ROOF REPLACEMENT COST ESTIMATOR

Unlike other roof replacement general ('big picture') cost estimating tools, this estimator tool is a detail ('bottoms up') analysis that allows the owner to dig deep into the analysis of the cost estimate, compare it against contractor reroof cost estimate quote and assess the possible size of a contractor profit.

Use of the tool requires elementary understanding of using MicroSoft Excel spreadsheet. The spreadsheet is password protected and cannot be modified and only allows entry of information in the yellow boxes by the owner and printing of the sheets and report.

This detail analysis will allow the owner (a consumer) to be better informed and information which to perhaps negotiate a better roofing price.

While the tool is predominately used for asphalt shingle roofs, it can be used for other roofs by adjusting material prices.

Ideally two or more contractor cost estimate quotes are obtained which do two things:

1. Competition brings out better pricing to the consumer; and
2. Multiple quotes can be used and compared against this cost estimating tool to assess which contractor's profit potential is more competitive.

This estimating tool describes in detail:

- Material used and its cost (where costs are based on retail prices obtained from Big Box hardware stores, such as Lowes and Home Depot, plus an analysis of the range of probable contractor material cost discounts obtained from the contractor's wholesale supplier of material. Material costs increase some because of wastage (such as unused cut drip edge or shingles). Typically wholesale roofing supply companies do not sale to the public).
- Labor installation costs (which are affected by how many stories a building has, how steep the roof and ease of access); The estimating tool is based on the use of air gun nailers.
    - Some building codes may require hand nailing and prohibit the use of nail guns. This can add up to 20% higher labor cost to install hand nailed shingles.
- Other indirect costs such as contractor overhead costs, removed roof disposal cost and building permits
- Indicative range of possible contractor profit
    - It is believed the potential profit analysis is a conservative estimate and may actually be higher since the tool is based on discounted retail material price as compared to a lower discounted wholesale contractor material price

The estimating tool requires two types of information supplied by the owner:

1. Mandatory information that is required to run the estimating tool (noted with an "*"); and
2. **Optional input information which if not provided a default value is provided. (The more local information the owner can provide, the more accurate the cost estimate will be). The owner needs to make sure any optional cost information they input is based on the same per unit cost as defined in the spreadsheet (for instance, Drip Edge Unit cost is based on 10 foot lengths, Underlayment costs are based on 1000 square feet, etc.).**

Below are examples of the printed one page Roof Cost Estimator Report which summarizes:

- Roofing project location and description
- Material costs (after contractor material supplier discount including tax)
- Labor, overhead (indirect costs) and other costs (including tax)
- Total project cost estimate with profit (where profit potential is analyzed over a range of percentages: 15% to 30%)
- Range of project cost (lowest to highest)
- Range of project cost per square foot of roof (which can be used as a quick comparison between contractor cost quotes – the lower the better)
- Range of project cost per square (which can be used as a quick comparison between contractor cost quotes – the lower the better)
  - In the roofing trade, a square is equivalent to 100 square feet of roof area and often times the square footage of the roof surface area is converted to the equivalent number of squares (divide the area by 100) and the number of squares times a cost per square estimate, used to determine a quick roof cost estimate.

In addition to the one page cost estimate report summary, each sheet in the spreadsheet tool is divided into five (5) sections:

1. **Input**
   a. Information, both mandatory and optional, provided by the owner
2. **Cost Material**
   a. Automatically calculated material cost based on the input information
   b. There is one optional input box (noted in yellow) that the owner can adjust the overall material price up (+) or down (-), as may be required because of some unique feature of the roofing project that needs to take into account more or less cost
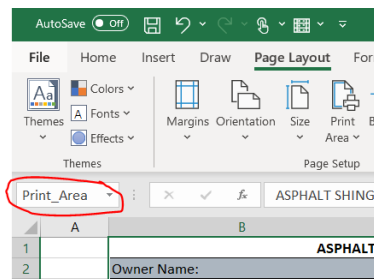3. **Cost Labor_Ovhd**
   a. Automatically calculated labor, overhead (indirect) and other costs based on the input information
4. **Profit Analysis**
   a. An analysis of possible range of contractor profit based on a range of profit from 15% to 30% of the project cost
5. **Cost Report**
   a. Automatic creation of the Roof Cost Estimator Report
   b. The report may be printed by using the spreadsheet drop down cell locator and selecting Print_Area (see below)

Then initiating the Print routine, the one page report is printed

Example cost estimating report…

ASPHALT SHINGLE ROOF COST ESTIMATOR REPORT				
Owner Name:	Owner			
Street Address, City, State, Zip	123	City	State	70000
Number stories:	3			
Square feet roof:	2400			
CONTRACTOR MATERIAL DISCOUNT	5%	10%	15%	
TOTAL MATERIAL COST AFTER DISCOUNT WITH TAX=	$5,243	$4,967	$4,691	
TOTAL LABOR AND OTHER COST AFTER TAX =	$3,121	$3,091	$3,061	
SUBTOTAL	$8,364	$8,058	$7,752	
Indicative profit %	15%	15%	15%	
TOTAL PROJECT COST WITH PROFIT =	$11,742	$9,267	$8,915	
Indicative profit %	20%	20%	20%	
TOTAL PROJECT COST WITH PROFIT =	$12,252	$9,670	$9,302	
Indicative profit %	30%	30%	30%	
TOTAL PROJECT COST WITH PROFIT =	$13,273	$10,475	$10,078	
Range of project cost:	$8,915	$13,273		
Range of project cost per square feet	$3.71	$5.53		
Range of project cost per square	$344	$512		

RANGE OF ESTIMATED ASPHALT SHINGLE ROOFING COST
MATERIAL + LABOR/OVERHEAD + PROFIT
(Includes: Contractor Material Discount From Supplier, 5% to 15%)
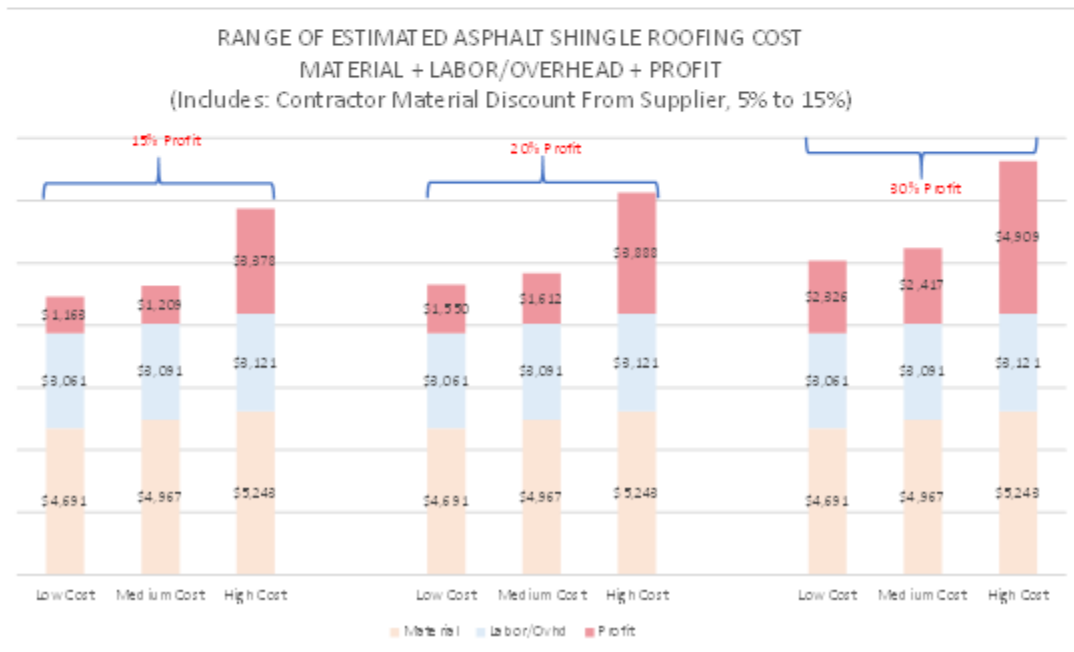
Input sheet content:

	A	B	C	D	E	F	G	H
1		ASHPALT SHINGLE ROOF COST ESTIMATOR	Mandatory Input Information					
2	*	Specifications:	Owner Input Information:					
3	*	Owner name:						
4		Address of roofing project:						
5	*	Street:						
6	*	City:						
7	*	State:						
8	*	Zip:						
9	*	Number stories (drop down selection) (Default to 1 if no selection)						
10		Google Aerial Map View Available (drop down selection):						
11								
12	*	Roof Area, Square Feet:						
13	*	Eave Length, Feet:						
14	*	Rake Length, Feet:						
15	*	Hip Length, Feet:						
16	*	Ridge Length, Feet:						
17	*	Valley Length, Feet:						
18	*	Chimney cricket required?: (Default to No if no selection)						
19	*	Number of rent vents / penetratons:						
20	*	Satellite dish? (Default to No if no selection)						
21	*	Underlayment type desired: (Default to synthetic if no selection)						
22	*	Ice/Water Barrier location: (Default to valley only if no selection)						
23	*	New Flashing For Walls/Abutements? (Default to no if no selection)			If Yes, Insert feet of new flashing=			
24	*	Percent Excess Material For Wastage: (Default to 8% if not selection)						
25								
26		Cost Information (adjust cost to match below measurement units:						
27			Optional Input Information	2021 Material Retail Cost Estimate (Lowes/Home Depot)				
28		Shingle cost per bundle, 33 square feet:		(Default to $33 if no input)				$33
29		Drip Edge Cost per 10 feet:		(Default to $3 if no input)				$3
30		Ice/Water Barrier per 66 feet:		(Default to $88 if no input)				$88
31		Underlayment, 1000 square feet:		(Default to $80 if no input)				$80
32		Ridge Vent, 25 foot length:		(Default to $60 if no input)				$60
33		Vent Flashing:		(Default to $30 if no input)				$30
34		Starter Shingle, per 120 feet:		(Default to $48 if no input)				$48
35		Ridge Cap Shingles, 4 feet		(Default to $10 if no input)				$10
36		Hip Cap Shingles, 4 feet		(Default to $10 if no input)				$10
37		Misc Flashing, 10 feet		(Default to $20 if no input)				$20
38		Sales Tax Rate:		(Default to 8.5% if no input)				8.5%
39		Number of Days To Complete Project:		(Default to 1 (11 hr day) if no input)				1
40		Miscellaneous Material: Nails, Sealant, Paint		(Default to $200 if no input)				$200
41		Number Of Roofers If Known:		(Default from 5 to 10 depending on No. stories, square foot of roof, if no input)				Lookup
42		Hourly Wage Rate of Roofers If Known:		(Default to $20/Hr, if no input)				$20
43								
44								

Input | Cost Material | Cost Labor_Ovhd | Profit Analysis | Cost Report | (+)

Cost Material sheet content

	A	B	C	D	E	F	G	H
1								
2		1 Square = 100 Square Feet						
3		Project Number of Squares:	0					
4								
5			Quantity		Cost			
6		Shingles:	0	square feet	$0			
7		Drip Edge:	0	feet	$0			
8		Ice/Water Barrier:	0	feet	$0			
9		Underlayment:	0	square feet	$0			
10		Ridge Vent:	0	feet	$0			
11		Ridge Cap Shingle:	0	feet	$0			
12		Hip Ridge Cap Shingle:	0	feet	$0			
13		Vent Flashing:	0	number	$0			
14		Starter Shingles, feet:	0	feet	$0			
15		Flashing Misc.:	0	feet	$0			
16		Misc. Material (Nails, Paint, Seal)	various	various	$0			
17		Miscellaneous				Miscellaneous cost adjustment (+ or -), at discretion of Owner		
18		TOTAL MATERIAL COST BEFORE TAX/ BEFORE CONTRACTOR DISCOUNT=			$0			
19		CONTRACTOR MATERIAL DISCOUNT	5%	10%	15%			
20		Discount	$0	$0	$0			
21		TOTAL MATERIAL COST BEFORE TAX/ AFTER CONTRACTOR DISCOUNT	$0	$0	$0			
22		TAX	$0	$0	$0			
23		TOTAL MATERIAL COST AFTER DISCOUNT WITH TAX=	$0	$0	$0			
24								
25								
26								
27								

Input | Cost Material | Cost Labor_Ovhd | Profit Analysis | Cost Report | (+)

Cost Labor_Ovhd sheet content

	A	B	C	D	E
1					
2		Number stories=	0		
3		Area of roof=	0		
4		Number of roofers=	#N/A		
5		Number of days to install roof (11hr/d) =	1		
6		Roofer hourly rate=	$20		
7		Roofer cost =	#N/A		
8					
9		Other cost			
10		Building Permit (square foot) =	$0		
11		Removed shingle disposal cost (landfill) =	$300		
12		Overhead rate =	10%		
13		Overhead cost (based on % of Total Material Cost After Discount With Tax) : Indirect cost to run a business including items such as insurance, advertising, office rent, utilities, transportation, management, legal, tax, accounting, depreciation of equipment, drone, business development, supervisor)	$0	$0	$0
14					
15		Total Labor and Other Cost Before Tax=	#N/A	#N/A	#N/A
16		Tax rate=	8.5%		
17		Tax =	#N/A	#N/A	#N/A
18		TOTAL LABOR AND OTHER COST AFTER TAX =	#N/A	#N/A	#N/A
19					
20					
21					
22					

Input | Cost Material | Cost Labor_Ovhd | Profit Analysis | Cost Report | (+)

Profit Analysis sheet content

	A	B	C	D	E	F	G	H	I	J	K
1											
2											
3		TOTAL MATERIAL COST AFTER DISCOUNT WITH TAX=	TOTAL LABOR AND OTHER COST AFTER TAX =	Total Material, Labor, Other Cost Before Profit		% Profit	Total Material, Labor, Other Cost With Profit	% Profit	Total Material, Labor, Other Cost With Profit	% Profit	Total Material, Labor, Other Cost With Profit
4		$0	$0	$0		15%	$0	20%	$0	30%	$0
5		$0	#N/A	#N/A		15%	#N/A	20%	#N/A	30%	#N/A
6		$0	#N/A	#N/A		15%	#N/A	20%	#N/A	30%	#N/A
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Input | Cost Material | Cost Labor_Ovhd | Profit Analysis | Cost Report | (+)

Cost Report sheet content

	A	B	C	D	E	F	G	H	I
1		ASPHALT SHINGLE ROOF COST ESTIMATOR REPORT							
2		Owner Name:	0						
3		Street Address, City, State, Zip	0	0	0	0			
4		Number stories:	0						
5		Square feet roof:	0						
6									
7		CONTRACTOR MATERIAL DISCOUNT	5%	10%	15%				
8		TOTAL MATERIAL COST AFTER DISCOUNT WITH TAX=	$0	$0	$0				
9		TOTAL LABOR AND OTHER COST AFTER TAX =	#N/A	#N/A	#N/A				
10		SUBTOTAL	#N/A	#N/A	#N/A				
11									
12		Indicative profit %	15%	15%	15%				
13		TOTAL PROJECT COST WITH PROFIT	$0	#N/A	#N/A				
14									
15		Indicative profit %	20%	20%	20%				
16		TOTAL PROJECT COST WITH PROFIT	$0	#N/A	#N/A				
17									
18		Indicative profit %	30%	30%	30%				
19		TOTAL PROJECT COST WITH PROFIT	$0	#N/A	#N/A				
20									
21		Range of project cost:	#N/A	$0					
22		Range of project cost per square feet	#N/A	#DIV/0!					
23		Range of project cost per square	#N/A	#DIV/0!					

RANGE OF ESTIMATED ASPHALT SHINGLE ROOFING COST
MATERIAL + LABOR/OVERHEAD + PROFIT
(Includes: Contractor Material Discount From Supplier, 5% to 15%)

15% Profit   20% Profit   30% Profit

$1
$1
$1
$1
$1
$1
$0
$0
$0
$0
$0

$0 $0 $0 $0 $0 $0 $0 $0 $0
Low Cost Medium Cost High Cost   Low Cost Medium Cost High Cost   Low Cost Medium Cost High Cost

Material   Labor/Ovhd   Profit

| Input | Cost Material | Cost Labor_Ovhd | Profit Analysis | **Cost Report** |

Common roof definitions…