

Small Unmanned Aircraft Systems (sUAS)



Overview

- FAA Certified Pilots
- Preliminary Engineering and Proposed Alignments
- 3D Point Cloud Models
- 3D DTM/TIN Surface Models for CAD and Geographic Information Systems (GIS)
- Construction Site Volumetrics and Earthwork Quantities
- Visual Pipeline and Utility Inspections
- Forensic Analysis Studies
- Vegetation and Habitat Studies
- Drainage Studies and Flood Analysis
- Structural Inspections for Bridges, Cell Towers, and Roof Solar Installations
- Documentation of Remote or Difficult to Access Locations
- Virtual Site Tours and Visualizations
- Emergency Safety Readiness and Assessments
- Marketing Images and Videos for Company and Public Events
- Cultural Resource Mapping for Historical Sites
- High Resolution/HD 360° Aerial Photography and Video

The combination of a well-established multi-disciplinary team of registered Structural, Civil, Mechanical, Electrical, and Automation Engineers along with licensed Land Surveyors means that you get more than a simple fly-over.

Our sUAS team works closely with our surveyors and engineers to fully integrate the data into usable and meaningful platforms.

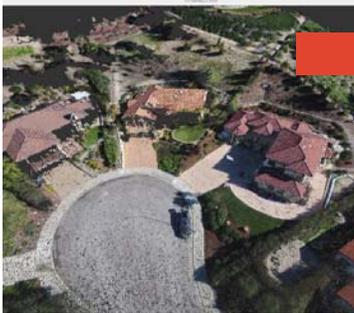
Projects



Surveying and sUAS Services for Agricultural Field

Ventura, California

Cannon was selected to map an 80-acre parcel following recent rains to assess damages from the overrun of an adjacent flood control channel. Due to rehabilitation efforts on the parcel, time was of the essence. In order to expedite services, Cannon used a combination of terrestrial 3D laser scanning, conventional ground surveying, and aerial imagery captured by sUAS mapping. This data was combined to create a singular 3D survey base map that was used to design improved flood control measures along the boundary of the parcel.



sUAS Mapping for Residential Neighborhood

Arroyo Grande, California

In order to analyze drainage issues within a residential neighborhood, Cannon was selected to gather aerial imagery and HD-quality aerial video via sUAS Mapping and perform a field topographic survey. The aerial photos, video fly around, and 3D terrain model exhibits were prepared to aid the property owner in presenting their case to the Home Owners Association, and the field topographic survey was used by a grading and drainage engineer for assessing the causes of the drainage and preparing design solutions to avoid further damage to the property.



Surveying and sUAS Mapping for Local Business

Pismo Beach, California

Due to safety concerns and project costs for manual inspection of an unsound structure, Cannon was selected to provide a preliminary structural inspection via sUAS mapping as an alternative solution. In addition, Cannon inspected and documented that drainage piping was installed per specifications in another location at the project site with the UAS; without the UAS, the procedure would have been highly dangerous as it would have required repelling from a cliff to view the entire length of pipe.



Laser Scanning and sUAS Mapping for Forensics Analysis

Los Angeles County, California

Southern California Gas Company selected Cannon to provide laser scanning and surveying services to acquire existing conditions mapping of a well site for forensic failure analysis. Using conventional, GPS, 3D Laser Scanning, and UAS survey methods to collect field data, Cannon processed and compiled the results into detailed AutoCAD Civil 3D drawings, exhibits, and digital terrain models showing precise (0.25') contours and 3D modeled visualizations of the post-event conditions of the structures and adjacent improvements within the site. The terrestrial data was complimented by geo-referenced digital aerial ortho-imagery obtained from sUAS mapping.