



Report Update No.1

The City of Greater Sudbury

Valley East Twin Pad Multipurpose Sports Complex

Costing and Analysis of Site Design Options A,B,&C



August 14, 2019

Report Update - No.1

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The following pages form an amendment and addition to the originally submitted report dated June 17th 2019. The purpose of the additional analysis is to outline the pros and cons of each site design option and to provide a detailed order of magnitude costing specific to each of the options.

Future reports, studies and considerations that will affect cost estimating:

The completion of the reports noted below are a requirement of SPCA, as outlined in the SPART Memo of Understanding. The outcome of these detailed reports and analysis will further outline the technical requirements related to site planning and will have an impact on costing, as the project moves forward into its next phases of development.

- Geotechnical & Soils Report to determine soil bearing capacity and water table height of proposed building locations
- Source Protection Plan Section 59 Application
- Stormwater Management Study and Report
- Wellhead Protection Area; By-law considerations, property/parking run off etc.
- Detailed Topographic Survey
- Traffic Study; flow to and from property and its effect on the existing Library, HARC, daycare and residential neighbourhood.
- Analysis of trail conditions and uses in green space to determine amount of disturbance.
- Environmental considerations (carbon footprint, building efficiency, heating/cooling strategies)
- CPTED Design Analysis
- Fire Flow Capacities (Water Pressure Testing)
- Infrastructure and Servicing Upgrades Analysis (water, sanitary, gas, hydro, etc.)

Options Analysis

August 14, 2019

Option A

Option A Key Points:

- 1. Main Entrance off of Elmview Drive across from Wilfred Street
- 2. Building & parking situated north of existing small soccer fields in south-west corner of existing green space.
- 3. Building does not disturb the existing recreational activities on the property but does remove approximately 8 to 10 acres of the green space located at the north end of the property.
- 4. 325m of existing Howard's Nature Trail would be removed to facilitate new construction, with approximately 280m of trail re-built to reroute existing loop.
- 5. An outdoor skating/running loop can be incorporated into Option A. Currently it is not and has not been costed.
- 6. Requires 445m of new municipal sidewalk construction.

Costing:

The total gross floor area is 95,301 ft2 (8,854 m2). The order of magnitude estimated cost for the proposed new facility is in the range of:

- \$ 22,720,810 for construction costs and
- \$ 28,341,938 for total project costs.

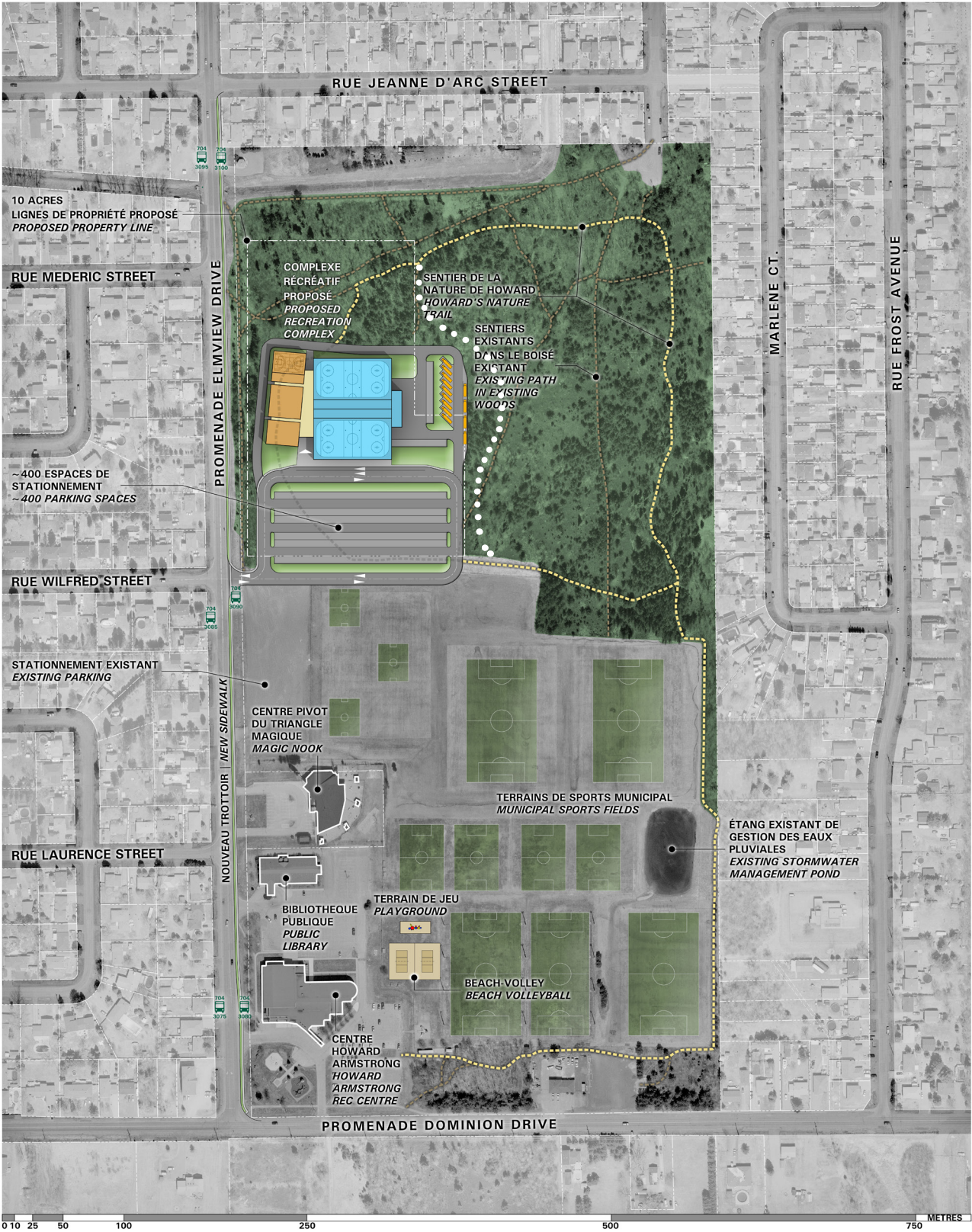
Option A - Pros & Cons

Pros:

- 1. Existing facilities undisturbed.
 - Soccer fields
 - Daycare
 - HARC parking lot
 - Beach volleyball courts
- 2. Opportunity for Howard's Nature Trail rerouting
- 3. Opportunity for Howard's Nature Trail improvements
- 4. Opportunity for New Trail Head near new facility.
- 5. Existing overflow soccer parking to be maintained.
- 6. New driveway entrance lines up with Wilfred Street.
- 7. Bus Parking/loading located further away from parking lot circulation.
- 8. Location of new parking lot can easily serve existing out door recreation spaces
- 9. Existing transit stop near parking lot entrance.

Cons:

- 1. Displaces approximately 8 to 10 acres of green space.
- 2. Displaces series of trails and paths within green space.
- 3. Single loaded entrance off Elmview Drive.
 - Neighboring residential area
 - Increased traffic
- 4. Further proximity from existing recreation site amenities.
- 5. Facility could act as barrier between green space and the rest of the property.



Site Plan Schematic Design - Option A

Option B

Option B Key Points:

- 1. Main Entrance off of Elmview Drive across from Wilfred Street
- 2. Building & parking situated north of existing small soccer fields in south-west corner of existing green space.
- 3. Building does not disturb the existing recreational activities on the property but does remove approximately 8 to 10 acres of the green space located at the north end of the property.
- 4. 3225m of existing trail would be removed to facilitate new construction, with approximately 280m of trail re-built to reroute existing loop.
- 5. Orientation allows for better access to green space.
- 6. Requires 445m of new municipal sidewalk construction.

Costing:

The total gross floor area is 95,301 ft2 (8,854 m2). The order of magnitude estimated cost for the proposed new facility is in the range of:

- \$ 22,747,150 for construction costs and
- \$ 28,374,795 for total project costs.

Options Analysis

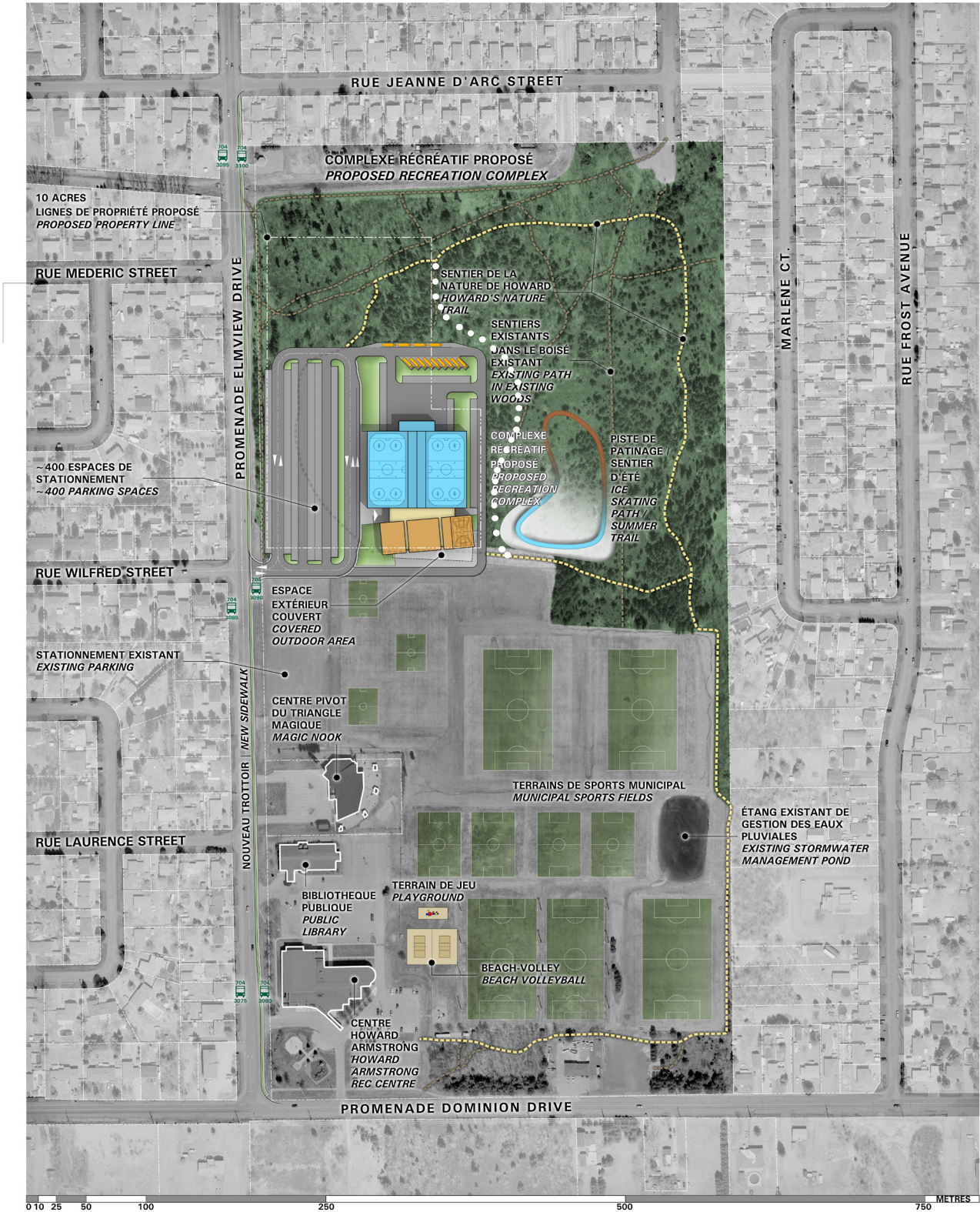
Option B - Pros & Cons

Pros:

- 1. Existing facilities undisturbed.
 - Soccer fields
 - Daycare
 - HARC parking lot
 - Beach volleyball courts
- 2. Opportunity for Howard’s Nature Trail rerouting
- 3. Opportunity for Howard’s Nature Trail improvements
- 4. Opportunity for New Trail Head near new facility.
- 5. Existing overflow soccer parking to be maintained.
- 6. New driveway entrance lines up with Wilfred Street.
- 7. Good flow and efficient vehicular circulation.
- 8. Dedicated shipping and receiving area.
- 8. Location of new parking lot can easily serve existing outdoor recreation spaces
- 9. Existing transit stop near parking lot entrance.
- 10. Addition of Skating/Running loop in South-East corner of green space, close to new facility.
- 11. Facility includes a covered outdoor area to the south of the building.
- 12. South facing recreation/gymnasium area.
- 13. Good connection with existing soccer fields and proposed skating/running loop for changerooms, washrooms and storage.

Cons:

- 1. Displaces approximately 8 to 10 acres of green space.
- 2. Displaces series of trails and paths with green space.
- 3. Single loaded entrance off Elmview Drive.
 - Neighboring residential area
 - Increased traffic



Site Plan Schematic Design - Option B

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Option C

Option C Key Points:

- 1. Main Entrance off of Dominion Drive.
- 2. Building situated close as possible to HARC, soccer fields and library to create community hub.
- 3. Building is not situated within and does not disturb the existing green space at the north end of the property. However, if the existing mini soccer fields and overflow parking are to be rebuilt, they would likely have to be re-built within the green space due to the lack of space throughout the site.
- 4. Displaces the existing CPTM daycare building, which would be constructed new within the new city building. Financial, business case and feasibility study will be required as part of the next steps.
- 5. Requires 445m of new municipal sidewalk construction.

Costing:

The total gross floor area is 95,301 ft2 (8,854 m2). The order of magnitude estimated cost for the proposed new facility is in the range of:

- \$ 29,829,450 for construction costs and
- \$ 37,209,256 for total project costs.

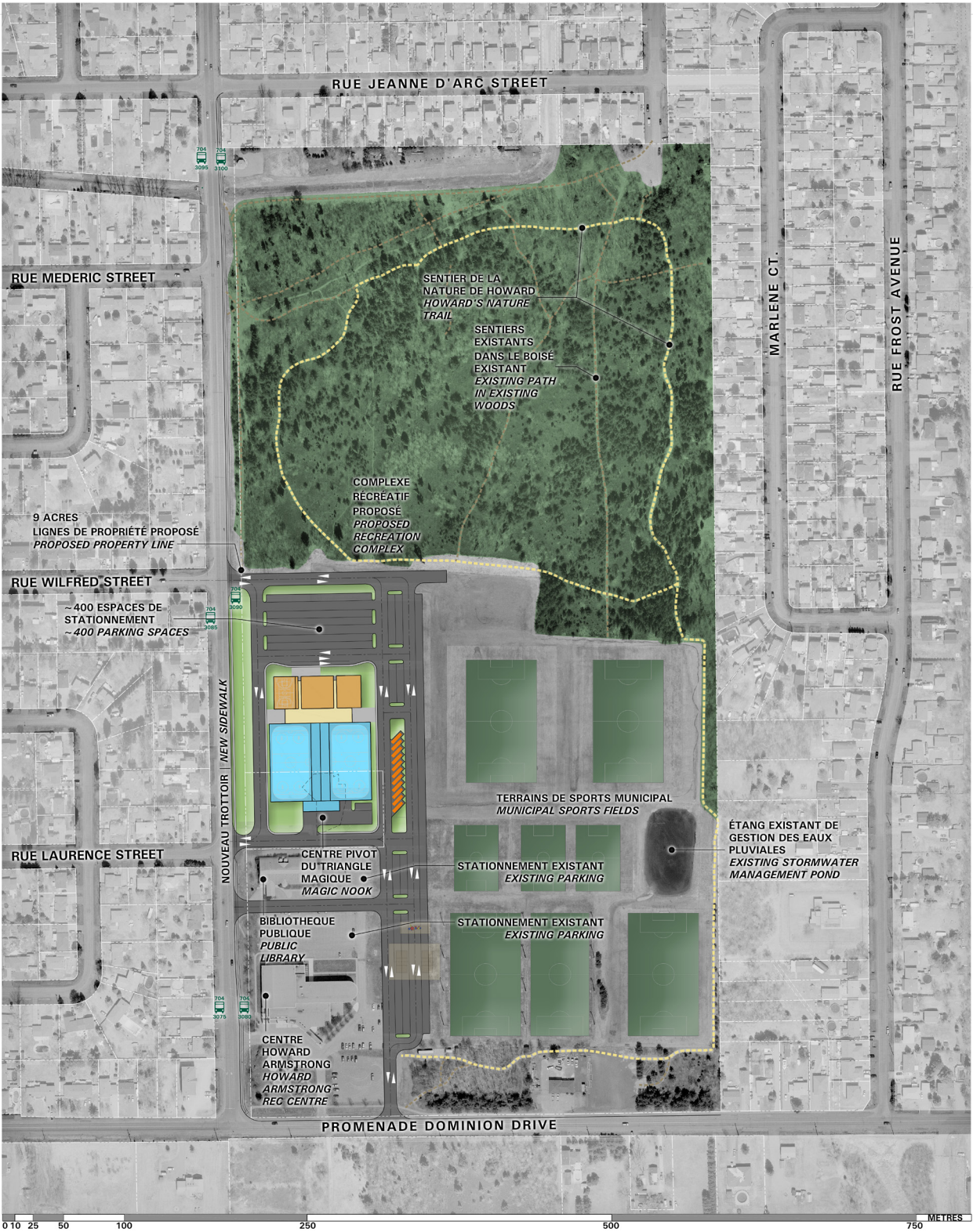
Option C - Pros & Cons

Pros:

- 1. Existing green space undisturbed. Unless used for displaced property features.
- 2. Facility closure to HARC and soccer fields.
- 3. Multiple access points to property to reduce traffic congestion.
- 4. Sprawled parking to improve access to soccer fields.
- 5. Facility provides space for new and improved daycare.
- 6. Main traffic flow focused on interior of site and away from residential area.

Cons:

- 1. Displaces CPTM Daycare and Administrative Building.
- 2. Displaces existing soccer overflow parking lot. (new location required)
- 3. Displaces existing mini soccer fields. (new location required)
- 4. Displaces existing volleyball courts and playground.
- 5. Green space may be displaced to accommodate the construction of new mini soccer fields and parking lot.
- 6. Multi-lane traffic separating facility from soccer fields.
- 7. Parking far from existing soccer fields.
- 8. Facility disconnected from green space; green space adjacent to parking lot. (cost to replace)
- 9. Main entrance of new building facing North, opposite and further from the existing outdoor facilities and buildings.
- 10. Lack of Zamboni ice storage to be resolved.



Site Plan Schematic Design - Option C

Options Analysis

Updated Costing

City of Greater Sudbury
Valley East Twin Pad Multi-purpose Sports Complex
Order of Magnitude - Updated Costing
14-Aug-19

Description	OPTION A					OPTION B					OPTION C				
	GFA (M2)	COST/M2	GFA (SF)	COST/SF	AMOUNT	GFA (M2)	COST/M2	GFA (SF)	COST/SF	AMOUNT	GFA (M2)	COST/M2	GFA (SF)	COST/SF	AMOUNT
1.0 NEW CONSTRUCTION			76,101	\$264	20,100,000			76,101	\$264	20,100,000			95,301	\$281	26,820,000
Arena			57,630	\$250	14,407,500			57,630	\$250	14,407,500			57,630	\$250	14,407,500
Support Function			3,537	\$320	1,131,840			3,537	\$320	1,131,840			3,537	\$320	1,131,840
Gymnasium			6,727	\$300	2,018,100			6,727	\$300	2,018,100			6,727	\$300	2,018,100
Public Shared Space			4,008	\$320	1,282,560			4,008	\$320	1,282,560			4,008	\$320	1,282,560
Atrium / Lobby / Circulation			4,200	\$300	1,260,000			4,200	\$300	1,260,000			4,200	\$300	1,260,000
Daycare					N/A					N/A			19,200	\$350	6,720,000
2.0 OTHER ASSOCIATED COSTS					2,250,000					2,250,000					2,250,000
Site Development/Landscaping Allowance					2,000,000					2,000,000					2,000,000
Abnormal Soil Conditions (allowance for structural piles due to high water table)					250,000					250,000					250,000
Hazardous Materials Abatement					N/A					N/A					N/A
Premium Time/After-Hours Work					N/A					N/A					N/A
Signage & Wayfinding					Incl.					Incl.					Incl.
Project Contingency					See Below					See Below					See Below
Escalation to Time of Tender (3% P.A.)					See Below					See Below					See Below
3.0 Option Specific Site Costs					370,810					397,150					759,450
New municipal sidewalk and transit stop	445m	\$150			66,750	445m	\$150			66,750	445m	\$150			66,750
Construction of new Howard Nature Trails (crusher dust)	280m	\$60			16,800	280m	\$60			10,500					N/A
Upgrading of existing Howard Nature Trails	794m	\$40			31,760	810m	\$40			32,400					N/A
Asphalt existing overflow soccer parking	6200m2	\$40			248,000	6200m2	\$40			248,000					N/A
Rebuild existing overflow soccer parking area					N/A					N/A	6200m2	\$55			341,000
New fire hydrant					7,500					7,500					N/A
Construction of outdoor ice loop					0	320m2	\$100			32,000					N/A
Rebuild displaced mini soccer fields (x6)					N/A					N/A					30,000
Demolition of existing CPTM Daycare facility					N/A					N/A					15,000
Expand & reconfiguration of existing Howard Armstrong parking					N/A					N/A					75,000
Additional traffic parking lot circulation (860 m2)					N/A					N/A	860m2	\$95			81,700
Premium cost for construction phasing					N/A					N/A					150,000
Total Construction Cost					22,720,810					22,747,150					29,829,450
- Professional & Design Fees (7%)				7.00%	1,590,457				7.00%	1,592,301				7.00%	2,088,062
- Other Consultants (1%)				1.00%	227,208				1.00%	227,472				1.00%	298,295
- Development Charges & Levies / Permits (N/A)				N/A					N/A					N/A	
- Commissioning, Moves, Misc., Other (1.5%)				1.50%	340,812				1.50%	341,207				1.50%	447,442
Total Ancillary / Soft Costs					2,158,477					2,160,979					2,833,798
Sub-Total: Construction & Ancillary					24,879,287					24,908,129					32,663,248
Furnishings and Equipment					By Owner					By Owner					By Owner
Sub-Total					24,879,287					24,908,129					32,663,248
Post Contract Contingency (Change Orders)				3.00%	681,624				3.00%	682,415				3.00%	894,884
Escalation to Tender (3.0% P.A) - 1 Year				3.00%	681,624				3.00%	682,415				3.00%	894,884
Design Contingency (8%)				8.00%	2,099,403				8.00%	2,101,837				8.00%	2,756,241
Total Project Cost - EXCLUDING HST					28,341,938					28,374,795					37,209,256

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