

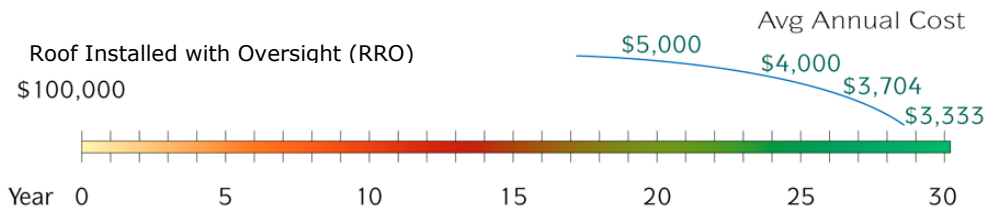
Asset Management for Roof Installations A Financial Overview

by Anthony de Kerf

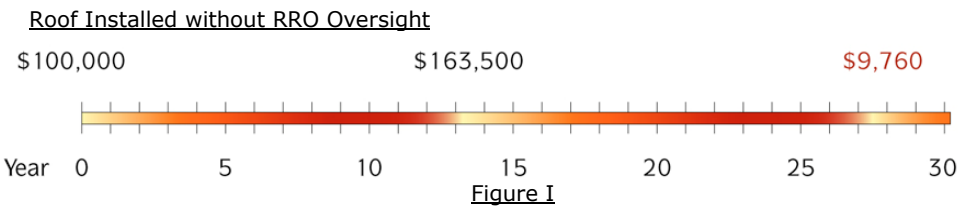
Commercial Roof Systems are recurring assets that offer different rates of return proportionate to the performance of each installation over time. Poorly performing roof systems increase annual maintenance expense in terms of manpower, repair cost and tenant interruptions.

Warranties generally activate upon “water intrusion” so it’s important to assure roof systems are installed properly to maximize the return on investment. The graphs below demonstrate how ROI is affected by installation oversight.

California roof systems have an average life-cycle of 13.5 years when installed without an on-site Registered Roof Observer (RRO). Compared, roof systems installed oversight has a Serviceable Life¹ of 25 to 30 years (top timeline).



Roof replacement 13.5 years in the future is currently estimated at \$163.5K (adjusted for inflation). Figure I illustrates the Total Cost of Ownership (without oversight)

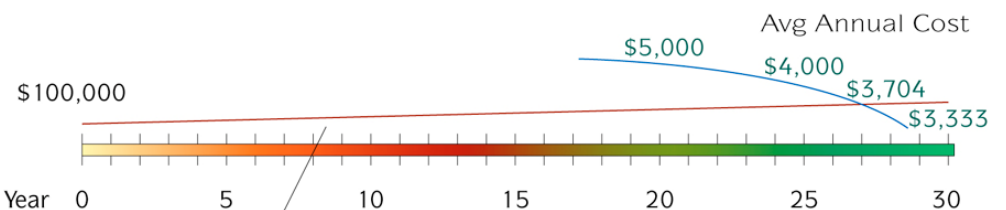


is \$263.5K for two similar roof systems. Over a 27 year period, the annual cost would be \$9,760 per year for a roof system that initially cost \$100K. The same roof installed with a Register Roof Observer Project Manager results in a longer life cycle reducing the annual cost of the roof system to \$4,000 or less per year.

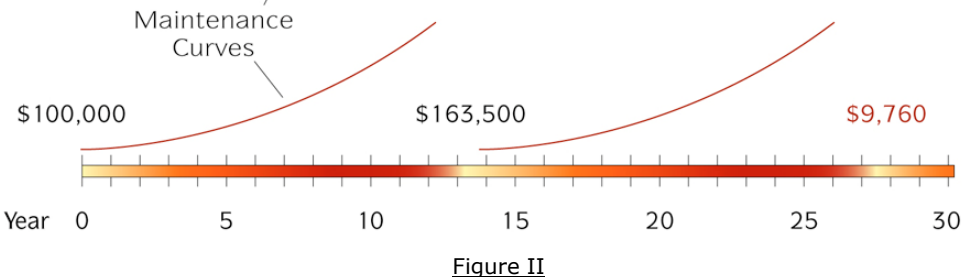
Annual Maintenance Requirements

Ancillary costs associated with lower quality workmanship affect overall asset values and annual cash flow.

As illustrated, repairs are directly proportionate to the quality of the roof installation (Figure II).



When the TCO is calculated for both installation and repair cost, the total expense of installing roof systems without an RRO can be more than \$350K over the 27 years – the calculation period.



Tenant Use

A buildings roof is the main protective layer between your business, tenants business and external elements. The proper performance² of a roof system means it must be installed correctly. As illustrated in figure III (maintenance curves), roof system failures have costly implications that affect immediate (short term) cash flows.

The impact is greater than out-of-pocket financial expenses though. Increased maintenance reduces disposable income but tenants need to be considered as well. Water intrusion affects tenant businesses with direct and indirect losses³ that can mount to well over \$10,000 for a 10 x 10 foot area of general office space. These numbers are exponentially higher for office space used by software developers and data centers.

Some tenants derive a majority of business from indoor winter activities as with Go-Carts in Portland, OR where there's an average 130 sunny days throughout the year. A tenant losing revenue as a result of water intrusion has significant incentives to relocate their business operations. The risk is greater when high vacancy rates motivate competing building owners to provide stimulus in attempts to secure Go-Carts next lease.

Asset Values & the Investment Agenda

Purchasing commercial property builds equity in an appreciable asset that offers tax advantages, income sheltering and cash flow. Investors purchase properties for different reasons but the acquisition of property is related to an appetite for earning profit.

Day to day, the return on investment evolve from elements of positive cash flow and asset appreciation. A focus on revenue from cash flow is short term and leads many to overlook obvious value based decisions. The point of sale or refinancing event is where advantages in appreciation take place.

Maintenance Cost Curves offer valuable insight into valuating assets during exchange and financing events. Buyers, insurance companies and banks all do their own due diligence reviews. If a property is being sold 12 years after the installation of a new roof system and it has a high degree of maintenance, the buyers' inspector will assess the current condition and forecast timing for next replacement.

Cost calculations to replace and/or zero time the roof will be feverishly negotiated with buyers requesting discounts equal to the inflated price of replacement. Based on Figure III, the buyer will be asking for a \$163K discount. In contrast, a high performance roof with a remaining serviceable life of fifteen years allow sellers to recuperate all of their original installation cost plus good will for low maintenance requirements and the resulting increase cash flow.

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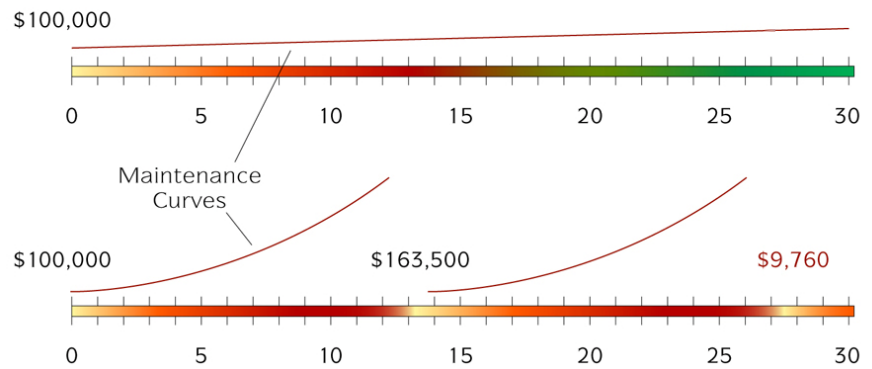


Figure III

¹ The current average calculated by CRS Roof Consultants is 24.5 years with the low at 23 yrs and high at 28 yrs.

² Best Practice Roofing Techniques & ROI, 2007 - CRS Roof Consultants Web Site, Project Management

³ The Cost of Water Intrusion, 2008 - CRS Roof Consultants, Dale Rowe & Anthony de Kerf