



**BOLTON  
& MENK**

Real People. Real Solutions.

# UAS LIDAR

## PROFESSIONAL SURVEYORS ENSURE ACCURACY AND EFFICIENCY

Bolton & Menk recognizes the importance of investing in new technologies to help our clients save time and money. Our in-house professional surveyors and FAA Certified UAS pilots work side-by-side to ensure the most accurate data results using the latest technology—UAS LiDAR.

### How it Works

The UAS pilot collects aerial 3D data using a light detection and ranging (LiDAR) sensor integrated with a camera. Low altitude LiDAR data collections provide high-density data with multiple returns, delivering high accuracy ground terrain models. Aerial photography collected simultaneous to LiDAR is used to colorize LiDAR point clouds and can be processed into up to date, ortho-rectified base map imagery with spatial resolutions of roughly 1.5 inches.

Under direct supervision of a professional land surveyor, survey staff work with our UAS professionals to set a network of horizontal and vertical aerial control targets. Next, the LiDAR flight is performed, processed, and reviewed for quality and accuracy. The LiDAR data is then reduced to extract a digital terrain model and any topographic information required. Finally, the LiDAR extracted topographic data is reviewed using a set of independent survey established ground checks. Any supplemental data is collected using conventional survey methods to fill areas that might be obscured in the LiDAR data. LiDAR data can be imported into design software similar to traditional topo survey, and surfaces and TINs can be built from the dense and accurate point cloud.

### Benefits

- Collects upwards of a half-million measurements per second, providing high-density, high-accuracy data to offer a more representative 3D model of the project site in a fraction of the time
- Survey areas that are difficult to access or dangerous to humans
- Ability to penetrate and provide ground data through most vegetation
- In-house equipment and flight crews streamline scheduling and increase availability
- Data can be integrated into most established workflows and software
- Typical hard-surface, vertical accuracies of 0.1'-0.2'

### Why Bolton & Menk

Bolton & Menk understands the importance of training and technologies to ensure we are providing the best solutions for our clients. Our team of professional surveyors set the ground control and then work directly alongside an in-house FAA Certified UAS pilot to finish the project deliverables. Working with Bolton & Menk assures an integrated team of professionals covering the survey, UAS, and LiDAR pieces of the process.

#### CONTACT

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