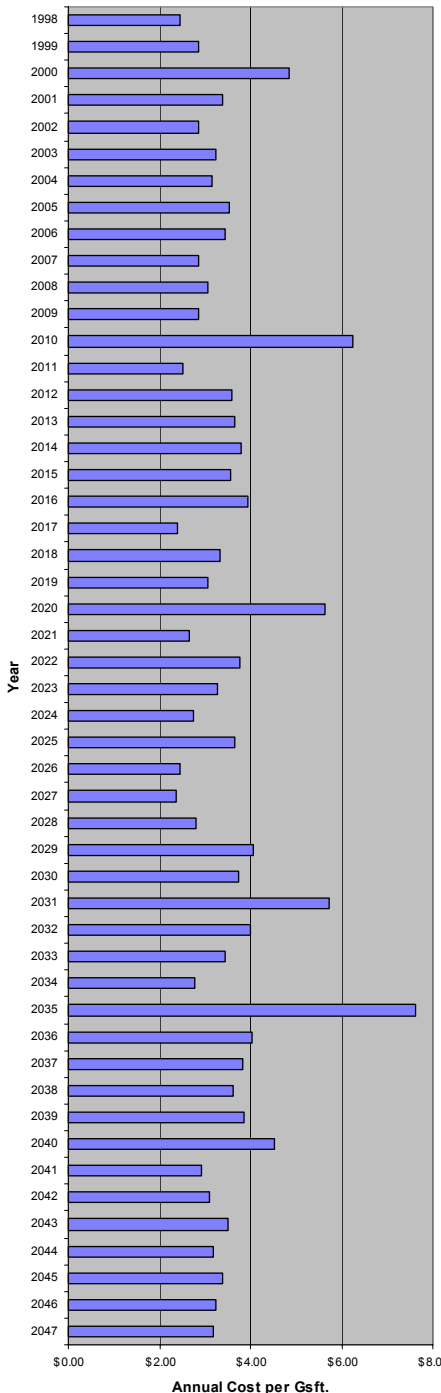


# ▶ Whitestone Report

## Defining M&R Funding Benchmarks for a California County Government

Chronic under funding of maintenance was leading to a large M&R backlog and serious erosion of building values for this county. New M&R funding guidelines were defined using the MARS Facility Maintenance Cost Forecast System, and presented to the Board of Supervisors. As a result of this presentation, a backlog reduction plan was funded and an increased annual budget was approved that met the new guidelines.

Facility 50-Year Cost Profile



For this study, M&R requirements were estimated for a 56-building inventory with 5.3 million square feet of space and an average of 30 years. Based on the life-cycle maintenance requirements of each building component, the model estimates were presented year-by-year for a 50-year planning period. This analysis showed the oscillations inherent in the demand for facility maintenance, specifically warning of peaks in demand around year 2000 (over \$5.00 per gross square foot, largely for painting) and year 2018 (over \$6.00 per foot, because of extensive pipe replacement).

### M&R Budget Requirements County Facility (56 Buildings), 1998-2047

	M&R Average Cost Forecasts			
	Current Year	5 Year	20 Year	50 Year
PM & Minor Repair:	\$8,402,617	\$8,114,624	\$8,359,185	\$8,296,247
Renewal & Replacement:	4,697,700	9,381,931	9,838,688	10,646,237
Total M&R Costs:	13,100,316	17,496,555	18,197,872	18,942,483
As % of replacement:	1.60%	2.13%	2.22%	2.31%
Per gsft:	\$2.46	\$3.29	\$3.42	\$3.56

\*All costs expressed in undiscounted \$98.

Estimates were also expressed as the simple ratios commonly used as benchmarks for M&R funding. For example, funding for the next five years should average \$3.29 per foot or 2.1 percent of building replacement value. Over the next 20 years the annual funding needed will rise slightly to an average \$3.42 per foot, or 2.2 percent.

And finally, a major repair backlog with a cost of \$60.7 million was identified for the facility. The backlog for each building was computed based on the major repair tasks that had gone undone beyond their scheduled occurrence. This backlog allowed the calculation of the *net* asset value of the county building inventory, and showed that county buildings were worth \$760 million--considerably less than their replacement value of \$871 million. Net asset value is equal to the current replacement value minus the major repair backlog.

### Key Assumptions

- Material and Labor costs, including in-house staff salaries and contract labor rates, were taken from the *Whitestone Building Maintenance and Repair Cost Reference 1998*; a markup rate of 2 on basic wages was used for calculating in-house shop rates.
- Preventive maintenance (PM) and minor repair tasks for most building components would be performed by in-house staff, while all renewal and replacement tasks would be performed using contract labor; MARS unscheduled maintenance multipliers were set at 5, so that approximately 80 percent of PM & minor repair costs were unscheduled.