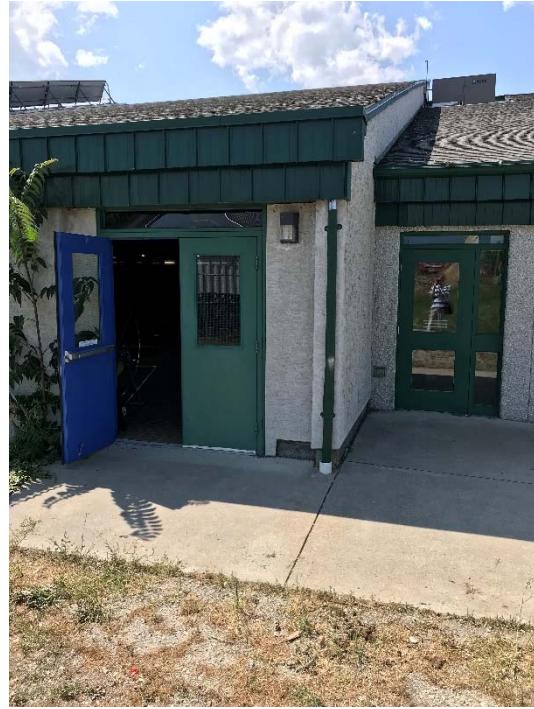


Photo A18
Exterior view of North-East pool exit doors.

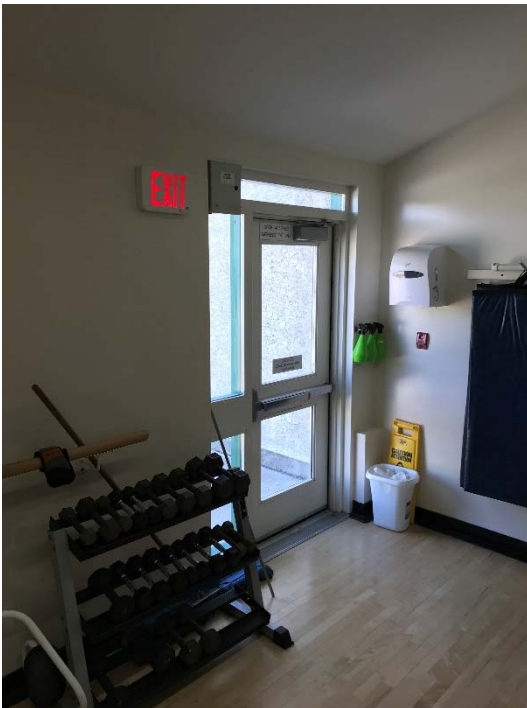


Photo A19
Interior view of new fitness room East exit door.



Photo A20
Interior view of exit door at West side of fitness room.

Appendix A Site Photographs

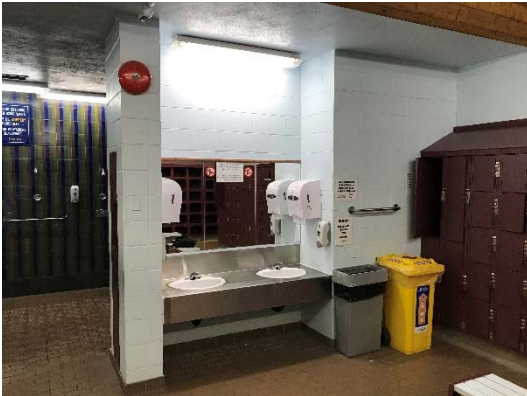


Photo A21
View of typical vanity in pool change rooms.



Photo A22
View of typical barrier free water closet in pool area.

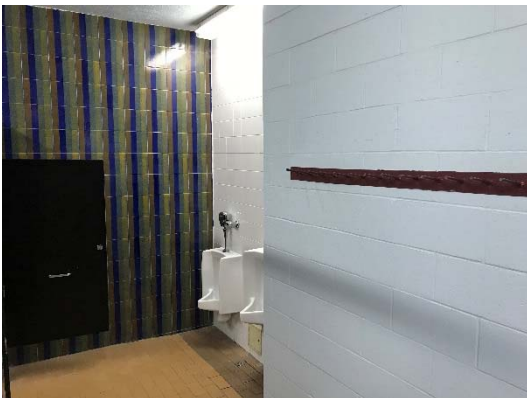


Photo A23
View of urinals in men's washroom for pool area.



Photo A24
View of grab bars installed in change rooms.



Photo A25
View of equipment room added under stairs.



Photo A 26
View from pool area toward public viewing area.



Photo S1
View of West elevation and main entrance.



Photo S2
View of pool deck tiles



Photo S3
Column base at entrance with termite damage below bolted connection. Repair is recommended.

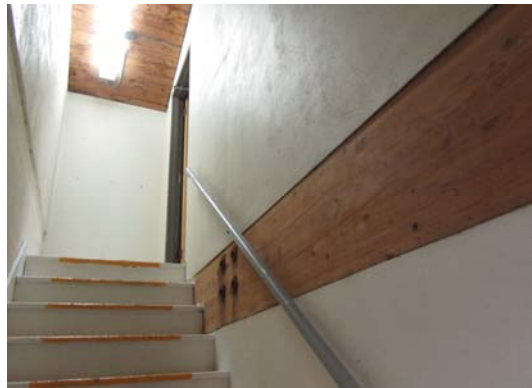


Photo S4
Watermark visible on roof decking. No immediate repair required.



Photo S5
Framed ceiling now serves as mechanical service mezzanine.



Photo S6
Deteriorated stair nosing

Appendix A Site Photographs



Photo S7
Spalling and differential settling of pavement at main entrance creating a tripping hazard.



Photo S8
Cracks on concrete paving at front entrance.



Photo S9
Exterior Deck



Photo S10
Plywood roof sheathing is in bad condition.



Photo M1A
Pool Lobby (AHU)



Photo M1B
Pool Area (AHU)



Photo M2A
Office Space Heat Pump Unit



Photo M2B
Office Space Condenser Unit



Photo M3
Fitness Area (RTU)



Photo M4
Radiation Wall Fin

Appendix A Site Photographs



Photo M5
Meeting Room (AHU)



Photo M6
Plumbing Piping Attic



Photo M7
Urinals



Photo M8
Typical Water Closet



Photo M9
Change Room Showers



Photo M10
Drinking Fountain



Photo M11
Gas Meter Enclosure



Photo E1
Section of Main Switchboard

Appendix A Site Photographs



Photo E2
Panel A Breakers



Photo E3
Panel B Breakers



Photo E4
Panel SB Breakers



Photo E5
Corroded main breaker



Photo E6
Splitter 1



Photo E7
Exterior Lighting



Photo E8
Exit Emergency Light / FA Bell /FA Pull station

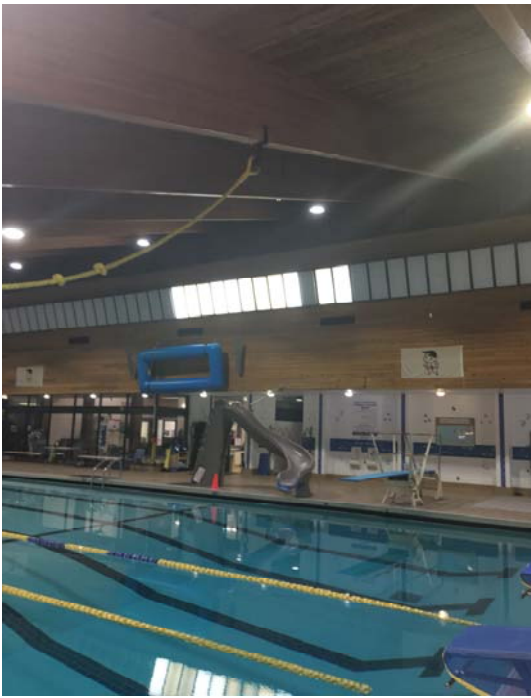


Photo E9
3 Types of Pool Lighting

Appendix A Site Photographs



Photo E10
Fitness Lighting



Photo E11
FA Panel

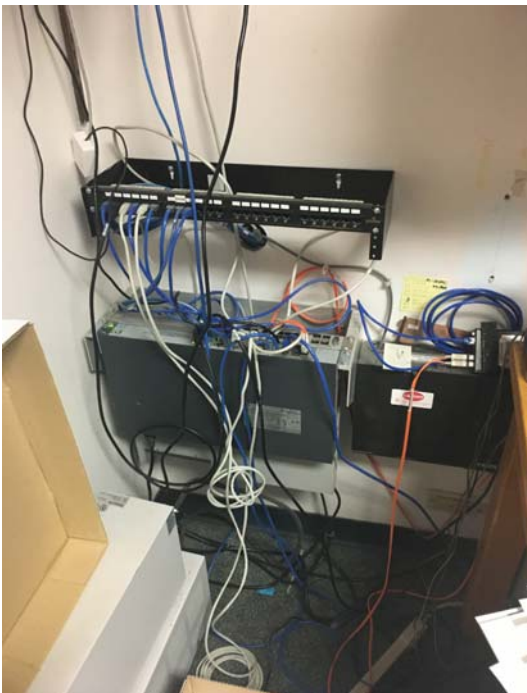


Photo E12
Communication Rack



Photo E13
Solar Panels



Photo E14
Splitter 2



Photo Env1
North Building Elevation



Photo Env2
South Building Elevation



Photo Env3
East Building Elevation



Photo Env4
West Building Elevation



Photo Env5
Wood Cladding and entrance canopy creating snow trap.

Appendix A Site Photographs



Photo Env6
Stucco Cladding



Photo Env7
Wall Penetrations



Photo Env8
Roof Shingles



Photo Env9
Roof Penetrations



Photo Env10
Roof Penetrations



Photo Env11
Roof Flashing



Photo Env12
Roof Flashing



Photo Env13
Gutters and Downspouts



Photo Env14
Gutters and Downspouts



Photo Env15
Perimeter Drains

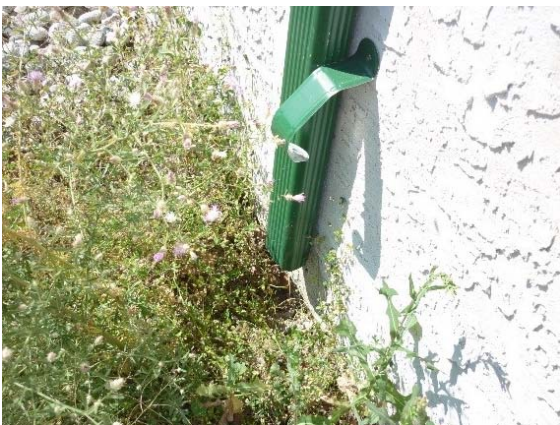


Photo Env16
Perimeter Drains



Photo Env17
Windows

Appendix A Site Photographs



Photo Env18
Doors



Photo Env19
Soffit and Fascia



Photo Env20
Exterior Walkways



Photo Env21
Staff Deck



Photo Env22
Staff Deck



Photo Env23 (photo provided by District)
Storage Shed



Photo Env23a (photo provided by District)
Storage Shed



Photo Env24 (photo provided by District)
Pool Area to mezzanine wall



Photo Env25
Attic Space



Photo Env26
Pool Deck Perimeter Walls



Photo PSys1
Main Pool Piping



Photo PSys2
Main Pool Filter

Appendix A Site Photographs



Photo PSys3
Pool Deck



Photo PSys4
Main Pool Pump



Photo PSys5
Hot Pool Pump



Photo PSys6
Hot Pool Filter



Photo PSys7
Hot Pool Hydro Air Pump

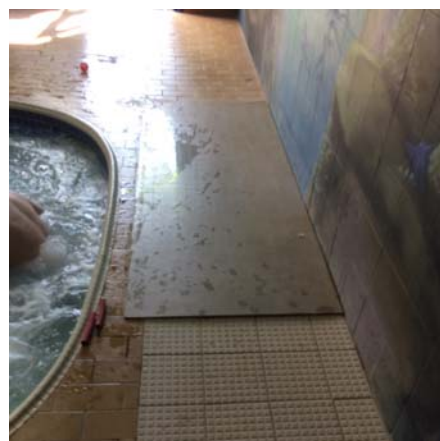


Photo PSys8
Hot Pool Deck



Photo Client1
View of ice buildup at structural column on South side the main entrance



Photo Client2
View of main entrance during winter with ice.



Photo Client3
View of attic space with daylight and significant ice buildup visible.



Photo Client4
Underside of roof sheathing with significant signs of moisture and frost.

Appendix A Site Photographs



Photo Client5
View of frost buildup on floor in the original fitness room.



Photo Client6
View of ice buildup typical at downspouts.

Appendix B SCOPE OF WORK AND LIMITATIONS

B.1 SCOPE OF WORK AND LIMITATIONS

B.1.1 Scope of Work

The scope of our work for the PCA was based on the scope of services as outlined in Stantec's proposal to the Client, dated June 21, 2018. No major deviations were made from our scope of work, the "walk-through" of the site, and the preparation of the PCA report.

Our scope of work included interviews with site representative(s), a review of pertinent documentation (where provided by the Client or site representative(s)), and a visual "walk-through" assessment of Major Facility Systems, and their components, at the site to observe and document existing physical conditions. The scope for conducting the condition assessment at the site was generally based on the American Society for Testing and Materials (ASTM) Standard E2018-15, "Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process".

The Major Facility Systems observed at the site include the following:

- Building Structure
- Building Envelope
- Interior Elements
- Mechanical Systems
- Electrical Systems
- Pool Systems

The information obtained from our visual assessment of the site formed the basis for establishing our opinion of the general physical condition of the Major Facility Systems and their components. The assessment also formed the basis for developing opinions of cost, and timing to investigate or address observed or reported "physical deficiencies", and to repair or replace systems and components that are anticipated to achieve or surpass their Expected Useful Life (EUL) over an evaluation period of ten (10) years.

The scope of our work for the PCA is summarized as follows:

- Reviewed existing documentation, where provided by the Client or the site representative(s). A summary of documentation reviewed is included in this report under **Section 6 Table 4**.
- Conducted a visual "walk-through" assessment of site's Major Facility Systems, and their components, to check their general physical condition.
- Conducted interviews with the site representative(s). A listing of personnel interviewed during the assessment is included in this report under **Section 0 Table 5**.
- Identified and financially quantified our opinions of cost and timing to:
 - Address observed and/or reported "physical deficiencies".
 - Repair or replace components that are anticipated to achieve (or have already achieved) their EUL.
 - Conduct further investigations (if required) and provide corresponding order-of-magnitude costs for work that may be required as a result of these investigations.

The assessment of the site was based on a visual “walk-through” review of the visible and accessible components of the property, building(s), and related structures. The roof surface(s), interior and exterior wall finishes, and floor and ceiling finishes of the building(s) were visually assessed to check their general physical condition and to identify “physical deficiencies”, where observed. The assessment did not include an intrusive investigation of wall assemblies, ceiling cavities, or any other enclosures/assemblies. No physical tests were conducted, and no samples of building materials were collected to substantiate observations made, or for any other reason.

The non-specialist review of mechanical, and electrical systems at the property, including corresponding fire & life safety systems, included discussions with the site representative(s). The visual assessment of the mechanical and electrical systems at the property, including corresponding fire & life safety systems, was conducted to determine the type of systems and components present, age, and aesthetic condition. No physical tests were conducted.

We have assumed that the existing property development was reviewed and approved by the local authorities having jurisdiction at the time of construction, and during any subsequent additions, renovations, and/or inspections. The review of the site should also not be considered to satisfy the requirements of a Structural Adequacy Assessment, according to applicable national or provincial Building Codes.

B.1.2 Limiting Conditions

Exclusive Use

This report, including its information and opinions, has been prepared for the exclusive and sole use of District of Summerland.

Reliance Purposes

This report shall not be relied upon for any purpose other than intended for the Client within the scope of services negotiated between Stantec Consulting Ltd. (Stantec) and the Client without the express prior written consent of Stantec.

Third Party Reliance

This report may not be relied upon by any other person or entity without the express written consent of Stantec and the Client. Any reliance on this report by a third party, any decisions that a third party makes based on this report, or any use at all of this report by a third party without the prior written consent of Stantec is the sole responsibility of such third parties. Stantec accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report.

Distribution

No party shall distribute this report, in its final form or in draft form, or any portion or copy thereof without the express written permission of Stantec, except that the Client may make copies of this report as are reasonable for its own use and consistent with the intended purposes of this report.

Opinions of Cost

Appendix B Scope of Work and Limitations

Any opinions of cost expressed in this report are partially based on consultation with industry-recognized publications on costs for materials and labour. While Stantec uses information available to us combined with our judgment and past experience, the specific rationale and conditions forming the basis of contractors' bids, material or equipment pricing are beyond our knowledge and control. Stantec can therefore not be held responsible if the final costs vary from these opinions of cost.

As well, any opinions of cost are intended for global budgeting purposes only. The scope of work and the actual costs of the work recommended can only be determined after a detailed examination of the site element in question, understanding of the site restrictions, understanding of the effects on the ongoing operations of the site/building(s), definition of the construction schedule, and preparation of tender documents. Stantec expressly waives any responsibilities for the effects of any action taken as a result of these endeavors unless Stantec is specifically advised of prior to, and participate in the action, at which time, Stantec's responsibility will be negotiated.

Physical Limitations to Scope

Stantec's work did not include intrusive testing/investigation, destructive testing, testing of life safety systems or quantitative testing. As such, any recommendations and opinions of cost associated with these recommendations, as presented in this report, are based on walk-through non-invasive observations of the parts of the building(s) which were readily accessible during a visual review. Conditions may exist that are not as per the general condition of the system being observed and reported in this report.

Opinions of cost presented in this report are also based on information received during interviews with site representatives, and operations and/or maintenance staff. Stantec cannot be held responsible for incorrect information received during the interview process. Should additional information become available with respect to the condition of the building(s) and/or site elements, Stantec requests that this information be brought to our attention so that Stantec may reassess the conclusions presented herein.

Assessments

No soil tests, environmental assessments, geotechnical assessments, seismic assessments, detailed engineering calculations, or quantity surveying compilations have been made. No responsibility, therefore, is assumed concerning these matters. Stantec did not design or construct the building(s) or related structures and therefore will not be held responsible for the impact of any design or construction defects, whether or not described in this report. No guarantee or warranty, expressed or implied, with respect to the property, building components, building systems, property systems, or any other physical aspect of the property is made.

Standard of Care

The assessment outlined in this report generally captured conditions that existed at the time of the site visit. Stantec's opinions and recommendations presented in this report are rendered in accordance with generally accepted professional standards for like services under like circumstances for similar locales. The opinions and recommendations are not to be construed as a warranty or guarantee regarding existing or future physical conditions or regarding compliance of systems/components and procedures/operations with the various regulating codes, standards, regulations, ordinances, etc.

Appendix C OPINION OF PROBABLE COST / CONCEPTUAL ESTIMATE



**SUMMERLAND AQUATIC &
FITNESS CENTRE
SUMMERLAND, BC
FACILITY ASSESSMENT
REPORT**

**OPINION OF PROBABLE
COST/CONCEPTUAL ESTIMATE**

September 10th, 2018

LTA Consultants Inc

Professional Quantity Surveyors
& Construction Cost Consultants
905 – 1708 Dolphin Avenue
Kelowna, BC V1Y 9S4

T: 250-868-8800
F: 888-371-1458
E: lyndon@ltaconsultants.com
W: www.ltaconsultants.com

Prepared for:

Stantec Consulting Ltd.
400 – 1620 Dickson Avenue
Kelowna, BC

TABLE OF CONTENTS

INTRODUCTION..... 3

DOCUMENTATION & INFORMATION..... 5

BASIS OF THE ESTIMATE..... 6-7

LIFE CYCLE COST ANALYSIS..... 8

REPORT QUALIFICATIONS..... 8

Detailed Estimates:

- SCHEDULE A FACILITY ASSESSMENT REPORT
- SCHEDULE B REPLACEMENT BUILDING ESTIMATE
- SCHEDULE C REPLACEMENT BUILDING ESTIMATE – 50% LARGER
- SCHEDULE D LIFE CYCLE COST ANALYSIS

INTRODUCTION

Stantec Consulting Ltd. (Stantec) has been retained by the District of Summerland to undertake a facility assessment of the Summerland Aquatic & Fitness Centre, located at 13205 Kelly Avenue, Summerland, BC.

LTA Consultants Inc. has been retained by Stantec as part of the consulting team to provide cost consulting and cost planning services.

We have been provided with copies of the architect's and engineer's assessment reports for the Summerland Aquatic & Fitness Centre which identify a number of upgrades which need to be undertaken. We have structured our report to identify the costs for architectural (including site work and building envelope) recommendations, structural recommendations, mechanical recommendations, electrical recommendations, and pool recommendations, as set out in the consultant reports.

The recommendations for upgrades have been itemized to follow the Stantec master format, which categorises the priorities under the following headings:

- **Now** – life safety, code and/or urgent items to be completed within a 0-1 year time horizon;
- **2-5** - Recommended upgrades to be completed within a 2-5 year time horizon;
- **5+** - Recommended upgrades to be completed in a +5 year time horizon;

In addition to the facility assessment estimate, we have also prepared separate replacement cost estimates to build a new purpose built aquatic and fitness centre with the **same building area and program elements** of the current facility, as well as an option that would be **50% larger than the existing building**.

The replacement facility assumes a single storey aquatic and fitness centre with a gross floor area of approximately 17,810ft². The facility would include a new 25m pool, a hot tub, viewing area, fitness centre, change rooms, administration spaces and ancillary spaces for the pool equipment and mechanical/electrical services.

The 50% larger replacement facility assumes a single storey aquatic and fitness centre with a gross floor area of approximately 26,715ft². The facility would include a new 25m pool, a hot tub, viewing area, fitness centre, change rooms, administration spaces and ancillary spaces for the pool equipment and mechanical/electrical services.

The replacement facility substructure assumes standard cast-in-situ concrete strip footings, pad footings, and a slab on grade. The mezzanine level mechanical room assumes a cast-in-situ suspended concrete slab with slab bands, columns and support walls. The roof structure will comprise structural steel columns and beams supporting metal decking with feature wood elements. The exterior walls comprise a mixture of insulated claddings with an insulated 'rain-screen' assembly and fenestrations. The exterior roof will comprise an insulated pitched pre-finished metal cladding system with insulated soffits. Interior finishes will mostly comprise

masonry block units with tiled finishes to the wet areas. We are assuming that the replacement facility would meet current LEED and National Energy Code standards.

Site work assumes good ground bearing conditions exist and that no special foundations or ground improvements would be required. We have assumed that the site would be fully serviced and that no off-site utility infrastructure upgrades will be required. We have assumed that the project will contain a similar number of parking stalls to the current facility and have included for new asphalt and concrete paving's. Site improvements include landscaping and full site servicing. We note that the costs associated with new site acquisition are **specifically excluded** from the replacement cost estimate.

The facility assessment estimate and replacement building estimate have been included in this report as follows:

- Facility Assessment Estimate (Refer to Pages 1 – 21 in **Schedule 'A'** in the backup to this report);
- Replacement Facility Estimate (Refer to Pages B1 – B3 in **Schedule 'B'** in the backup to this report);
- Replacement Facility Estimate – 50% larger (Refer to Pages C1 – C3 in **Schedule 'B'** in the backup to this report);

The facility assessment estimate contains the following summaries and detail:

- Main Summary of Estimate Project Costs. This summary develops a total estimated project cost to address all items identified in the consultants' reports;
- Main Summary of Estimated Project Costs – **NOW** Short-Term Items 0-1 Year. This summary develops a total estimated cost, by discipline, to address all items in the consultants' reports identified as needing to be considered within the 0-1 year time horizon;
- Main Summary of Estimated Project Costs – Medium Term Items 2-5 Years. This summary develops a total estimated cost, by discipline, to address all items in the consultants' reports identified as needing to be considered within the 2-5 year time horizon;
- Main Summary of Estimated Project Costs – Long Term Items +5 Years. This summary develops a total estimated cost, by discipline, to address all items in the consultants' reports identified as needing to be considered within the +5 year time horizon;
- Detailed Back-up. Within each estimate, we have provided a detailed back-up, which identifies the cost of each individual item identified in the consultant's reports. A sub-total has been provided within each of the disciplines, which is then transferred to the various summaries identified above.

In calculating the overhead and fee allowances for the items noted in the report, we have generally increased the percentage allowances as it cannot be determined at this time how the individual priorities will be procured, and how they may be bundled together.

The replacement cost estimates contain the following summaries:

- Main Summary of Estimate Project Costs. This summary develops a total estimated project cost for the replacement facility;
- Elemental Summary.

For each estimate, we have included on each 'Main Cost Summary', a percentage allowance to cover the following soft costs:

- Design Consultant Fees;
- Miscellaneous Consultants;
- Project Management Fees;
- Permitting Costs;

Please note, no allowances are included in the estimate for Development Cost Charges (if applicable), Course of Construction Insurance, and Loose Furniture, Furnishings and Equipment.

*Over the past twelve months, we have experienced a construction market condition in British Columbia that has resulted in construction costs rising by approximately 15% to 20% across public sector projects. As the demand for construction services remains high across residential, commercial and institutional sectors of the market, we can expect costs to continue to rise at the rate of approximately 15% to 20% for the foreseeable future. **Please note, no allowance has been included in this estimate for forward escalation/market condition contingency, as the schedule for the approval process required to move the project into the detailed design, tender and construction phases has not been determined. However, we caution that an allowance of at least 15% to 20% per annum should be budgeted for the next two years, based on the current economic climate. Please refer to our comments under the 'Contingency' and 'Market Conditions' sections of this report for further information.***

We note that this Facility Assessment Report Estimate has been prepared from very preliminary documentation for high level comparison purposes only, and should not be used for establishing the capital planning budget for the project.

DOCUMENTATION & INFORMATION

We have been provided with the following documentation and information for the preparation of this opinion of probable costs/conceptual estimate:

- Property Condition Assessment Report dated August 20th, 2018, prepared by Stantec Consulting Ltd.;
- Existing Facility Plans (36 pages).

This documentation and information has been supplemented with additional verbal information from the consultants.

BASIS OF THE ESTIMATE

Budget Estimate

We have met with the consultant team and reviewed the drawing documentation and information provided to establish the scope and extent of the work.

From the documentation and information provided, we have prepared the enclosed class 'D' opinion of probable costs/conceptual estimates (schedule A-B).

Please note, the documentation and information provided is very high level, and of a preliminary nature. In most cases, little or no drawing documentation and information was available for the facilities review. Furthermore, the consultant team was not engaged to provide design and engineering solutions for the identified items.

As such, estimates of construction cost are based on very high-level comparisons of similar work scopes for similar facilities. Where possible, quantities have been measured and unit rates have been applied. Where no drawing documentation and information was available, we have included budget allowances and stated this in the back-up to the report.

In a number of cases, the consultants have identified various work items that are to be considered on-going maintenance. These costs are **specifically excluded** from the report. Additionally, certain items have also been identified as 'information only' and have been noted for consideration. Again, the costs associated with these items are **specifically excluded** from the report.

Please refer to the detailed back-up within each of the estimates (schedule A-B) for further information.

Project Procurement and Pricing

Pricing for this project is based upon our opinion of current September 2018 standard construction industry market costs for this type of recreational project in Summerland, BC. It has been assumed that the project will be procured on a fixed stipulated 'lump sum' contract basis, from a competitive bidding field of at least five competent General Contractors. It has also been assumed that a competitive bidding field of at least four competent sub-contractors for each trade will tender for the work and that there will be no 'sole source' bids.

This conceptual estimate attempts to establish a fair and reasonable price for the proposed work and is not intended to be a prediction of 'low bid'.

Contingency Reserves

A Design Contingency Allowance of 15% (facility assessment estimate) and 10% (replacement facility estimate) has been included. This allowance is a reserve of funds in the construction estimate to cover unforeseen items during the design phase that do not change the project scope. This allowance is ultimately absorbed into the designed and quantified work

as more detailed information becomes available and is, therefore, normally reduced to zero at the tender stage.

An Escalation Contingency Allowance of 0% has been included in this estimate. This allowance is a reserve of funds in the construction estimate to cover price increases in construction costs due to changes in market conditions between the date the estimate is prepared and the date the tender is called. ***Refer to the comments in the introduction to this report.***

A Construction Contingency of 5% is included in this estimate. This allowance is a reserve of funds in the construction estimate to cover unforeseen items during the construction period which will result in change orders. This contingency is not intended to cover changes in the scope of the work.

Market Conditions

The current Construction Market in British Columbia is very active to the extent that many projects, at the tender stage, are suffering from a lack of interest from General Contractors as well as Sub-trades. Lack of competitive interest will have an effect on the tendered bottom line and will very likely not reflect the estimated value contained in this report.

Level of Accuracy

This is a preliminary class 'D' opinion of probable cost estimate with a level of accuracy of +/- 25% 18 times out of 20.

We note that this Facility Master Plan Report Estimate has been prepared from very preliminary documentation for high level comparison purposes only, and should not be used for establishing the capital planning budget for the project.

GST

The Goods and Services Tax (GST) has been included at the full rate payable of 5%.

Excluded Items

The following items are **specifically excluded** from the class 'D' conceptual estimate:

- Development Cost Charges;
- Course of Construction Insurance;
- Forward Escalation Contingency;
- Portering, relocation and temporary accommodation;
- Site Acquisition Costs for Replacement Summerland Aquatic & Fitness Centre;
- Loose furniture, furnishings and equipment;
- LEED™ certification and registration costs.

LIFE CYCLE COST ANALYSIS

A Life Cycle Cost Analysis has been prepared for the options based on a time frame of 40 years. Please refer to Pages LCC 1-2 in schedule 'C' of this report for further information regarding the assumptions and rates used for the calculations.

We note that adjustments have been made to the operational costs for the upgrade option verses the replacement option to account for 'operational efficiencies'.

REPORT QUALIFICATIONS

This report has been prepared for Stantec and is for their exclusive use only. The information contained in this report must be treated as confidential and may not be disclosed, reproduced or permitted to be disclosed to any party, without the express written consent of LTA Consultants Inc.

This report is based on the documentation and information provided to us by Stantec and its representatives at the date the report is issued. LTA Consultants Inc. does not accept accountability for information that has not been provided to us, or was not available at the time of preparing this report.

LTA Consultants Inc. is a firm of Professional Quantity Surveyors and is not qualified to provide planning and design services.

C.1 SCHEDULE A – FACILITY ASSESSMENT ESTIMATE

**SCHEDULE 'A'
FACILITY ASSESSMENT
ESTIMATE**

| MAIN SUMMARY OF ESTIMATED PROJECT COSTS | | | |
|---|---------------------|-------------------|-------------------|
| Description | Gross Floor Area | m ² | ft ² |
| | | Estimated Value | \$/m ² |
| ARCHITECTURAL/ENVELOPE & SITEWORK | \$4,149,442 | \$2,507.84 | \$233 |
| STRUCTURAL | \$68,718 | \$41.53 | \$4 |
| MECHANICAL | \$2,269,862 | \$1,371.86 | \$127 |
| ELECTRICAL | \$558,039 | \$337.27 | \$31 |
| POOL | \$3,418,067 | \$2,065.81 | \$192 |
| ESTIMATED CONSTRUCTION COSTS (Excluding GST) | \$10,464,129 | \$6,324.31 | \$588 |
| GST 5.00% | \$523,206 | \$316.22 | \$29 |
| ESTIMATED CONSTRUCTION COSTS (Including GST) | \$10,987,335 | \$6,640.52 | \$617 |
| SOFT COSTS | | | |
| Design Fees (Architect, Structural, Mechanical & Electrical) 13.00% | \$1,360,337 | \$822.16 | \$76 |
| Miscellaneous Consultants (Specialists) 2.00% | \$209,283 | \$126.49 | \$12 |
| Project Management Fees 3.00% | \$313,924 | \$189.73 | \$18 |
| Building Permit Fees 1.10% | \$115,105 | \$69.57 | \$6 |
| Development Cost Charges - Specifically Excluded | Excluded | \$0.00 | \$0 |
| Loose Furniture, Furnishings and Equipment - Specifically Excluded | Excluded | \$0.00 | \$0 |
| Escalation Contingency - Refer to Commentary in report | Excluded | \$0.00 | \$0 |
| ESTIMATED SOFT COSTS (Excluding GST) | \$1,998,649 | \$1,207.94 | \$112 |
| GST 5.00% | \$99,932 | \$60.40 | \$6 |
| ESTIMATED SOFT COSTS (Including GST) | \$2,098,581 | \$1,268.34 | \$118 |
| ESTIMATED PROJECT COSTS (Including GST) | \$13,085,916 | \$7,908.86 | \$735 |

SHORT TERM 0-1 YEARS (NOW)

MAIN SUMMARY OF ESTIMATED PROJECT COSTS

| Description | Total | General Contractor | | Contingencies | | | Total |
|---|-----------|--------------------|----------|---------------|------------|--------------|------------------|
| | | Overhead | Profit | Design | Escalation | Construction | |
| <u>HARD COSTS</u> | | | | | | | |
| ARCHITECTURAL/ENVELOPE & SITEWORK | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| STRUCTURAL | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| MECHANICAL | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| ELECTRICAL | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| POOL | \$250,000 | \$40,000 | \$29,000 | \$47,850 | \$0 | \$18,343 | \$385,193 |
| ESTIMATED CONSTRUCTION COSTS (Excluding GST) | | | | | | | \$385,193 |
| GST | 5.00% | | | | | | \$19,260 |
| ESTIMATED CONSTRUCTION COSTS (Including GST) | | | | | | | \$404,452 |
| <u>SOFT COSTS</u> | | | | | | | |
| Design Fees (Architect, Structural, Mechanical & Electrical) | 13.00% | | | | | | \$50,075 |
| Miscellaneous Consultants (Specialists) | 2.00% | | | | | | \$7,704 |
| Project Management Fees | 3.00% | | | | | | \$11,556 |
| Permits - Allowance | 1.10% | | | | | | \$4,237 |
| Development Cost Charges - Specifically Excluded | | | | | | | Excluded |
| Loose Furniture, Furnishings and Equipment - Specifically Excluded | | | | | | | Excluded |
| Escalation Contingency - Refer to Commentary in report | | | | | | | Excluded |
| ESTIMATED SOFT COSTS (Excluding GST) | | | | | | | \$73,572 |
| GST | 5.00% | | | | | | \$3,679 |
| ESTIMATED SOFT COSTS (Including GST) | | | | | | | \$77,250 |
| ESTIMATED TOTAL PROJECT COSTS (Including GST) | | | | | | | \$481,702 |

MEDIUM TERM 2-5 YEARS

MAIN SUMMARY OF ESTIMATED PROJECT COSTS

| Description | Total | General Contractor | | Contingencies | | | Total |
|---|-------------|--------------------|-----------|---------------|------------|--------------|--------------------|
| | | Overhead | Profit | Design | Escalation | Construction | |
| HARD COSTS | | | | | | | |
| ARCHITECTURAL/ENVELOPE & SITEWORK | \$1,921,071 | \$307,371 | \$222,844 | \$367,693 | \$0 | \$140,949 | \$2,959,929 |
| STRUCTURAL | \$32,100 | \$5,136 | \$3,724 | \$6,144 | \$0 | \$2,355 | \$49,459 |
| MECHANICAL | \$956,540 | \$153,046 | \$110,959 | \$183,082 | \$0 | \$70,181 | \$1,473,808 |
| ELECTRICAL | \$275,878 | \$44,140 | \$32,002 | \$52,803 | \$0 | \$20,241 | \$425,065 |
| POOL | \$1,968,415 | \$314,946 | \$228,336 | \$376,755 | \$0 | \$144,423 | \$3,032,875 |
| ESTIMATED CONSTRUCTION COSTS (Excluding GST) | | | | | | | \$7,941,135 |
| GST | 5.00% | | | | | | \$397,057 |
| ESTIMATED CONSTRUCTION COSTS (Including GST) | | | | | | | \$8,338,192 |
| SOFT COSTS | | | | | | | |
| Design Fees (Architect, Structural, Mechanical & Electrical) | 13.00% | | | | | | \$1,032,348 |
| Miscellaneous Consultants (Specialists) | 2.00% | | | | | | \$158,823 |
| Project Management Fees | 3.00% | | | | | | \$238,234 |
| Permits - Allowance | 1.10% | | | | | | \$87,352 |
| Development Cost Charges - Specifically Excluded | | | | | | | Excluded |
| Loose Furniture, Furnishings and Equipment - Specifically Excluded | | | | | | | Excluded |
| Escalation Contingency - Refer to Commentary in report | | | | | | | Excluded |
| ESTIMATED SOFT COSTS (Excluding GST) | | | | | | | \$1,516,757 |
| GST | 5.00% | | | | | | \$75,838 |
| ESTIMATED SOFT COSTS (Including GST) | | | | | | | \$1,592,595 |
| ESTIMATED TOTAL PROJECT COSTS (Including GST) | | | | | | | \$9,930,787 |

LONG TERM 5+ YEARS

MAIN SUMMARY OF ESTIMATED PROJECT COSTS

| Description | Total | General Contractor | | Contingencies | | | Total |
|---|-----------|--------------------|----------|---------------|------------|--------------|--------------------|
| | | Overhead | Profit | Design | Escalation | Construction | |
| <u>HARD COSTS</u> | | | | | | | |
| ARCHITECTURAL/ENVELOPE & SITEWORK | \$772,025 | \$123,524 | \$89,555 | \$147,766 | \$0 | \$56,643 | \$1,189,513 |
| STRUCTURAL | \$12,500 | \$2,000 | \$1,450 | \$2,393 | \$0 | \$917 | \$19,260 |
| MECHANICAL | \$516,660 | \$82,666 | \$59,933 | \$98,889 | \$0 | \$37,907 | \$796,054 |
| ELECTRICAL | \$86,304 | \$13,809 | \$10,011 | \$16,519 | \$0 | \$6,332 | \$132,974 |
| POOL | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 | \$0 |
| ESTIMATED CONSTRUCTION COSTS (Excluding GST) | | | | | | | \$2,137,801 |
| GST | 5.00% | | | | | | \$106,890 |
| ESTIMATED CONSTRUCTION COSTS (Including GST) | | | | | | | \$2,244,691 |
| <u>SOFT COSTS</u> | | | | | | | |
| Design Fees (Architect, Structural, Mechanical & Electrical) | 13.00% | | | | | | \$277,914 |
| Miscellaneous Consultants (Specialists) | 2.00% | | | | | | \$42,756 |
| Project Management Fees | 3.00% | | | | | | \$64,134 |
| Permits - Allowance | 1.10% | | | | | | \$23,516 |
| Development Cost Charges - Specifically Excluded | | | | | | | Excluded |
| Loose Furniture, Furnishings and Equipment - Specifically Excluded | | | | | | | Excluded |
| Escalation Contingency - Refer to Commentary in report | | | | | | | Excluded |
| ESTIMATED SOFT COSTS (Excluding GST) | | | | | | | \$408,320 |
| GST | 5.00% | | | | | | \$20,416 |
| ESTIMATED SOFT COSTS (Including GST) | | | | | | | \$428,736 |
| ESTIMATED TOTAL PROJECT COSTS (Including GST) | | | | | | | \$2,673,427 |

| Priority | Description | Quantity | Unit | Rate | Extension | |
|--|--|----------|------|-----------------|-------------|-------------|
| <u>ARCHITECTURAL/ENVELOPE & SITE WORK</u> | | | | | | |
| <u>Architectural</u> | | | | | | |
| 2-5 | <u>Concrete Ramps</u> | | | | | |
| | Remove and replace service ramp | 1 | No | 15,000.00 | \$15,000.00 | |
| | Remove and replace ramp to mechanical room; work includes re-configuration of ramp to reduce grade and installation of a drain | 1 | No | 50,000.00 | \$50,000.00 | |
| | Sub-total | | | \$65,000 | | |
| 2-5 | <u>Metal Canopies</u> | | | | | |
| | Carefully remove existing main entrance canopy | 1 | l/s | 15,000.00 | \$15,000.00 | |
| | Patch and make good existing exterior surfaces | 1 | l/s | 7,500.00 | \$7,500.00 | |
| | Sub-total | | | \$22,500 | | |
| 2-5 | <u>Railings (Iron)</u> | | | | | |
| | Replace existing handrails and guardrails at west side of building | | | | | |
| | Remove existing railings | 1 | l/s | 600.00 | \$600.00 | |
| | New Handrails and Guardrails | 1 | l/s | 4,000.00 | \$4,000.00 | |
| | Sub-total | | | \$4,600 | | |
| 5+ | <u>Aluminum Frame Doors</u> | | | | | |
| | No work indicated | | | | \$0.00 | |
| | Sub-total | | | \$0 | | |
| 5+ | <u>Standard Door Hardware</u> | | | | | |
| | Remove existing door hardware | | | | | |
| | | Single | 22 | No | 25.00 | \$550.00 |
| | | Double | 6 | Pr | 50.00 | \$300.00 |
| | New door hardware; institutional grade | | | | | |
| | | Single | 22 | No | 850.00 | \$18,700.00 |
| | | Double | 6 | Pr | 1,200.00 | \$7,200.00 |
| | Refinish doors | | | | | |
| | | Single | 22 | No | 150.00 | \$3,300.00 |
| | | Double | 6 | Pr | 200.00 | \$1,200.00 |
| | Sub-total | | | \$31,250 | | |
| 2-5 | <u>Standard Door Hardware (Egress Doors)</u> | | | | | |
| | Remove existing door hardware | | | | | |
| | | Single | 0 | No | 75.00 | \$0.00 |
| | | Double | 5 | Pr | 125.00 | \$625.00 |
| | New door hardware; institutional grade | | | | | |
| | | Single | 0 | No | 850.00 | \$0.00 |
| | | Double | 5 | Pr | 1,800.00 | \$9,000.00 |
| | Sub-total | | | \$9,625 | | |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|---|-----------------|-----------------|-----------|-------------|
| 5+ | <u>Door Actuators</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| 2-5 | <u>Gypsum Board Partitions</u> | | | | |
| | <i>Information - Based on age and condition of the building envelope, and photos provided by the facility, it is recommended to conduct destructive testing to determine the extent of water damage and potential mold.</i> | | | | |
| | Allowance for repairing water damaged drywall surfaces - allowance (scope and extent undefined) | 1 | l/s | 75,000.00 | \$75,000.00 |
| | Sub-total | \$75,000 | | | |
| | <u>Tile Finish (Ceramic)</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| | <u>Resilient Sheet Flooring</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| 5+ | <u>Resilient Tile Flooring</u> | | | | |
| | Remove existing resilient tile flooring | 50 | m ² | 20.00 | \$1,000.00 |
| | Prepare surfaces for new finish | 50 | m ² | 25.00 | \$1,250.00 |
| | New sports floor including allowance for base | 50 | m ² | 175.00 | \$8,750.00 |
| | Sub-total | \$11,000 | | | |
| | <u>Carpet Flooring</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| | <u>Tile Finishes - Change Areas</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| 2-5 | <u>Exterior Paint</u> | | | | |
| | Paint exterior surfaces - allowance | 1 | l/s | 50,000.00 | \$50,000.00 |
| | Sub-total | \$50,000 | | | |
| 2-5 | <u>Interior Paint</u> | | | | |
| | Interior painting work (cost based on GFA of building) | 17,810 | ft ² | 4.50 | \$80,145.00 |
| | Sub-total | \$80,145 | | | |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|--|-----------------|----------------|----------|-------------|
| | <u>Fabricated Components (Toilet and Shower Partition stalls)</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| 5+ | <u>Toilet Bath & Laundry Accessories</u> | | | | |
| | Replacement below cost threshold | 1 | l/s | Excluded | \$0.00 |
| | Sub-total | \$0 | | | |
| 2-5 | <u>Handrail Replacement</u> | | | | |
| | Exterior Handrails - included above | | | | |
| | Replace interior handrails | 1 | Flts | 7,500.00 | \$7,500.00 |
| | Sub-total | \$7,500 | | | |
| | <u>Lockers</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| | <u>Other Storage Facilities</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| | <u>Athletic, Recreational, and Therapeutic Equipment</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| 2-5 | <u>Window Treatments</u> | | | | |
| | Replace existing venetian blinds | 1 | l/s | 7,500.00 | \$7,500.00 |
| | Sub-total | \$7,500 | | | |
| 2-5 | <u>Fixed Casework and Countertops</u> | | | | |
| | Remove existing casework - scope and extent unknown (cost based on similar facility GFA) | 1,655 | m ² | 3.00 | \$4,963.77 |
| | New Millwork (AWMAC Quality) | 1,655 | m ² | 45.00 | \$74,456.52 |
| | Sub-total | \$79,420 | | | |
| | <u>Fire Extinguishers, Cabinets and Accessories</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| | <u>Drinking Fountains/Coolers</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| | <u>Exit Signs</u> | | | | |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|---|----------|----------------|------------------|--------------|
| | No work indicated | | | | \$0.00 |
| | Sub-total | | | \$0 | |
| 2-5 | <u>Washrooms</u> | | | | |
| | New 2 stall washroom for Men | 1 | l/s | 50,000.00 | \$50,000.00 |
| | New 7 stall womens washroom - allowance | 1 | l/s | 150,000.00 | \$150,000.00 |
| | Sub-total | | | \$200,000 | |
| | <u>Site Work</u> | | | | |
| 2-5 | <u>Grading & Topography</u> | | | | |
| | South East Service Door Ramps - Included above | 1 | l/s | Included | \$0.00 |
| | Main entrance ramp improvements - allowance | 1 | l/s | 150,000.00 | \$150,000.00 |
| | Sub-total | | | \$150,000 | |
| 2-5 | <u>Asphalt Parking Area and Curbs</u> | | | | |
| | Remove existing asphalt paving | 988 | m ² | 15.00 | \$14,820.00 |
| | Remove existing curbs | 95 | m | 20.00 | \$1,900.00 |
| | Miscellaneous demolition | 1 | l/s | 2,000.00 | \$2,000.00 |
| | Regarding/repairing existing base gravels | 988 | m ² | 12.00 | \$11,856.00 |
| | New asphalt paving | 988 | m ² | 30.00 | \$29,640.00 |
| | New curbs | 95 | m | 20.00 | \$1,900.00 |
| | Line painting | 1 | l/s | 2,500.00 | \$2,500.00 |
| | Sub-total | | | \$64,616 | |
| | <u>Parking Bumpers (Precast)</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | | | \$0 | |
| | <u>Exterior Envelope</u> | | | | |
| 5+ | <u>Downspouts and Perimeter Drains</u> | | | | |
| | Replace perimeter downspouts | 1 | l/s | 2,000.00 | \$2,000.00 |
| | <i>The following in Perimeter Weeping Tile Replacement:</i> | | | | |
| | Break out hard pavings | 184 | m ² | 75.00 | \$13,800.00 |
| | Excavate and dispose of existing perimeter weeping tile | 199 | m ³ | 35.00 | \$6,965.00 |
| | New perimeter weeping tile; pipe and surround | 166 | m | 70.00 | \$11,620.00 |
| | Backfill | 120 | m ³ | 55.00 | \$6,600.00 |
| | Regrading work | 184 | m ² | 25.00 | \$4,600.00 |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|---|-----------------|----------------|-----------|-------------|
| | Reinstate existing paving | 184 | m ² | 125.00 | \$23,000.00 |
| | Miscellaneous demolition and alterations - allowance | 1 | l/s | 10,000 | \$10,000.00 |
| | Sub-total | \$78,585 | | | |
| | <u>Sidewalk Repair</u> | | | | |
| | Included with Site Work and Structural | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| | <u>Staff Deck Replacement</u> | | | | |
| | Replacement of Staff Deck included with Structural costs | | | | \$0.00 |
| | Sub-total | \$0 | | | |
| 2-5 | <u>Replace Existing Soffits</u> | | | | |
| | Remove existing soffits - allowance | 200 | m ² | 25.00 | \$5,000.00 |
| | New institutional vented soffit finish | 200 | m ² | 400.00 | \$80,000.00 |
| | Sub-total | \$85,000 | | | |
| 5+ | <u>Attic Space Insulation</u> | | | | |
| | Refer to new roof item | 1 | l/s | | \$0.00 |
| | Sub-total | \$0 | | | |
| 5+ | <u>Mezzanine Insulation</u> | | | | |
| | Remove existing fixtures and equipment to access existing wall | 1 | l/s | 10,000.00 | \$10,000.00 |
| | Remove existing finishes to expose existing partition wall substrate | 102 | m ² | 50.00 | \$5,100.00 |
| | Install insulation and vapour barrier to wall; assumed spray foam | 102 | m ² | 110.00 | \$11,220.00 |
| | New finishes to existing substrate | 102 | m ² | 200.00 | \$20,400.00 |
| | Reinstall existing fixtures and equipment | 1 | l/s | 10,000.00 | \$10,000.00 |
| | Sub-total | \$56,720 | | | |
| 5+ | <u>Pool Deck Perimeter Walls</u> | | | | |
| | Refer to Building Envelope | 1 | l/s | - | \$0.00 |
| | New wall between pool and change areas | 1 | l/s | 50,000.00 | \$50,000.00 |
| | Sub-total | \$50,000 | | | |
| 2-5 | <u>Storage Shed Replacement</u> | | | | |
| | Dispose of existing shed structure assumed 3.65m x 3.65m | 1 | l/s | 1,000.00 | \$1,000.00 |
| | Allowance for new storage structure including building foundations, walls, roof, basic electrical lighting and vent | 1 | l/s | 38,000.00 | \$38,000.00 |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|---|----------|----------------|----------|------------------|
| | Sub-total | | | | \$39,000 |
| 5+ | <u>Wall Penetrations</u> | | | | |
| | Allowance for patching and repairing existing wall penetrations - Refer to envelope replacement | 1 | l/s | - | \$0.00 |
| | Sub-total | | | | \$0 |
| 5+ | <u>Roof Penetrations</u> | | | | |
| | Allowance for patching and repairing existing roof penetrations - Refer to envelope replacement | 1 | l/s | - | \$0.00 |
| | Sub-total | | | | \$0 |
| 5+ | <u>Roof Shingles</u> | | | | |
| | Remove existing roof finish | 1,737 | m ² | 25.00 | \$43,425.00 |
| | Pre-finished metal - insulated | 1,737 | m ² | 285.00 | \$495,045.00 |
| | Allow for new roof | | | | |
| | Sub-total | | | | \$538,470 |
| 5+ | <u>Replace Wood Cladding</u> | | | | |
| | Remove existing wood cladding - Refer to Envelope Replacement | 185 | m ² | - | \$0.00 |
| | New wood cladding - Refer to Envelope Replacement | 185 | m ² | - | \$0.00 |
| | Sub-total | | | | \$0 |
| 5+ | <u>Roof Flashings</u> | | | | |
| | Replace existing roof flashings - Included with roof replacement above | 1 | l/s | - | \$0.00 |
| | Sub-total | | | | \$0 |
| 5+ | <u>Gutters and Downspouts</u> | | | | |
| | Remove and replace existing gutters - allowance | 1 | l/s | 6,000.00 | \$6,000.00 |
| | Remove and replace downspouts - included above | 1 | l/s | Included | \$0.00 |
| | Sub-total | | | | \$6,000 |
| 5+ | <u>Windows</u> | | | | |
| | Remove and Replace Sealant Joint at windows - Refer to Window Replacement | 1 | l/s | - | \$0.00 |
| | Sub-total | | | | \$0 |
| 5+ | <u>Stucco Cladding</u> | | | | |
| | Regrading work - included with replacement of perimeter weeping tile above | 1 | l/s | - | \$0.00 |
| | Remove existing perimeter stucco cladding - Refer to Exterior Envelope Replacement | 95 | m | - | \$0.00 |
| | New perimeter flashing - Refer to Exterior Envelope Replacement | 95 | m | - | \$0.00 |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|---|----------|----------------|--------------------|-----------------------|
| | Stucco repairs - Refer to Exterior Envelope Replacement | 95 | m | - | \$0.00 |
| | Sub-total | | | \$0 | |
| 2-5 | <u>Exterior Wall Replacement</u> | | | | |
| | Demolish exterior wall finish to expose existing substrate | 978 | m ² | 30.00 | \$29,340.00 |
| | Demolish interior wall finish to exterior perimeter walls | 978 | m ² | 25.00 | \$24,450.00 |
| | Allowance for new exterior insulated wall cladding to existing substrate | 978 | m ² | 600.00 | \$586,800.00 |
| | Allowance for new interior wall finish to existing substrate | 978 | m ² | 125.00 | \$122,250.00 |
| | Allowance for associated builders work in removing existing fixtures and equipment to facilitate exterior envelope upgrade work | 1 | l/s | 75,000.00 | \$75,000.00 |
| | Sub-total | | | \$837,840 | |
| 2-5 | <u>Exterior Window Replacement</u> | | | | |
| | Remove existing exterior windows and fenestrations | 147 | m ² | 50.00 | \$7,350.00 |
| | Allowance for preparing existing openings for new windows | 147 | m ² | 75.00 | \$11,025.00 |
| | New double glazed sealed units in aluminum frames | 147 | m ² | 850.00 | \$124,950.00 |
| | Sub-total | | | \$143,325 | |
| | Summary of Costs: | | | | |
| Now | <i>Urgent (0-1 Years)</i> | | | \$0 | |
| 2-5 | <i>2-5 Years</i> | | | \$1,921,071 | |
| 5+ | <i>5 Years Long Term</i> | | | \$772,025 | |
| | Total | | | \$2,693,096 | |
| | Sub-total | | | | \$2,693,096.29 |
| | General Contractors Overhead | 16.0% | | | \$430,895.41 |
| | General Contractors Fee | 10.0% | | | \$312,399.17 |
| | Sub-total | | | | \$3,436,390.87 |
| | Design Contingency Allowance | 15.0% | | | \$515,458.63 |
| | Escalation Contingency Allowance | 0.0% | | | \$0.00 |
| | Construction Contingency Allowance | 5.0% | | | \$197,592.47 |
| | Sub-total | | | | \$4,149,441.97 |
| | Engineering Fees and Permitting - Refer to Main Cost Summary | 0.00% | | | Excluded |
| | TOTAL - ARCHITECTURAL/ENVELOPE & SITE WORK | | | | \$4,149,441.97 |

| Priority | Description | Quantity | Unit | Rate | Extension |
|---------------------------|---|----------|----------------|-----------------|--------------------|
| STRUCTURAL | | | | | |
| 5+ | <u>Cast in Place Concrete (Exterior Elements)</u> | | | | |
| | Main entrance ramp - Included with Architectural Site Work | 1 | l/s | Included | \$0.00 |
| | Allowance for miscellaneous concrete repairs to existing sidewalks and stairs | 1 | l/s | 12,500.00 | \$12,500.00 |
| | Sub-total | | | \$12,500 | |
| 2-5 | <u>Staff Deck</u> | | | | |
| | Remove existing wood deck structure and dispose | 70 | m ² | 30.00 | \$2,100.00 |
| | Allowance for new deck foundation and structure | 70 | m ² | 250.00 | \$17,500.00 |
| | Patch and repair existing landscaping | 1 | l/s | 2,500.00 | \$2,500.00 |
| | Sub-total | | | \$22,100 | |
| | <u>Exterior Walls</u> | | | | |
| | No work indicated | | | | \$0.00 |
| | Sub-total | | | \$0 | |
| 2-5 | <u>Termite Damage</u> | | | | |
| | Allowance for repairing termite damage at column base; shoring existing column; removing damaged section and installation of new connection | 1 | No | 10,000.00 | \$10,000.00 |
| | Sub-total | | | \$10,000 | |
| | Summary of Costs: | | | | |
| Now | <i>Urgent (0-1 Years)</i> | | | \$0 | |
| 2-5 | <i>2-5 Years</i> | | | \$32,100 | |
| 5+ | <i>5 Years Long Term</i> | | | \$12,500 | |
| | Total | | | \$44,600 | |
| | Sub-total | | | | \$44,600.00 |
| | General Contractors Overhead | 16.0% | | | \$7,136.00 |
| | General Contractors Fee | 10.0% | | | \$5,173.60 |
| | Sub-total | | | | \$56,909.60 |
| | Design Contingency Allowance | 15.0% | | | \$8,536.44 |
| | Escalation Contingency Allowance | 0.0% | | | \$0.00 |
| | Construction Contingency Allowance | 5.0% | | | \$3,272.30 |
| | Sub-total | | | | \$68,718.34 |
| | Engineering Fees and Permitting - Refer to Main Cost Summary | 0.00% | | | Excluded |
| TOTAL - STRUCTURAL | | | | | \$68,718.34 |

| Priority | Description | Quantity | Unit | Rate | Extension |
|--------------------------|--|----------|------|-----------------|-------------|
| <u>MECHANICAL</u> | | | | | |
| 5+ | <u>Fire Extinguishers, Cabinets and Accessories</u> | | | | |
| | Fire extinguisher Cabinets | 5 | ea | 500.00 | \$2,500.00 |
| | Sub-total | | | \$2,500 | |
| 2-5 | <u>Water Supply Piping Systems</u> | | | | |
| | Domestic Water--plumbing fixtures | 1 | Lot | 25,000.00 | \$25,000.00 |
| | Domestic Water--pool--see pool section | 1 | Lot | - | \$0.00 |
| | Builders work; cutting and coring | 1 | Lot | 5,000.00 | \$5,000.00 |
| | Sub-total | | | \$30,000 | |
| 2-5 | <u>Backflow Preventers</u> | | | | |
| | Replace backflow preventor assembly | 1 | lot | 10,000.00 | \$10,000.00 |
| | Sub-total | | | \$10,000 | |
| 2-5 | <u>Waste and Vent Piping</u> | | | | |
| | Waste & vent piping--plumbing fixtures | 1 | lot | 32,000.00 | \$32,000.00 |
| | Waste & vent piping--pool--see pool section | 1 | lot | - | \$0.00 |
| | Builders work; cutting and coring | 1 | Lot | 7,000.00 | \$7,000.00 |
| | Sub-total | | | \$39,000 | |
| 2-5 | <u>Rain Water Drainage Piping Systems</u> | | | | |
| | Replace gutter/downspouts--see architectural | 1 | Lot | - | \$0.00 |
| | Sub-total | | | \$0 | |
| 5+ | <u>Domestic Water Heaters</u> | | | | |
| | New DHW heater/stor tank/exp tank | 2 | ea | 9,500.00 | \$19,000.00 |
| | Remove existing units | 2 | ea | 1,400.00 | \$2,800.00 |
| | DHW recirc pump | 2 | ea | 1,700.00 | \$3,400.00 |
| | Sub-total | | | \$25,200 | |
| 5+ | <u>Other Plumbing Systems</u> | | | | |
| | <i>Cost is below reporting threshold</i> | 1 | l/s | Excluded | \$0.00 |
| | Sub-total | | | \$0 | |
| 2-5 | <u>Other Plumbing Systems - Drainage</u> | | | | |
| | Allowance--trap primer system to floor drains | 1 | Lot | 10,000.00 | \$10,000.00 |
| | Builders work; breaking out and reinstating concrete | 1 | Lot | 1,500.00 | \$1,500.00 |
| | Sub-total | | | \$11,500 | |
| 2-5 | <u>Plumbing Fixtures</u> | | | | |
| | Water Closets | 11 | ea | 1,250.00 | \$13,750.00 |
| | Urinals | 2 | ea | 1,150.00 | \$2,300.00 |
| | Lavatories | 7 | ea | 980.00 | \$6,860.00 |
| | Sinks | 3 | ea | 820.00 | \$2,460.00 |
| | Showers | 6 | ea | 1,250.00 | \$7,500.00 |
| | Drinking Fountains | 2 | ea | 1,400.00 | \$2,800.00 |
| | Mop Sink | 1 | ea | 870.00 | \$870.00 |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|--|----------|------|------------------|--------------|
| | Builders work; cutting and patching | 1 | Lot | 10,000.00 | \$10,000.00 |
| | Sub-total | | | \$46,540 | |
| 5+ | <u>Gas Supply Systems</u> | | | | |
| | Boiler disconnect/reconnect | 1 | ea | 1,500.00 | \$1,500.00 |
| | DHW Heater disconnect/reconnect | 2 | ea | 600.00 | \$1,200.00 |
| | Piping--replace existing | 1 | Lot | 15,000.00 | \$15,000.00 |
| | Testing | 1 | Lot | 900.00 | \$900.00 |
| | Builders work; cutting and patching | 1 | Lot | 3,000.00 | \$3,000.00 |
| | Sub-total | | | \$21,600 | |
| 2-5 | <u>Hot Water Distribution Systems</u> | | | | |
| | Replace all hot water piping/insulation/valves etc | 1,655 | Sm | 100.00 | \$165,500.00 |
| | Test & water treatment | 1 | Lot | 12,000.00 | \$12,000.00 |
| | Builders work; cutting and patching | 1 | Lot | 20,000.00 | \$20,000.00 |
| | Sub-total | | | \$197,500 | |
| 2-5 | <u>Heating Water Pumps & Accessories</u> | | | | |
| | Replace pumps | 2 | ea | 10,500.00 | \$21,000.00 |
| | Replace chemical pot feeder | 1 | ea | 2,000.00 | \$2,000.00 |
| | Replace expansion Tank | 1 | ea | 8,200.00 | \$8,200.00 |
| | Test & water treatment | 1 | Lot | 7,000.00 | \$7,000.00 |
| | Sub-total | | | \$38,200 | |
| 2-5 | <u>Exhaust Fans</u> | | | | |
| | Replace exhaust fans with hr unit | 1 | ea | 45,000.00 | \$45,000.00 |
| | Builders work; cutting and patching | 1 | Lot | 1,500.00 | \$1,500.00 |
| | Sub-total | | | \$46,500 | |
| 5+ | <u>Air Distribution Ductwork</u> | | | | |
| | Replace all air distribution duct & insulation | 1,655 | Sm | 110.00 | \$182,050.00 |
| | Builders work; cutting and patching | 1 | Lot | 25,000.00 | \$25,000.00 |
| | Sub-total | | | \$207,050 | |
| 5+ | <u>Exhaust Ductwork</u> | | | | |
| | Replace all exhaust duct | 1,655 | Sm | 10.00 | \$16,550.00 |
| | Builders work; cutting and patching | 1 | Lot | Included | \$0.00 |
| | Sub-total | | | \$16,550 | |
| 2-5 | <u>Boilers</u> | | | | |
| | New HW Cond Boiler-30000mbh | 1 | ea | 90,000.00 | \$90,000.00 |
| | Remove existing boiler | 1 | ea | 7,500.00 | \$7,500.00 |
| | Test & Commission | 1 | Lot | 2,500.00 | \$2,500.00 |
| | New intake/vent | 1 | Lot | 7,800.00 | \$7,800.00 |
| | Sub-total | | | \$107,800 | |
| 2-5 | <u>Packaged HVAC Units</u> | | | | |
| | AHU-pool--hc/clg/hr-7500 cfm | 1 | ea | 106,000.00 | \$106,000.00 |
| | AHU-Lobby/dress rm--4500cfm | 1 | ea | 47,000.00 | \$47,000.00 |
| | Removal/hoisting | 1 | lot | 10,000.00 | \$10,000.00 |
| | Builders work; cutting and patching | 1 | Lot | 15,000.00 | \$15,000.00 |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|--|----------|------|------------------|--------------|
| | Sub-total | | | \$178,000 | |
| 2-5 | <u>Packaged HVAC Units</u> | | | | |
| | AHU --meeting rm | 1 | ea | 18,000.00 | \$18,000.00 |
| | Removal/hoisting | 1 | lot | 3,000.00 | \$3,000.00 |
| | Builders work; cutting and patching | 1 | Lot | 3,000.00 | \$3,000.00 |
| | Sub-total | | | \$24,000 | |
| 5+ | <u>Packaged HVAC Units</u> | | | | |
| | Ht Pump | 1 | ea | 12,500.00 | \$12,500.00 |
| | AHU-Fitness--4000 cfm | 1 | ea | 32,000.00 | \$32,000.00 |
| | Removal/hoisting | 1 | lot | 7,000.00 | \$7,000.00 |
| | Builders work; cutting and patching | 1 | Lot | 5,000.00 | \$5,000.00 |
| | Sub-total | | | \$56,500 | |
| 2-5 | <u>Unit Heaters</u> | | | | |
| | Replace Unit heater | 1 | Each | 2,500.00 | \$2,500.00 |
| | Sub-total | | | \$2,500 | |
| 2-5 | <u>Finned Tube Radiation</u> | | | | |
| | Replace Finned Tube Radiation | 120 | M | 250.00 | \$30,000.00 |
| | Test & Treatment | 1 | Lot | 5,000.00 | \$5,000.00 |
| | Sub-total | | | \$35,000 | |
| 5+ | <u>Building Management Systems Controls</u> | | | | |
| | DDC Control system--bldg eqpt | 1,655 | Sm | 70.00 | \$115,850.00 |
| | DDC Control system--pool eqpt | 1,655 | Sm | 22.00 | \$36,410.00 |
| | Sub-total | | | \$152,260 | |
| 2-5 | <u>Site Domestic Water Distribution</u> | | | | |
| | Allowance--to replace exist system(Stantec) | 1 | Lot | 35,000.00 | \$35,000.00 |
| | Sub-total | | | \$35,000 | |
| 5+ | <u>Sanitary Sewage Collection</u> | | | | |
| | Allowance--to replace exist system(Stantec) | 1 | Lot | 35,000.00 | \$35,000.00 |
| | Sub-total | | | \$35,000 | |
| 2-5 | <u>Storm Water Collection</u> | | | | |
| | Allowance--to replace rock pit system(Stantec) | 1 | Lot | 155,000.00 | \$155,000.00 |
| | Sub-total | | | \$155,000 | |
| 5+ | <u>Natural Gas Distribution</u> | | | | |
| | No work required--utility responsibility | 1 | Lot | - | \$0.00 |
| | Sub-total | | | \$0 | |
| | Summary of Costs: | | | | |
| Now | <i>Urgent (0-1 Years)</i> | | | <i>\$0</i> | |

| Priority | Description | Quantity | Unit | Rate | Extension |
|---------------------------|---|--------------------|------|------|-----------------------|
| 2-5 | 2-5 Years | \$956,540 | | | |
| 5+ | 5 Years Long Term | \$516,660 | | | |
| | Total | \$1,473,200 | | | |
| | Sub-total | | | | \$1,473,200.00 |
| | General Contractors Overhead | 16.0% | | | \$235,712.00 |
| | General Contractors Fee | 10.0% | | | \$170,891.20 |
| | Sub-total | | | | \$1,879,803.20 |
| | Design Contingency Allowance | 15.0% | | | \$281,970.48 |
| | Escalation Contingency Allowance | 0.0% | | | \$0.00 |
| | Construction Contingency Allowance | 5.0% | | | \$108,088.68 |
| | Sub-total | | | | \$2,269,862.36 |
| | Engineering Fees and Permitting - Refer to Main Cost Summary | 0.00% | | | Excluded |
| TOTAL - MECHANICAL | | | | | \$2,269,862.36 |

| Priority | Description | Quantity | Unit | Rate | Extension |
|--------------------------|---|----------|------|-----------------|-------------|
| <u>ELECTRICAL</u> | | | | | |
| 2-5 | <u>Main Electrical Switchboards/Panelboards</u> | | | | |
| | Replace exist swbd with new 600a 208v swbd | 1 | Ea | 14,600.00 | \$14,600.00 |
| | Replace exist panel A/SB with new 100A panel | 2 | Ea | 2,100.00 | \$4,200.00 |
| | Replace exist panel B/C with new 225A panel | 2 | Ea | 2,800.00 | \$5,600.00 |
| | Disconnect/reconnect circuits | 1 | Lot | 3,500.00 | \$3,500.00 |
| | Replace feeders between swbd and panels | 1 | Lot | 7,500.00 | \$7,500.00 |
| | Test & Commission | 1 | Lot | 3,200.00 | \$3,200.00 |
| | Sub-total | | | \$38,600 | |
| 2-5 | <u>Other Electrical Systems - Splitters and Disconnects</u> | | | | |
| | Replace existing splitters and mech disconnects | 1,655 | Sm | 12.50 | \$20,687.50 |
| | Sub-total | | | \$20,688 | |
| 2-5 | <u>Electrical Branch Wiring</u> | | | | |
| | Replace branch circuit wiring/reuse conduit | 1,655 | Sm | 17.00 | \$28,135.00 |
| | Sub-total | | | \$28,135 | |
| 2-5 | <u>Lighting Accessories and Controls</u> | | | | |
| | New lighting control system | 1,655 | Sm | 12.00 | \$19,860.00 |
| | Builders work; cutting and patching | 1 | Lot | 5,000.00 | \$5,000.00 |
| | Sub-total | | | \$24,860 | |
| 2-5 | <u>Interior Fluorescent Fixtures</u> | | | | |
| | Offices--Replace fixtures with LED fixtures | 524 | Sm | 127.00 | \$66,548.00 |
| | Ancillary--Replace fixtures with LED fixtures | 184 | Sm | 105.00 | \$19,320.00 |
| | Sub-total | | | \$85,868 | |
| 2-5 | <u>Interior HID Fixtures</u> | | | | |
| | Pool Soffit --Replace fixtures with new LED fixtures | 100 | Sm | 150.00 | \$15,000.00 |
| | Sub-total | | | \$15,000 | |
| 2-5 | <u>Other Interior Fixtures</u> | | | | |
| | Change rooms--Replace fixtures with LED fixtures | 191 | Sm | 110.00 | \$21,010.00 |
| | Sub-total | | | \$21,010 | |
| | <u>Interior LED Fixtures</u> | | | | |
| | Pool area--exist fixtures upgraded in 2015-no work | 655 | Sm | - | \$0.00 |
| | Sub-total | | | \$0 | |
| 2-5 | <u>Exterior HID Fixtures</u> | | | | |
| | Replace exterior HID fixtures | 8 | Ea | 950.00 | \$7,600.00 |
| | Sub-total | | | \$7,600 | |
| 2-5 | <u>Exit Signs</u> | | | | |
| | Replace exit signs | 10 | Ea | 350.00 | \$3,500.00 |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|---|----------|------|-----------|---------------------|
| | Sub-total | | | | \$3,500 |
| 5+ | <u>Data Systems and Cabling</u> | | | | |
| | New data system equipment/cabling/conduit | 1,655 | Sm | 9.50 | \$15,722.50 |
| | Builders work; cutting and patching | 1 | Lot | 3,000.00 | \$3,000.00 |
| | Sub-total | | | | \$18,723 |
| 2-5 | <u>Public Address and Music System</u> | | | | |
| | PA & Music system --replace existing | 1,655 | Sm | 18.50 | \$30,617.50 |
| | Sub-total | | | | \$30,618 |
| 5+ | <u>Fire detection and Alarm System</u> | | | | |
| | New Fire Alarm System | 1,655 | Sm | 28.75 | \$47,581.25 |
| | Builders work; cutting and patching - all systems | 1 | Lot | 20,000.00 | \$20,000.00 |
| | Sub-total | | | | \$67,581 |
| | Summary of Costs: | | | | |
| Now | <u>Urgent (0-1 Years)</u> | | | | \$0 |
| 2-5 | <u>2-5 Years</u> | | | | \$275,878 |
| 5+ | <u>5 Years Long Term</u> | | | | \$86,304 |
| | Total | | | | \$362,182 |
| | Sub-total | | | | \$362,181.75 |
| | General Contractors Overhead | 16.0% | | | \$57,949.08 |
| | General Contractors Fee | 10.0% | | | \$42,013.08 |
| | Sub-total | | | | \$462,143.91 |
| | Design Contingency Allowance | 15.0% | | | \$69,321.59 |
| | Escalation Contingency Allowance | 0.0% | | | \$0.00 |
| | Construction Contingency Allowance | 5.0% | | | \$26,573.27 |
| | Sub-total | | | | \$558,038.77 |
| | Engineering Fees and Permitting - Refer to Main Cost Summary | 0.00% | | | Excluded |
| | TOTAL - ELECTRICAL | | | | \$558,038.77 |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|---|-----------------|----------------|-----------|-------------|
| | <u>POOL</u> | | | | |
| 2-5 | <u>Hot Pool</u> | | | | |
| | <i>The Following in Removal and Replacement of Hot Pool:</i> | | | | |
| | <i>Demolition:</i> | | | | |
| | Break out and remove existing cast in situ concrete hot pool | 1 | l/s | 15,000.00 | \$15,000.00 |
| | <i>Concrete Work:</i> | | | | |
| | Perimeter strip footing; 675mm x 300mm; including excavation, concrete, formwork, reinforcing steel and backfill | 24 | m | 260.00 | \$6,240.00 |
| | Hot tub retaining walls 550mm thickness; straight; including concrete, formwork and reinforcing steel | 31 | m ² | 650.00 | \$20,150.00 |
| | E/O allowance for perimeter guttering forming costs | 24 | m | 250.00 | \$6,000.00 |
| | Water stop | 24 | m | 110.00 | \$2,640.00 |
| | Allowance for forming bench seating | 14 | m | 250.00 | \$3,500.00 |
| | Allowance for forming steps | 1 | Flt | 3,500.00 | \$3,500.00 |
| | Slab on grade; 200mm thick concrete, power trowel finish, perimeter formwork, reinforcing steel, poly vapour barrier, 250mm granular material | 34 | m ² | 175.00 | \$5,950.00 |
| | Rigid insulation | 34 | m ² | 35.00 | \$1,190.00 |
| | <i>Tiling:</i> | | | | |
| | Ceramic tile to pool base and pool walls | 65 | m ² | 260.00 | \$16,900.00 |
| | Sub-total | \$81,070 | | | |
| 2-5 | <u>Main Pool</u> | | | | |
| | <i>The Following in Replacement of Main Pool Deck, Pool Concrete, Pool Base and Pool Area Tiling</i> | | | | |
| | <i>Demolition and Earthwork:</i> | | | | |
| | Remove miscellaneous pool deck fixtures and equipment | 1 | l/s | 5,000.00 | \$5,000.00 |
| | Remove existing pool deck tiling | 475 | m ² | 50.00 | \$23,750.00 |
| | Remove existing pool coping tile | 80 | m | 75.00 | \$6,000.00 |
| | Remove existing pool tile to floor and walls | 507 | m ² | 50.00 | \$23,350.00 |
| | Break out and remove existing pool deck concrete | 475 | m ² | 75.00 | \$35,625.00 |
| | Break out and remove pool base concrete | 360 | m ² | 75.00 | \$27,000.00 |
| | Break out and remove pool concrete walls and footings | 146 | m ² | 75.00 | \$10,950.00 |

| Priority | Description | Quantity | Unit | Rate | Extension | |
|----------|---|----------|----------------|------------------|--------------|--------|
| | Miscellaneous demolition allowance | 1 | l/s | 3,000.00 | \$3,000.00 | |
| | Bulk earthwork for new pool, levelling grading and backfilling - allowance | 1 | l/s | 75,000.00 | \$75,000.00 | |
| | <i>Concrete Work:</i> | | | | | |
| | Perimeter strip footing; 675mm x 300mm; including excavation, concrete, formwork, reinforcing steel and backfill | 80 | m | 275.00 | \$22,000.00 | |
| | Pool retaining walls 250mm thickness; straight; including concrete, formwork and reinforcing steel | 146 | m ² | 410.00 | \$59,860.00 | |
| | E/O allowance for perimeter guttering forming costs | 80 | m | 250.00 | \$20,000.00 | |
| | Water stop | 80 | m | 110.00 | \$8,800.00 | |
| | Allowance for miscellaneous pads and bases for pool features/equipment | 1 | l/s | 2,500.00 | \$2,500.00 | |
| | Slab on grade; 200mm thick concrete, power trowel finish, perimeter formwork, reinforcing steel, poly vapour barrier, 250mm granular material - Pool Base | 360 | m ² | 185.00 | \$66,600.00 | |
| | Rigid insulation | 360 | m ² | 35.00 | \$12,600.00 | |
| | Allowance for forming pool steps | | | | | |
| | | Small | 0 | Flt | 1,500.00 | \$0.00 |
| | | Large | 0 | Flt | 5,000.00 | \$0.00 |
| | Slab on grade (Pool Deck); 125mm thick concrete, power trowel finish, perimeter formwork, control joints, saw cuts, reinforcing steel, poly vapour barrier, 150mm granular material and Radon guard | 475 | m ² | 135.00 | \$64,125.00 | |
| | Surge Tank Concrete Work | 1 | l/s | 22,500.00 | \$22,500.00 | |
| | Miscellaneous pool deck pads and bases | 1 | l/s | 2,500.00 | \$2,500.00 | |
| | <i>Tiling Work:</i> | | | | | |
| | Non-slip Ceramic tile; 50mm x 50mm (Pool Decks); includes allowance for base | 475 | m ² | 275.00 | \$130,625.00 | |
| | Ceramic tile to pool base and pool walls | 506 | m ² | 260.00 | \$131,560.00 | |
| | Allowance for modifications to existing tiling and grades at intersection of new pool deck tiling with existing | 1 | l/s | 15,000.00 | \$15,000.00 | |
| | <i>Miscellaneous:</i> | | | | | |
| | Replace pool lights | 1 | l/s | 75,000.00 | \$75,000.00 | |
| | Reinstall pool fixtures and equipment; pool area | 1 | l/s | 7,500.00 | \$7,500.00 | |
| | Allowance for stainless steel rail, inserts and fittings in pool area | 1 | l/s | 75,000.00 | \$75,000.00 | |
| | Miscellaneous patching and repairing existing finishes - allowance | 1 | l/s | 50,000.00 | \$50,000.00 | |
| | Sub-total | | | \$975,845 | | |
| Now | <u>Replacement of Anti Vortex Outlets</u> | | | | | |

| Priority | Description | Quantity | Unit | Rate | Extension |
|----------|---|----------|------|--------------------|-----------------------|
| | Anti-vortex outlets, including concrete work and builders work | 1 | Lot | 250,000.00 | \$250,000.00 |
| | Sub-total | | | \$250,000 | |
| 2-5 | <u>Main Pool/Hot Tub Piping, Skimming, Drain, Pumps and Filers</u> | | | | |
| | <u>a.Main Pool</u> | | | | |
| | Pool Equipment | 1 | Lot | 432,000.00 | \$432,000.00 |
| | Pool Materials | 1 | Lot | 268,000.00 | \$268,000.00 |
| | Labour Associated With Contract | 1 | Lot | 232,000.00 | \$232,000.00 |
| | Logistics/Mgmt | 1 | Lot | 168,000.00 | \$168,000.00 |
| | UV Generator--included in pool equipment | 1 | Lot | - | \$0.00 |
| | Pumps--included in pool equipment | 1 | Lot | - | \$0.00 |
| | Compressor---included in pool equipment | 1 | Lot | - | \$0.00 |
| | Sand Filters---included in pool equipment | 1 | Lot | - | \$0.00 |
| | Chem. Control/agitator/meters/Auto Fill-incl in pool eqpt | 1 | Lot | - | \$0.00 |
| | <u>Pool Drainage</u> | | | | |
| | Gutter Drains--included in pool equipment | 1 | Lot | - | \$0.00 |
| | Floor Drains--included in pool equipment | 1 | Lot | - | \$0.00 |
| | Vent piping--included in pool equipment | 1 | Lot | - | \$0.00 |
| | Deduct Ant-Vortex Outlets (included above) | 1 | l/s | (250,000.00) | -\$250,000.00 |
| | <u>Electrical</u> | | | | |
| | Power-replace wiring/disconnects/feeders--pool eqpt | 1 | Lot | 16,500.00 | \$16,500.00 |
| | Upgrade Pool eqpt Switchboard/panels--allowance | 1 | Lot | 45,000.00 | \$45,000.00 |
| | Sub-total | | | \$911,500 | |
| | Summary of Costs: | | | | |
| Now | <i>Urgent (0-1 Years)</i> | | | \$250,000 | |
| 2-5 | <i>2-5 Years</i> | | | \$1,968,415 | |
| 5+ | <i>5 Years Long Term</i> | | | \$0 | |
| | Total | | | \$2,218,415 | |
| | Sub-total | | | | \$2,218,415.00 |
| | General Contractors Overhead | 16.0% | | | \$354,946.40 |
| | General Contractors Fee | 10.0% | | | \$257,336.14 |
| | Sub-total | | | | \$2,830,697.54 |
| | Design Contingency Allowance | 15.0% | | | \$424,604.63 |
| | Escalation Contingency Allowance | 0.0% | | | \$0.00 |
| | Construction Contingency Allowance | 5.0% | | | \$162,765.11 |
| | Sub-total | | | | \$3,418,067.28 |
| | Engineering Fees and Permitting - Refer to Main Cost Summary | 0.00% | | | Excluded |
| | TOTAL - POOL | | | | \$3,418,067.28 |

C.2 SCHEDULE B – REPLACEMENT BUILDING ESTIMATE

**SCHEDULE 'B'
REPLACEMENT BUILDING
ESTIMATE**

| MAIN SUMMARY OF ESTIMATED PROJECT COSTS | | | |
|---|---------------------|---------------------|--------------------|
| Description | Gross Floor Area | m ² | ft ² |
| | | Estimated Value | \$/m ² |
| Net Building Cost | \$10,503,340 | \$6,348.00 | \$590 |
| Site Development | \$718,672 | \$434.35 | \$40 |
| Ancillary Work - Demolition of Existing Facility | \$692,014 | \$418.24 | \$39 |
| Contingency Allowances | \$1,846,674 | \$1,116.09 | \$104 |
| Off-site Costs and Utility Upgrades - Specifically Excluded | Excluded | \$0.00 | \$0 |
| ESTIMATED CONSTRUCTION COSTS (Excluding GST) | \$13,760,700 | \$8,316.68 | \$773 |
| GST | 5.00% | \$688,035 | \$415.83 |
| ESTIMATED CONSTRUCTION COSTS (Including GST) | \$14,448,735 | \$8,732.52 | \$811 |
| <u>SOFT COSTS</u> | | | |
| Design Fees (Architect, Structural, Mechanical & Electrical) | 10.00% | \$1,376,070 | \$831.67 |
| Miscellaneous Consultants (Geotech, Civil, Landscaping Specialists) | 2.00% | \$275,214 | \$166.33 |
| Project Management Fees | 3.00% | \$412,821 | \$249.50 |
| Building Permit Fees | 1.10% | \$151,368 | \$91.48 |
| Development Cost Charges - Specifically Excluded | | Excluded | \$0.00 |
| Loose Furniture, Furnishings and Equipment - Specifically Excluded | 0.00% | Excluded | \$0.00 |
| Escalation Contingency - Refer to Commentary in Report | 0.00% | Excluded | \$0.00 |
| ESTIMATED SOFT COSTS (Excluding GST) | | \$2,215,473 | \$1,338.99 |
| GST | 5.00% | \$110,774 | \$66.95 |
| ESTIMATED SOFT COSTS (Including GST) | | \$2,326,246 | \$1,405.94 |
| TOTAL PROJECT COSTS (Including GST) | | \$16,774,981 | \$10,138.45 |
| | | | \$942 |

| ELEMENTAL COST PLAN | | | | | | | | |
|---|------------------|--------------------------------|-------------|---------------|---------------------|-------------------|------------------------|----------------|
| Project Number: | | 1871 | | | GFA: | | 1,655 m ² | |
| Name: | | Summerland Aquatic & Fitness C | | | GFA: | | 17,810 ft ² | |
| Site: | | Summerland, BC | | | | | | |
| Date: | | 10-Sep-18 | | | | | | |
| Element | Element Quantity | | Unit Rate | Element Value | Total | \$/m ² | \$/m ² | % |
| A1 SUBSTRUCTURE | | | | | \$859,130 | | \$519.24 | 7.08% |
| A111 Standard Foundations | 1,555 | m ² | \$284.92 | \$443,058 | | \$267.78 | | |
| A112 Special Foundations (Pool Tanks) | 349 | m ² | \$679.92 | \$237,294 | | \$143.42 | | |
| A12 Basement Excavation | 1,555 | m ² | \$114.97 | \$178,778 | | \$108.05 | | |
| A2 STRUCTURE | | | | | \$1,156,324 | | \$698.86 | 9.53% |
| A21 Lowest Floor Construction | 1,206 | m ² | \$130.00 | \$156,780 | | \$94.75 | | |
| A221 Upper Floor Construction | 100 | m ² | \$500.00 | \$50,000 | | \$30.22 | | |
| A222 Stair Construction | 1 | No | \$15,000.00 | \$15,000 | | \$9.07 | | |
| A23 Roof Construction | 1,632 | m ² | \$572.64 | \$934,544 | | \$564.82 | | |
| A3 EXTERIOR ENCLOSURE | | | | | \$1,914,893 | | \$1,157.32 | 15.78% |
| A312 Structural Walls Below Grade | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| A321 Walls Above Grade | 978 | m ² | \$808.00 | \$790,224 | | \$477.60 | | |
| A322 Structural Walls Above Grade | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| A323 Curtain Walls | 147 | m ² | \$1,200.00 | \$176,400 | | \$106.61 | | |
| A331 Windows & Louvers | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| A332 Glazed Screens | 17 | m ² | \$882.35 | \$15,000 | | \$9.07 | | |
| A333 Doors | 11 | lvs | \$2,863.64 | \$31,500 | | \$19.04 | | |
| A341 Roofing | 1,737 | m ² | \$284.92 | \$494,905 | | \$299.11 | | |
| A342 Skylights | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| A35 Projections | 1,655 | m ² | \$245.84 | \$406,864 | | \$245.90 | | |
| B1 PARTITIONS | | | | | \$321,280 | | \$194.18 | 2.65% |
| B111 Fixed Partitions | 1,655 | m ² | \$144.96 | \$239,916 | | \$145.00 | | |
| B112 Moveable Partitions | 1 | No | \$25,000.00 | \$25,000 | | \$15.11 | | |
| B113 Structural Partitions | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| B12 Doors | 1,655 | m ² | \$34.06 | \$56,365 | | \$34.07 | | |
| B2 FINISHES | | | | | \$655,487 | | \$396.16 | 5.40% |
| B21 Floor Finishes | 1,655 | m ² | \$241.70 | \$400,009 | | \$241.76 | | |
| B22 Ceiling Finishes | 1,655 | m ² | \$62.08 | \$102,748 | | \$62.10 | | |
| B23 Wall Finishes | 1,655 | m ² | \$92.28 | \$152,730 | | \$92.31 | | |
| B3 FITTINGS & EQUIPMENT | | | | | \$619,267 | | \$374.27 | 5.10% |
| B311 Metals | 1,655 | m ² | \$62.34 | \$103,169 | | \$62.35 | | |
| B312 Millwork | 1,655 | m ² | \$66.19 | \$109,548 | | \$66.21 | | |
| B313 Specialties | 1,655 | m ² | \$76.47 | \$126,550 | | \$76.48 | | |
| B32 Equipment | 1,655 | m ² | \$169.18 | \$280,000 | | \$169.23 | | |
| B331 Elevators | 0 | no | \$0.00 | \$0 | | \$0.00 | | |
| B332 Escalators & Moving Walkways | 0 | no | \$0.00 | \$0 | | \$0.00 | | |
| B333 Materials Handling Systems | 0 | no | \$0.00 | \$0 | | \$0.00 | | |
| C1 MECHANICAL | | | | | \$2,465,339 | | \$1,490.00 | 20.32% |
| C11 Plumbing and Drainage | 1,655 | m ² | \$924.77 | \$1,530,496 | | \$925.00 | | |
| C12 Fire Protection | 1,655 | m ² | \$39.99 | \$66,184 | | \$40.00 | | |
| C13 HVAC | 1,655 | m ² | \$449.89 | \$744,566 | | \$450.00 | | |
| C14 Controls | 1,655 | m ² | \$74.98 | \$124,094 | | \$75.00 | | |
| C2 ELECTRICAL | | | | | \$691,596 | | \$417.99 | 5.70% |
| C21 Service & Distribution | 1,655 | m ² | \$104.97 | \$173,732 | | \$105.00 | | |
| C22 Lighting, Devices & Heating | 1,655 | m ² | \$192.73 | \$318,964 | | \$192.78 | | |
| C23 System & Ancillaries | 1,655 | m ² | \$120.18 | \$198,901 | | \$120.21 | | |
| Z1 GENERAL REQUIREMENTS & FEES | | | | | \$1,820,023 | | \$1,099.98 | 15.00% |
| Z11 General Requirements | 12.00% | | | \$1,041,998 | | \$629.76 | | |
| Z12 Fee | 8.00% | | | \$778,025 | | \$470.22 | | |
| Sub-total Net Building Cost | | | | | \$10,503,340 | | \$6,348.00 | 86.58% |
| Z21 Design Contingency Allowance | 10.00% | | | | \$1,050,334 | | \$634.80 | 8.66% |
| Z22 Escalation Contingency Allowance | 0.00% | | | | \$0 | | \$0.00 | 0.00% |
| Z23 Construction Contingency Allowance | 5.00% | | | | \$577,684 | | \$349.14 | 4.76% |
| NET BUILDING COST | | | | | \$12,131,358 | | \$7,331.94 | 100.00% |

| Project Number: | 1871 | | | GFA: | 1,655 m ² | | | |
|---|--------------------------------|----------------|-----------|---------------|------------------------|-------------------|-------------------|---|
| Name: | Summerland Aquatic & Fitness C | | | GFA: | 17,810 ft ² | | | |
| Site: | Summerland, BC | | | | | | | |
| Date: | 10-Sep-18 | | | | | | | |
| Element | Element Quantity | | Unit Rate | Element Value | Total | \$/m ² | \$/m ² | % |
| D1 SITE DEVELOPMENT | | | | | \$594,140 | | \$359.09 | |
| D111 Preparation | 4,300 | m ² | \$11.63 | \$50,000 | | \$30.22 | | |
| D112 Hard Surfaces | 1,080 | m ² | \$70.37 | \$76,000 | | \$45.93 | | |
| D113 Improvements | 4,300 | m ² | \$30.60 | \$131,600 | | \$79.54 | | |
| D114 Landscaping | 1,655 | m ² | \$79.48 | \$131,540 | | \$79.50 | | |
| D12 Mechanical Site Services | 4,300 | m ² | \$24.42 | \$105,000 | | \$63.46 | | |
| D13 Electrical Site Services | 4,300 | m ² | \$23.26 | \$100,000 | | \$60.44 | | |
| Z1 GENERAL REQUIREMENTS & FEES | | | | | \$124,532 | | \$75.26 | |
| Z11 General Requirements | 12.00% | | | \$71,297 | | \$43.09 | | |
| Z12 Fee | 8.00% | | | \$53,235 | | \$32.17 | | |
| Sub-total Site Development | | | | | \$718,672 | | \$434.35 | |
| Z21 Design Contingency Allowance | 10.00% | | | | \$71,867 | | \$43.44 | |
| Z22 Escalation Contingency Allowance | 0.00% | | | | \$0 | | \$0.00 | |
| Z23 Construction Contingency Allowance | 5.00% | | | | \$39,527 | | \$23.89 | |
| SITE DEVELOPMENT | | | | | \$830,066 | | \$501.67 | |
| D2 ANCILLARY WORK | | | | | \$572,102 | | \$345.77 | |
| D211 Demolition | 1,655 | m ² | \$239.94 | \$397,102 | | \$240.00 | | |
| D212 Hazardous Materials | 1,655 | m ² | \$105.74 | \$175,000 | | \$105.77 | | |
| D22 Alterations | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| Z1 GENERAL REQUIREMENTS & FEES | | | | | \$119,912 | | \$72.47 | |
| Z11 General Requirements | 12.00% | | | \$68,652 | | \$41.49 | | |
| Z12 Fee | 8.00% | | | \$51,260 | | \$30.98 | | |
| Sub-total Ancillary Work | | | | | \$692,014 | | \$418.24 | |
| Z21 Design Contingency Allowance | 10.00% | | | | \$69,201 | | \$41.82 | |
| Z22 Escalation Contingency Allowance | 0.00% | | | | \$0 | | \$0.00 | |
| Z23 Construction Contingency Allowance | 5.00% | | | | \$38,061 | | \$23.00 | |
| ANCILLARY WORK | | | | | \$799,276 | | \$483.07 | |
| CONSTRUCTION COST (Excluding GST) | | | | | \$13,760,700 | | \$8,316.68 | |
| GST | 5.00% | | | | Excluded | | \$0.00 | |
| CONSTRUCTION COST (Including GST) | | | | | \$13,760,700 | | \$8,316.68 | |

C.3 SCHEDULE C – REPLACEMENT BUILDING ESTIMATE 50 % LARGER

**SCHEDULE 'C'
REPLACEMENT BUILDING
50% LARGER ESTIMATE**

| MAIN SUMMARY OF ESTIMATED PROJECT COSTS | | | |
|---|---------------------|---------------------|-------------------|
| Description | Gross Floor Area | m ² | ft ² |
| | | Estimated Value | \$/m ² |
| Net Building Cost | \$14,517,840 | \$5,849.52 | \$543 |
| Site Development | \$781,190 | \$314.76 | \$29 |
| Ancillary Work - Demolition of Existing Facility | \$679,657 | \$273.85 | \$25 |
| Contingency Allowances | \$2,476,696 | \$997.91 | \$93 |
| Off-site Costs and Utility Upgrades - Specifically Excluded | Excluded | \$0.00 | \$0 |
| ESTIMATED CONSTRUCTION COSTS (Excluding GST) | \$18,455,383 | \$7,436.03 | \$691 |
| GST | 5.00% | \$922,769 | \$371.80 |
| ESTIMATED CONSTRUCTION COSTS (Including GST) | \$19,378,152 | \$7,807.84 | \$725 |
| <u>SOFT COSTS</u> | | | |
| Design Fees (Architect, Structural, Mechanical & Electrical) | 10.00% | \$1,845,538 | \$743.60 |
| Miscellaneous Consultants (Geotech, Civil, Landscaping Specialists) | 2.00% | \$369,108 | \$148.72 |
| Project Management Fees | 3.00% | \$553,661 | \$223.08 |
| Building Permit Fees | 1.10% | \$203,009 | \$81.80 |
| Development Cost Charges - Specifically Excluded | | Excluded | \$0.00 |
| Loose Furniture, Furnishings and Equipment - Specifically Excluded | 0.00% | Excluded | \$0.00 |
| Escalation Contingency - Refer to Commentary in Report | 0.00% | Excluded | \$0.00 |
| ESTIMATED SOFT COSTS (Excluding GST) | | \$2,971,317 | \$1,197.20 |
| GST | 5.00% | \$148,566 | \$59.86 |
| ESTIMATED SOFT COSTS (Including GST) | | \$3,119,883 | \$1,257.06 |
| TOTAL PROJECT COSTS (Including GST) | | \$22,498,035 | \$9,064.90 |
| | | | \$842 |

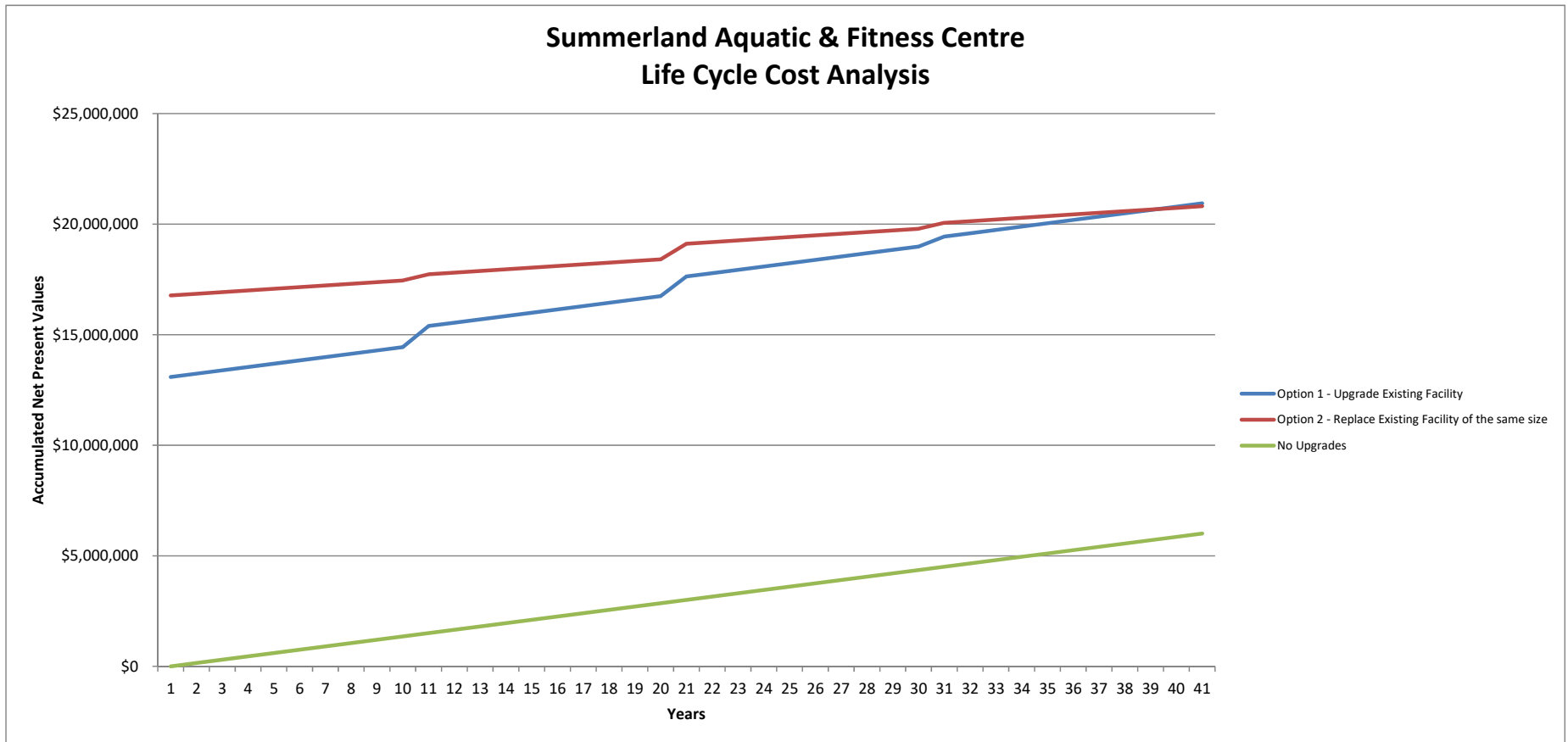
ELEMENTAL COST PLAN

| Project Number: | | 1871 | | | GFA: | | 2,482 m ² | | |
|---|------------------------------------|--------------------------------|----------------|-------------|---------------|---------------------|------------------------|-------------------|----------------|
| Name: | | Summerland Aquatic & Fitness C | | | GFA: | | 26,715 ft ² | | |
| Site: | | Summerland, BC | | | | | | | |
| Date: | | 10-Sep-18 | | | | | | | |
| Element | | Element Quantity | | Unit Rate | Element Value | Total | \$/m ² | \$/m ² | % |
| A1 SUBSTRUCTURE | | | | | | \$1,166,229 | | \$469.90 | 6.96% |
| A111 | Standard Foundations | 2,382 | m ² | \$274.99 | \$655,018 | | \$263.92 | | |
| A112 | Special Foundations (Pool Tanks) | 349 | m ² | \$679.92 | \$237,294 | | \$95.61 | | |
| A12 | Basement Excavation | 2,382 | m ² | \$114.99 | \$273,917 | | \$110.37 | | |
| A2 STRUCTURE | | | | | | \$1,629,216 | | \$656.44 | 9.72% |
| A21 | Lowest Floor Construction | 2,033 | m ² | \$130.00 | \$264,290 | | \$106.49 | | |
| A221 | Upper Floor Construction | 100 | m ² | \$500.00 | \$50,000 | | \$20.15 | | |
| A222 | Stair Construction | 1 | No | \$15,000.00 | \$15,000 | | \$6.04 | | |
| A23 | Roof Construction | 2,501 | m ² | \$519.76 | \$1,299,926 | | \$523.77 | | |
| A3 EXTERIOR ENCLOSURE | | | | | | \$3,032,303 | | \$1,221.77 | 18.08% |
| A312 | Structural Walls Below Grade | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| A321 | Walls Above Grade | 1,369 | m ² | \$808.88 | \$1,107,360 | | \$446.18 | | |
| A322 | Structural Walls Above Grade | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| A323 | Curtain Walls | 205 | m ² | \$1,202.22 | \$246,456 | | \$99.30 | | |
| A331 | Windows & Louvers | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| A332 | Glazed Screens | 17 | m ² | \$882.35 | \$15,000 | | \$6.04 | | |
| A333 | Doors | 17 | lvs | \$2,794.12 | \$47,500 | | \$19.14 | | |
| A341 | Roofing | 2,661 | m ² | \$284.96 | \$758,276 | | \$305.52 | | |
| A342 | Skylights | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| A35 | Projections | 2,482 | m ² | \$345.57 | \$857,712 | | \$345.59 | | |
| B1 PARTITIONS | | | | | | \$484,656 | | \$195.28 | 2.89% |
| B111 | Fixed Partitions | 2,482 | m ² | \$134.99 | \$335,054 | | \$135.00 | | |
| B112 | Moveable Partitions | 2 | No | \$40,000.00 | \$80,000 | | \$32.23 | | |
| B113 | Structural Partitions | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| B12 | Doors | 2,482 | m ² | \$28.04 | \$69,601 | | \$28.04 | | |
| B2 FINISHES | | | | | | \$817,055 | | \$329.21 | 4.87% |
| B21 | Floor Finishes | 2,482 | m ² | \$185.43 | \$460,237 | | \$185.44 | | |
| B22 | Ceiling Finishes | 2,482 | m ² | \$62.50 | \$155,133 | | \$62.51 | | |
| B23 | Wall Finishes | 1,655 | m ² | \$121.86 | \$201,685 | | \$81.26 | | |
| B3 FITTINGS & EQUIPMENT | | | | | | \$718,605 | | \$289.54 | 4.29% |
| B311 | Metals | 2,482 | m ² | \$46.57 | \$115,578 | | \$46.57 | | |
| B312 | Millwork | 2,482 | m ² | \$62.80 | \$155,877 | | \$62.81 | | |
| B313 | Specialties | 2,482 | m ² | \$67.34 | \$167,150 | | \$67.35 | | |
| B32 | Equipment | 2,482 | m ² | \$112.81 | \$280,000 | | \$112.82 | | |
| B331 | Elevators | 0 | no | \$0.00 | \$0 | | \$0.00 | | |
| B332 | Escalators & Moving Walkways | 0 | no | \$0.00 | \$0 | | \$0.00 | | |
| B333 | Materials Handling Systems | 0 | no | \$0.00 | \$0 | | \$0.00 | | |
| C1 MECHANICAL | | | | | | \$3,350,545 | | \$1,350.00 | 19.98% |
| C11 | Plumbing and Drainage | 2,482 | m ² | \$799.96 | \$1,985,508 | | \$800.00 | | |
| C12 | Fire Protection | 2,482 | m ² | \$40.00 | \$99,275 | | \$40.00 | | |
| C13 | HVAC | 2,482 | m ² | \$439.98 | \$1,092,029 | | \$440.00 | | |
| C14 | Controls | 2,482 | m ² | \$70.00 | \$173,732 | | \$70.00 | | |
| C2 ELECTRICAL | | | | | | \$1,021,796 | | \$411.70 | 6.09% |
| C21 | Service & Distribution | 2,482 | m ² | \$95.00 | \$235,779 | | \$95.00 | | |
| C22 | Lighting, Devices & Heating | 2,482 | m ² | \$198.51 | \$492,696 | | \$198.52 | | |
| C23 | System & Ancillaries | 2,482 | m ² | \$118.18 | \$293,321 | | \$118.18 | | |
| Z1 GENERAL REQUIREMENTS & FEES | | | | | | \$2,297,436 | | \$925.68 | 13.70% |
| Z11 | General Requirements | 10.00% | | | \$1,222,040 | | \$492.38 | | |
| Z12 | Fee | 8.00% | | | \$1,075,396 | | \$433.30 | | |
| Sub-total Net Building Cost | | | | | | \$14,517,840 | | \$5,849.52 | 86.58% |
| Z21 | Design Contingency Allowance | 10.00% | | | | \$1,451,784 | | \$584.95 | 8.66% |
| Z22 | Escalation Contingency Allowance | 0.00% | | | | \$0 | | \$0.00 | 0.00% |
| Z23 | Construction Contingency Allowance | 5.00% | | | | \$798,481 | | \$321.72 | 4.76% |
| NET BUILDING COST | | | | | | \$16,768,106 | | \$6,756.20 | 100.00% |

| Project Number: | | 1871 | | | GFA: | | 2,482 m ² | | |
|---|------------------------------------|--------------------------------|----------------|-----------|---------------|---------------------|------------------------|-------------------|---|
| Name: | | Summerland Aquatic & Fitness C | | | GFA: | | 26,715 ft ² | | |
| Site: | | Summerland, BC | | | | | | | |
| Date: | | 10-Sep-18 | | | | | | | |
| Element | | Element Quantity | | Unit Rate | Element Value | Total | \$/m ² | \$/m ² | % |
| D1 SITE DEVELOPMENT | | | | | | \$657,567 | | \$264.95 | |
| D111 | Preparation | 4,300 | m ² | \$17.44 | \$75,000 | | \$30.22 | | |
| D112 | Hard Surfaces | 1,405 | m ² | \$70.52 | \$99,075 | | \$39.92 | | |
| D113 | Improvements | 4,300 | m ² | \$37.63 | \$161,800 | | \$65.19 | | |
| D114 | Landscaping | 667 | m ² | \$83.50 | \$55,692 | | \$22.44 | | |
| D12 | Mechanical Site Services | 4,300 | m ² | \$31.86 | \$137,000 | | \$55.20 | | |
| D13 | Electrical Site Services | 4,300 | m ² | \$30.00 | \$129,000 | | \$51.98 | | |
| Z1 GENERAL REQUIREMENTS & FEES | | | | | | \$123,623 | | \$49.81 | |
| Z11 | General Requirements | 10.00% | | | \$65,757 | | \$26.49 | | |
| Z12 | Fee | 8.00% | | | \$57,866 | | \$23.32 | | |
| Sub-total Site Development | | | | | | \$781,190 | | \$314.76 | |
| Z21 | Design Contingency Allowance | 10.00% | | | | \$78,119 | | \$31.48 | |
| Z22 | Escalation Contingency Allowance | 0.00% | | | | \$0 | | \$0.00 | |
| Z23 | Construction Contingency Allowance | 5.00% | | | | \$42,965 | | \$17.31 | |
| SITE DEVELOPMENT | | | | | | \$902,274 | | \$363.54 | |
| D2 ANCILLARY WORK | | | | | | \$572,102 | | \$230.51 | |
| D211 | Demolition | 1,655 | m ² | \$239.94 | \$397,102 | | \$160.00 | | |
| D212 | Hazardous Materials | 1,655 | m ² | \$105.74 | \$175,000 | | \$70.51 | | |
| D22 | Alterations | 0 | m ² | \$0.00 | \$0 | | \$0.00 | | |
| Z1 GENERAL REQUIREMENTS & FEES | | | | | | \$107,555 | | \$43.34 | |
| Z11 | General Requirements | 10.00% | | | \$57,210 | | \$23.05 | | |
| Z12 | Fee | 8.00% | | | \$50,345 | | \$20.28 | | |
| Sub-total Ancillary Work | | | | | | \$679,657 | | \$273.85 | |
| Z21 | Design Contingency Allowance | 10.00% | | | | \$67,966 | | \$27.38 | |
| Z22 | Escalation Contingency Allowance | 0.00% | | | | \$0 | | \$0.00 | |
| Z23 | Construction Contingency Allowance | 5.00% | | | | \$37,381 | | \$15.06 | |
| ANCILLARY WORK | | | | | | \$785,003 | | \$316.29 | |
| CONSTRUCTION COST (Excluding GST) | | | | | | \$18,455,383 | | \$7,436.03 | |
| GST | | 5.00% | | | | Excluded | | \$0.00 | |
| CONSTRUCTION COST (Including GST) | | | | | | \$18,455,383 | | \$7,436.03 | |

C.4 SCHEDULE D – LIFE CYCLE COST ANALYSIS

**SCHEDULE 'D'
LIFE CYCLE COST
ANALYSIS**



NPV AT THE FOLLOWING OPERATING YEARS

| | Option 1 - Upgrade Existing Facility | Option 2 - Replace Existing Facility of the same size | No Upgrades |
|------------------------------------|--------------------------------------|---|-------------|
| Gross Floor Area (m ²) | 1,655 | 1,655 | 1,655 |
| Year | | | |
| 0 | \$13,085,916 | \$16,774,981 | \$0 |
| 5 | \$13,836,847 | \$17,150,447 | \$750,930 |
| 10 | \$15,391,139 | \$17,731,880 | \$1,501,861 |
| 20 | \$17,632,791 | \$19,115,042 | \$3,003,721 |
| 30 | \$19,437,430 | \$20,060,040 | \$4,505,582 |
| 40 | \$20,939,291 | \$20,810,971 | \$6,007,443 |

Notes:

- 1) The Net Present Value (NPV) at year 40 represents the total current cash value of all estimated expenses for the facility, including the initial capital cost, as well as the on-going maintenance/operational costs, over the 'life cycle' of the building (40 years);
- 2) A discount rate of 5%, and price escalation rate of 5%, has been used for all options;
- 3) Adjustments have been made to the various options to take into account the operational efficiencies;
- 4) Initial Capital Cost for Replacement Options 2 includes demolition of the Existing Facility