Utility Engineering for Airports

We work with our aviation clients to develop cost-efficient and compliant solutions to support airport development and infrastructure management.

Airport improvement services include:
> Planning and design
> Signage and guidance services
> Utility location and relocation plans
> Mapping services
> Property surveys

In addition to having a founding governor and President of the ASCE Utility Engineering Surveying Institute in-house, we have co-authored ACRP Synthesis 34 “Subsurface Utility Engineering Information Management for Airports: A Synthesis of Airport Practice,” sponsored by the Federal Aviation Administration.

Reducing risk and delay claims
Our job is to help reduce uncertainties and keep your project moving forward. With decades of experience serving hundreds of clients, top notch equipment and processes, you can be confident that your project will be handled with the attention it deserves.

Our SUE expertise regularly leads to identification and documentation of previously unrecorded subsurface utilities, reducing the risk of potential project impacts.

Safety Managing Risk & Uncertainty
With decades of experience, top notch equipment, and firmly entrenched safety processes, you can be confident that we will mitigate impacts and reduce risk over the life of your project, providing a full range of services that minimize the opportunity for costly delays and unplanned expenses. Safety is a core value for Cardno. We are committed to continually improving our safety processes and to providing for the safety of the project site, staff, and the public.

At a Glance:

60+ AIRPORT CLIENTS

Airports are typically served by a network of underground utilities, and many have unreliable and/or incomplete subsurface utility data. As a result, utilities are often in conflict with infrastructure development, leading to high risk of damage.

Cardno has provided civil, survey, utility engineering, and construction inspection services for airports throughout the country. Our civil, site and UES services have included upgrades and improvements to existing facilities, taxiway improvements, and services for new terminals.
Cardno is a global provider of integrated professional services which enrich the physical and social environment for the communities in which we live and work. Our team of multidisciplinary specialists around the world has more than 70 years’ experience in designing, developing and delivering sustainable projects and community advancement programs. Cardno is listed on the Australian Securities Exchange (ASX: CDD).

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Comprehensive services
Cardno is a full service firm providing professional services in subsurface investigations, utility planning, design, utility relocation, and construction management. Our depth of experience and resources enables our professionals to provide clients with customized, cost-efficient solutions to meet all project needs.

Leading with technology
A wide range of equipment is necessary to detect the variety of subsurface utilities that may be present. We use the most appropriate technology for the project to increase the accuracy of the data, including:

> Stream EM, a multi-channel ground penetrating radar solution dedicated to utility locating and mapping.
> LiDAR scanning to generate precise, 3D information of the airport property and its operations.
> Concrete imaging GPR, advanced concrete scanning that detects and protects existing utilities and structural supports in concrete.
> FAA compliant GIS products and services of below ground and ground level Airport property and operations.

Staff and training
Cardno’s ongoing focus on staff training and advancement keep us at the forefront of the industry. Our UES field and office teams are highly-trained and specialized professionals are qualified to meet a broad range of client needs. All staff are required to meet rigid safety and industry training requirements as well as complete training that Cardno has developed to provide our teams with additional skills and technical knowledge.

Avoiding Impacts – Airport Examples
Damages to underground utilities during construction at airports have led to billion dollar impacts, disruption of travel to tens of thousands of people from flight cancellations, and complete airport closure, as well as the huge safety risks. Unfortunately, these incidents happen too often. Here are a few examples that could have been avoided by using SUE to locate underground utilities.

> **Newark Airport**: 24 hour closure after power line cut, caused $1B impact
> **Minneapolis-St. Paul International Airport**: Interruption of two parallel runways’ instrument landing systems
> **Colorado Springs Airport**: Fiber optic cable cut, caused the airline to switch to back-up communications systems
> **John Wayne Airport**: Gas line rupture, caused extensive traffic delays on the I-405 and 55 freeways
> **Baltimore-Washington International Airport**: Gas leak caused major traffic issue and led to evacuation of three piers

Leading the Utility Engineering & Surveying (UES) industry
We are proud to be a founding and sustaining member of the American Society of Civil Engineers’ (ASCE) Utility Engineering and Surveying Institute (UESI), whose mission is to advance the UES practice. Our experts lead the profession through speaking at industry conferences; developing standards and manuals of practice. We lead the industry by example. We develop professional practices that set the bar regarding the expectations for any SUE or survey investigation.

Charter Organization Member
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