



West Vancouver, Canada

CASE STUDY

WEST VANCOUVER SCHOOLS

West Vancouver Schools, also known as School District 45 West Vancouver, is a school district in British Columbia with 17 Schools and 3 Administrative buildings. It is north of Vancouver and includes the Municipality of West Vancouver, the community of Lions Bay and Bowen Island.

CHALLENGE

The West Vancouver School District SD45 was constantly replacing their fluorescent lighting and energy costs were high. Teachers were even turning off and dimming lights as students complained about the classroom lighting. Radiance Energy conducted a detailed energy audit and analysis for 20 schools and buildings in their district. Radiance identified lighting and energy improvements and worked diligently with their management in realizing immediate energy savings while delivering the healthiest quality of light for their students and staff.

SOLUTION

Radiance Energy replaced high-flicker and high maintenance T8 and T12 tubes with high-efficient, ultra-low flicker LED tubes, downlights and area lighting. Immediately after the install, staff reported seeing a positive response from their students.

PROJECT SUMMARY

- 80% lighting energy cost savings after the first year
- Est. energy savings of 2 million kilowatt hours
- Significant reduction in flicker from 40% to < 3%
- Optimal learning environment for students & staff



ENERGY COSTS & SAVINGS ANALYSIS

For a comparable project that was completed at West Vancouver School District, we were able to save 80% in combined energy costs alone before maintenance for the entire district. Results from their hydro bill records as seen below:

SCHOOL ID	BC Hydro Bill		BC Hydro Bill		SAVINGS	% CHANGE	LIGHTING COSTS		% CHANGE of LIGHTING COSTS	
	YR 2017	YR 2018	YR 2018	YR 2017						
			*Radiance LED				* 65% of Total Bill = Lights			
3	\$	53,066.89	\$	24,122.32	\$	28,944.57	55%	\$	34,493.48	84%
10	\$	59,061.88	\$	23,473.75	\$	35,588.13	60%	\$	38,390.22	93%
15	\$	127,799.79	\$	59,224.57	\$	68,575.22	54%	\$	83,069.86	83%
19	\$	27,126.10	\$	16,555.58	\$	10,570.52	39%	\$	17,631.97	60%
20	\$	15,583.88	\$	6,742.65	\$	8,841.23	57%	\$	10,129.52	87%
25	\$	9,553.51	\$	5,202.38	\$	4,351.13	46%	\$	6,209.78	70%
30	\$	11,678.38	\$	6,354.68	\$	5,323.70	46%	\$	7,590.95	70%
35	\$	3,751.54	\$	2,102.93	\$	1,648.61	44%	\$	2,438.50	68%
40	\$	8,721.52	\$	3,985.62	\$	4,735.90	54%	\$	5,668.99	84%
45	\$	14,759.20	\$	6,084.09	\$	8,675.11	59%	\$	9,593.48	90%
55	\$	10,684.48	\$	6,807.24	\$	3,877.24	36%	\$	6,944.91	56%
60	\$	14,811.35	\$	8,090.89	\$	6,720.46	45%	\$	9,627.38	70%
62	\$	14,391.63	\$	8,832.67	\$	5,558.96	39%	\$	9,354.56	59%
65	\$	15,509.79	\$	7,316.08	\$	8,193.71	53%	\$	10,081.36	81%
70	\$	10,155.08	\$	3,828.02	\$	6,327.06	62%	\$	6,600.80	96%
75	\$	18,195.85	\$	8,639.75	\$	9,556.10	53%	\$	11,827.30	81%
80	\$	8,861.53	\$	3,680.44	\$	5,181.09	58%	\$	5,759.99	90%
95	\$	11,933.25	\$	6,840.37	\$	5,092.88	43%	\$	7,756.61	66%
TOTAL	\$	435,645.65	\$	207,884.03	\$	227,761.62	52%	\$	283,169.67	80%