MGB ACADEMY · JOB AID

Cost Basis & Economic Screening Worksheet

Order-of-magnitude cost, SIR, and the term screen — before it reaches a lender

MGBA-EA-JA-05 · Version 1.0 · Released at Segment 3

You are not producing contractor pricing. You are producing cost ranges credible enough that the relationship between savings and investment is visible to someone deciding whether to underwrite the scope. This worksheet does that, and screens each measure against the term limit before it reaches a lender.

Cost basis — what is expected

Precision	Order of magnitude, expressed as a range. A stated ±30% range is more useful than a false point estimate.
Sources	Published cost data, recent comparable projects in your own files, budgetary vendor quotes, or program cost libraries. Name which you used per measure.
Scope of the number	State whether the range includes design, permitting, controls integration, and contingency — or does not. The most common discrepancy between an audit cost and a contractor bid is a scope boundary, not a price.
Contingency	Carry it and disclose it. Ten to twenty percent is typical for retrofit work in occupied buildings.
What you exclude	Say so explicitly: hazardous material abatement, structural remediation, code-triggered upgrades, tenant disruption costs.

WHY THE RANGE MATTERS MORE THAN THE NUMBER

A measure that saves four thousand dollars a year and costs ninety thousand tells a different story than one that saves four thousand and costs twenty-two. The reviewer is not checking your arithmetic. They are checking whether the story your numbers tell is the story your recommendation assumes.

Per-measure economic screen

MEASURE	COST LOW	COST HIGH	SAVINGS / YR	LIFE	SIR	SCREEN RESULT

MEASURE	COST LOW	COST HIGH	SAVINGS / YR	LIFE	SIR	SCREEN RESULT
Package total				WAUL:		

Savings-to-investment ratio

SIR = (annual savings × useful life) ÷ total installed cost. Use the high end of your cost range and the conservative end of your savings range — if it clears at those values, it clears. State whether you have discounted future savings; if you have, name the discount rate.

WORKED EXAMPLE	MEASURE A	MEASURE B
Annual savings	$4,000	$4,000
Installed cost	$90,000	$22,000
Useful life	15 years	15 years
Lifetime savings (undiscounted)	$60,000	$60,000
SIR	0.67	2.73
Screen result	Below benchmark — do not carry as a standalone financed measure without documented rationale	Clears comfortably — carry as a package anchor

STATE THE BENCHMARK CORRECTLY

Economic benefit is the statutory standard under §67.2800 RSMo. An SIR of 1.0 or greater is the working underwriting benchmark used by MGB and across the market — industry best practice, not a statutory requirement. Write it that way in your report. Measures below 1.0 can still belong in a financed package where the package clears and the measure is required for the others to function; document that rationale rather than omitting the measure or inflating its savings.

Term screen — weighted average useful life

The assessment term may not exceed the weighted average useful life of the financed improvements, and in no case may it exceed twenty years. Run this before you propose a package, because a package that fails the term screen has to be re-cut — and it is cheaper to re-cut it at your desk than after a term sheet has been issued.

WAUL = Σ (measure cost × measure life) ÷ Σ (measure cost)

MEASURE	COST	USEFUL LIFE	COST × LIFE
LED retrofit with controls	$60,000	15 yr	$900,000
Rooftop unit replacement	$220,000	18 yr	$3,960,000

MEASURE	COST	USEFUL LIFE	COST × LIFE
Roof insulation and air sealing	$120,000	25 yr	$3,000,000
Totals	$400,000	—	$7,860,000
Weighted average useful life	$7,860,000 ÷ $400,000	=	19.65 years
Maximum term available	Lesser of WAUL and 20 years	=	19 years

The package effect

A fast-payback measure raises the package SIR and can carry slower, deeper measures that would not clear alone. A long-lived measure raises the weighted average useful life and can extend the available term. Those two levers pull against each other — lighting improves the ratio and shortens the life, envelope does the reverse. Cut the package deliberately with both in view, and show the owner the package economics rather than a list of measures each judged in isolation.

Missouri Green Banc
16305 Swingley Ridge Road, Suite 220, Chesterfield, MO 63017 · (866) 554-4083 · communications@missourigreenbanc.org
Markets set in motion. It all starts with collaboration.