Design, Construction and Retrofit Strategies												
Lighting	Quantity of Time that Measure will be in place (years)	201 Estimated Cost of Implementation	3-14 Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	4-15 Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	L5-16 Estimated Annual Energy Savings from all projects (ekWh)		Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	7-18 Estimated Annual Energy Savings from all projects (ekWh)	2013/14-2017/18 Estimated Total Accumulated Energy Savings (ekWh)
High Efficiency Lighting Systems (T-8, T-5, CFL, LED)	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ 25,000	24,691	24,691
Daylight Sensors	10	\$ -	-	\$ 10,000	14,815	\$ 10,000	14,815	\$ 10,000	14,815	\$ 10,000	14,815	148,148
Outdoor Lighting	15	\$ -	-	\$ 50,000	49,383	\$ 50,000	49,383	\$ 50,000	49,383	\$ 25,000	24,691	469,136
Occupancy Sensors	10	\$ -	-	\$ 25,000	37,037	\$ 25,000	37,037	\$ 25,000	37,037	\$ 25,000	37,037	370,370
Daylight Harvesting	10	\$ -	-	\$ -		\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	·	\$ -	-	\$ -	-		-	-
HVAC	Quantity of Time that Measure will be in place	Estimated Cost of Implementation	3-14 Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	4-15 Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	+	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	7-18 Estimated Annual Energy Savings from all projects (ekWh)	2013/14-2017/18 Estimated Total Accumulated Energy Savings (ekWh)
Efficient Boilers (near condensing)	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
High Efficiency Boilers (condensing)	15	\$ 950,000	2,467,292	\$ 500,000	1,298,575	\$ 700,000	1,818,005	\$ 650,000	1,688,147	\$ 775,000	2,012,791	28,373,860
High-efficiency boiler burners	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Geothermal	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Heat recovery/enthalpy wheels	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Economizers	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Energy efficient HVAC systems	30	\$ 500,000	79,165	\$ 500,000	79,165	\$ 350,000	55,415	\$ 450,000	71,248	\$ 425,000	67,290	1,088,516
Energy efficient Rooftop units	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
High Efficiency Domestic Hot Water	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Efficient Chillers and Controls	25	\$ -	-	\$ -	_	\$ -	-	\$ -	-	\$ -	_	-
High-efficiency motors	20	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	_	-
VFD	15	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Demand Ventilation	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Entrance Heater Controls	20	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-		-		-	-
, , , , , , , , , , , , , , , , , , , ,		201	3-14	201	4-15	2015-16		2016-17		2017-18		2013/14-2017/18
Controls	Quantity of Time that Measure will be in place	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Building Automation Systems - New	10	\$ 20,000	15,833	\$ 20,000	15,833	\$ 50,000	39,582	\$ 50,000	39,582	\$ 50,000	39,582	379,991
Building Automation Systems - Upgrade	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
		201	3-14	201	4-15	201	15-16	201	16-17	201	.7-18	2013/14-2017/18
Building Envelope	Quantity of Time that Measure will be in place	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Glazing	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Increased Wall Insulation	50	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
New Roof	25	\$ 740,000	68,850	\$ 500,000	46,520	\$ 500,000	46,520	\$ 500,000	46,520	\$ 500,000	46,520	809,453
New Windows	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Treatments	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Shading Devices	30	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Design, Construction and Retrofit Strategic	es Total	\$ 2,210,000	2,631,140	\$ 1,605,000	1,541,327	\$ 1,685,000	2,060,757	\$ 1,735,000	1,946,733	\$ 1,835,000	2,267,418	31,664,166

Operations and Maintenance S	trategies												
			2013-1		201	4-15	201	5-16	2016-17		201	.7-18	2013/14-2017/18
		Quantity of Time		Estimated Annual	Estimated Total								
Policy and Planning		that Measure will	Estimated Cost of	Energy Savings	Estimated Cost of	Energy Savings	Accumulated						
		be in place (years)	Implementation	from all projects	Energy Savings								
				(ekWh)	(ekWh)								
New school design/construction guideling	nes and specifications	5	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Day and Night Temperature Guidelines f	or all Schools	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Night time blackout of sites	Interior	10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Exterior		10	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Procures only Energy Star certified appli	ances	5	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Daylight Harvesting (servicing)		3	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Demand Ventilation (servicing)		3	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)			\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
			20:	13-14	201	4-15	201	5-16	201	6-17	201	.7-18	2013/14-2017/18
		Quantity of Time		Estimated Annual	Estimated Total								
Energy Audits		that Measure will	Estimated Cost of	Energy Savings	Estimated Cost of	Energy Savings	Accumulated						
		be in place	Implementation	from all projects	Energy Savings								
				(ekWh)	(ekWh)								
Walk Through Audit		5	\$ -	-	\$ 2,500	30	\$ -	-	\$ 2,500	30	\$ -	-	178
Engineering Audit		5	\$ -	-	\$ -	-	\$ 20,000	237	\$ -	-	\$ 20,000	237	950
Other (Describe)				-		-		-	_	-		-	-

		201	3-14	-14 2014-1		4-15 2015-16		2016-17		2017-18		2013/14-2017/18
	Quantity of Time		Estimated Annual	Estimated Total								
Real Time Monitoring	that Measure will	Estimated Cost of	Energy Savings	Estimated Cost of	Energy Savings	Estimated Cost of	Energy Savings	Estimated Cost of	Energy Savings	Estimated Cost of	Energy Savings	Accumulated
	be in place	Implementation	from all projects	Energy Savings								
			(ekWh)	(ekWh)								
Real-time energy data for operators to identify and diagnose												
building issues	5	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other (Describe)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-

Operations and Maintenance Strategies Total	\$ -	-	\$ 2,500	30	\$ 20,000	237	\$ 2,500	30	\$ 20,000	237	1,128

Occupant Behaviour Strategies												
	Quantity of Time	2013-14		2014-15		2015-16		2016-17		2017-18		2013/14-2017/18
Training and Education	that Measure will be in place (years)		Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	٠. ٠	Estimated Cost of Implementation		Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Building Operator Training	3	\$ 500	1,766	\$ 500	1,766	\$ 500	1,766	\$ 500	1,766	\$ 500	1,766	26,491
NRCan Benchmarking Program	5	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Building Automation Training (site specific)	3	\$ 1,000	10,597	\$ 1,000	10,597	\$ 1,000	10,597	\$ 1,000	10,597	\$ 1,000	10,597	158,949
Ongoing training and awareness programs for energy conservation	5	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Provide detailed information on Building Operational costs	1	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Provide detailed information on energy consumption (e.g. via the Utility Consumption Database or other database)	1	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Participate in environmental programs, such as EcoSchools, Earthcare	1	\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Other tools (Define)		\$ -	-	\$ -	-	\$ -	-	\$ -	-	\$ -	-	-
Occupant Behaviou	ır Strategies Total	\$ 1,500	12,363	\$ 1,500	12,363	\$ 1,500	12,363	\$ 1,500	12,363	\$ 1,500	12,363	185,440

Conservation Goal - LDSB

	FY2013
Total Building Area (includes portables) (m²)	131,359
Total Building Area (includes portables) (ft²)	1,413,983
Energy Consumption for the board (ekWh)	36,378,240

Enter from UCD - use square meters
Enter from UCD - use square feet
Enter from UCD

1 ft² = 0.0929 m²

	20:	13-14	20)14-15	2015-16		201	6-17	2017-18		2013/14-2017/18
	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost o	Estimated Annual f Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Cost of Implementation	Estimated Annual Energy Savings from all projects (ekWh)	Estimated Total Accumulated Energy Savings (ekWh)
Appendix B; Design, Construction and Retrofit Strategies Total	\$ 2,210,000	2,631,140	\$ 1,605,00	0 1,541,327	\$ 1,685,000	2,060,757	\$ 1,735,000	1,946,733	\$ 1,835,000	2,267,418	31,664,166
Appendix C; Operations and Maintenance Strategies Total	\$ -	0	\$ 2,50	30	\$ 20,000	237	\$ 2,500	30	\$ 20,000	237	1,128
Appendix D; Occupant Behaviour Strategies Total	\$ 1,500	12,363	\$ 1,50	12,363	\$ 1,500	12,363	\$ 1,500	12,363	\$ 1,500	12,363	185,440
TOTAL	\$ 2,211,500	2,643,503	\$ 1,609,00	1,553,720	\$ 1,706,500	2,073,358	\$ 1,739,000	1,959,125	\$ 1,856,500	2,280,018	31,850,734
Percentage reduction		7		4		6		5		6	17.51087129
Conservation Goal (ekWh/m²)		20.12		11.83		15.78		14.91		17.36	242.47
Conservation Goal (ekWh/ft²)]	1.869543732		1.098825137		1.466324476]	1.385536839]	1.612479683	22.525546