

First on the Ground

Geomatics





Surveying and mapping solutions spanning the entire project lifecycle

Part art, part science, part technology, the Geomatics profession is constantly evolving. From the very first structures, early surveyors used primitive instruments and simple geometry to perform layouts and measurements. Today, advancing technology and field-to-finish data management enables our Geomatics professionals to deliver measurements unparalleled in accuracy.

From municipal development, to industrial construction and to oil and gas specific projects, we work in all sectors and at all stages of the job. Our strong project teams and proven track record, coupled with our commitment to safety and ISO 9001:2008 aligned quality program, means that our clients can have full confidence that their projects will be completed safely, on time, on budget and be delivered as a high-quality product.

Having access to project-critical data from the office at all times means efficient communication and project management, as well as minimal errors and timeline overruns. A unique part of our approach to surveying includes the development and use of custom GIS tools and applications that allow this level of project knowledge. Using the best in survey technology and having access to award-winning GIS developers, no job is too large or complex for our team.

Safety is a big part of who we are. Our safety program is ingrained in our culture, encompassing management, to junior staff and from office support to field operations. Our track record proves that we are committed, at all levels of our organization, to the health and safety of our employees.



Our Project Experience

LAMÈQUE WIND POWER

Lamèque, NB
Client: Acciona Energy

The project consisted of thirty 1.5-megawatt wind turbines, a large electrical substation, kilometres of access roads and underground collector system corridors, as well as kilometres of a new transmission line corridor. WSP's role was to supply layout for clearing all turbine sites and corridors, and perform legal and topographic surveys. LiDAR was used to generate contours across the site and WSP performed field verification using conventional survey methods. A lease was created for each turbine site, as well as corridor easements and rights of way for the access roads and power corridor.

K+S LEGACY MINE

Regina, SK
Client: Aecon, Keller, Graham, PLC

WSP provided surveying services for the construction of this \$4.1B Greenfield solution potash mine. Breaking ground in 2012, WSP was in the field with the early earthworks for the main site and the camp site, and carried on to all the piling (approximately 2,600 piles), foundations, underground facilities, well pads, and ponds.



PRINCE RUPERT GAS TRANSMISSION (PRGT)

Northern BC
Client: TransCanada Pipelines

WSP has worked with TransCanada on new projects and existing infrastructure within its vast network. On the PRGT project, WSP provided scouting, preliminary design, survey, preliminary mapping products and survey plans, and crossing surveys through over kilometres of rugged terrain from Hudson's Hope to British Columbia's northern coast.

MAJOR TRANSPORTATION PROJECTS

Ontario
Client: Ministry of Transportation Ontario

WSP has been providing Geomatics services to the Ministry of Transportation in Ontario for over 20 years. In conjunction with WSP's transportation services teams, our Geomatics professionals have successfully completed hundreds of highway, bridge and interchange projects throughout the province. Geomatics services include photogrammetric base mapping, legal surveys, topographic and preengineering surveys, GIS support, laser scanning, mobile mapping, alignment staking, base plans and DTM creation and ongoing geomatics support throughout the entire project's lifecycle.

THE BOW

Calgary, AB
Client: Supreme Walters joint venture Leducor Construction Ltd.

WSP provided professional Geomatics services on The Bow, a \$1.4B crescent shaped, steelframe tower, on many aspects of the construction including the establishment and maintenance of the precise exterior control network. The control network was comprised of external stable control monuments installed and coordinated by WSP. In addition, the external control network was augmented through the installation, coordination, and maintenance of a network of rooftop, degree prisms on neighbouring buildings.



WSP delivers geomatics solutions to some of the largest projects in Canada. We are proud to have a premier reputation and long-term relationships with our clients.

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Geomatics Offices Across Canada

Geomatics services are an essential element to any engineering project no matter how large or small. WSP is the leader and the premier choice for geomatics solutions in Canada.
First on the ground, WSP goes where your projects are because geomatics is more than a profession – it's a way of life.

Core Services

GIS

QA Survey

3D Modelling

Legal Survey

Hydrographic Survey

Civil Earthworks

Construction Survey

Engineering Survey

Facility As-built

Line Locating

Asset Management

Topographic Survey

Specialized Services

OIL & GAS

Wellsites Survey

Pipeline Routing

Access Roads

Facility Survey

Plan Production & Mapping

PIPELINE

Route Selection

Pre-legal & Design Survey

Regulatory Application Plans

Construction Flagging & As-built

Integrity Survey

MINING & INDUSTRIAL

Site Preparation & Layout

Above & Below Ground Utilities

3D Laser Scan Survey

Foundation & Piling Layout

High Precision Anchor Bolt Layout

ENERGY

Substation Staking

Structure Staking Control Framework
Design & Implementation

Land Acquisition Plans

Cultural & Environmental Feature Mapping

TRANSPORTATION & INFRASTRUCTURE

Heavy Rail & LRT Corridor

Pre-engineering & Detailed Design

Surface Modelling & Quantities

Airport Mapping & Regulatory Survey

Deformation & Settlement Monitoring

GEOSPATIAL

Bathymetric Survey

Laser Scanning & Mobile Scanning

Unmanned Aerial Vehicle (UAV)

Utility Mapping & Verification
(Ground Penetrating Radar)

Remote Sensing



As one of the world's leading professional services firms, WSP™ provides technical expertise and strategic advice to clients in the Transportation & Infrastructure, Property & Buildings, Environment, Industry, Resources (including Mining and Oil & Gas) and Energy sectors, as well as offering project and program delivery and advisory services. Our experts include engineers, advisors, technicians, scientists, architects, planners, surveyors and environmental specialists, as well as other design, program and construction management professionals. With approximately 48,000 talented people in 550 offices across 40 countries — more than 8,000 in Canada and 9,500 in the U.S. — we are uniquely positioned to deliver successful and sustainable projects, wherever our clients need us.

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