Paver Base & Sand Planning Guide (FreeBuildTools)

Paver footprint

Original footprint = length × width (ft²).

Edge overbuild

Edge extension e applies to both sides of each dimension: adjusted length = L + 2e, adjusted width = W + 2e.

Adjusted area = (L + 2e) × (W + 2e). The overbuild is never added twice.

Installed vs loose volume

Installed (compacted) volume = adjusted area × depth (in) ÷ 12 (ft³).

Compaction allowance is separate: loose after compaction = installed × (1 + compaction %).

Waste allowance is separate: loose to order = loose after compaction × (1 + waste %).

Installed and loose volumes are always reported separately; compaction is applied only once.

Bedding sand

Bedding sand volume = paved area × bedding depth (in) ÷ 12 (ft³).

Waste allowance applies separately to bedding sand.

Optional joint sand

Joint sand is estimated only when paver length, paver width, joint width and joint depth are all supplied.

Approximation: area × joint depth (in) × joint width (in) × (1/paver length (in) + 1/paver width (in)) ÷ 12.

Keep bedding and joint sand quantities separate; never combine before package rounding.

Required joint-sand measurements

Paver length (in), paver width (in), joint width (in), joint depth (in), paved area (ft²).

Calculation example

S
V

P
1

B
4

I
1

B
1

Limitations

Compaction and waste percentages are planning allowances you control; not universal engineering formulas.

Results are purchasing estimates, not contractor quotes.