C3 GROUP

ROOF FLASHING AND COMPONENTS

White Paper 2020

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Xactimate published price lists include many options for applying additional charges for high and steep roofing. The intention of these charges is to allow for lost labor productivity that is naturally experienced on roofs that are high and/or steep.

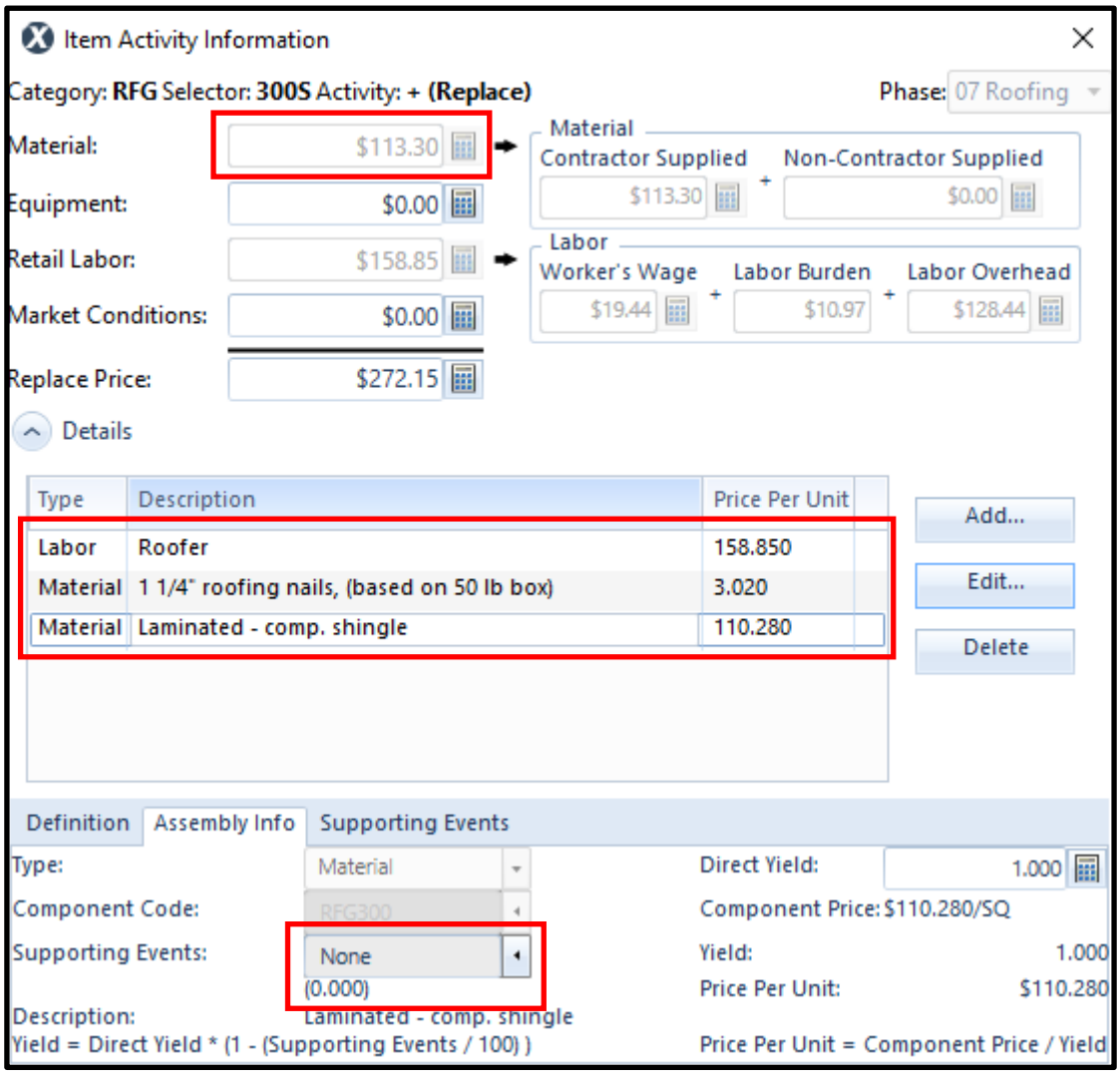


Figure 1: Showing material components of Xactimate line item 'RFG300S'.

In **Figure 1**, it is also important to note the 'Supporting Events' within the 'Assembly Info' tab, which indicates a '0.000' percent allocation is applied to the shingles themselves. This prompts a user to ensure an industry-standard waste factor is applied manually so that an adequate amount of materials are represented. This often ranges from 10-15% for gable and hip roofs, and sometimes more depending on complexity. However, this application of waste factor is intended for the shingles themselves, and does not allocate for hip, ridge, starter and flashing components. When applying a manual waste factor, an estimator is simply factoring each component included within the selected line item.

What Are My Options to Account for These Components?

Xactware outlines a number of methods to allocate for hip, ridge, starter and flashing components. First, a user can search published price list data and include each component separately, which accurately allocates for each component and their costs. As an alternative, Xactware states that "it is possible for estimators to choose to account for roofing accessories by using an increased waste factor percentage – a percentage that reflects more than just the shingle waste – or by modifying the line item pricing and descriptions to include these additional cost" (**Figure 2**). Unfortunately, most parties utilizing this option do not accurately quantify the percentage increase actually needed to account for such items.

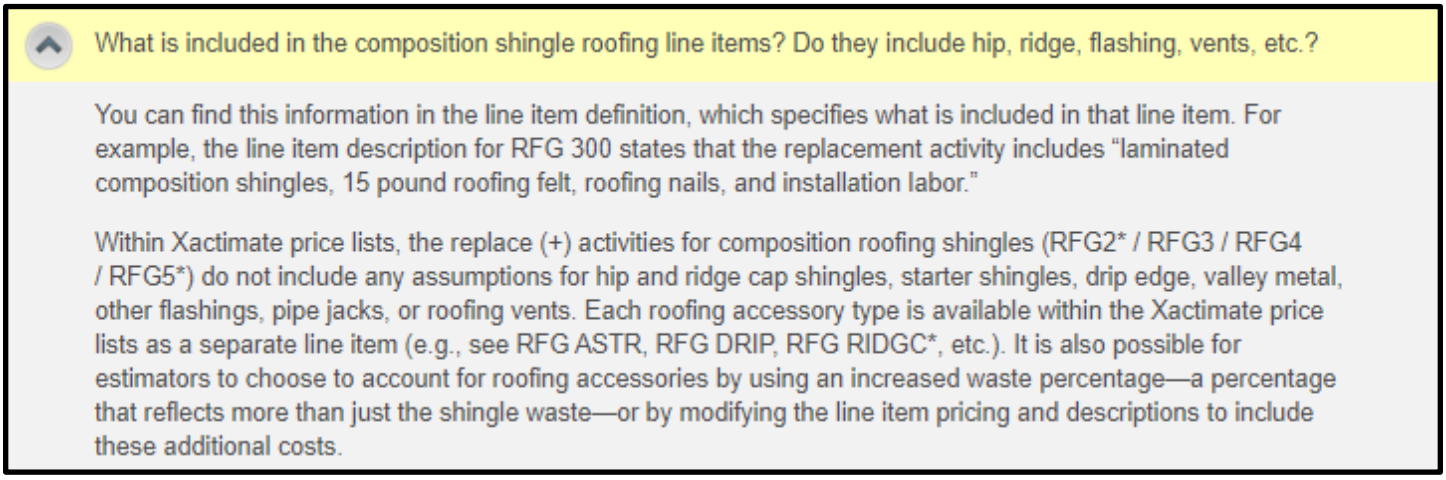
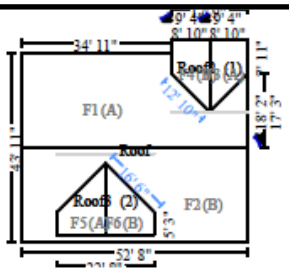


Figure 2: Showing Xactware's "Frequently Asked Questions about Xactware's Published Price Lists", outlining the various options for adding allocations for hip, ridge, flashing and vents. https://xactware.custhelp.com/app/answers/detail/a_id/2963

What Additional Waste Percentage is Needed to Cover These Costs?

Within **Figure 3**, a unit price of $272.15 per square is provided for the shingles, nails and labor components of the 'Laminated – comp. shingle rfg. – w/out felt' line item. It is also evident that a standard 10% waste factor has been applied manually, as the quantity listed is 27.67 squares – which has also taken into account bundle rounding – whereas the size of the roof is only 24.97 squares.



Roof

2497.19 Surface Area
244.09 Total Perimeter Length
24.97 Number of Squares
86.01 Total Ridge Length

DESCRIPTION	QUANTITY	UNIT PRICE	TAX	O&P	RCV	DEPREC.	ACV
1. Laminated - comp. shingle rfg. - w/out felt	27.67 SQ	272.15	250.80	1,556.24	9,337.43	(0.00)	9,337.43
2. Roofing felt - 30 lb.	21.55 SQ	46.02	21.84	202.70	1,216.27	(0.00)	1,216.27
3. Ice & water barrier	341.76 SF	2.25	10.39	155.88	935.23	(0.00)	935.23
4. Asphalt starter - universal starter course	244.09 LF	2.72	13.47	135.48	812.87	(0.00)	812.87
5. Ridge cap - Standard profile - composition shingles	86.01 LF	5.98	14.59	105.78	634.71	(0.00)	634.71
6. Step flashing	16.07 LF	11.97	1.75	38.84	232.95	(0.00)	232.95
7. Valley metal	58.67 LF	6.70	9.53	80.52	483.14	(0.00)	483.14
8. Drip edge	130.17 LF	2.85	7.71	75.74	454.43	(0.00)	454.43
9. Drip edge/gutter apron	113.92 LF	2.97	7.84	69.22	415.40	(0.00)	415.40
10. Aluminum sidewall/endwall flashing - mill finish	22.67 LF	7.17	4.88	33.48	200.90	(0.00)	200.90
11. Roof vent - turtle type - Metal	4.00 EA	71.48	4.97	58.18	349.07	(0.00)	349.07
12. Exhaust cap - through roof - 6" to 8"	2.00 EA	101.36	5.47	41.64	249.83	(0.00)	249.83
13. Flashing - pipe jack	3.00 EA	51.57	2.30	31.40	188.41	(0.00)	188.41
14. Furnace vent - rain cap and storm collar, 5"	1.00 EA	69.03	1.69	14.14	84.86	(0.00)	84.86
Totals: Roof			**357.23**	**2,599.24**	**15,595.50**	**0.00**	**15,595.50**
Total: Roofing			**357.23**	**2,599.24**	**15,595.50**	**0.00**	**15,595.50**

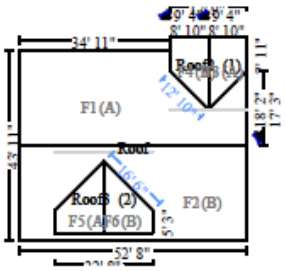
Figure 3: Showing the costs of a basic gable roof area, **including** shingles, ridge cap, starter, flashings and vents.

The gable roof example in **Figure 3** totals a replacement cost value of $15,595.50 when including for all components, but excluding any removal costs. Reviewing the totals for line items 4 - 14, one can determine the total dollar amount needed for ridge cap, starter, flashing and vents (**Figure 4**).

Item	Total Replacement Cost Total
Asphalt starter – universal starter course	$812.87
Ridge cap – standard profile – composition shingle	$634.71
Step flashing	$232.95
Valley metal	$483.14
Drip edge	$454.43
Drip edge/gutter apron	$415.40
Aluminum sidewall/endwall flashing	$200.90
Roof vent – turtle type - Metal	$349.07
Exhaust cap – through roof 6” to 8”	$249.83
Flashing – pipe jack	$188.41
Furnace vent – rain cap and storm collar, 5”	$84.86
Total	**$4,106.57**

Figure 4: Showing the total costs for starter, ridge cap, flashing and vent components.

The total replacement cost value allocated for all accessories is $4,106.57. Some estimators may opt to include for these costs by increasing the waste factor of the shingles beyond just the shingle waste. But just how much waste should be added for these items? In **Figure 5**, the amount for just the shingles and underlayment totals just $11,488.93, which also takes into account a 10% waste factor applied manually to the shingle line item. In order to accurately account for the additional $4,106.57 needed for all other accessories shown in **Figure 4,** an estimator would need to add an additional 49% waste factor to the shingle line item to maintain a similar replacement cost value (**Figure 6**).

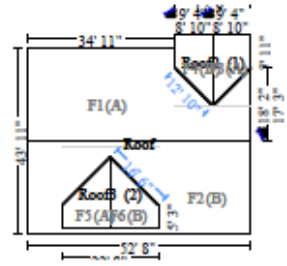


Roof

2497.19	Surface Area	24.97	Number of Squares
244.09	Total Perimeter Length	86.01	Total Ridge Length

DESCRIPTION	QUANTITY	UNIT PRICE	TAX	O&P	RCV	DEPREC.	ACV
1. Laminated - comp. shingle rfg. - w/out felt	27.67 SQ	272.15	250.80	1,556.24	9,337.43	(0.00)	9,337.43
2. Roofing felt - 30 lb.	21.55 SQ	46.02	21.84	202.70	1,216.27	(0.00)	1,216.27
3. Ice & water barrier	341.76 SF	2.25	10.39	155.88	935.23	(0.00)	935.23
Totals: Roof			**283.03**	**1,914.82**	**11,488.93**	**0.00**	**11,488.93**
Total: Roofing			**283.03**	**1,914.82**	**11,488.93**	**0.00**	**11,488.93**

Figure 5: Showing the costs of a basic gable roof estimate, **excluding** ridge cap, starter, flashings and vents.



Roof

2497.19	Surface Area	24.97	Number of Squares
244.09	Total Perimeter Length	86.01	Total Ridge Length

DESCRIPTION	QUANTITY	UNIT PRICE	TAX	O&P	RCV	DEPREC.	ACV
1. Laminated - comp. shingle rfg. - w/out felt	40.00 SQ	272.15	362.56	2,249.72	13,498.28	(0.00)	13,498.28
2. Roofing felt - 30 lb.	21.55 SQ	46.02	21.84	202.70	1,216.27	(0.00)	1,216.27
3. Ice & water barrier	341.76 SF	2.25	10.39	155.88	935.23	(0.00)	935.23
Totals: Roof			**394.79**	**2,608.30**	**15,649.78**	**0.00**	**15,649.78**
Total: Roofing			**394.79**	**2,608.30**	**15,649.78**	**0.00**	**15,649.78**

Figure 6: Showing a total 59% applied waste factor – accounting for 10% shingle waste and 49% additional to account for omitted ridge cap, starter, flashings and vent line items.

It is a common misperception that a standard waste factor percentage of 10-15% also covers the cost of accessories – such as ridge, hip, starter, flashing and vents. In reality, the percentage increase required to cover the cost of these accessories can exceed the industry-standard shingle waste factor by four to five times. Roof layouts of increased complexity – or roofs requiring material removal – even further increase the additional waste percentage required. If overlooked, these omissions can have dire consequences to contractors who have the intent of performing reliable, reputable and code-compliant reconstruction.

An estimator can account for roof accessory items by searching for each component separately within an applicable Xactimate price list and adding to their estimate. Alternatively, if an estimator opts to allow for accessory components by increasing the waste factor percentage, they should accurately quantify what those costs are, and manually apply the additional waste percentage necessary to cover such costs.

Ultimately, it is up to the estimator and the parties involved in a job to determine which items to use in an estimate, how they are applied, and the pricing.

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