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**COMPANY**PROFILE

Surveying Mapping 3D Technology



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# The Company

The Future in Construction, WorldWide.

Established in 1996, General Surveying (GSS) is a leading company with operational offices in Lebanon and Saudi Arabia, with unprecedent success in terms of Topography, Under Ground Utility Mapping (GPR), 3D Laser Scanning BIM, 3D documentation & visualization and capable to accurately deliver as-built engineering drawings.

GSS is an Authorized Distributor of the German 3D Laser Scanning FARO Technology in Lebanon, Saudi Arabia and Jordan



Our Clients are Architects, Civil Engineers, Real Estate Professionals, Urban Regional Planners, Municipalities, Developers, Landscape Designers, Various Industries, Private Landowners, Corporate Clients, Universities and Consultants.



# **About Us**

Our company has vigorously pursued a policy of building a highly professional and proficient infrastructure; recruiting experienced field staff and qualified management personnel from various countries, and purchasing "state-of-the-art" survey equipment and survey software – in order to meet all the needs of all clients.

Today, the company, with young and and professional management and a large pool of technically competent and widely experienced employees trained to the highest standard, is well-equipped and ready to offer a complete range of specialized survey services to the construction, civil and oil & gas industries in the government and private sector in Lebanon, Saudi Arabia and abroad.

## **Our Mission**



## **Our Services**

General Surveying Services provides a variety of professional applications for both the private and public sector with unique tailored solutions for our clients. We connect expertise across services, markets, and geographies to deliver transformative outcomes. Worldwide, we design, build, finance, operate and manage projects and programs that unlock opportunities.



## Conventional Surveying Services

We remain true to the same principles on which our company was founded over a hundred years ago: providing superior service to our clients, putting safety first, creating opportunities for our people, delivering ex-

ceptional work, fostering innovation, acting with integrity, and strengthening our communities.



# 3D Laser Scan to BIM Solutions

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## GPR(Ground Penetration Radar)Services



FARO Laser Instruments Sales & Services

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# **Conventional Surveying Services**

General Surveying Services celebrates its 25 years of transparent services



General Surveying Services goes beyond conventional surveying and offers professional services, with the primary focus on 3D laser scanning, that are often overlooked in the industry. We are satisfying our client's needs by delivering exceptional work and let our clients to benefit from our highly-trained engineer's experiences.

Our company has vigorously pursued a policy of building a highly professional and proficient infrastructure; recruiting experienced field staff and qualified management personnel from various countries, and purchasing "state-of-the-art" survey equipment and survey software – in order to meet the needs of all clients within their timeframe.

We are working closely with our clients, maintaining our quality output and ensuring they receive the best practice through our expert team and by utilizing the latest technology in regard of software and instrumentation.



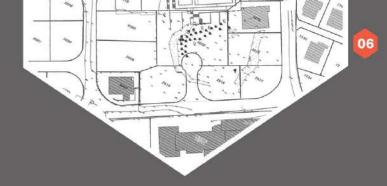
## **GPS**

A GPS baseline uses two survey-quality GPS receivers, with one at each end of the line to be measured. They collect data from the same GPS satellites at the same time. The duration of these simultaneous observations varies with the length of the line and the accuracy needed, but is typically an hour or more.



## GPF

Ground-penetrating radar (GPR) is a geophysical method that uses radar pulses to image the subsurface. It is a non-intrusive method of surveying the sub-surface to investigate underground utilities such as concrete, asphalt, metals, pipes, cables or masonry.



General Surveying Services provides a variety of professional applications for both the private and public sector with unique tailored solutions for our clients.



## Levels

FARO®'s latest ultra-portable FocusS Laser Scanner series enable you to capture fast, straightforward and accurate measurements of complex objects and buildings. The intuitive touch-screen of the FocusS models has been increased in size and clarity to deliver an extraordinary user experience.



## **Total Stations**

A total station (TS) or total station theodolite (TST) is an electronic/optical instrument used for surveying and building construction. It is an electronic transit theodolite integrated with electronic distance measurement (EDM) to measure both vertical and horizontal angles.



## **3D Laser Scanner**

FARO®'s latest ultra-portable FocusS Laser Scanner series enable you to capture fast, straightforward and accurate measurements of complex objects and buildings. The intuitive touch-screen of the FocusS models has been increased in size and clarity to deliver an extraordinary user experience. A built-in 8 mega-pixel, HDR-camera captures detailed imagery easily while providing a natural color overlay to the scan data in extreme lighting conditions. Familiar traits such as light weight, small size and a 4.5-hour battery runtime per charge makes the FocusS Laser Scanner truly mobile for fast, secure and reliable scanning.

The FocusS Series consists of three laser scanners with different ranges: FocusS 350/ 350 Plus for long-range measurements up to 350m, FocusS 150 / 150 Plus for mid-range measurements up to 150m and FocusS 70, perfectly suitable for short-range measurements up to 70m.

## **GPR (Ground Penetration Radar) Services**

Concrete scanning, also known as concrete x-ray, with ground penetrating radar (GPR) is a geophysical technique that uses radar pulses to nondestructively investigate concrete, earth, and other media



#### **Construction Consultant**

For instance, post-tension cable, rebar, conduit, pipes, fiber optic cables and air voids can all be identified using the 3D imaging capabilities of GPR. Determining the location and depth of these objects within concrete structures is crucial before cutting, drilling or coring.

it is used to locate and map the positions of metallic and non-metallic materials such as rebar, post-tensioning cables, conduit, metal and plastic pipes, electrical cables, and other near-surface anomalies and objects in concrete. One of the main uses of GPR is locating anomalies in concrete buildings, bridges, and other structures.



#### The Process

This system uses radar and electromagnetic waves to scan the entire area and locate any questionable subsurface materials by sending a unique return signal to the technician operating the machine.



### Strategic and Tactical

Extensively trained in using this innovative technology, our GSS crew is ready to explain their findings and evaluate the potential risk of any sub-level materials to help determine next steps and subsequent project planning.



Our GPR scanning services are highly recommended for any type of commercial, residential or municipal projects



A concrete "x-ray" survey or GPR is a geophysical process that uses a pulsating wave of radar to cut through the top surface of the concrete instead of actually penetrating the ground layer or disturbing the surrounding area.



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## 3D LASER SCANNING TO BIM SOLUTIONS

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Precise laser scanning survey ensures that the final as-built condition fit design intent and minimizes the chance of potential problems;



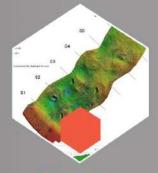
Construction Process Monitoring

Seamless capture and monitoring of construction progress for legal and technical documentation;



Checking

Quality Assurance (QA) and Quality Control (QC) management tools to perform accurate full measurements



**Data Analysis** 

Contour maps, elevation maps, deflection, deviation & alignment analysis and detailing;



Quality Assurance (QA) and Quality Control (QC) management tools to perform accurate full measurements continuously throughout the build process and immediately find discrepancies. Such early detection enables architects and contractors to produce higher quality projects while saving time and money since errors are minimized and rework cost is subsequently reduced;



3D Models High-End Renderings

3D Models high-end renderings using specialized software

Heritage Scaning and Preservation

Capturing & Archeological site works

**MEP Survey Services** 

MEP documentation, as-built survey and 3D modeling;

## **FARO Laser Instrumentation Sales & Services**

"FARO® is the leading global source for 3D measurement, imaging and realization technology for 3D Metrology, AEC (Architecture, Engineering and Construction) and Public Safety Analytics.

355 is an Authorized Distributor, of the German 30 Laser Scanning FARO rectinology in Lebanon, Journal Arabia and Jordan



# **FARO®**

For 40 years, FARO has provided industry-leading solutions that enable customers to quickly and easily measure their world, and then use that data to make smarter decisions faster.

## **Manufacturing Accuracy**

FARD continues to be a pioneer in bridging the digital and physical worlds forough data-driven reliable accuracy, precision and immediacy. The Company develops and manufactures leading edge solutions that enable high-precision 3D complure, measurement and analysis."



## More than 1500 completed surveying projects.

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## 25 Years of Experience

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## DTM Contour and V-Calculation



Digital terrain models (DTMs) acquired from airborne laser scanning (ALS) are available for many mountainous regions. ALS has the capability to penetrate high vegetation, hence high-resolution DTMs can be derived even in forested areas.

## **Cadastral and Road Surveying**



Cadastral surveying is the sub-field of cadastre and surveying that specialises in the establishment and re-establishment of real property boundaries. It is an important component of the legal creation of properties.

## **Heritage Capturing and Preservation**

General Surveying Services provides a variety of professional applications for both the private and public sector with unique tailored solutions for our clients.

## **Heritage Scanning Projects**



Cornet Chehwan

Located in the secluded river valley between Mansourieh and Hazmieh are the remains of a little-known Roman aqueduct.



Archeology

Located in the secluded river valley between Mansourieh and Hazmieh are the remains of a little-known Roman aqueduct.



**Cornet Chehwan** 

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**Zbeideh Aqueducts** 

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Falougha

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**Zbeideh Aqueducts** 

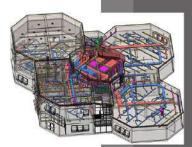
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## **MEP Analysis and Documentation**

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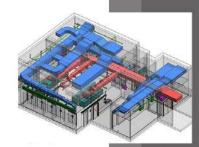
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#### **Architectural BIM**

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