

Aerialogics	EagleView	GeoEstimator	Roofers411	RoofWalk
\$49.95 – residential \$79.95 – commercial	\$20 - \$60 – residential \$25 - \$65 – commercial (priced by total squares)	\$26.35 - \$98.95, based on number of planes	\$49.95 flat rate	\$25.95 - \$98.95, based on number of planes
“As little as 2 hours.” No express service.	Memberships, from \$20 - \$30/year, reduce rates \$5/roof. Express delivery (3 hours or next-day) are \$30 - \$40 and \$20 - \$30 extra.	10% to \$25% discounts by purchasing discount plans based on use estimate.	Volume rate breaks at 50, 100, 500, and 1,000 roofs.	\$40 extra for 4-hour expedite. \$20 extra for 24-hour expedite. Discounts for multiple use.

Table 1

than the original tornado damage, and they were now scuttling around up there doing the measuring—both hazardly and haphazardly, it appeared to my less-than-experienced eye.

A few days later, in discussion with my insurance adjustor, I was informed that despite the belated attempts by the contractor to manually measure my roof, the insurance company had ordered an aerial roof report—in my case, by EagleView Technologies™. I'd heard of these reports; in fact, EagleView and one of its competitors, Aerialogics, displayed at RCI's trade show in Reno just a few weeks earlier, but I'd never

actually seen such a report. I imagine, however, that with the proliferation of violent wind events the U.S. experienced this spring, many home and business owners are being introduced to this relatively new marriage of global positioning system (GPS) and geographic information system (GIS) technology. (Remo Capolino, in an article in the February 2010 issue of *Interface*, also wrote about GPS technology for roof consulting.)

In polling a small number of building envelope consultants for this article, I discovered many had used these reports and found them to be an increasingly helpful

tool. Some of the other competing firms advertising online are GeoEstimator, Roofers411, and RoofWalk. Undoubtedly, there are others I have inadvertently overlooked.

The companies offering these aerial measurements are using satellite services from Digital Globe, Google Earth, and Pictometry GPS imagery. They are combining them with proprietary software that correlates the image size with the actual size and extrapolates total roof area; facets; predominant pitch; and linear feet of ridges, valleys, rakes, and eaves. Most reports show aerial photographs of the property

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before and after suspected damage from different angles and also provide diagrams with dimensions, pitches, and areas drawn and labeled.

The advantages touted by these companies include the following:

- The margin of error is reportedly “within two inches in most cases”¹ or “1% to 2%,”² just as good as manual measurement. The estimating department also no longer has to do the math.
- Cost is minimal (see *Table 1* for advertised rates as of June 1). There’s no need to send the troops out for a remeasure or pay for the gasoline to get them there.
- Turn-around is shortened (often dependent upon price but also subject to the provider’s current volume). One consultant noted, “Our orders are taking longer and longer to fill.” One provider notes, “We are experiencing extremely high volumes in roof report orders due to the recent storm activity...Standard orders will be processed within approximately 96 hours.”³
- Reports are not dependent upon current weather conditions.
- Safety is greatly enhanced—the less time a consultant, estimator, or contractor is on a potentially unstable roof without protective equipment (as is almost always the case during investigation), the safer he or she is. Also, the lower the risk of accidents, the lower the workmen’s compensation premiums.
- The full-color assessments make nice additions to customers’ roof reports. One company promotes the fact its reports are in MS Word format so that they can be cut and pasted into a company’s standard presentation.⁴ Others offer reports customized with the company’s logo, etc.
- The less traffic on the roof, the less possibility of further damage.
- It’s easy to use. All one need do is set up an account on a provider’s Web site, input the address of the subject building and the payment information, and the report will be e-mailed in the designated time. Sample reports may be viewed on all of the sites.

Some providers are offering additional products to their services, such as the following:

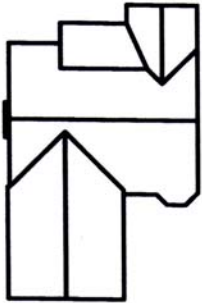
Report Summary

Below is a measurement summary using the values presented in this report.

Waste Calculation Table

Waste %	0%	7%	10%	12%	15%	17%	20%
Area (sq ft)	3,176	3,398	3,494	3,557	3,652	3,716	3,811
Squares	31.8	34.0	35.0	35.6	36.6	37.2	38.2

This table shows the total roof area and squares (rounded up to the nearest decimal) based upon different waste percentages. The waste factor is subject to the complexity of the roof, individual roofing techniques and your experience. Please consider this when calculating appropriate waste percentages. Note that only roof area is included in these waste calculations. Ridge, hip, valley, and starter lengths may require additional material.



Total Roof Facets = 9

Lengths, Areas and Pitches

Ridges = 108 ft (4 Ridges)
 There are no hips labeled.
 Valleys = 74 ft (5 Valleys)
 Rakes* = 169 ft (14 Rakes)
 Eaves/Starter** = 119 ft (10 Eaves)
 Drip Edge (Eaves + Rakes) = 288 ft (24 Lengths)
 There are no parapet walls labeled.
 Flashing = 1 ft (1 Lengths)
 Step flashing = 19 ft (5 Lengths)
 Total Area = 3,176 sq ft
 Predominant Pitch = 8/12

Property Location

Longitude = -78.5789110
 Latitude = 35.8197690

Notes

This was ordered as a residential property. It was reported to be a single structure. And, there were no changes to the structure in the past four years.

This summary was part of the author's EagleView report. The last line of the report (not included here) provides a link to the GoogleMaps image of the property.

- Solar analysis reports showing where PV panels should be installed on roof structures for maximum year-round energy production. These include azimuth, grid, and rafter length diagrams. At least one service⁵ also offers "shade analysis" capable of showing the cast of shadows from roof penetrations and adjacent building features upon the roof.
- Hail history data
- Report output in AutoCAD format
- Smart phone applications allowing ordering directly from the field
- Waste calculation tables
- Integration with estimating software

These technology tools appear to be a valuable asset for building envelope consultants, estimators, facility managers, contractors, and building owners. And just because a roofer decides to start his day early on a Saturday morning doesn't mean the occupant must.

REFERENCES

1. GeoEstimator
2. RoofWalk
3. Ibid.
4. Roofers411
5. Aerialogics

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Kris Ammerman has been the publications director for RCI and executive editor of *Interface* journal since 1996. Prior to that, she was an editor and researcher for FMI, Corp. in Raleigh, NC; managing editor of *The Wayne Independent*, a daily newspaper in northeastern Pennsylvania; and editor for the Evidence Photography International Council's technical journal. She has a BA in writing and Asian studies from the University of Arizona and is a published novelist.



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