

DATE: October 24, 2017

TO: Board of Trustees

FROM: Darrel Robertson, Superintendent of Schools

SUBJECT: New Model of School Replacement in Mature Neighbourhoods
(Response to Request for Information #217)

ORIGINATOR: Dr. Lorne Parker, Executive Director

**RESOURCE
STAFF:** Krista Brandon, Todd Burnstad, Terri Gosine, Roland Labbe, Christopher Wright

REFERENCE: May 9, 2017 Caucus Committee Meeting (Trustee Gibson)

ISSUE

The following information was requested:

That Administration develop a framework to define total cost savings that are expected to be achieved in the new model of school replacement in mature neighbourhoods, starting with Ivor Dent, and then Highlands. The purpose for developing a framework is to assist the Board in determining the value in asking Administration to collect the corresponding data once the schools are open, in support of community conversation and advocacy with government.

BACKGROUND

Ivor Dent School opened to students on September 1, 2017. This new school opening represents the first replacement school opening in a mature area of the city, as a result of the consolidation and closure of two or more schools into one new replacement school. A similar project will take effect upon the modernization and new addition of Highlands School, which will consolidate Montrose, Mount Royal and Highlands schools into a single K-9 facility. Additional community engagement has been initiated with three school community groups, referred to as "Space for Students in Mature Communities." These are the Britannia, Rosslyn and Westlawn clusters. In all instances, the intent is to provide students in mature areas of the District with equitable access to 21st century learning and working environments that facilitate addressing the District Strategic Plan Priority 2, "Provide welcoming, high quality learning and working environments."

CURRENT SITUATION

In order to address the questions posed, analysis has been conducted regarding:

- allocations for staffing, instructional and operational supplies, equipment and services for four school clusters (Lawton/Ivor Dent, Highlands, Britannia and Westlawn)
- life cycle costing analysis to compare cost-benefits of two school clusters not yet funded for consolidation (Britannia and Westlawn)

Allocation Efficiencies

In terms of allocation efficiencies, the following four school clusters are articulated in a table (Attachment I). The Lawton Cluster (Lawton, R.J. Scott and Rundle schools consolidated into Ivor Dent School) has resulted in a net annual allocation reduction of \$606,832, based on 2016-2017 allocation levels and the spring proposed budget for the current school year. It is estimated that Highlands, Montrose and Mount Royal schools, consolidated into the renewed K-9 Highlands School, will result in a net annual allocation reduction of approximately \$1,052,850, based on 2016-2017 allocation levels. Consolidation of the four Westlawn Cluster schools (Afton, Glendale, Sherwood and Westlawn schools) into two schools will result in a net annual allocation reduction of approximately \$2,154,653, based on 2016-2017 allocation levels. Consolidation of the four Britannia Cluster schools (Brightview, Britannia, Mayfield and Youngstown schools) into one or two schools, should that be the outcome of the community consultations, would result in a net annual allocation reduction estimated to be in the range of \$1,904,785 to \$2,167,564, based on 2016-2017 allocation levels.

Life Cycle Cost Analysis

An analysis of capital and building operation savings has been completed by external cost consultants for two of the three clusters of school communities which were engaged with over the past two years, as part of the Space for Students in Mature Communities initiative. The school clusters were the Britannia and Westlawn clusters. The analysis compares the status quo for facilities, with concepts developed to inform discussions with the respective communities, which includes initial capital costs, as well as future capital and building operation costs, over a projected 40 year life cycle of the facilities. The life cycle cost analyses are presented in summary tables (Attachment II). Life cycle cost analyses were not completed for the Ivor Dent School cluster of consolidated schools and the Highlands Cluster, as the decision to consolidate occurred before the work was contracted. Concepts for the Rosslyn Cluster will require further community engagement and refinement prior to confirmation.

The status quo cost to capitalize, operate and maintain the four schools in the Westlawn Cluster over 40 years is estimated to be \$100,408,549, compared with consolidation/replacement concepts being considered ranging between \$80,659,433 and \$86,617,240.

The status quo cost to capitalize, operate and maintain the four schools in the Britannia Cluster over 40 years is estimated to be \$119,987,767, compared with consolidation/replacement concepts being considered ranging between \$76,697,193 and \$80,026,616.

While initial capital costs are lower with status quo facilities, the longer term capital renewal and higher operating and maintenance costs indicates up to a 40 per cent reduction could be realized over 40 years in a consolidated school context. It should be noted that status quo facility costs do not include costs to alter instructional areas significantly from traditional individual classroom configurations, to meet unique program-specific instructional requirements, or innovative teaching and learning space. Collaborative, flexible, program-oriented space required to deliver high quality, 21st century learning environments is estimated to better be realized in new replacement facilities.

KEY POINTS

- Consolidation of two or more schools would realize reduced education and operation funding allocations, which could be re-directed to support other District needs for the provision of educational services to students.

- The average operating allocation savings per year for the Ivor Dent School consolidation is estimated to be \$606,832, which equates to \$1,428 per student per year (based on last year's 425 student enrolment and a three to one school consolidation).
- The average operating allocation savings per year for the Highlands School consolidation is estimated to be \$1,052,850, which equates to \$1,737 per student per year (based on last year's 606 student enrolment and allocations).
- The average operating allocation savings per year for the Westlawn Cluster (Afton, Glendale, Sherwood and Westlawn schools) is estimated to be approximately \$2,154,653, which equates to \$2,440 per student per year savings (based on last year's 883 student enrolment and allocations, in the proposed four to two school consolidation).
- The average operating allocation savings per year for the Britannia Cluster (Brightview, Britannia, Mayfield and Youngstown schools) is approximated to be between \$1,904,785 and \$2,167,564, which equates to a savings of up to \$2,720 per student per year (based on last year's 797 student enrolment and allocations, assuming a four to two or four to one school consolidation).
- The estimated savings are predicted to be higher in situations where student counts increase as a result of consolidation; all consolidations are expected to lead to increased enrolment over the course of the next or following few years after opening; actual enrolment, costs and allocations can be monitored and reported in subsequent years to assess outcomes.
- The Westlawn Cluster cost benefit analysis indicates that between \$13.8 million to \$19.7 million could be saved over 40 years of school capitalization and operation.
- The Britannia Cluster cost benefit analysis indicates that between \$40 million to \$43.3 million could be saved over 40 years of school capitalization and operation.
- Status quo facility costs do not include costs to alter instructional areas significantly from traditional individual classroom configurations to provide high quality 21st century learning environments to:
 - meet unique program-specific instructional requirements, or
 - provide flexible, collaborative and innovative teaching and learning space
- Collaborative, program-oriented space required to deliver high quality 21st century learning environments would better be realized in new replacement facilities.

ATTACHMENTS and APPENDICES

Attachment I Summary of Cost Operational Savings for Ivor Dent (Lawton) and Highlands Clusters

Attachment II Summary of Cost Benefit Analyses – Britannia and Westlawn Clusters

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Estimated Annual Allocation Efficiencies

		Sep-16	2016-17	Ave Per
Ivor Dent (Lawton) Cluster		Enrol	Budget Alloc	Enrol
	Rundle	156	\$ 1,743,995	\$ 11,179
	R.J. Scott	105	\$ 1,271,492	\$ 12,109
	Lawton	164	\$ 1,666,748	\$ 10,163
	Total	425	\$ 4,682,235	\$ 11,017
	Ivor Dent 2017-2018 Spring Alloc.	425	\$ 4,075,403	\$ 9,589
3 to 1 Consolidation	Annual reduction in Allocations		\$ 606,832	
		Sep-16	2016-17	Ave Per
Highlands Cluster		Enrol	Budget Alloc	Enrol
	Highlands	230	\$ 1,924,781	\$ 8,369
	Montrose	158	\$ 1,745,367	\$ 11,047
	Mount Royal	218	\$ 1,764,922	\$ 8,096
	Total	606	\$ 5,435,070	\$ 8,969
	Using Ave. Alloca.	606	\$ 4,382,220	\$ 7,231
3 to 1 Consolidation	Annual reduction in Allocations		\$ 1,052,850	
		Sep-16	2016-17	Ave Per
Westlawn Cluster		Enrol	Budget Alloc	Enrol
	Westlawn	268	\$ 2,547,335	\$ 9,505
	Sherwood	160	\$ 1,671,848	\$ 10,449
	Glendale	153	\$ 1,723,341	\$ 11,264
	Total	581	\$ 5,942,524	\$ 10,228
	Using Ave. Alloca.	581	\$ 3,787,871	\$ 6,520
4 to 2 Consolidation	Annual reduction in Allocations		\$ 2,154,653	
	Afton (Status Quo Alloc.)	302	2,188,896	7,248
		Sep-16	2016-17	Ave Per
Britannia Cluster		Enrol	Budget Alloc	Enrol
	Britannia	138	\$ 1,528,569	\$ 11,077
	Brightview	202	\$ 2,132,865	\$ 10,559
	Mayfield	119	\$ 1,235,834	\$ 10,385
	Youngstown	338	\$ 2,466,394	\$ 7,297
	Total	797	\$ 7,363,662	\$ 9,239
	Using Ave. Alloca.	797	\$ 5,196,098	\$ 6,520
4 to 1 Consolidation	Annual reduction in Allocations		\$ 2,167,564	
	Britannia	138	\$ 1,528,569	\$ 11,077
	Brightview	202	\$ 2,132,865	\$ 10,559
	Mayfield	119	\$ 1,235,834	\$ 10,385
	Total	459	\$ 4,897,268	\$ 10,669
	Using Ave. Alloca.	459	\$ 2,992,483	\$ 6,520
4 to 2 Consolidation	Annual reduction in Allocations		\$ 1,904,785	
	Youngstown (Status Quo alloc.)	338	\$ 2,466,394	\$ 7,297

Summary of Cost Benefit Analyses – Britannia and Westlawn School Clusters

BRITANNIA SCHOOLS CLUSTER - Capital and Building Operation Cost Comparison							
Concept	Project	Building Area (in m ²)	Capital cost (Excluding Design Fees and Cost Escalation)	Total Life Cycle Cost (asset replacement)	Total Operations & Maintenance Benchmark Cost (over 40 years)*	Total Life Cycle Capital, Operation and Maintenance Cost over 40 Years	Total Savings on Life Cycle Capital, Operation and Maintenance Cost over 40 Years
Concept 1	Britannia New Build 4-9	4,770	\$23,802,618	\$3,940,380	\$16,875,726	\$44,618,724	
Concept 1	Youngstown New Build Pre K-3	3,350	\$18,370,993	\$2,767,353	\$11,851,925	\$32,990,271	
Concept 1	TOTAL	8,120	\$42,173,611	\$6,707,733	\$28,727,651	\$77,608,995	\$42,378,772
Concept 2	Britannia New Build 4-9	4,770	\$23,802,618	\$3,940,380	\$16,875,726	\$44,618,724	
Concept 2	Mayfield Addition Pre K-3	1,096	\$5,051,981	\$1,230,779	\$3,877,525	\$10,160,285	
Concept 2	Mayfield Modernization Pre K-3	3,639	\$8,437,397	\$2,971,041	\$13,839,169	\$25,247,607	
Concept 2	TOTAL	9,505	\$37,291,996	\$8,142,200	\$34,592,420	\$80,026,616	\$39,961,151
Concept 3	Youngstown New Build Pre K-9	8,597	\$36,637,860	\$9,644,110	\$30,415,223	\$76,697,193	\$43,290,574
Concept 4	Britannia New Build Pre K-9	8,597	\$36,695,752	\$9,644,110	\$30,415,223	\$76,755,085	\$43,232,682
Status Quo	Project	Building Area (in m ²)	Deferred Maintenance Value (From Building Condition Audit)	Total Life Cycle Cost (asset replacement)	Total Operations & Maintenance Benchmark Cost*	Total Life Cycle Capital, Operation and Maintenance Cost over 40 Years	
	Brightview	3,244	\$8,919,918	\$ 4,354,999.00	\$ 12,336,978.00	\$25,611,895	
	Britannia	5,758	\$14,515,308	\$ 6,465,838.00	\$ 21,897,757.00	\$42,878,903	
	Mayfield	3,773	\$4,681,456	\$ 4,226,331.00	\$ 13,839,169.00	\$22,746,956	
	Youngstown	4,589	\$6,386,814	\$ 4,911,166.00	\$ 17,452,033.00	\$28,750,013	
Staus Quo	TOTAL	17,364	\$34,503,496	\$19,958,334.00	\$ 65,525,937.00	\$119,987,767	

* As the projects are still in an early stage, the Operations & Maintenance Costs are based on benchmark costs.

WESTLAWN SCHOOLS CLUSTER - Capital and Building Operation Cost Comparison							
Concept	Project	Building Area (in m ²)	Capital Cost (Excluding Design Fees and Cost Escalation)	Total Life Cycle Cost (asset replacement)	Total Operations & Maintenance Benchmark Cost (over 40 years)*	Total Life Cycle Capital, Operation and Maintenance Cost over 40 Years	Total Savings on Life Cycle Capital, Operation and Maintenance Cost over 40 Years
Concept 1	Westlawn New Build K-9	8,597	\$39,523,124	\$10,721,076	\$30,415,233	\$80,659,433	\$19,749,116
Concept 2	Afton New Build K-3	3,350	\$18,256,137	\$3,180,443	\$11,851,925	\$33,288,505	
Concept 2	Westlawn New Build 4-9	5,593	\$28,030,376	\$5,510,951	\$19,787,408	\$53,328,735	
Concept 2	TOTAL	8,943	\$46,286,513	\$8,691,394	\$31,639,333	\$86,617,240	\$13,791,309
Concept 3	Glendale New Build K-3	3,350	\$16,640,183	\$3,180,443	\$11,851,925	\$31,672,551	
Concept 3	Westlawn New Build 4-9	5,593	\$28,030,376	\$5,510,951	\$19,787,408	\$53,328,735	
Concept 3	TOTAL	8,943	\$44,670,559	\$8,691,394	\$31,639,333	\$85,001,286	\$15,407,263
Status Quo	Project	Building Area (in m ²)	Deferred Maintenance Value (From Building Condition Audit)	Total Life Cycle Cost (asset replacement)	Total Operations & Maintenance Benchmark Cost (over 40 years)*	Total Life Cycle Capital, Operation and Maintenance Cost over 40 Years	
	Afton	4288	\$5,938,134	\$3,977,427	\$16,307,326	\$26,222,887	
	Glendale	1928	\$3,350,553	\$2,636,602	\$7,229,530	\$13,216,685	
	Sherwood	2451	\$4,579,686	\$3,618,427	\$9,321,188	\$17,519,301	
	Westlawn	6548	\$9,452,732	\$9,094,806	\$24,902,138	\$43,449,676	
Staus Quo	TOTAL	15215	\$23,321,105	\$19,327,262	\$57,760,182	\$100,408,549	

* As the projects are still in an early stage, the Operations & Maintenance Costs are based on benchmark costs.