NORTHWIND SITE INVESTIGATION AND SURVEYING SERVICES

UAV SURVEYING CAPABILITIES

Northwind offers state-of-the-art unmanned aerial vehicle (UAV) surveying services as a highly efficient, dynamically superior alternative to traditional ground-based DGPS surveying. Our autonomous, fixed-wing UAVs capture millions of data points instantaneously during their pre-planned flights. Our surveyors are trained and highly skilled in programming and operating these machines, synthesizing and integrating captured data into specialized software applications to streamline data dissemination and utilization.

Northwind's UAV surveying approach offers an exponential increase in data quality at significant cost savings over traditional DGPS surveying. One 20-minute UAV flight collects data that would take years to collect using traditional surveying practices.

Northwind has performed extensive UAV surveys internationally and is authorized to export all related equipment.

The image above is not a photograph, but a 3D rendering comprised of millions of data points from our drone surveying system.

DGPS SURVEYING ENHANCEMENTS

Differential GPS (DGPS): has become a universal measurement system with a high capacity for positioning survey points on a very precise scale.

Robotic Total Station (more cost effective & accurate than standard total station)

Northwind's UAV operators upload freshly-captured data

UAV SYSTEM HIGHLIGHTS

- ★ Autonomous, pre-programmed flight
- ★ 20-50 minute flight times
- ★ Millions of data points collected
- ★ Accuracy within 1-2 cm
- ★ Data directly uploadable to diverse software
- ★ Significant cost savings over manual survey
- ★ Expert operators

GPR APPLICATIONS

Northwind's geotechnical site investigations include Ground Penetrating Radar (GPR) data collection and dissemination. Through this approach, we are able to provide our clients with quick and accurate information on a site's subsurface features.

Subsurface Feature Modeling
Cavity Detection
Groundwater Depth Detection
Utility Detection

To the right, Northwind's geotechnical investigation team collects GPR data in conjunction with DGPS.

UAV APPLICATIONS

Our UAVs are capable of carrying a variety of specialized payloads, enabling them to be used for a host of diverse tasks. Our team is always available to discuss how our UAVs can be used to benefit our clients' operations.

3D Modeling
Construction Progress Surveys
Thermal Pipeline Leak Detection
Vegetation Studies
Pipeline Surveys
Security Monitoring
Power Line Surveys
Volumetrics

DGPS APPLICATIONS

Engineering Surveys
Levels
Construction Stakeouts
Pipeline Alignments
Cross-sections
Road Alignments

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