

# Unmanned Aerial Systems (UAS)

Kleinfelder provides UAS, remote sensing, and predictive modeling using artificial intelligence (AI) for a variety of projects. Our staff has years of experience working with UAS systems and can select the right equipment to meet your data requirements.

## Equipment

- Various rotary-wing and fixed wing airframes with flight durations from 40-minutes to several hours
- High resolution cameras and HD video
- Upward looking cameras for flying under structures such as bridges
- Forward looking infrared cameras
- LiDAR systems
- Multi-spectral cameras
- RTK, PPK, and GNSS

## Services

- Infrastructure inspections
- Mapping using LiDAR or photogrammetry
- Digital terrain modeling (DTM) and digital surface modeling (DSM) with accuracy to 1-3cm
- Dams, levees, and roadway embankment analysis
- Incorporation of data into GIS and CAM/BIM etc.
- Reality capture/3D visualization
- Stockpile volumetrics, cut and fill measurement
- Thermal imaging, buildings, structures, pipelines, transformers, substations, and other electrical systems
- Biological and vegetation studies
- Video monitoring and documentation
- Construction site progress and Monitoring



## MEETING THE UNIQUE DATA NEEDS OF PROJECTS

We are system-agnostic, which means we don't have systems sitting on the shelf that we try to fit to every job. We have specialized system providers throughout the country; therefore, we can select the unique system and provider that best suits our clients' project needs. With extensive knowledge of the industry and a strong understanding of our clients' project requirements, we know exactly what information is needed. We select the right method to achieve the necessary Data Quality Objective (DQO), whether it's by UAS, ground-based sensors, manned aircraft, satellites, or a combination. We can do this while providing greater value, speed, accuracy, and safety than ever before.

## MANAGING AND ANALYZING THE DATA

Kleinfelder has the staff to analyze data generated from UAS systems and provide clear, accurate graphic representation and analysis of the data. Through our QA/QC process, we ensure the accuracy of the information and that it meets our clients' expectations. We know how to check and verify raw data so extraneous information is removed. Our clients benefit from our turnaround times, as we can usually provide draft data typically the same day it is collected. In addition, our engineers, scientists, and planners collaborate with clients to make sense of the data and assist in making the right decisions for their projects.

## START TO FINISH SERVICE

- Sensor selection and appropriate sensor and collection methods
- Data collection, validation and storage
- Analysis, graphic and numerical outputs in CAD/BIM and GIS that meet the data quality objectives
- Predictive modeling/consulting services to help you make the right decisions
- 100% compliant with FAA regulations
- Highest standards of safety

