

Life Cycle Cost Analysis Report
for
Floor Coverings in School Facilities Medium Traffic Areas
February 20, 2008

This analysis will compare the use Linoleum, VCT, Carpet, Terrazzo & Wood Flooring in medium traffic areas.

Reference or Area

The areas would include conference rooms, teacher offices, break areas, administrative offices and part-time classrooms.

General Information

The type of usage or traffic is based on: **Medium**

The base (start) date of the study is: **February 1, 2008**

The total number of years is: **30**

The real discount rate is: **3.00%**

The inflation rate for this analysis: **Constant Dollars - No Inflation**

The NET discount rate used for this analysis: **3.00%**

The region used for labor and energy rates is: **National Average, United States**

Hours of Operation

Month	Hours per Day	Days per Week	Weeks per Month	Total Hours / Month
January	9	5	4	180
February	9	5	4	180
March	9	5	3.4	153
April	9	5	4.3	193.5
May	9	5	4	180
June	9	5	1	45
July				
August				
September	9	5	4	180
October	9	5	4.3	193.5
November	9	5	4	180
December	9	5	3	135

	Hours per Year	Days per Year	Weeks per Year	Months per Year
Per Year	1620	180	36	8.3

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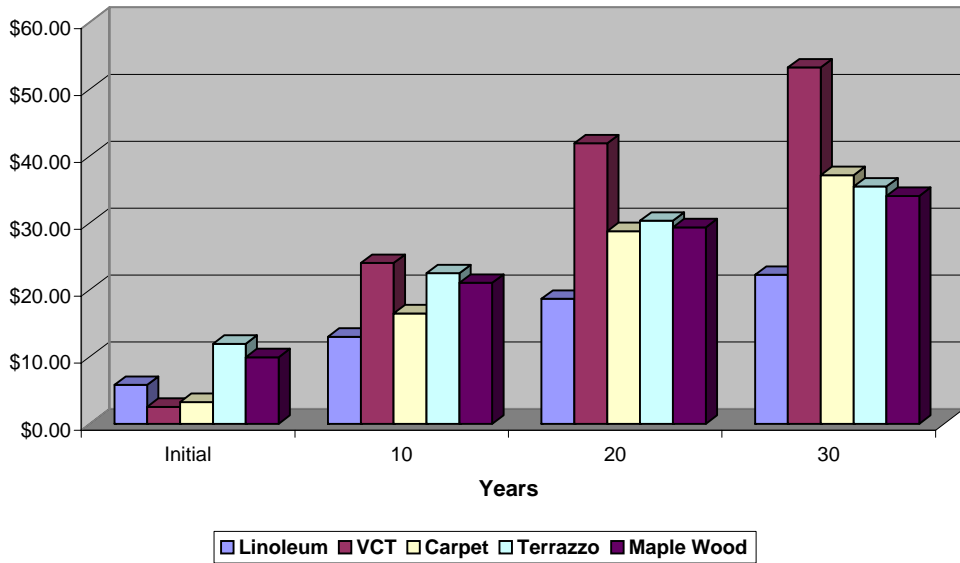
Analysis Chart

February 20, 2008

Selection 1	Selection 2	Selection 3	Selection 4	Selection 5
Linoleum	VCT	Carpet	Terrazzo	Maple Wood

Cumulative Life Cycle Cost Per Year

Initial	2008	\$5.80	\$2.52	\$3.26	\$11.95	\$9.94
10	2018	\$13.00	\$24.02	\$16.49	\$22.49	\$21.06
20	2028	\$18.66	\$41.91	\$28.78	\$30.33	\$29.35
30	2038	\$22.26	\$53.25	\$37.16	\$35.46	\$34.04



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Summary

February 20, 2008

	Selection 1	Selection 2	Selection 3	Selection 4	Selection 5
	Linoleum	VCT	Carpet	Terrazzo	Maple Wood
Quantity >	1	1	1	1	1
Initial Costs					
Initial Installation	\$5.80	\$2.52	\$3.26	\$11.95	\$9.94
Future Costs					
Full Replacement	\$0.00	\$3.29	\$7.33	\$0.00	\$0.00
Partial Replacement	\$1.39	\$0.49	\$1.01	\$0.71	\$1.61
Maintenance / OM&R	\$24.75	\$75.15	\$45.36	\$36.39	\$37.95
Energy & Water Costs	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Residual Value	-\$1.34	-\$1.38	-\$1.83	-\$1.71	-\$4.09
Subtotal - NOT Discounted	\$30.60	\$80.07	\$55.12	\$47.34	\$45.41
Total - (x Quantity)	\$30.60	\$80.07	\$55.12	\$47.34	\$45.41

Discounted Future Cost to Present Value

3.00% **Discount Rate**

0	2008	\$5.80	\$2.52	\$3.26	\$11.95	\$9.94
1	2009	\$6.60	\$4.95	\$4.73	\$13.13	\$11.17
2	2010	\$7.38	\$7.31	\$6.16	\$14.27	\$12.36
3	2011	\$8.13	\$9.60	\$7.54	\$15.38	\$13.52
4	2012	\$8.96	\$11.83	\$8.88	\$16.46	\$14.64
5	2013	\$9.67	\$13.99	\$10.36	\$17.51	\$15.73
6	2014	\$10.36	\$16.09	\$11.63	\$18.53	\$16.79
7	2015	\$11.03	\$18.13	\$12.86	\$19.52	\$18.15
8	2016	\$11.76	\$20.11	\$14.05	\$20.66	\$19.15
9	2017	\$12.39	\$22.16	\$15.21	\$21.59	\$20.12
10	2018	\$13.00	\$24.02	\$16.49	\$22.49	\$21.06
11	2019	\$13.60	\$25.83	\$17.58	\$23.37	\$21.97
12	2020	\$14.28	\$27.59	\$21.21	\$24.22	\$22.86
13	2021	\$15.04	\$29.30	\$22.24	\$25.05	\$23.72
14	2022	\$15.59	\$30.96	\$23.24	\$25.85	\$24.82
15	2023	\$16.12	\$32.57	\$24.21	\$26.63	\$25.63
16	2024	\$16.70	\$34.13	\$25.15	\$27.53	\$26.42
17	2025	\$17.20	\$35.65	\$26.19	\$28.26	\$27.19
18	2026	\$17.68	\$37.22	\$27.08	\$28.97	\$27.93
19	2027	\$18.15	\$40.52	\$27.94	\$29.66	\$28.65
20	2028	\$18.66	\$41.91	\$28.78	\$30.33	\$29.35
21	2029	\$19.10	\$43.26	\$29.59	\$30.98	\$30.25
22	2030	\$19.53	\$44.57	\$30.48	\$31.61	\$30.91
23	2031	\$19.95	\$45.84	\$31.25	\$32.22	\$31.55
24	2032	\$20.43	\$47.07	\$33.80	\$32.93	\$32.17
25	2033	\$20.82	\$48.27	\$34.52	\$33.51	\$32.77
26	2034	\$21.34	\$49.43	\$35.22	\$34.07	\$33.36
27	2035	\$21.71	\$50.56	\$35.90	\$34.62	\$33.93
28	2036	\$22.12	\$51.73	\$36.56	\$35.15	\$34.66
29	2037	\$22.47	\$52.79	\$37.29	\$35.66	\$35.20
30	2038	\$22.26	\$53.25	\$37.16	\$35.46	\$34.04

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	Selection 1	Selection 2	Selection 3	Selection 4	Selection 5
	Linoleum	VCT	Carpet	Terrazzo	Maple Wood
Quantity >	1	1	1	1	1

Capital Investment Cost Per Year

	0.00% Inflation Rate					
0	2008	\$5.80	\$2.52	\$3.26	\$11.95	\$9.94
1	2009	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2	2010	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
3	2011	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
4	2012	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
5	2013	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
6	2014	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
7	2015	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
8	2016	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
9	2017	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
10	2018	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
11	2019	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
12	2020	\$0.00	\$0.00	\$3.66	\$0.00	\$0.00
13	2021	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
14	2022	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
15	2023	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
16	2024	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
17	2025	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
18	2026	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
19	2027	\$0.00	\$3.29	\$0.00	\$0.00	\$0.00
20	2028	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
21	2029	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
22	2030	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
23	2031	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
24	2032	\$0.00	\$0.00	\$3.66	\$0.00	\$0.00
25	2033	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
26	2034	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
27	2035	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
28	2036	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
29	2037	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
30	2038	-\$1.34	-\$1.38	-\$1.83	-\$1.71	-\$4.09
TOTAL		\$4.46	\$4.42	\$8.75	\$10.24	\$5.84

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Floor Coverings in School Facilities Medium Traffic Areas

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	Linoleum	VCT	Carpet	Terrazzo	Maple Wood
Quantity >	1	1	1	1	1

Operating, Maintenance, Energy & Water Cost Per Year

	0.00% Inflation Rate					
0	2008	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
1	2009	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
2	2010	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
3	2011	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
4	2012	\$0.93	\$2.51	\$1.51	\$1.21	\$1.27
5	2013	\$0.83	\$2.51	\$1.71	\$1.21	\$1.27
6	2014	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
7	2015	\$0.83	\$2.51	\$1.51	\$1.21	\$1.67
8	2016	\$0.93	\$2.51	\$1.51	\$1.45	\$1.27
9	2017	\$0.83	\$2.67	\$1.51	\$1.21	\$1.27
10	2018	\$0.83	\$2.51	\$1.71	\$1.21	\$1.27
11	2019	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
12	2020	\$0.97	\$2.51	\$1.51	\$1.21	\$1.27
13	2021	\$1.11	\$2.51	\$1.51	\$1.21	\$1.27
14	2022	\$0.83	\$2.51	\$1.51	\$1.21	\$1.67
15	2023	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
16	2024	\$0.93	\$2.51	\$1.51	\$1.45	\$1.27
17	2025	\$0.83	\$2.51	\$1.71	\$1.21	\$1.27
18	2026	\$0.83	\$2.67	\$1.51	\$1.21	\$1.27
19	2027	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
20	2028	\$0.93	\$2.51	\$1.51	\$1.21	\$1.27
21	2029	\$0.83	\$2.51	\$1.51	\$1.21	\$1.67
22	2030	\$0.83	\$2.51	\$1.71	\$1.21	\$1.27
23	2031	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
24	2032	\$0.97	\$2.51	\$1.51	\$1.45	\$1.27
25	2033	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
26	2034	\$1.11	\$2.51	\$1.51	\$1.21	\$1.27
27	2035	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
28	2036	\$0.93	\$2.67	\$1.51	\$1.21	\$1.67
29	2037	\$0.83	\$2.51	\$1.71	\$1.21	\$1.27
30	2038	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
TOTAL		\$26.14	\$75.64	\$46.37	\$37.10	\$39.56

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	Selection 1	Selection 2	Selection 3	Selection 4	Selection 5
	Linoleum	VCT	Carpet	Terrazzo	Maple Wood
Quantity >	1	1	1	1	1

Total Sum of Cash Flow Per Year

	0.00% Inflation Rate					
0	2008	\$5.80	\$2.52	\$3.26	\$11.95	\$9.94
1	2009	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
2	2010	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
3	2011	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
4	2012	\$0.93	\$2.51	\$1.51	\$1.21	\$1.27
5	2013	\$0.83	\$2.51	\$1.71	\$1.21	\$1.27
6	2014	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
7	2015	\$0.83	\$2.51	\$1.51	\$1.21	\$1.67
8	2016	\$0.93	\$2.51	\$1.51	\$1.45	\$1.27
9	2017	\$0.83	\$2.67	\$1.51	\$1.21	\$1.27
10	2018	\$0.83	\$2.51	\$1.71	\$1.21	\$1.27
11	2019	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
12	2020	\$0.97	\$2.51	\$5.18	\$1.21	\$1.27
13	2021	\$1.11	\$2.51	\$1.51	\$1.21	\$1.27
14	2022	\$0.83	\$2.51	\$1.51	\$1.21	\$1.67
15	2023	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
16	2024	\$0.93	\$2.51	\$1.51	\$1.45	\$1.27
17	2025	\$0.83	\$2.51	\$1.71	\$1.21	\$1.27
18	2026	\$0.83	\$2.67	\$1.51	\$1.21	\$1.27
19	2027	\$0.83	\$5.79	\$1.51	\$1.21	\$1.27
20	2028	\$0.93	\$2.51	\$1.51	\$1.21	\$1.27
21	2029	\$0.83	\$2.51	\$1.51	\$1.21	\$1.67
22	2030	\$0.83	\$2.51	\$1.71	\$1.21	\$1.27
23	2031	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
24	2032	\$0.97	\$2.51	\$5.18	\$1.45	\$1.27
25	2033	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
26	2034	\$1.11	\$2.51	\$1.51	\$1.21	\$1.27
27	2035	\$0.83	\$2.51	\$1.51	\$1.21	\$1.27
28	2036	\$0.93	\$2.67	\$1.51	\$1.21	\$1.67
29	2037	\$0.83	\$2.51	\$1.71	\$1.21	\$1.27
30	2038	-\$0.51	\$1.12	-\$0.32	-\$0.49	-\$2.83
TOTAL		\$30.60	\$80.07	\$55.12	\$47.34	\$45.41

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Compiled Yearly Cost Report

February 20, 2008

Analysis Selection - 1

Description of Item: **Linoleum Flooring - Commercial Grade - Medium Duty**

Unit of Measure: **SQFT**

		Non-Annual Recurring Costs							
Year	Initial	Full Replacement	Non-Annual Maintenance	Maintenance OM&R	Energy & Water Cost	Total Per Year	Residual Value	Discounted Total	Cumulative Total
	2008	\$5.80				\$5.80		\$5.80	\$5.80
1	2009				\$0.83	\$0.83		\$0.80	\$6.60
2	2010				\$0.83	\$0.83		\$0.78	\$7.38
3	2011				\$0.83	\$0.83		\$0.75	\$8.13
4	2012		\$0.11	\$0.83		\$0.93		\$0.83	\$8.96
5	2013				\$0.83	\$0.83		\$0.71	\$9.67
6	2014				\$0.83	\$0.83		\$0.69	\$10.36
7	2015				\$0.83	\$0.83		\$0.67	\$11.03
8	2016		\$0.11	\$0.83		\$0.93		\$0.73	\$11.76
9	2017				\$0.83	\$0.83		\$0.63	\$12.39
10	2018				\$0.83	\$0.83		\$0.61	\$13.00
11	2019				\$0.83	\$0.83		\$0.60	\$13.60
12	2020		\$0.14	\$0.83		\$0.97		\$0.68	\$14.28
13	2021		\$0.29	\$0.83		\$1.11		\$0.76	\$15.04
14	2022				\$0.83	\$0.83		\$0.55	\$15.59
15	2023				\$0.83	\$0.83		\$0.53	\$16.12
16	2024		\$0.11	\$0.83		\$0.93		\$0.58	\$16.70
17	2025				\$0.83	\$0.83		\$0.50	\$17.20
18	2026				\$0.83	\$0.83		\$0.48	\$17.68
19	2027				\$0.83	\$0.83		\$0.47	\$18.15
20	2028		\$0.11	\$0.83		\$0.93		\$0.51	\$18.66
21	2029				\$0.83	\$0.83		\$0.44	\$19.10
22	2030				\$0.83	\$0.83		\$0.43	\$19.53
23	2031				\$0.83	\$0.83		\$0.42	\$19.95
24	2032		\$0.14	\$0.83		\$0.97		\$0.48	\$20.43
25	2033				\$0.83	\$0.83		\$0.39	\$20.82
26	2034		\$0.29	\$0.83		\$1.11		\$0.52	\$21.34
27	2035				\$0.83	\$0.83		\$0.37	\$21.71
28	2036		\$0.11	\$0.83		\$0.93		\$0.41	\$22.12
29	2037				\$0.83	\$0.83		\$0.35	\$22.47
30	2038				\$0.83	\$0.83	-\$1.34	-\$0.21	\$22.26
	TOTALS	\$5.80		\$1.39	\$24.75	\$31.94	-\$1.34		\$22.26

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Compiled Yearly Cost Report

February 20, 2008

Analysis Selection - 2

Description of Item: **VCT - Solid Color - Medium Duty**

Unit of Measure: **SQFT**

		Non-Annual Recurring Costs									
Year	Initial	Full Replacement	Non-Annual Maintenance	Maintenance OM&R	Energy & Water Cost	Total Per Year	Residual Value	Discounted Total	Cumulative Total		
	2008	\$2.52						\$2.52	\$2.52	\$2.52	
1	2009				\$2.51	\$2.51		\$2.43	\$4.95		
2	2010				\$2.51	\$2.51		\$2.36	\$7.31		
3	2011				\$2.51	\$2.51		\$2.29	\$9.60		
4	2012				\$2.51	\$2.51		\$2.23	\$11.83		
5	2013				\$2.51	\$2.51		\$2.16	\$13.99		
6	2014				\$2.51	\$2.51		\$2.10	\$16.09		
7	2015				\$2.51	\$2.51		\$2.04	\$18.13		
8	2016				\$2.51	\$2.51		\$1.98	\$20.11		
9	2017			\$0.16	\$2.51	\$2.67		\$2.05	\$22.16		
10	2018				\$2.51	\$2.51		\$1.86	\$24.02		
11	2019				\$2.51	\$2.51		\$1.81	\$25.83		
12	2020				\$2.51	\$2.51		\$1.76	\$27.59		
13	2021				\$2.51	\$2.51		\$1.71	\$29.30		
14	2022				\$2.51	\$2.51		\$1.66	\$30.96		
15	2023				\$2.51	\$2.51		\$1.61	\$32.57		
16	2024				\$2.51	\$2.51		\$1.56	\$34.13		
17	2025				\$2.51	\$2.51		\$1.52	\$35.65		
18	2026			\$0.16	\$2.51	\$2.67		\$1.57	\$37.22		
19	2027		\$3.29		\$2.51	\$5.79		\$3.30	\$40.52		
20	2028				\$2.51	\$2.51		\$1.39	\$41.91		
21	2029				\$2.51	\$2.51		\$1.35	\$43.26		
22	2030				\$2.51	\$2.51		\$1.31	\$44.57		
23	2031				\$2.51	\$2.51		\$1.27	\$45.84		
24	2032				\$2.51	\$2.51		\$1.23	\$47.07		
25	2033				\$2.51	\$2.51		\$1.20	\$48.27		
26	2034				\$2.51	\$2.51		\$1.16	\$49.43		
27	2035				\$2.51	\$2.51		\$1.13	\$50.56		
28	2036			\$0.16	\$2.51	\$2.67		\$1.17	\$51.73		
29	2037				\$2.51	\$2.51		\$1.06	\$52.79		
30	2038				\$2.51	\$2.51	-\$1.38	\$0.46	\$53.25		
	TOTALS	\$2.52	\$3.29	\$0.49	\$75.15			\$81.45	-\$1.38		\$53.25

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Compiled Yearly Cost Report

February 20, 2008

Analysis Selection - 3

Description of Item: **Carpet - Medium Duty Commercial**

Unit of Measure: **SQFT**

		Non-Annual Recurring Costs							
Year	Initial	Full Replacement	Non-Annual Maintenance	Maintenance OM&R	Energy & Water Cost	Total Per Year	Residual Value	Discounted Total	Cumulative Total
	2008	\$3.26				\$3.26		\$3.26	\$3.26
1	2009				\$1.51	\$1.51		\$1.47	\$4.73
2	2010				\$1.51	\$1.51		\$1.43	\$6.16
3	2011				\$1.51	\$1.51		\$1.38	\$7.54
4	2012				\$1.51	\$1.51		\$1.34	\$8.88
5	2013			\$0.20	\$1.51	\$1.71		\$1.48	\$10.36
6	2014				\$1.51	\$1.51		\$1.27	\$11.63
7	2015				\$1.51	\$1.51		\$1.23	\$12.86
8	2016				\$1.51	\$1.51		\$1.19	\$14.05
9	2017				\$1.51	\$1.51		\$1.16	\$15.21
10	2018			\$0.20	\$1.51	\$1.71		\$1.28	\$16.49
11	2019				\$1.51	\$1.51		\$1.09	\$17.58
12	2020		\$3.66		\$1.51	\$5.18		\$3.63	\$21.21
13	2021				\$1.51	\$1.51		\$1.03	\$22.24
14	2022				\$1.51	\$1.51		\$1.00	\$23.24
15	2023				\$1.51	\$1.51		\$0.97	\$24.21
16	2024				\$1.51	\$1.51		\$0.94	\$25.15
17	2025			\$0.20	\$1.51	\$1.71		\$1.04	\$26.19
18	2026				\$1.51	\$1.51		\$0.89	\$27.08
19	2027				\$1.51	\$1.51		\$0.86	\$27.94
20	2028				\$1.51	\$1.51		\$0.84	\$28.78
21	2029				\$1.51	\$1.51		\$0.81	\$29.59
22	2030			\$0.20	\$1.51	\$1.71		\$0.89	\$30.48
23	2031				\$1.51	\$1.51		\$0.77	\$31.25
24	2032		\$3.66		\$1.51	\$5.18		\$2.55	\$33.80
25	2033				\$1.51	\$1.51		\$0.72	\$34.52
26	2034				\$1.51	\$1.51		\$0.70	\$35.22
27	2035				\$1.51	\$1.51		\$0.68	\$35.90
28	2036				\$1.51	\$1.51		\$0.66	\$36.56
29	2037			\$0.20	\$1.51	\$1.71		\$0.73	\$37.29
30	2038				\$1.51	\$1.51	-\$1.83	-\$0.13	\$37.16
	TOTALS	\$3.26	\$7.33	\$1.01	\$45.36	\$56.95	-\$1.83		\$37.16

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Compiled Yearly Cost Report

February 20, 2008

Analysis Selection - 4

Description of Item: **Terrazzo Floor - Epoxy Thin Set**

Unit of Measure: **SQFT**

		Non-Annual Recurring Costs							
Year	Initial	Full Replacement	Non-Annual Maintenance	Maintenance OM&R	Energy & Water Cost	Total Per Year	Residual Value	Discounted Total	Cumulative Total
	2008	\$11.95				\$11.95		\$11.95	\$11.95
1	2009			\$1.21		\$1.21		\$1.18	\$13.13
2	2010			\$1.21		\$1.21		\$1.14	\$14.27
3	2011			\$1.21		\$1.21		\$1.11	\$15.38
4	2012			\$1.21		\$1.21		\$1.08	\$16.46
5	2013			\$1.21		\$1.21		\$1.05	\$17.51
6	2014			\$1.21		\$1.21		\$1.02	\$18.53
7	2015			\$1.21		\$1.21		\$0.99	\$19.52
8	2016		\$0.24	\$1.21		\$1.45		\$1.14	\$20.66
9	2017			\$1.21		\$1.21		\$0.93	\$21.59
10	2018			\$1.21		\$1.21		\$0.90	\$22.49
11	2019			\$1.21		\$1.21		\$0.88	\$23.37
12	2020			\$1.21		\$1.21		\$0.85	\$24.22
13	2021			\$1.21		\$1.21		\$0.83	\$25.05
14	2022			\$1.21		\$1.21		\$0.80	\$25.85
15	2023			\$1.21		\$1.21		\$0.78	\$26.63
16	2024		\$0.24	\$1.21		\$1.45		\$0.90	\$27.53
17	2025			\$1.21		\$1.21		\$0.73	\$28.26
18	2026			\$1.21		\$1.21		\$0.71	\$28.97
19	2027			\$1.21		\$1.21		\$0.69	\$29.66
20	2028			\$1.21		\$1.21		\$0.67	\$30.33
21	2029			\$1.21		\$1.21		\$0.65	\$30.98
22	2030			\$1.21		\$1.21		\$0.63	\$31.61
23	2031			\$1.21		\$1.21		\$0.61	\$32.22
24	2032		\$0.24	\$1.21		\$1.45		\$0.71	\$32.93
25	2033			\$1.21		\$1.21		\$0.58	\$33.51
26	2034			\$1.21		\$1.21		\$0.56	\$34.07
27	2035			\$1.21		\$1.21		\$0.55	\$34.62
28	2036			\$1.21		\$1.21		\$0.53	\$35.15
29	2037			\$1.21		\$1.21		\$0.51	\$35.66
30	2038			\$1.21		\$1.21	-\$1.71	-\$0.20	\$35.46
	TOTALS	\$11.95	\$0.71	\$36.39		\$49.04	-\$1.71		\$35.46

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Compiled Yearly Cost Report

February 20, 2008

Analysis Selection - 5

Description of Item: **Maple Wood Flooring with Underlayment - Select Grade**

Unit of Measure: **SQFT**

		Non-Annual Recurring Costs							
Year	Initial	Full Replacement	Non-Annual Maintenance	Maintenance OM&R	Energy & Water Cost	Total Per Year	Residual Value	Discounted Total	Cumulative Total
	2008	\$9.94				\$9.94		\$9.94	\$9.94
1	2009				\$1.27	\$1.27		\$1.23	\$11.17
2	2010				\$1.27	\$1.27		\$1.19	\$12.36
3	2011				\$1.27	\$1.27		\$1.16	\$13.52
4	2012				\$1.27	\$1.27		\$1.12	\$14.64
5	2013				\$1.27	\$1.27		\$1.09	\$15.73
6	2014				\$1.27	\$1.27		\$1.06	\$16.79
7	2015			\$0.40	\$1.27	\$1.67		\$1.36	\$18.15
8	2016				\$1.27	\$1.27		\$1.00	\$19.15
9	2017				\$1.27	\$1.27		\$0.97	\$20.12
10	2018				\$1.27	\$1.27		\$0.94	\$21.06
11	2019				\$1.27	\$1.27		\$0.91	\$21.97
12	2020				\$1.27	\$1.27		\$0.89	\$22.86
13	2021				\$1.27	\$1.27		\$0.86	\$23.72
14	2022			\$0.40	\$1.27	\$1.67		\$1.10	\$24.82
15	2023				\$1.27	\$1.27		\$0.81	\$25.63
16	2024				\$1.27	\$1.27		\$0.79	\$26.42
17	2025				\$1.27	\$1.27		\$0.77	\$27.19
18	2026				\$1.27	\$1.27		\$0.74	\$27.93
19	2027				\$1.27	\$1.27		\$0.72	\$28.65
20	2028				\$1.27	\$1.27		\$0.70	\$29.35
21	2029			\$0.40	\$1.27	\$1.67		\$0.90	\$30.25
22	2030				\$1.27	\$1.27		\$0.66	\$30.91
23	2031				\$1.27	\$1.27		\$0.64	\$31.55
24	2032				\$1.27	\$1.27		\$0.62	\$32.17
25	2033				\$1.27	\$1.27		\$0.60	\$32.77
26	2034				\$1.27	\$1.27		\$0.59	\$33.36
27	2035				\$1.27	\$1.27		\$0.57	\$33.93
28	2036			\$0.40	\$1.27	\$1.67		\$0.73	\$34.66
29	2037				\$1.27	\$1.27		\$0.54	\$35.20
30	2038				\$1.27	\$1.27	-\$4.09	-\$1.16	\$34.04
	TOTALS	\$9.94		\$1.61	\$37.95		\$49.50	-\$4.09	\$34.04

Life Cycle Cost Analysis Report
for
Floor Coverings in School Facilities Medium Traffic Areas

Input Data

February 20, 2008

Analysis Selection - 1

Description of Item or System: **Linoleum Flooring - Commercial Grade - Medium Duty**

The unit of measure used for this analysis is: **SQFT**

The **Initial Installation Cost** consists of the following:

Description	U/M	Qty	Unit Price	Ext Price
Linoleum Flooring - Medium Duty	SQFT	1	\$5.799	\$5.799
TOTAL INITIAL INSTALLATION COST				\$5.799

The **General Maintenance Cost** is based on the following:

Description	U/M	Qty	Frequency (Times Per)		Unit Price
VCT / Resilient Floor Maintenance - Dust Mopping	SQFT	1	4	Weekly	\$0.004
VCT / Resilient Floor Maintenance - Wet Mopping	SQFT	1	2	Monthly	\$0.015

Non-Annual Maintenance / Partial Replacement Cost is based on the following:

Description	U/M	Qty	Occurs Every		Unit Price
Remove Flooring - Average	SQFT	0.05	96	Months	\$0.765
Linoleum Flooring - Medium Duty	SQFT	0.05	108	Months	\$5.799
VCT / Resilient Floor Maintenance - Scrub & Recoat	SQFT	1	30	Months	\$0.105

Complete Replacement Cost is based on the following:

Description	U/M	Qty	Replace Every		Unit Price
Remove Flooring - Average	SQFT	1	324	Months	\$0.765
Linoleum Flooring - Medium Duty	SQFT	1	324	Months	\$5.799

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Input Data

February 20, 2008

Analysis Selection - 2

Description of Item or System: **VCT - Solid Color - Medium Duty**

The unit of measure used for this analysis is: **SQFT**

The **Initial Installation Cost** consists of the following:

Description	U/M	Qty	Unit Price	Ext Price
VCT - Vinyl Composite Tile Flooring - Solid Color - Medium Duty	SQFT	1	\$2.521	\$2.521
TOTAL INITIAL INSTALLATION COST				\$2.521

The **General Maintenance Cost** is based on the following:

Description	U/M	Qty	Frequency (Times Per)		Unit Price
VCT / Resilient Floor Maintenance - Dust Mopping	SQFT	1	3	Weekly	\$0.004
VCT / Resilient Floor Maintenance - Wet Mopping	SQFT	1	2	Weekly	\$0.015
VCT / Resilient Floor Maintenance - Spray Buffing	SQFT	1	2	Monthly	\$0.029
VCT / Resilient Floor Maintenance - Scrub & Recoat	SQFT	1	2	Annually	\$0.105
VCT / Resilient Floor Maintenance - Strip & Refinish	SQFT	1	1	Annually	\$0.302

Non-Annual Maintenance / Partial Replacement Cost is based on the following:

Description	U/M	Qty	Occurs Every		Unit Price
Remove Vinyl Composition Tile (VCT)	SQFT	0.05	72	Months	\$0.765
VCT - Vinyl Composite Tile Flooring - Solid Color - Medium Duty	SQFT	0.05	72	Months	\$2.521

Complete Replacement Cost is based on the following:

Description	U/M	Qty	Replace Every		Unit Price
Remove Vinyl Composition Tile (VCT)	SQFT	1	156	Months	\$0.765
VCT - Vinyl Composite Tile Flooring - Solid Color - Medium Duty	SQFT	1	156	Months	\$2.521

Life Cycle Cost Analysis Report
for
Floor Coverings in School Facilities Medium Traffic Areas

Input Data

February 20, 2008

Analysis Selection - 3

Description of Item or System: **Carpet - Medium Duty Commercial**

The unit of measure used for this analysis is: **SQFT**

The **Initial Installation Cost** consists of the following:

Description	U/M	Qty	Unit Price	Ext Price
Carpet - Commercial Grade - Medium Duty	SQFT	1	\$2.617	\$2.617
Carpet Pad - Rebond (Bonded Urethane Foam) - Medium Duty (6 LB)	SQFT	1	\$0.638	\$0.638
TOTAL INITIAL INSTALLATION COST				\$3.255

The **General Maintenance Cost** is based on the following:

Description	U/M	Qty	Frequency (Times Per)		Unit Price
Carpet - Vacuuming	SQFT	1	3	Weekly	\$0.007
Carpet - Spot Removal	SQFT	1	2	Weekly	\$0.007
Carpet - Rinse Cleaning	SQFT	1	3	Annually	\$0.040
Carpet - Deep Cleaning	SQFT	1	2	Annually	\$0.066

Non-Annual Maintenance / Partial Replacement Cost is based on the following:

Description	U/M	Qty	Occurs Every		Unit Price
Remove Carpet	SQFT	0.05	5	Years	\$0.408
Carpet - Commercial Grade - Medium Duty	SQFT	0.05	5	Years	\$2.617
Carpet Pad - Rebond (Bonded Urethane Foam) - Medium Duty (6 LB)	SQFT	0.05	5	Years	\$0.638
Carpet - Adder for Small Areas	SQFT	0.05	5	Years	\$0.374

Life Cycle Cost Analysis Report
for
Floor Coverings in School Facilities Medium Traffic Areas

Input Data

February 20, 2008

Analysis Selection - 3

Carpet - Medium Duty Commercial

Complete Replacement Cost is based on the following:

Description	U/M	Qty	Replace Every		Unit Price
Remove Carpet	SQFT	1	96	Months	\$0.408
Carpet - Commercial Grade - Medium Duty	SQFT	1	96	Months	\$2.617
Carpet Pad - Rebond (Bonded Urethane Foam) - Medium Duty (6 LB)	SQFT	1	96	Months	\$0.638

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Input Data

February 20, 2008

Analysis Selection - 4

Description of Item or System: **Terrazzo Floor - Epoxy Thin Set**

The unit of measure used for this analysis is: **SQFT**

The **Initial Installation Cost** consists of the following:

Description	U/M	Qty	Unit Price	Ext Price
Terrazzo Floor - Epoxy Thin Set - Average Cost	SQFT	1	\$11.947	\$11.947
TOTAL INITIAL INSTALLATION COST				\$11.947

The **General Maintenance Cost** is based on the following:

Description	U/M	Qty	Frequency (Times Per)		Unit Price
Terrazzo Floor Maintenance - Dust Mopping	SQFT	1	3	Weekly	\$0.004
Terrazzo Floor Maintenance - Wet Mopping	SQFT	1	1	Weekly	\$0.015
Terrazzo Floor Maintenance - Spray Buffing	SQFT	1	1	Monthly	\$0.029

Non-Annual Maintenance / Partial Replacement Cost is based on the following:

Description	U/M	Qty	Occurs Every		Unit Price
Terrazzo Floor Maintenance - Spot Repair	SQFT	0.01	8	Years	\$23.543

Complete Replacement Cost is based on the following:

Description	U/M	Qty	Replace Every		Unit Price
Remove Terrazzo Floor	SQFT	1	35	Years	\$2.041
Terrazzo Floor - Epoxy Thin Set - Average Cost	SQFT	1	35	Years	\$11.947

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Input Data

February 20, 2008

Analysis Selection - 5

Description of Item or System: **Maple Wood Flooring with Underlayment - Select Grade**

The unit of measure used for this analysis is: **SQFT**

The **Initial Installation Cost** consists of the following:

Description	U/M	Qty	Unit Price	Ext Price
Wood Flooring - Underlayment - Premium	SQFT	1	\$1.059	\$1.059
Wood Strip Flooring - Unfinished Maple - Select Grade	SQFT	1	\$6.831	\$6.831
Wood Strip Flooring - Add for Sanding & 2 Coats of Finish	SQFT	1	\$2.046	\$2.05
TOTAL INITIAL INSTALLATION COST				\$9.936

The **General Maintenance Cost** is based on the following:

Description	U/M	Qty	Frequency (Times Per)		Unit Price
Wood Floor Maintenance - Dust Mopping	SQFT	1	4	Weekly	\$0.004
Wood Floor Maintenance - Wet Mopping	SQFT	1	3	Monthly	\$0.015
Wood Floor Maintenance - Wash & Wax	SQFT	1	3	Annually	\$0.105

Non-Annual Maintenance / Partial Replacement Cost is based on the following:

Description	U/M	Qty	Occurs Every		Unit Price
Wood Floor Maintenance - Strip & Refinish	SQFT	1	60	Months	\$0.403

Complete Replacement Cost is based on the following:

Description	U/M	Qty	Replace Every		Unit Price
Remove Wood Floor	SQFT	1	420	Months	\$1.021
Wood Flooring - Underlayment - Premium	SQFT	1	420	Months	\$1.059
Wood Strip Flooring - Unfinished Maple - Select Grade	SQFT	1	420	Months	\$6.831
Wood Strip Flooring - Add for Sanding & 2 Coats of Finish	SQFT	1	420	Months	\$2.046

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Annual Maintenance Worksheet

February 20, 2008

Analysis Selection - 1

Description of Item or System: **Linoleum Flooring - Commercial Grade - Medium Duty**

The **Annual General Maintenance Cost** is based on the following:

Description	U/M	Qty		Frequency				Times Per Year		Unit Price		Annual Cost	
VCT / Resilient Floor Maintenance - Dust Mopping	SQFT	1	x	4	x	36	Weeks	=	144	x	\$0.004	=	\$0.576
VCT / Resilient Floor Maintenance - Wet Mopping	SQFT	1	x	2	x	8.3	Months	=	16.6	x	\$0.015	=	\$0.249
			x		x			=		x		=	
TOTAL ANNUAL MAINTENANCE COST PER												SQFT	\$0.825

Analysis Selection - 2

Description of Item or System: **VCT - Solid Color - Medium Duty**

The **Annual General Maintenance Cost** is based on the following:

Description	U/M	Qty		Frequency				Times Per Year		Unit Price		Annual Cost	
VCT / Resilient Floor Maintenance - Dust Mopping	SQFT	1	x	3	x	36	Weeks	=	108	x	\$0.004	=	\$0.432
VCT / Resilient Floor Maintenance - Wet Mopping	SQFT	1	x	2	x	36	Weeks	=	72	x	\$0.015	=	\$1.080
VCT / Resilient Floor Maintenance - Spray Buffing	SQFT	1	x	2	x	8.3	Months	=	16.6	x	\$0.029	=	\$0.481
VCT / Resilient Floor Maintenance - Scrub & Recoat	SQFT	1	x	2	x	1	Annually	=	2	x	\$0.105	=	\$0.210
VCT / Resilient Floor Maintenance - Strip & Refinish	SQFT	1	x	1	x	1	Annually	=	1	x	\$0.302	=	\$0.302
			x		x			=		x		=	
TOTAL ANNUAL MAINTENANCE COST PER												SQFT	\$2.505

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Annual Maintenance Worksheet

February 20, 2008

Analysis Selection - 3

Description of Item or System: **Carpet - Medium Duty Commercial**

The **Annual General Maintenance Cost** is based on the following:

Description	U/M	Qty		Frequency				Times Per Year		Unit Price	Annual Cost		
Carpet - Vacuuming	SQFT	1	x	3	x	36	Weeks	=	108	x	\$0.007	=	\$0.756
Carpet - Spot Removal	SQFT	1	x	2	x	36	Weeks	=	72	x	\$0.007	=	\$0.504
Carpet - Rinse Cleaning	SQFT	1	x	3	x	1	Annually	=	3	x	\$0.040	=	\$0.120
Carpet - Deep Cleaning	SQFT	1	x	2	x	1	Annually	=	2	x	\$0.066	=	\$0.132
			x		x			=		x		=	
TOTAL ANNUAL MAINTENANCE COST PER											SQFT	\$1.512	

Analysis Selection - 4

Description of Item or System: **Terrazzo Floor - Epoxy Thin Set**

The **Annual General Maintenance Cost** is based on the following:

Description	U/M	Qty		Frequency				Times Per Year		Unit Price	Annual Cost		
Terrazzo Floor Maintenance - Dust Mopping	SQFT	1	x	3	x	36	Weeks	=	108	x	\$0.004	=	\$0.432
Terrazzo Floor Maintenance - Wet Mopping	SQFT	1	x	1	x	36	Weeks	=	36	x	\$0.015	=	\$0.540
Terrazzo Floor Maintenance - Spray Buffing	SQFT	1	x	1	x	8.3	Months	=	8.3	x	\$0.029	=	\$0.241
			x		x			=		x		=	
TOTAL ANNUAL MAINTENANCE COST PER											SQFT	\$1.213	

Analysis Selection - 5

Description of Item or System: **Maple Wood Flooring with Underlayment - Select Grade**

The **Annual General Maintenance Cost** is based on the following:

Description	U/M	Qty		Frequency				Times Per Year		Unit Price	Annual Cost		
Wood Floor Maintenance - Dust Mopping	SQFT	1	x	4	x	36	Weeks	=	144	x	\$0.004	=	\$0.576
Wood Floor Maintenance - Wet Mopping	SQFT	1	x	3	x	8.3	Months	=	24.9	x	\$0.015	=	\$0.374

Life Cycle Cost Analysis Report

for

Floor Coverings in School Facilities Medium Traffic Areas

Annual Maintenance Worksheet

February 20, 2008

Wood Floor Maintenance - Wash & Wax	SQFT	1	x	3	x	1	Annually	=	3	x	\$0.105	=	\$0.315
			x		x			=		x		=	
TOTAL ANNUAL MAINTENANCE COST PER												SQFT	\$1.265