

As consumers look toward more sustainable and durable products for their homes, it is common to consider the total cost of owning a product over the full life cycle of the building and not simply the initial product and installation costs. A Life Cycle Cost Analysis (LCCA) is a comprehensive economic assessment of such costs.

The following table provides data from an LCCA commissioned by the Tile Council of North America (TCNA). The third-party study compares 18 different flooring materials and provides the cost per year of owning each product.

When product, installation, maintenance, and replacement (if applicable) are factored in, the long-term cost of owning a floor covering product can be quite surprising.

For example, flooring materials such as Rigid Core LVT that have lower initial costs than many competing flooring types, often have a higher cost per year. As a result, the consumer spends considerably more in the long run.

LIFE CYCLE COSTS FOR FLOORING IN COMMERCIAL BUILDINGS

Material Type	Installation Cost ¹ (per sq. ft.)	Life Cycle Cost ² (per sq. ft.)	Estimated Useful Life	Cost Per Year ³ (per sq. ft.)
Quarry Tile	\$9.53	\$71.31	75 years	\$0.95
Ceramic Tile	\$11.03	\$72.81	75 years	\$0.97
Porcelain Tile	\$11.38	\$73.16	75 years	\$0.98
Solid Wood	\$8.92	\$75.78	75 years	\$1.01
Engineered Wood	\$7.92	\$78.76	25 years	\$1.05
Limestone	\$24.30	\$101.68	75 years	\$1.36
Travertine	\$24.30	\$101.68	75 years	\$1.36
Granite	\$26.65	\$102.69	75 years	\$1.37
Marble	\$26.65	\$104.03	75 years	\$1.39
Nylon Broadloom Carpet	\$5.86	\$125.41	5 years	\$1.67
LVF	\$4.56	\$131.66	15 years	\$1.76
Carpet Tile	\$5.25	\$132.57	5 years	\$1.77
Rigid Core	\$6.36	\$136.13	15 years	\$1.82
Epoxy Terrazzo	\$13.66	\$137.22	75 years	\$1.83
Laminate	\$8.49	\$138.45	20 years	\$1.85
Poured Epoxy	\$11.49	\$155.91	15 years	\$2.08
VCT	\$3.09	\$159.48	15 years	\$2.13
Sheet Vinyl	\$7.10	\$169.46	15 years	\$2.26

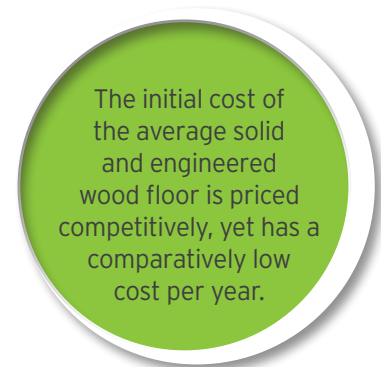


TABLE 1:

¹ Initial installation costs include the flooring material and installation labor costs.

² Life Cycle costs are expressed as net present values utilizing a real discount rate of 3%.

³ Costs per year are the life cycle costs divided by the estimated life of a commercial building (75 years).

But what happens to the long-term value of wood flooring when the initial cost is in the upper-middle or upper price range?

To find out, the National Wood Flooring Association (NWFA) worked with IPA Laboratories (TCNA's IAS accredited lab) to determine the life cycle costs of wood flooring with varying characteristics at higher price points.

This apples-to-apples approach allows the comparison of the long-term value of the wood flooring products in Table 2, with the 18 different flooring types in Table 1.

The results couldn't be better. The long-term value (cost per year) of both solid and engineered wood flooring, at all price points, remains in the top-tier of all flooring materials.



» View the complete TCNA/NWFA Life Cycle Cost Analysis Floor Coverings Comparison

LIFE CYCLE COSTS FOR WOOD FLOORING IN COMMERCIAL BUILDINGS AT VARIOUS PRICE POINTS

Initial Installation Cost (per sq. ft.)	Life Cycle Cost (per sq. ft.)	Estimated Useful Life	Cost Per Year (per sq. ft.)
Solid¹ and Engineered (twice-refinishable²) Wood Flooring			
\$15.00	\$81.86	75 years	\$1.09
\$20.00	\$86.86	75 years	\$1.16
\$25.00	\$91.86	75 years	\$1.22
Engineered (once-refinishable³) Wood Flooring			
\$15.00	\$83.70	50 years	\$1.12
\$20.00	\$89.57	50 years	\$1.19
\$25.00	\$95.43	50 years	\$1.27
Engineered (non-refinishable⁴) Wood Flooring			
\$15.00	\$90.83	25 years	\$1.21
\$20.00	\$99.36	25 years	\$1.32
\$25.00	\$107.89	25 years	\$1.44

TABLE 2:

¹ Traditional 3/4" thick solid wood flooring can last more than 100 years, well beyond the 75 year scope of the LCCA study.

² Twice-refinishable factory-finished engineered wood flooring products have wear layers ~3.2mm thick.

³ Once-refinishable factory-finished engineered wood flooring products have wear layers at least 2.5mm thick.

⁴ Non-refinishable factory-finished engineered wood flooring products have wear layers less than 2.5mm thick.