CUSTOMER CASE STUDY

Accurate Surveying & Mapping

ACCURATE
SURVEYING & MAPPING

Preserving Idaho's Pioneer Spirit with Hybrid-Capture Virtual Modeling.

Accurate Surveying & Mapping is a professional geospatial firm based in Boise, Idaho, dedicated to providing high-quality data for restoration, land development, and historical preservation. Led by Nathan J. Dang, PLS, the firm specializes in integrating advanced technology to deliver survey-grade precision for complex and remote projects.

In its historical preservation practice, the team creates digital twins that bridge the gap between historical significance and modern engineering requirements. These projects prioritize non-invasive, high-accuracy data collection to understand boundary lines and structural integrity without risking damage to fragile, century-old sites.

The Challenge: Remote Historical Documentation

The Soldier Townsite—a semi-occupied ghost town in Camas County, Idaho—presented a unique set of challenges. The client's goal was to understand boundary lines in relation to Goff's Hall, an Opera House built around 1907, to guide future restoration and development.

Traditional survey methods for such a remote and fragile site would have been slower and lacked the fine-grained detail required for precise restoration planning. The project required a solution that could capture both the broad site context and the intricate vertical details of the aging structure without physical impact.

A New Workflow: Ground-Based Hybrid Capture

Before adopting Looq AI, the firm relied on standard aerial methodologies. For the Soldier Townsite project, they evolved their process into an innovative hybrid-capture workflow that eliminated the need for a robotic total station:

- **Aerial Data (The "What"):** A DJI Mavic 3 Enterprise drone captured high-resolution photogrammetry of the entire townsite, providing a survey-grade base map of terrain, building footprints, and vegetation.
- **Ground Data (The "Wow"):** The Looq qCam was introduced to capture the fine details that aerial surveys often miss. The surveyor walked the building's perimeter, collecting sub-centimeter, photorealistic 3D data of the brickwork, wooden doors, and foundation.
- **GPS Control:** Javad LS System GPS was used for alignment and control, ensuring a balanced dataset that combined aerial coverage with terrestrial precision.

Despite external challenges—including a federal government shutdown that halted GPS coordinate conversion and a temporary server outage—the team utilized "old school" assumed coordinates to keep the project moving seamlessly.

Impact & Results

The integration of Looq into the surveying toolkit has significantly improved the depth of data available for restoration planners:

- **Exceptional Detail:** Looq captured intricate details of the 115-year-old building, even identifying a crumbling concrete foundation in need of repair that was previously undocumented.
- **Unified Intelligence:** By processing both aerial and Looq datasets within the Looq Platform, the team created the first-ever survey-grade digital twin of Goff's Hall.
- **Tangible Efficiency:** The field capture was remarkably fast, requiring only two 15-minute scans. Alignment was completed in approximately 10 minutes per scan.
- **Actionable Insights:** The resulting model allows historians and planners to monitor structural changes, erosion, and vegetation encroachment over time.

> ***This project showcases how Looq AI bridges historical preservation and modern surveying practice—honoring the past while equipping restoration teams for the future.***

Nathan J. Dang, PLS
Owner, Accurate Surveyng & Mapping

Outlook

For Accurate Surveying & Mapping, the Looq Platform has proven to be a vital tool for delivering richer, survey-grade datasets. The ability to perform high-precision photogrammetric mapping at ground level provides a distinct advantage for heritage documentation and site development. Looking forward, the firm sees this hybrid-capture approach as essential for finalizing datasets that blend cutting-edge technology with classic survey ingenuity.

Accurate Surveying & Mapping captured Idaho's first survey-grade digital twin of Goff's Hall in the remote Soldier Ghost Town. Using a hybrid drone, Looq qCam, and GPS workflow. This precise 3D model provides the foundational data needed for the landmark's long-term restoration and preservation. Image | Accurate Surveying & Mapping

Looq AI enables survey-grade 3D capture cost-effective at scale helping users safely and efficiently deliver spatial intelligence for the built world.

looq.ai

+1 888-209-4958 info@looq.ai Looq AI @looq-ai

San Diego, CA