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## **4. ASSESSMENT OF LONG TERM CAPITAL NEEDS BY AREA**

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### 4.1 Overview

The following chapter describes, for each elementary and secondary review area, the Board's existing capital asset inventory of operating schools (year opened, facility size, site size, on-the-ground capacity, number of portables, etc.), projected enrolment (based on average daily enrolment) for each school and how facility renewal needs are expected to change over the 2007/08 to 2020/21 time period.

For each review area, information is provided in respect of:

- Age of facilities compared to Board-wide averages, site sizes for each facility and comparison to panel totals, facility size for each school and comparison to panel totals, permanent and temporary capacity of each school and comparison to panel totals;
- Demographic and enrolment perspectives for each review area, indicating change in Census population 1996, 2001 and 2006; the change in the pre-school and school-age population per household (i.e. the number of households may be increasing, but the number of school-age children per household may be decreasing);
- The change in the number of students entering the school system at the elementary level, versus the number of students graduating from elementary school (i.e. the Grade Structure Ratio);
- The share of English language enrolment between the HPEDSB and the ALCDSB (i.e. apportionment), shown on a historical basis in order to provide perspectives on how the population cohorts are moving through the system and how this is likely to affect future enrolment;
- Projected enrolment from 2007/08 to 2020/21;

- Facility utilization – that is, student enrolment versus the number of bricks and mortar (i.e. permanent) spaces, both in 2007/08 and 2020/21;
- The condition of each school facility today (known as the “deferred backlog” – that is, facility renewal needs that have not been addressed due to lack of funding) and how this is expected to change (based on the RECAPP assessment data and updated by Board staff) by 2016/17 and by 2021/22. As well, a facility renewal condition index (i.e. total cumulative facility renewal costs divided into the facility replacement costs (where the replacement standards are consistent with the original construction standards) is calculated for each school facility in 2016/17 and 2021/22;
- Facility renewal index (i.e. needs) on a per pupil basis (i.e. based on projected enrolment), or FRIPP. This information indicates how quickly the gap between renewal expenditure needs and projected enrolment is growing for each school facility

Finally, program and facility recommendations are summarized for each school at the end of each subsection.

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#### **4.6 Review Area PE05 – Moira School Group (City of Belleville east of Moira River and south of CNR line, portion of Township of Tyendinaga south of CNR line, Town of Deseronto)**

##### **Overview:**

This planning area comprises the easterly portion of the City of Belleville and the southerly portion of the Township of Tyendinaga bounded by the Moira River to the west, the CNR line to the north, Township of Tyendinaga and Town of Deseronto to the east and Lake Ontario to the south.

Four schools, Queen Elizabeth School (JK-8), Queen Victoria School (JK-6), Harry J Clarke PS (2-5) and Harry J Clarke Annex (Sir Winston Churchill) (JK-1) are located within the City of Belleville limits. A fifth school, Deseronto PS is located in the Town of Deseronto.

There are approximately 1,250 new residential dwelling units anticipated to be constructed in this review area between 2007/08 and 2020/21.

##### **Existing School Facility Inventory:**

The schools in this review area are, on average, 10 years older than the average age of all the elementary schools in the Hastings Prince Edward DSB jurisdiction. For the forty-seven Board-owned properties that are current operating elementary schools, the average site size is 7.93 acres, which is a combination of urban serviced sites generally in the range of 4.0 to 7.0 acres, and a number of rural serviced sites (i.e. municipal water only or full communal services) in the range of 12.0 to 37.0 acres. The average site size in PE05 is 6.5 acres.

The following sets out key facility attributes consistent with information filed by the Board, and with the Ministry of Education.

School Name/Program	SFIS #	Year Constructed	Site Size (acres)	Facility Size (sq m)	2007-08 OTG	# of Portables
<b>Belleville East of Moira River, South of CNR line</b>						
Queen Elizabeth School (Belleville) (JK-8) 135 MacDonald Avenue, Belleville	1914	1951	6.6	2,337	259.0	1
Queen Victoria School (JK-6) 46 Pine Street, Belleville	1926	1912	5.5	3,883	423.0	0
Harry J. Clarke PS (2-8) 77 Rollins Drive, Belleville	1028	1961	6.3	4,645	529.0	0
Sir Winston Churchill School (JK-1) 301 Macdonald Avenue, Belleville	6015	1954	6.2	1,951	251.0	0
<b>Deseronto</b>						
Deseronto PS (JK-8) 385 Stanley Street, Deseronto	580	1956	7.8	2,330	262.0	0
<b>Review Area Totals or Average</b>		<b>60 years</b>	<b>32.4</b>	<b>15,146</b>	<b>1,724.0</b>	<b>1</b>
<b>Board (Elementary) Totals or Average</b>		<b>50 years</b>	<b>379.7</b>	<b>121,605</b>	<b>12,766.0</b>	<b>36</b>

### Demographic and Enrolment Perspectives:

The table on the following page compares the pre-school and school age population data from Statistics Canada between 1996-2001 and 2001-2006 Census periods, illustrating the changing trends which will impact future enrolment growth for this Review Area. The pre-school age population (ages 0-3) declined by 149 persons between 1996 and 2001 and increased by 37 persons between 2001 and 2006. The elementary school age population (ages 4-13) has also increased by 15 persons or 0.7% from 1996 to 2001. More recently, the number of 4-13 year olds has decreased by 4.6% or 104 persons. The secondary school age population (ages 14-17) has increased by 28 and 56 persons in the Census periods 1996 through 2006.

**Actual Population – PE05**

Review Area	Census Period			1996 - 2001 Change		2001 - 2006 Change	
	1996	2001	2006	Absolute Change	% Change	Absolute Change	% Change
Pre-school Age (0-3)	902	753	790	-149	-16.5%	37	4.8%
Elementary Age (4-13)	2,259	2,274	2,171	15	0.7%	-104	-4.6%
Secondary Age (14-17)	915	943	999	28	3.1%	56	5.9%
<b>Total</b>	<b>4,075</b>	<b>3,970</b>	<b>3,959</b>	<b>-106</b>	<b>-2.6%</b>	<b>-11</b>	<b>-0.3%</b>

Source: Statistics Canada 1991, 1996, 2001, 2006 Census Profile Data & Single Year of Age Population Data

Note: 2006 population figures do not include Census undercount

**Number of Occupied Households – PE05**

Number of Occupied Households			1996 - 2001 Change		2001 - 2006 Change	
1996	2001	2006	Absolute Change	% Change	Absolute Change	% Change
7,828	8,042	8,376	214	2.7%	334	4.1%

**Population per Household (Population/Number of Occupied Households) – PE05**

Review Area	Census Period			1996 - 2001 Change		2001 - 2006 Change	
	1996	2001	2006	Absolute Change	% Change	Absolute Change	% Change
Pre-school Age (0-3)	0.115	0.094	0.094	-0.022	-18.7%	0.001	0.7%
Elementary Age (4-13)	0.289	0.283	0.259	-0.006	-2.0%	-0.024	-8.4%
Secondary Age (14-17)	0.117	0.117	0.119	0.000	0.3%	0.002	1.7%
<b>Total</b>	<b>0.521</b>	<b>0.494</b>	<b>0.473</b>	<b>-0.027</b>	<b>-5.2%</b>	<b>-0.021</b>	<b>-4.2%</b>

The above table calculates the school age population per household. Analysis of the school age population by household indicates that during the 1996 to 2001 Census period, the pre-school age population per household within the Moira School Group Review Area exhibited an 18.7% decline. The elementary population per household experienced an 8.4% decline and there was a 1.7% increase in the number of 14-17 year olds per household during 2001 to 2006.

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Approximately 548 new dwelling units were added to the number of occupied households between 1996 and 2006, wherein the pre-school age population decreased by 112 persons during the same period.

### **Historical Enrolment and Grade Structure (GSR):**

The following table summarizes elementary enrolment by grade, between 2001/02 and 2006/07, and for Review Area PE05. Further, the table indicates the change in enrolment by grade, both in absolute numbers and in terms of percentage change. During this time period the Moira School Group enrolment has declined from 1,440 in 2001/02 to 1,305 in 2006/07 or a decrease of 135 persons.

The change in Grade Structure Ratio (GSR) is shown for each year between 2001/02 and 2006/07. GSR measures the number of pupils entering the elementary system (JK-1) versus the number leaving the elementary system (Grades 6-8). A ratio of 1.5 is indicative of an equal number of pupils entering the system as those leaving the system (i.e. when the information is expressed as average daily enrolment). Further, a ratio of 1.5 in each year is an indicator of stable enrolment, whereas a value greater than 1.5 is indicative of increasing decline in enrolment. In PE05 the GSR decreases by 43% from 1.35 in 2001/02 to 1.93 in 2006/07, which is representative of the greatest shift away from stable enrolment within the Board's jurisdiction, despite the residential construction taking place and proposed south east of the City.

	<b>2001/ 2002</b>	<b>2002/ 2003</b>	<b>2003/ 2004</b>	<b>2004/ 2005</b>	<b>2005/ 2006</b>	<b>2006/ 2007</b>	<b>Change</b>	<b>% Change</b>
<b>JK</b>	64	66	54	61	63	52	-12	-18.8%
<b>SK</b>	73	71	83	64	71	67	-6	-8.2%
<b>1</b>	183	163	151	174	126	140	-43	-23.5%
<b>2</b>	164	181	148	151	157	127	-37	-22.6%
<b>3</b>	171	159	176	140	147	145	-26	-15.2%
<b>4</b>	190	177	161	178	142	144	-46	-24.2%
<b>5</b>	167	190	164	158	177	135	-32	-19.2%
<b>6</b>	170	169	195	156	155	164	-6	-3.5%
<b>7</b>	119	133	134	202	167	170	51	42.9%
<b>8</b>	141	122	137	145	197	164	23	16.3%
<b>SE</b>	0	0	0	0	0	0	n/a	n/a
<b>Total</b>	<b>1,440</b>	<b>1,429</b>	<b>1,399</b>	<b>1,425</b>	<b>1,399</b>	<b>1,305</b>	<b>-135</b>	<b>-9.4%</b>
<b>GSR</b>	<b>1.35</b>	<b>1.42</b>	<b>1.61</b>	<b>1.68</b>	<b>2.00</b>	<b>1.93</b>	<b>0.58</b>	<b>43.0%</b>

### Apportionment (HPEDSB AND ALCDSB):

The apportionment (i.e. the share of enrolment that each board receives) of historical elementary enrolment (expressed as average daily enrolment) between the HPEDSB and the co-terminous English language board ALCDSB, and in Review Area PE05, is shown below.

The information is based on where pupils attend school, rather than where they reside, but it does indicate that the Board's share of elementary enrolment has decreased by 0.5% since 2001/02, though it still accounts for 58% of the enrolment in this area. Changes in apportionment can have significant impacts on Board enrolment. An increase in Board apportionment can offset a potential decline in enrolment that would normally result from a decline in school age population.

	2001/ 2002	2002/ 2003	2003/ 2004	2004/ 2005	2005/ 2006	2006/ 2007
<b>HPEDSB Share</b>	58.8%	58.9%	58.4%	59.4%	59.5%	58.3%
<b>ALCDSB Share</b>	41.2%	41.1%	41.6%	40.6%	40.5%	41.7%

Note: May not add precisely due to rounding.

### **Projected Enrolment:**

Overall enrolment in this review area is expected to decrease by 90 pupil places from 1,262 in 2007/08 to 1,172 in 2020/21.

Only Queen Elizabeth School is expected have an increased number of pupils places by 2020/21 of 25 pupil places. All other schools that service this area are projected have declining enrolment.

### **Facility Utilization:**

Facility utilization represents the number of pupils (i.e. expressed as average daily enrolment (ADE)) over the number of permanent bricks and mortar spaces available to accommodate students, and expressed as the On-the-Ground capacity (i.e. OTG capacity). The following table provides information on current facility utilization and anticipated facility utilization, given projected student enrolments.

The following table provides information on current facility utilization and anticipated facility utilization, given projected student enrolments. Overall, the utilization for this review area is expected to 73.8% in 2007/08, by 2020/21 the utilization is expected to increase to 68.7% by 2020/21.

School Name/Program	2007/08 OTG	2007/08 ADE	% Utilization	2020/21 OTG	2020/21 ADE	% Utilization
<b>Belleville East of Moira River, South of CNR line</b>						
Queen Elizabeth School (Belleville) (JK-8)	259.0	263	101.4%	259.0	288	111.2%
Queen Victoria School (JK-6)	423.0	237	56.0%	423.0	193	45.6%
Harry J. Clarke PS (2-8)	529.0	518	97.9%	529.0	483	91.3%
Sir Winston Churchill School (JK-1)	251.0	99	39.4%	251.0	83	33.1%
<b>Deseronto</b>						
Deseronto PS (JK-8)	262.0	156	59.6%	262.0	137	52.3%
<b>Review Area Totals</b>	<b>1,724.0</b>	<b>1,273</b>	<b>73.8%</b>	<b>1,724.0</b>	<b>1,184</b>	<b>68.7%</b>
<b>Board (Elementary) Totals</b>	<b>12,766.0</b>	<b>10,208</b>	<b>79.9%</b>	<b>12,766.0</b>	<b>9,858</b>	<b>77.2%</b>

In fourteen years, it is expected that three of the five schools in PE05 will have utilization below the 80% threshold for top-up funding (i.e. top-up operations and facility renewal funding) purposes (although Deseronto PS carried a “rural” designation for funding purposes). This will impact on the Board’s ability to match grant funding sources to facility operations and renewal expenditure needs.

### **Facility Condition Assessment:**

The following provides a summary of facility renewal needs based on a Province-wide facility condition assessment undertaken in 2000 and more recent data provided by Board staff in respect of capital investments under the Province’s Stage I and Stage II facility renewal funding. Facility replacement value is based on the cost to replace the school, given the current Provincial funding benchmarks, and the lesser of the value based on facility size in square metres or the number of permanent pupil places (i.e. On-the-Ground capacity, or OTG).

The determination of existing and future facility condition is based on the assessment of facility renewal needs (e.g. roofs, windows, boilers, HVAC, plumbing, millwork, site amenities, etc.) divided into the deemed replacement value of the building.

All but two of the facilities in this review area are expected to exceed 75% of the replacement value within the next fourteen years.

<b>Name of School</b>	<b>Facility Replacement Value (lesser of sq m or OTG)</b>	<b>Facility Renewal Needs to 2006/07</b>	<b>Facility Renewal Index 2006/07</b>	<b>Facility Renewal Needs to 2016/17</b>	<b>Facility Renewal Index 2016/17</b>	<b>Facility Renewal Needs to 2021/22</b>	<b>Facility Renewal Index 2021/22</b>
<b>Belleville East of Moira River, South of CNR line</b>							
Queen Elizabeth School (B) (JK-8)	\$3.88	\$2.12	54.6%	\$4.12	106.2%	\$4.66	120.1%
Queen Victoria School (JK-6)	\$6.45	\$1.29	20.0%	\$4.95	76.9%	\$6.25	97.0%
Harry J. Clarke PS (2-8)	\$7.71	\$1.30	16.9%	\$3.98	51.6%	\$4.71	61.1%
Sir Winston Churchill School (JK-1)	\$3.24	\$1.54	47.6%	\$2.32	71.5%	\$2.66	82.1%
<b>Deseronto</b>							
Deseronto PS (JK-8)	\$3.87	\$1.28	33.0%	\$2.23	57.7%	\$2.42	62.6%
<b>Review Area Totals</b>	<b>\$25.14</b>	<b>\$7.52</b>	<b>29.9%</b>	<b>\$17.60</b>	<b>70.0%</b>	<b>\$20.70</b>	<b>82.3%</b>
<b>Board (Elementary) Totals</b>	<b>\$191.08</b>	<b>\$70.42</b>	<b>36.9%</b>	<b>\$129.57</b>	<b>67.8%</b>	<b>\$152.74</b>	<b>79.9%</b>

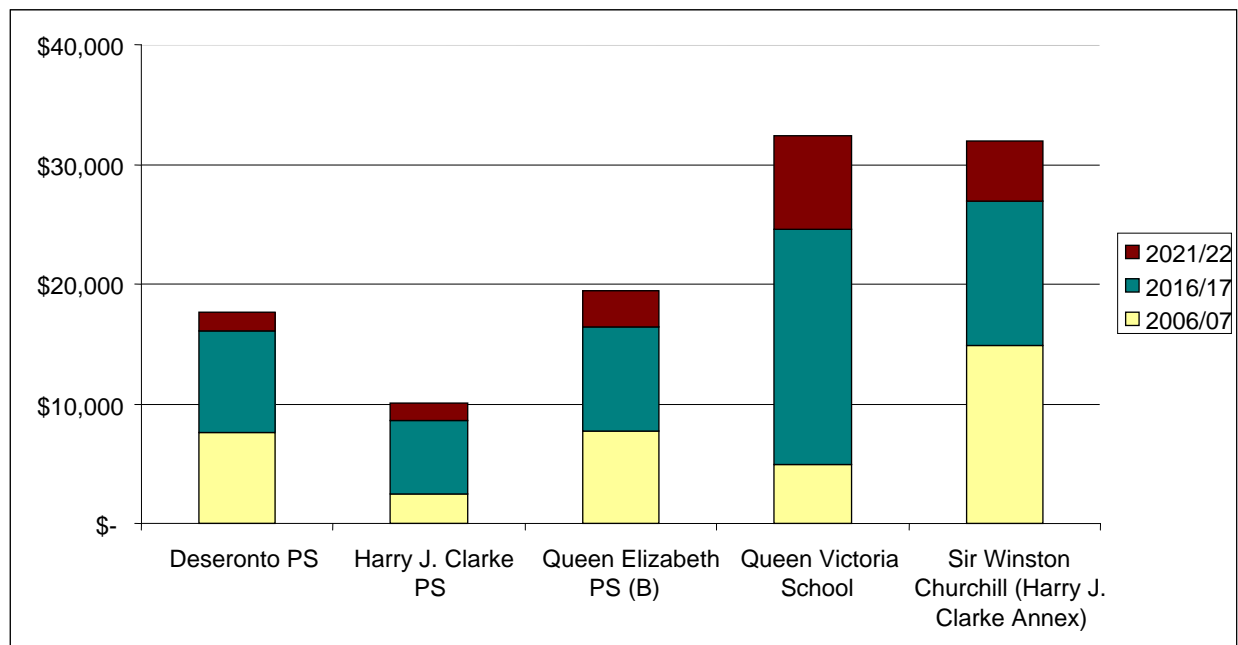
Total facility renewal needs for PE05 are expected to be approximately \$17.60 million, or 70.0% of facility replacement value by 2016/17 and \$20.70 million by 2021/22. Total renewal grant funding for this area amounts to \$207,404 annually based on existing grant funding structure and taking into consideration student enrolment per school. This figure is expected to fall to \$175,283 annually by 2021/22.

The following chart examines facility renewal needs per pupil place; that is, future renewal expenditure needs over projected enrolment (which is a key driver in a per pupil based funding

environment). While FCI, or Facility Condition Index, is an indicator of the backlog of unfunded facility renewal needs, longer term capital strategies pay more attention to how quickly a school facility reaches its facility replacement value. The following chart adds one additional element and addresses the extent to which the gap between school enrolment and its facility renewal needs are growing over time. This is known as the Facility Renewal Index per Pupil Place (FRIPP).

Queen Victoria School and Harry J Clarke Annex PS (Sir Winston Churchill) exhibits the highest increase in facility renewal needs over the next fourteen year. Following next are Queen Elizabeth School, Deseronto PS and Harry J Clarke PS. Harry J Clarke PS has the lowest cost in facility renewal needs measured against projected enrolment in this review area which is a function of renewal needs, size of facility and facility utilization.

**FACILITY RENEWAL NEEDS PER PUPIL PLACE**



**Program and Facility Recommendations:**

- Convert Moira SS to Grade 7-12 facility and redirect Grades 7 and 8 pupils from Queen Elizabeth School, Harry J Clarke PS and Deseronto PS to this facility. Retaining Moira SS as a Grade 9-12 facility would result in the facility utilization falling to 70% and would negatively impact the Board's ability to fund facility renewal and operating costs.

- Construct a 350 pupil place replacement facility at Queen Elizabeth and redirect Queen Victoria School JK-6 pupils to Queen Elizabeth School. This would create a pupil population large enough to allow a greater breadth of program.
- Consolidate Harry J Clarke PS and Harry J Clarke Annex at Harry J Clarke PS, as Harry J Clarke Annex School utilization is projected to decrease to 33% by 2021/22.
- Redirect JK-6 Deseronto PS to Tyendinaga PS in PE06.