

SURVEY GRADE BRIDGE SCAN IN UNDER 10 MINUTES

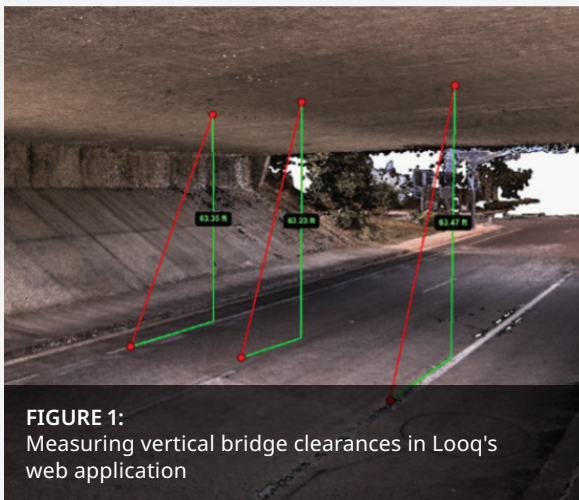


FIGURE 1:
Measuring vertical bridge clearances in Looq's web application

Acquiring field measurements of existing infrastructure can be a difficult process. Completing the job using standard surveying tools such as RTK or total stations is time consuming, requires exposing workers to high-traffic areas, and results in the collection of only a limited number of measurements and often, multiple site visits are required. Existing reality capture technologies can solve some of the problems, but these solutions often require high up-front costs, expert staff, and additional software for post-processing of data.

AJ Surveying Inc. (AJS) provides boundary, topographic, and construction surveying services throughout California. AJS was looking to gain a competitive advantage by utilizing emerging technologies in the field to update workflows. Their crew was tasked with performing a clearance check under a bridge in a highly trafficked area. They had to assess the vertical clearance at multiple locations underneath the bridge and sought to do this without putting any field workers in a potentially dangerous situation. This was the perfect opportunity to test Looq's new technology.

The company used Looq's proprietary imaging system for this bridge survey to evaluate whether it could provide results that are equal to or better than traditional surveying methods. AJS further wanted to assess whether Looq technology would allow them to deliver a higher-quality visual product while saving time and maintaining the accuracy required.

With Looq's hand-held camera system, AJS captured more than 120 million points measuring the road, curbs, medians, abutments, and the underside of the bridge in **under 10 minutes**. The Looq data was georeferenced using a set of ground control points (GCPs), while the accuracy was evaluated using additional checkpoints. The Looq data was found to be accurate within **0.05 feet horizontally and vertically**, which is well within the specification for the target application. Moving forward AJS will now be able to provide their well-known surveying expertise, along with Looq's inspection and visualization products, to their customers.

looq Technology Benefits

TIME SAVINGS

Crew was in the field for half a day instead of 3 full days
No need to revisit site, all necessary information captured

COST SAVINGS

Camera is 1/8 the price of terrestrial laser scanner
No need for multiple software packages
85% of field resources saved
Field work completed 100x faster

ADDED VALUE

Crew safety
No rework
3D model rendered quickly
Share and collaborate among stakeholders
Centimeter accuracy
High-quality visual products

“The use of this technology is a game-changer for us. It gives us the opportunity to capture a large amount of survey-grade data without drones or hours and hours of boots-on-the-ground labor.”

Amanda Jones, PLS
OWNER, AJ SURVEYING, LLC



FIGURE 2:
Collecting Ground Control Points

In addition to providing highly accurate survey data, Looq’s web-based data platform enables all project stakeholders to easily view, share, and interact with both the 3D model and raw imagery. Users can perform visual inspections, record measurements, extract classes, and export points, all within 24-hours of capturing the data. The Looq web application allows users to place points, specify a code, and download data for use in other software programs. Users can import survey control information and select corresponding points in the model to assess the accuracy of the dataset.



Looq	
Lidar Technology	
10 Minutes Field Time	
10 Minutes Manual Processing	
<24 Hours Turnaround Time	
Images	✓
Point Cloud	✓
Project Cost	\$500

TRADITIONAL

Total Station, RTK	
18 Hours Field Time	
2 Hours Manual Processing	
2+ Days Turnaround Time	
Images	✗
Point Cloud	✗
Project Cost	\$3,000



Looq technology allows users to save time and money on field collection, produce high-quality deliverables, and decrease safety hazards. Looq’s products increase productivity and decrease costs for surveying and geospatial professionals.