

NORFOLK COUNTY

BUILDING CONDITION ASSESSMENT REPORT FOR VARIOUS COUNTY FACILITIES

FINAL

April 13, 2017

Submitted by:



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system.

Lavatory sinks and faucets in the second floor washrooms are corroding and showing signs of leaking. Ductwork penetrating second floor janitor's closet floors and walls do not appear to have fire dampers. Recommend an evaluation of fire ratings and requirements for dampers.

The hydronic unit heater in the Zamboni boiler room has a seized motor. It should be replaced immediately.

The brine pump in the refrigeration plant is deteriorating and should be replaced in 1 to 2 years.

The sump pump in the refrigeration plant is extensively rusted and should be replaced in 1 to 2 years.

5.28 Langton Arena & Field House

Overview

The Langton Arena and Field House is located at 30 Albert Street in Langton, Ontario. It is an arena and was constructed in phases in 1976 and 1982. It has approximately 35,010 square feet of floor space.

5.28.1 Architectural and Structural

Concrete stairs from the upper level are damaged and require repair. The exterior concrete block is showing signs of structural distress and deteriorating along the north and south elevations, and at the corners of the building. The blocks and mortar joints are cracked in several locations. The exterior original painted concrete block should be repointed, repaired and repainted. Further structural review of the northeast corner of the building is required. There is water infiltration noted in the attic space on south face of concrete block wall. The removed exterior windows should be rebuilt. Observing from the ground level, the shingle roofing appears to have exceeded lifespan and should be replaced. Refer to Photo A26. The overhead door is deteriorated and in need of replacement. The downspouts require replacement.

Finishes are generally old and worn. The cracking and mortar joints in the interior requires repointing. Further investigation is required to determine the extent of the damages. The second floor janitor's room has exposed insulation. The damaged insulation should be removed an new insulation installed, followed by vapour barrier and fire rated gypsum board along with a fire rated door and frame. The countertop and cabinets are in the kitchen is in poor condition and is in need of replacement. The second floor washrooms are in fair condition and require renovation.

For the Field House, the exterior concrete block is showing signs of deterioration and in need of repointing and repainting. The interior concrete block walls have holes and cracks that need to

be addressed.

5.28.2 Building Electrical

The 3-phase service disconnect is nearing the end of its useful life expectancy and should be considered for replacement. The age of distribution panels vary throughout the facility. Consideration should be given to replacing the older Federal Pioneer panels as replacement parts may eventually be difficult to attain. It appears some of the exterior lighting has been recently upgraded. We recommend replacing the rest of the exterior lights that appear original. With respect to disconnects and splitters, all Amalgamated Electric, Taylor Electric, Square D and Federal Pioneer disconnects are nearing the end of their useful life expectancy and should be considered for replacement. Both single phase and 3- phase metering enclosure are exhibiting signs of rust and should be replaced in the future. The field house receptacle located near the sink should be protected by a ground fault circuit interrupter.

As of January 1st 2014, all new buildings and major renovations are required to install the new "Running Man" Exit signage. The running man exit signs are not currently required for this building. If a major renovation, as defined by the Ontario Building Code (OBC) occurs, or a new building is constructed, then the "Running Man" signs will be required.

5.28.3 Building Mechanical

The arena refrigeration plant equipment was not assessed in detail due to miscommunication. Refrigeration equipment is provided and maintained by Cimco. The overall impression of equipment condition is good. The replacement cost for the refrigeration plant depends on the condition of the existing equipment. For a full replacement of the refrigeration plant (i.e., new piping, brine pumps, cooling tower, compressors etc.), the cost can be as high as \$350,000. However, not all components need to be replaced within 20 years. As is the case for Building 27, the replacement cost within 20 years is approximately \$100,000.

The washroom floor drain grates are in poor condition. The lavatories in the second floor washrooms show minor wear and the drainage pipes have signs of leaks. Shower heads in various dressing rooms are rusting and require replacement. Minor corrosion is present on water piping to plumbing fixtures throughout. Paint on the ductwork in the shower of the change room located in the lobby area is peeling and should be replaced.

The field house water supply is turned off for the season. Washroom fixtures are in poor condition and should be replaced. The field house canteen plumbing is in good condition.

The sump pump in the Zamboni room is deteriorating and aging and should be replaced in 2 to 5 years. The wall mounted exhaust fans in the Rink Area are not functional and should be replaced immediately. Various Fans through the facility are operating beyond expected life

expectancy and should be replaced within five years. The Hot Water Storage tank and Gas Fired Water Heaters are aging and should be replaced within five years.

5.29 Port Dover Arena

Overview

The Port Dover Arena is located at 809 St. George Street in Port Dover, Ontario. It is an arena constructed in 1987 and has approximately 55,732 square feet of floor space.

5.29.1 Architectural and Structural

The exterior concrete split face block shows signs of structural distress and deterioration along the north elevation at roof drain leaders. The control joint caulking is cracking and should be replaced. The broken glass block should be replaced. The concrete block piers require additional structural review. Refer to Photo A27. Water damage was noted on the interior rink area from roof drains. Refer to Photo A28. Efflorescence was also noted within rink area. Further detailed structural review is recommended. The missing and damaged weather stripping on exterior doors should be repaired. The double exterior exit door does not close properly and should be replaced in the future.

Roof was not accessed during the site visit; as such, it is recommended that a specific roof audit to be done.

Cracks were observed in several locations in the gypsum board partitions. Evidence of possible mould was found at underside of the concrete structure in the locker rooms and shower area. Further testing should be completed. Staining of grout and tiles within the locker room showers was observed. Fire stopping at the top of walls separating the stairwell from the building is not in place and should be provided. The guards for the exterior exit stair do not meet the requirements on the Ontario Building Code.

5.29.2 Building Electrical

The meter enclosure appears to have surface rusting. This should be monitored to ensure the integrity of the enclosure is not compromised. Refer to Photo E23.

Disconnects for the rink area exhaust fans are showing signs of enclosure rust. These should be monitored to ensure integrity of enclosure is not compromised.

As of January 1st 2014, all new buildings and major renovations are required to install the new "Running Man" Exit signage. The running man exit signs are not currently required for this building. If a major renovation, as defined by the Ontario Building Code (OBC) occurs, or a new building is constructed, then the "Running Man" signs will be required.

5.29.3 Building Mechanical

	Asset Hierarch	у			Identification			Sustainability D	Data (Asset Life)																							
Facility				-	je.		lation	ancy	years)	Life (years)	Rating																						
Location ID	Class Asset			-ocatior	nufactu	Description	of Insta	Expects (years)	nt Age (ective L	ndition	Comments/ Identified Need	Inflation	2%	<u> </u>					S	chedule of	Costs, adju	sted for I	nflation									
		Attribute		_	Ma		Year	Life	Currer	Eff. Rema	ပိ		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029		2030	2031	2032	2033	2034	2035	2036
028 Langton Arena													\$ 16,300.00 \$ 5,000.00	\$ -	\$ -	\$ 730,100.		\$ -	\$ 144,100.0 \$ 40,500.0		\$ -	\$ -	\$ -	- \$	- \$		675,500.00	\$ - \$	-	\$ -	\$ 23,800.00	\$ -	\$ -
20.1	Architectural & Structural 28.1.1 Sub-Grade En	closures										T =	\$ 5,000.00	\$ -	\$ -	\$ 517,200. \$ -		\$ - \$ -	\$ 40,500.0		\$ -	\$ -	\$ -	- \$	- \$	- \$	19,400.00	\$ - \$	-	\$ -	\$ -	\$ -	\$ -
		28.1.1.1	Foundation Walls - General	Varies	N/A	Concrete block	1971	60	45	15.00	3	There was no visually evident signs of structural distress or deterioration	\$ -	\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -
			Ochciai									noted. Except as noted below,																					
			Slabs-on-			Reinforced						there was no visually evident signs of structural distress or deterioration noted. In rink area																					
		28.1.1.2	Grade - General	Varies	N/A	Concrete	1971	60	45	15.00	3	walkway, some cracks in concrete slab. Further	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -
												structural investigation of north east corner is required by the County																					
		28.1.1.3	Slabs-on-	Zamboni Roon	N/A	Reinforced	1971	60	45	15.00	3	Some deterioration evident at zamboni tracks from		\$ -	s -	s -	s -	\$ -	\$ -	\$ -	\$ -	s -	\$ -	- \$	- \$	- \$	_	s - s	§ -	\$ -	\$ -	\$ -	\$ -
	28.1.2 Floor structure		Grade			Concrete						exterior onto the ice rink area	\$ -	¢ .	\$ -			\$ -		\$ -		\$ -		- s	- \$	- \$		\$ - \$	\$ -	s -	\$ -	s -	·
	20.1.2 FIGOR Structure					Heavy timber						In general, there were no visually evident signs of				4,200.		_		*						φ		3				_	
		28.1.2.1	Wood Roof Framing - Within the Ice Rink Area	Varies	N/A	structural memebers with wood roof deck within the ice rink area	1971	60	45	15.00	3	structural distress or deterioration noted in the ice rink area roof framing. Wood roof deck showing water staining along soffit	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -
						Structure of						edge of roof.																					
			Structural Second Floor Framing -			second floor was not visible above						Structure was not visible,																					
		28.1.2.2	Balance building not	Varies	N/A	the suspended	1971	60	45	15.00	3	so no reviewed during this review	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -
			within the Ice Rink Area			ceilings within the balance of the building																											
						Wood and						In general, there were no visually evident signs of																					
		28.1.2.3	Tiered seating floor structure	ered seating ar	N/A	concrete block	1971	60	45	15.00	3		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -
						Concrete	1971			45.00		Concrete strairs are damaged and require repair. Width of stairs, if																			,		
		28.1.2.4	Stairwells	ist and west sid	N/A	stairs	1971	60	45	15.00	2	greater than 1100mm, require and additional handrail.	\$ -	5 -	\$ -	\$ 4,200.	50 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- \$	- 5	- 5	-	\$ - \$	-	\$ -	\$ -	\$ -	-
	28.1.3 Exterior Walls												\$ -	\$ -	\$ -	\$ 138,400.	00 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -
												Exterior concrete block is showing signs of structural distress or deterioration along north and south elevations, and at corners of the building. Exterior north wall of arena to be repointed and repainted. Several blocks are cracked and several mortar joints																					
		28.1.3.1	Perimeter Walls	xterior of buildi	N/A	Concrete Block	1971	60	45	15.00	2	throughout balance of building require repair and repointing. Control joint caulking is showing some deterioration and should be replaced. Further structural review of north east corner of building is required. Some water infiltration noted in attic space on south face of concrete block wall.		\$ -	\$ -	\$ 106,100.		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.3.2	Exterior Doors	Varies	Unknown	Various Hollow-Metal Exit Doors	1971	40	45	-5.00	3	Generally performing as intended. Damaged and missing weatherstripping to be replaced on each door.	\$ -	\$ -	\$ -	\$ 5,300.	00 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- s	- \$	- \$	-	\$ - \$	-	\$ -	\$ -	\$ -	\$ -
		28.1.3.3	Exterior windows	rimeter of build	N/A	Removed windows- plywood panel. Vinyl insert windows	1971	40	45	-5.00	2	Exterior window has been removed and replaced with plywood panel. Should be replaced with wall constrution.		\$ -	\$ -	\$ 11,100.	00 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.3.4	Exterior Roll Up Door	Roll up door at zamboni	Unknown	Roll up door	1971	40	45	-5.00	2	Overhead door is deteriorated wood door in	\$ -	\$ -	s -	\$ 15,900.	00 \$ -	s -	\$ -	\$ -	\$ -	s -	\$ -	- s	- \$	- \$	-	\$ - \$	\$ -	s -	\$ -	\$ -	\$ -
[28.1.4 Exterior Horizo	ontal Enclosures		entrance								need of replacement	\$ -	\$ -	\$ -	\$ 318,400.	00 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.4.1	Roofing - General	Varies	N/A	Asphalt shingle roofing	??	20	-	-	2	Roofs were reviewed from the ground. Shingles are curling, loose and missing. Shingles are at the end of their lifespan and should be replaced.		\$ -	\$ -	\$ 318,400.	00 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -
	28.1.5 Interior Constr	uction & Finishe	es										\$ 5,000.00	\$ -	\$ -	\$ 48,200.	00 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$	- \$	- \$	-	\$ - \$	\$ -	\$ -	\$ -	\$ -	\$ -

	Asset Hierarchy	у			Identification		:	Sustainability D	Data (Asset Life))																						
Facili Location ID	Class			ation	acturer	Description	nstallation	ectancy ars)	ge (years)	ve Life ng (years)	ion Rating	Comments/ Identified Need	Inflation 2	2%																		
	Asset			Loca	Manufa	Description	ar of In	ife Exp (yea	rrent A	Effecti	Condit		L 8	6	9.	Σ		Ŋ	22	Sched	lule of C	osts, adjus	ted for Inf	lation	g.	Q	22	QJ	Ω	4	ıΩ	· · ·
		Attribute	ı				Хе		ਠੋ	, w			201	201	202	202		202	202	202	202	202	202	202	202	203	203	203	203	203	203	203
		28.1.5.1	Interior Walls	Interior wall construction	N/A	Concrete Block and gypsum board	1971/2004	60	?	?	3	Some evidence of cracking and mortar joints that required repointing. Further investigation required to determine extent of damage and required repairs an north east corner by the County	\$ - \$ -	\$ -	\$ 5,	\$ \$	- \$	- \$	\$	\$ - \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.5.2	Interior Concrete Block Walls	Interior face of exterior wall construction	N/A	Concrete Block walls within the Ice Rink Area	1971	60	45	15.00	3	Generally interior walls are in acceptable condition.	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	s - s	- \$	-	\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$ -	s -	\$ -	\$ -	\$ -
		28.1.5.3	Interior Windows	Varies	Unknown	Fixed Windows	1971	60	45	15.00	3	Generally in acceptable condition throughout.	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	- \$	\$ - \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.5.4	Interior Doors	Varies	Unknown	Single and Double Doors	1971/2004	60	?	?	3	Generally in good condition throughout. Some maintenance and repair is recommended, over time depending on use.	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	\$ - \$	\$ - \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.5.5	Floor Finishes	Varies	Unknown	Vinyl Composite Tiles and Linoleum Tiles	1971	60	45	15.00	3	Generally in acceptable condition throughout.	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	s - s	\$ - \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.5.6	Floor Finishes	Ice Rink Area	Unknown	Exposed concrete	1971	60	45	15.00	3	Some cracking noted in concrete throughout. Generally in acceptable condition.	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	s - \$	\$ - \$	-	\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$ -	s -	\$ -	\$ -	\$ -
		28.1.5.7	Suspended Ceilings	Heated Areas	Unknown	Acoustic Tile	1971	60	45	15.00	3	Generally in good condition throughout. Some water stained and damaged tiles to be replaced.	\$ - \$ -	\$ -	\$ 2,	00.00 \$	- \$	- \$	s - \$	s - \$	-	\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$ -	s -	\$ -	\$ -	\$ -
		28.1.5.8	Kitchen	Heated Areas	Unknown	Cabinetry, and plastic laminate countertops and rubber flooring	1971	60	45	15.00	2	Generally cabinets and countertops in poor condition.	\$ - \$ -	\$ -	\$ 26,	600.00 \$	- \$	- \$	s - \$	s - \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.5.9	Washrooms	Heated Areas	Unknown	Men's, Womens and Barrier Free washrooms	1971/2004	20	?	?	2	Second floor washrooms - Toilet partions in womens wr. are rusting. Vanities require caulking replacement. Some sinks showing rust and damaged area. Vanity needs replacement. Flooring is damaged and need replacement.	s - s -	\$ -	\$ 12,	700.00 \$	- \$	- \$	\$ - \$	5 - \$		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.5.10	Locker Rooms	Varies	Unknown	Locker rooms	2004	60	12	48.00	3	Generally in locker room areas are in good condition.	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	- \$	\$ - \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.5.11	Locker Rooms Washroom Shower Area	Varies	Unknown	Cermamic wall tiles and concrete floors	2004	60	12	48.00	3	Generally in locker room areas are in good condition. Sealing of joints in shower areas required.	\$ - \$ -	\$ -	\$ 1,	\$ \$ \$	- \$	- \$	\$ - \$	\$ - \$		\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$ -	s -	\$ -	\$ -	\$ -
		28.1.5.12	Janitor's room second floor	Varies	Unknown	Exposed insulation, wood studs	1971	60	45	15.00	2	Second floor janitor's room has exposed insulation with no vapour barrier or gypsum board protection. Remove damaged insulation, install new insulation, vapour barrier and fire rated gypsum board, and rated door and frame	\$ 5,000.00 \$ -	s -	\$	- \$	- \$	- \$	\$ - \$	5 - \$		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	28.1.6 Field House											There was no visually	\$ - \$ -	\$ -	\$ 8,	00.00 \$	- \$	- \$	\$ 40,500.00 \$	- \$	-	\$ -	\$ -	\$ -	\$ -	\$ 19,400.00	0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.6.1	Foundation Walls - General	Varies	N/A	Concrete block	1971	60	45	15.00	3	evident signs of structural distress or deterioration noted. Except as noted below,	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	- \$	- \$	-	\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$ -	s -	\$ -	\$ -	\$ -
		28.1.6.2	Slabs-on- Grade - General	Varies	N/A	Reinforced Concrete	1971	60	45	15.00	3	there was no visually evident signs of structural distress or deterioration noted.	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	\$ - \$	\$	-	\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$ -	s -	\$ -	\$ -	\$ -
		28.1.6.3	Slabs-on- Grade	Field House	N/A	Concrete	1971	60	45	15.00	3	Concrete floors appear to be in acceptable condition. Concrete floor to be repainted	\$ - \$ -	\$ -	\$ 8,	100.00 \$	- \$	- \$	\$ - \$	\$ - \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.6.4	Roofing - General	Varies	N/A	Asphalt shingle roofing	1971	20	-	-	3	Roofs were reviewed from the ground. Shingles, fascias and soffits appear to be in acceptable condition.	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	\$ - \$	\$ - \$	-	\$ -	\$ -	\$ -	\$ -	\$ 19,400.00	0 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.6.5	Exterior Doors	Varies	Unknown	Hollow-Metal Doors	1971	40	45	-5.00	3	Generally performing as intended. Damaged and missing and hardware weatherstripping to be replaced on each door.	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	\$ 23,600.00 \$	\$		\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
		28.1.6.6	Walls	Varies	N/A	Painted Concrete Block	1971	60	45	15.00	3	Exterior concrete block is showing signs of deterioration and in need of repointing and painting. Interior concrete block requires repairs at holes and cracks.	\$ - \$ -	\$ -	\$	- \$	- \$	- \$	\$ 16,900.00 \$	\$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	28.2 Electrical												\$ - \$ - \$ - \$ -		\$ 196,		- \$		\$ 103,600.00 \$ \$ 47,300.00 \$		-	\$ - \$ -	\$ -	\$ -	\$ - \$ -	\$620,900.00				\$ - \$ -		
I	28.2.1 Distribution												ψ - \$ -	٠ -	φ 116,	3 OU.UU	- 3	- \$	¥ 41,300.00 \$	- \$	-	· -	\$ -	\$ -	φ -	φ 30∠,100.00	φ -	φ -	9	φ -	φ -	φ

Asset Hierarch	у			Identification			Sustainability E	Data (Asset Life)																							
Facility Location ID Class			ation	acturer	Description	nstallation	Expectancy (years)	ge (years)	ve Life ng (years)	ion Rating	Comments/ Identified Need	Inflation	2%	b																		
Asset	Attribute		Loc	Manuf		ear of li	Life Exp (ye	urrent A	Effect	Condi		17	18	19	8		54	23	23		hedule of (Costs, adj	usted for In	flation g	59	98	34	83	8	\$	32	8
	28.2.1.1	Single Phase Service	Exterior	Unknown	Pole Mounted	Unknown	40	Unknown	Unknown	4	Customer Owned vs Utility Owned to be verified	\$ -	\$ -	\$ -	\$	- \$	- \$	- 50	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	28.2.1.2	Transformer Three Phase Service Transformer	Exterior	Unknown	Pole Mounted	Unknown	40	Unknown	Unknown	4	Customer Owned vs Utility Owned to be verified	\$ -	\$ -	\$ -	\$	- \$	- \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$ -	\$ -	s -	\$ -	\$ -	\$ -
	28.2.1.3	Single Phase Main Disconnect	Electrical Room near front of Facility	Siemens	240V, 400A, 1-phase	Unknown	40	Unknown	Unknown	4	Generally appears to be in good condition, ground cable entering into building should have LB conduit fitting installed in order to protect exterior ground cable. Replace in 10 years based on condition rating	9 -	\$ -	s -	s	- \$	- \$	-	\$ 6,800.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$ -	\$ -	s -	\$ -	\$ -	\$ -
	28.2.1.4	Three Phase Main Disconnect	Electrical Room near rear of Facility	Federal Pioneer	400A, 600V, 3-phase	1976	40	40	0.00	3	It is nearing the end of its useful life expectancy and should be replaced soon	¢ -	\$ -	s -	\$ 6,40	0.00 \$	- \$		\$ -	\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$ -	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	28.2.1.5	Lighting Panels	Various	Various	Various	Various	40	Various	Various	3	Panels state of useful life expectancy range throughout the facility; some original, some installed more recently. Regular maintenance and replacement of integral parts may prolong equipment life. Replacement recommended in the next few years.		\$ -	s -	\$ 31,80	0.00 \$	- s		\$ -	s -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$ -	\$ -	s -	\$ -	\$ -	\$ -
0.1	28.2.1.6	Distribution Panels	Electrical Rooms	Various	Various	Various	40	Various	Various	3	Panels state of useful life expectancy range throughout the facility; some original, some installed more recently. Regular maintenance and replacement of integral parts may prolong equipment life. Older Federal Pioneer Panels should be considered for replacement.	\$ -	\$ -	\$ -	\$ 31,80	0.00 \$	- \$		\$ -	\$ -	\$ -	\$ -	\$ -	s -	\$ -	\$ -	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	28.2.1.7	Exterior Lighting	Various	Various	Various	Various	40	Various	Various	3	Some Wall packs have already been upgraded to LED fixtures. Consideration should be made for the remaining exterior fixtures.		\$ -	\$ -	\$	- \$	- \$	-	\$ 9,000.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	28.2.1.8	Splitter and Disconnects	Various	Various	Wide range of Disconnects and Splitters serving various systems.	Various	40	Various	Various	2	Amalgamated Electric, Taylor Electric, Square D and Federal Pioneer Disconnects and Splitters all appear to be nearing the end their life expectancy and should be considered for replacement.		\$ -	\$ -	\$ 42,40	0.00 \$	- \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	28.2.1.9	Meter Cabinets	Various	Various	Both Single Phase Service and Three Phase service metering Cabinets	1976	40	40	0.00	2	Both Metering enclosures appear to be rusting. If rust is comprimising the integrity of the enclosure, it is recommended that the enclosure be considered for replacement soon.	\$ -	\$ -	\$ -	\$ 4,20	0.00 \$	- \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	28.2.1.10	Interior Lighting	Various	Various	Majority of Interior Lighting is mixture of Fluorescent type fixtures. Most occupant area are motion sensor controlled.	Unknown	40	Unknown	Unknown	4	Generally appears to be in good condition. High Bay rink lighting has been replaced more recently. Replace in 10 years based on condition rating	\$ -	\$ -	\$ -	\$	- \$	- \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$323,400	.00 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	28.2.1.11	Conduit and Wiring	Various	Various	Various types	Various	40	Various	Various	3	Majority of conduit and wire not visible. Exposed wiring under Single phase service metering cabinet needs to be removed if no longer in use. If be used, should routed through conduit for mechanical protection. Conduits and Wiring should be replaced if failed	\$ -	\$ -	s -	s	- \$	- \$	-	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$258,700	.00 \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	28.2.1.12	Field House Service Entrance Disconnect	Field House	Federal Pioneer	200A, 600V- 120/240V	1982	40	34	6.00	3	Appears Original and has surpassed life expectancy. Regular maintenance and replacement of integral parts may prolong equipment life, however parts may not be easily attainable. Replace in 5 years based on condition rating and ERL		\$ -	\$ -	\$	- \$	- \$	-	\$ 3,400.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$.	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -

	Asset I	Hierarchy			Identification	n		Sustainability [Data (Asset Life)																				
Fa	acility				rer		ation	incy	/ears)	Life (years)	Rating																			
Location ID	Class	t		ocation	nufactu	Description	of Instal	Expecta (years)	nt Age (ective L	ndition	Comments/ Identified Need	Inflation 2	%					Schedule o	f Costs, ad	justed for In	flation								
		Attribu	te		Ma		Year	Life	Currer	Effe	Ö		2017	2019	2020	2021	2022	2023	2024	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
												Appears Original and has surpassed its life expectancy. Regular maintenance and												.,			.,	.,	.,	
		28.2.1.	Lighting and Distribution Panels	field House	Federal Pioneer	125A, 120/240V, 1- phase.	Various	40	Various	Various	3	replacement of integral parts may prolong equipment life, however parts may not be easily	s - s -	\$ -	\$ -	\$ -	\$ -	\$ 5,600.00 \$	- \$	s -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- s	s -	\$ -	\$ -	\$ -
												attainable. Replace in 5 years based on condition rating Appears Original and in fair																		
		28.2.1.	Splitter and Disconnects		Federal Pioneer	Various	Various	40	Various	Various	3	condition. Replace in 5 years based on condition rating Appears Original and in fair	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,900.00 \$	- \$	· \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- s	s -	\$ -	\$ -	\$ -
		28.2.1.	Dry-type Transformer		Federal Pioneer	50 kVA, 600- 120/240V	1982	40	34	6.00	3	condition. Replace in 5 years based on condition rating	\$ - \$ -			\$ -			- \$			\$ -		,	\$ - \$					\$ -
	28.2.2 Gener	erator	Т	T								Recently installed,	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -	\$ 9,700.00	\$ - \$	- S	\$ -	\$ -	\$ -	\$ -
		28.2.2	.1 Manual Transfer Switch		it Eaton	Double Throw Safety Switch	2016	40	0	40.00	4	Generator receptacle provision not complete yet. Replace in 10 years based on condition rating	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	s -	\$ -	\$ -	\$ -	\$ 9,700.00	\$ - \$	- s	s -	\$ -	\$ -	\$ -
	28.2.3 Life Si	Safety/ Barrier Free											\$ - \$ -	\$ -	\$ 79,600.00	\$ -	\$ -	\$ 56,300.00 \$	- \$	\$ -	\$ -	\$ -	\$ -	\$ 25,900.00	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -
		28.2.3	.1 Fire Alarm system	Single Phase Service Electrical Room	Mircom	pull station, bells and heat	Unknown	40	Unknown	Unknown	3	Generally appears to be in fair condition. Replace in 5 years based on condition rating	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ 56,300.00 \$	- \$	· \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -
						detectors																								
		28.2.3	2 Emergency Lighting	/ Various	Lumacell	Emergency Battery Units complete with remote lamps and recessed down light fixtures	1976	40	40	0.00	3	Some of the remote lamps and EBUs appear aged and should be considered to be replaced. Replace soon base on ERL	\$ - \$ -	\$ -	\$ 53,100.00	\$ -	\$ -	\$ - \$	- \$. \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -
		28.2.3	.3 Exit Signs	Various	Unknown	Exits Signs	Various	40	Various	Various	4	Appear in good shape. Replacement in future will be upgrade to green "Running Man" signage. Upgrade at next major reno	\$ - \$ -	\$ -	\$ 26,500.00	\$ -	\$ -	\$ - \$	- \$	· \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -
		REFI 28.2.3	.4 Barrier Free	Front Entrance and Washrooms	Unknown	Barrier Free Doors	Unknown	40	Unknown	Unknown	4	Generally appears to be in good condition. Replace in 10 years based on	\$ - \$ -	\$ -	\$ -	s -	s -	\$ - \$	- \$	· \$ -	\$ -	\$ -	\$ -	\$ 25,900.00	\$ - \$	- s	s -	\$ -	\$ -	\$ -
	28.2.4 Comm	munications										condition rating	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	· \$ -	\$ -	\$ -	\$ -	\$ 3,200.00	\$ - \$	- \$	s -	\$ -	\$ -	\$ -
_		28.2.4	.1 Network	Office	Procurve	Patch Panel	Unknown	20	Unknown	Unknown	4	Appears in good condition, replace as required in 10 years based on condition rating.	\$ - \$ -	s -	s -	\$ -	\$ -	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -	\$ 3,200.00	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -
	28.3 Building Mechanical 28.3.1												\$ 11,300.00 \$ - \$ 11,300.00 \$ -	\$ - \$ -	\$ 16,700.00 \$ 16,700.00		\$ - \$ -	\$ - \$	- \$	s -	\$ - \$ -	\$ -	\$ - \$ -	\$ 35,200.00 \$ 35,200.00	\$ - \$ \$ - \$	- S		\$ 23,800.00 \$ 23,800.00		\$ - \$ -
	20.0.1					Serves Men's												ų ų	•		•			\$ 00,200.00	•		*	\$ 20,000.00	*	•
		28.3.1	.1 Exhaut Fan	Men's Washroom	-	and Women's Washroom (Public Lobby Area)	2004	25	12	13.00	3	Fan rattles. Replace in 13 years based on ERL	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	s -	\$ -	\$ -	\$ -	\$ 1,600.00	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -
		28.3.1	Gas Fired Radiant Tub Heaters	e Rink Area	-		2004	25	12	13.00	3	Minor surface rusting. Replace in 13 years based on ERL Assumed original	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	· s -	\$ -	\$ -	\$ -	\$ 20,700.00	\$ - \$	- \$	s -	\$ -	\$ -	\$ -
		28.3.1	.3 Sump Pump	Zamboni Room			1982	25	34	-9.00	3	equipment - float is deteriorating. Recommend replacing pump soon as it exceeds service life	\$ 3,800.00 \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	s -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -
		28.3.1	.4 Fueling Station	Zamboni Room			2011	25	5	20.00	4	Newer Equipment - Good Condition. No need for	s - s -	s -	\$ -	\$ -	\$ -	\$ - \$	- \$	· \$ -	\$ -	s -	\$ -	\$ -	\$ - \$	- s	ş -	\$ -	\$ -	\$ -
		28.3.1		Zamboni			2011	25	5	20.00	4	replacement in 20 years No need for replacement in	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	· \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- s	\$ -	\$ -	\$ -	\$ -
		28.3.1	Reverse	Zamboni	Jetice	Water treatment system for	2011	25	5	20.00	4	20 years Newer Equipment - Good Condition. No need for replacement in 20 years	\$ - \$ -		\$ -	\$ -	\$ -	\$ - \$	- \$	· \$ -		\$ -			\$ - \$	- \$	ş -	\$ -	\$ -	\$ -
		28.3.1	Con fixed Un	nit Zamboni Room	Combat	Zamboni	2011	25	5	20.00	4	Newer Equipment - Good Condition. No need for replacement in 20 years	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -
		28.3.1	.8 Boiler	Zamboni Room	Lochinvar		2011	25	5	20.00	4	Newer Equipment - Good Condition. No need for	s - s -	\$ -	s -	\$ -	\$ -	\$ - \$	- \$	· \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	s -	\$ -	\$ -	\$ -
		28.3.1	.9 Indirect Waters		Lochinvar	water supply 2 Heaters	2011	20	5	15.00	4	replacement in 20 years Newer Equipment - Good Condition. Replace in 15 years based on ERL	\$ - \$ -	\$ -	\$ -	\$ -	s -	\$ - \$	- \$	· s -	\$ -	\$ -	\$ -	\$ 12,900.00	s - s	- s	\$ -	\$ -	\$ -	\$ -
		28.3.1.	10 Boiler Pump	Zamboni Room	Grundfos		2011	25	5	20.00	4	Newer Equipment - Good Condition. No need for replacement in 20 years	\$ - \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	· \$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- \$	s -	\$ -	\$ -	
		28.3.1.	11 Exhaust Fan	ns Rink Area	-	2 Wall mounted propeller fan	1982	25	34	-9.00	1	Fans are not functional. Replace immediately	\$ 2,500.00 \$ -	\$ -	\$ -	\$ -	s -	\$ - \$	- \$	· s -	\$ -	\$ -	\$ -	\$ -	s - s	- s	s -	\$ -	\$ -	\$ -
		28.3.1.	12 Supply Fan	"Attic"	-	Inline centrifugal	1982	25	34	-9.00	3	Assumed original equipment - Fair Condition. Replace soon.	\$ - \$ -	\$ -	\$ 2,100.00	\$ -	\$ -	\$ - \$	- \$	\$ -	\$ -	\$ -	\$ -	\$ -	\$ - \$	- s	\$ -	\$ -	\$ -	\$ -

Asset Hierarchy			Identification			Sustainability D	ata (Asset Life))																							
Facility Location ID Class Asset		Location	anufacturer	Description	of Installation	Expectancy (years)	ant Age (years)	ffective Life aining (years)	ondition Rating	Comments/ Identified Need	Inflation	2%							Schedu	ıle of Cos	ts, adjus	sted for Inf	lation								
Attribute			W		Year	Life	Curre	Rem	Ö		2017	2018	2019	2020	2021	2022	2023	2024		2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036
28.3.1.13	Exhaust Fan	"Attic"	-	Utility type fan serving kitchen exhaust hood	1982	25	34	-9.00	3	Assumed original equipment - rough stopping action. Replace soon.	\$ -	\$ -	\$ -	\$ 2,700.00	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$	- \$	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28.3.1.14 E	Kitchen Exhaust Hood	Kitchen			1982	25	34	-9.00	3	Grease filters are rusting and need replacement soon	\$ -	\$ -	\$ -	\$ 800.00	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$	- \$	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28.3.1.15	Storage Tank	Mechanical Room 1 (Lobby Area)	John Wood		1982	25	34	-9.00	2	Assumed original equipment - Rusting and signs of leaking, Replace immediately	\$ 1,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$	- \$	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Water Heater	Mechanical Room 1 (Lobby Area)	AO Smith		1982	20	34	-14.00	2	Assumed original equipment - Rusting and signs of leaking. Replace immediately	\$ 3,500.00	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- \$	- \$	- \$		\$ -	\$ -	\$	- \$	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28.3.1.17	Gas Fired Furnace	Mechanical Room 1 (Lobby Area)	Lennox		2005	15	11	4.00	3	Estimated age - Fair condition. Replace in 4 years based on ERL	\$ -	\$ -	\$ -	\$ 3,700.00	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$	- \$	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28.3.1.18	Gas Fired	Mechanical Room 1 (Lobby Area)	Lennox		2005	15	11	4.00	3	Estimated age - Fair condition. Replace in 4 years based on ERL	\$ -	\$ -	\$ -	\$ 3,700.00	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$	- \$	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28.3.1.19	Gas Fired Furnace (Mechanical Room 1 (Lobby Area)	Lennox		2005	15	11	4.00	3	Estimated age - Fair condition. Replace in 4 years based on ERL	\$ -	\$ -	\$ -	\$ 3,700.00	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$	- \$	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28.3.1.20	UV Disinfection System	Electrical Room	Upstream		2011	25	5	20.00	4	Newer Equipment - Good Condition. No need for replacement in 20 years	\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$. \$	- \$ -	\$ -	s -	\$ -	\$ -	\$ -
28.3.1.21	Water Softener	Storage Room	Tahoe		2011	25	5	20.00	4	Newer Equipment - Good Condition. No need for replacement in 20 years	\$ -	\$ -	s -	\$ -	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$. \$	- \$ -	\$ -	s -	\$ -	\$ -	\$ -
28.3.1.22 E	Exhaust Fan	Storage Room	-	Manual switch operation	2011	25	5	20.00	4	Newer Equipment - Good Condition. No need for replacement in 20 years	\$ -	\$ -	s -	s -	\$ -	s -	\$	- \$	- \$	- \$	-	\$ -	s -	\$	- \$	- \$ -	\$ -	s -	\$ -	\$ -	\$ -
28.3.1.23	Air Handling Unit	Mechanical Room 2	Engineered Air		2009	25	7	18.00	4	Replace in 18 years based on ERL	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$ -	- \$	- \$ -	\$ -	\$ -	\$ 21,000.00	\$ -	\$ -
28.3.1.24	Water Softener	Compressor Room			2013	25	3	22.00	4	Newer Equipment - Good Condition. No need for replacement in 20 years	\$ -	\$ -	\$ -	s -	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$	- \$	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28.3.1.25	UV Disinfection System	Field House	Upstream		2011	25	5	20.00	4	Currently disconnected for the winter season. No need for replacement in 20 years	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$	- \$	- \$ -	\$ -	\$ -	\$ -	\$ -	\$ -
28.3.1.26 E	Electric Water Heater	Field House	John Wood		2011	20	5	15.00	4	Currently disconnected for the winter season. Replace in 15 years based on ERL	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$	- \$	- \$	- \$	-	\$ -	\$ -	\$	- \$	\$ -	\$ -	\$ -	\$ 2,800.00	\$ -	\$ -