



**The surveying and geomatics
company that's **down-to-earth.****

Dedicated to the land and technologies that shape it.



Our partnership promise / We are:



Responsive

We are quick.

With an impressive bench strength, we're quick to quote, to get to site, to address challenges and to get the job done on-time and on-budget.



Industry Experts

We have the skills you need.

With team members working in different industries all across the country, we've got a knowledge base that's undeniable.



Solutions-Oriented

We solve problems.

We ask questions, investigate and provide the best solution for your individual project needs.



Trustworthy

We are reliable.

Like any great partner, you can count on us. We provide safe, dependable, quality service.





The GeoVerra Difference

GeoVerra was built on one founding principle –to provide outstanding service. First and foremost, we are a service organization that thrives on exceeding expectations and creating lasting relationships that clients can depend on. It's what sets us apart and makes us leaders in land surveying, engineering, mapping, forestry, environmental consulting and geospatial solutions.

We're driven by an entrepreneurial spirit and a relentless work ethic that pushes us to take initiative, developing advanced, customized solutions for clients in diverse sectors from industry to government. Those solutions give our clients a decided advantage and enable us to continually advance the field as we deliver industry-leading solutions in spatial intelligence. In all we do, safety comes first. It's a group effort. We pride ourselves on highly coordinated teamwork for complete peace of mind in the field and beyond.

Our team-oriented approach extends to how we work with our clients too. We view ourselves as strategic partners, focused solely on achieving client objectives through seamless collaboration and providing seasoned expertise they can rely on.

The confidence our clients have in us stems from our actions, values and ethics put into practice. We're truthful, open and honest, and with that comes trusted partnerships. Clients know we're committed to exceeding expectations with our service-backed reputation for responsive, efficient, solutions-based performance every step of the way. It's what we like to call the partnership promise.



Vision

To be the leading geomatics company, shaping the future of the industry.



Mission

To provide industry-leading geomatics services that employees are truly proud of and that clients recommend to others.



Values

Our values are at the core of who we are and what we do; teamwork, safety, clients, trust and excellence. They keep us focused on our goals and the promises we make to each other and our stakeholders.



Capacity & Locations

23

locations across the country, we are one of Canada's largest geomatics firms providing land surveying, forestry, environmental, and geospatial solutions to clients.





What we do:

Sustainable Energy

Construction Surveys

Subway, LRT, Railway and Highway Survey Services

Pipeline Construction and Pre-construction Surveys

Oil and Gas Surveys

Pipeline Integrity

Subsurface Utility Locating and Mapping

Municipal and Land Development Surveys

Electric Power Transmission and Distribution Survey Services

Forestry & Environmental

Land Use Planning

Mapping GIS and Remote Sensing

3D Laser Scanning

Unmanned Aerial Vehicles (U.A.V.)

Bathymetric Surveys

Ground Penetrating Radar

CAD and BIM Support with QA/QC Measures, Implementation and Oversight

Project Management Support

GeoVerra offers solutions in land surveying, mapping, forestry, environmental, and advanced technology across diverse industries.

For more details, please visit our website | geoverra.com

Please note, this is not a comprehensive list of solutions and the services listed may not be offered in all of our locations. Contact us at info@geoverra.com for details.



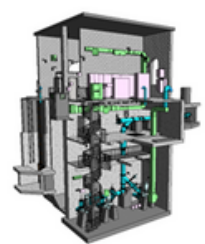


Geospatial Technologies / Reality Capture Methods

Mapping and GIS

Data Management & Online Portal

Our industry-leading experts present data to our clients in rich, engaging, and easy-to-understand visual formats, delivering insights that support effective decision-making and drive projects forward on time and on budget.



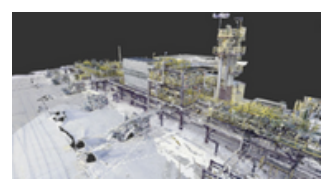
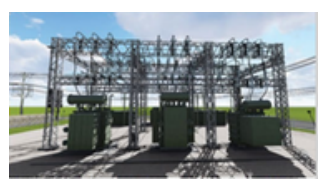
We collect, comb, filter, and display project information in one place so that our clients can make meaningful data-driven decisions. Whether you need a standardized solution (GV View) or a custom portal, our data visualization programs can help you design and build with confidence.



3D Scanning

Terrestrial & Aerial Data Capture

3D scanning allows us to collect thousands of data points per second, in great detail. This survey method is not only unobtrusive, safe, and efficient, but also exceptional at capturing information in challenging physical environments and hard-to-reach spaces. It also provides a means of storing critical geospatial data so that clients can make informed decisions and optimize operations.



Unmanned Aerial Vehicles (UAV) & LiDAR

High resolution imaging

Unmanned aerial imaging is a proven and trusted technique for collecting precise geospatial data with remote (LiDAR), photogrammetry (RGB), multi-spectral and thermal sensors. UAVs help us perform quick, high-definition surveys (HDS) across large, complex, and even hazardous areas while keeping everyone out of harm's way. Thermal imaging and zoom photography are used for our inspection services. Using the latest fixed-wing and diverse fleet of multi-rotor drones, our licensed pilots can fly different types of payloads, and acquire, process and deliver wide range of solutions and products.



Mobile Mapping System (MMS)

Dense point cloud, high accuracy, long range for survey & engineering projects

For large infrastructure projects, conventional surveying can be tedious. While there's a time and a place for traditional surveying, GeoVerra embraces technology, like mobile mapping, to advance the industry.



GeoVerra uses the Trimble MX50 – a complete mobile mapping solution that combines leading edge hardware with intuitive field software and a powerful, integrated office software workflow.

- Combines long range LiDAR, spherical imagery and oblique cameras along with best-in-class inertial sensors
- Rapidly captures laser scans and images, both panoramic and multi-angle, as you drive



GeoVerra Team Experience

Sustainable Energy / Sharp Hills Wind Farm



Location: Special Area No. 3 and 4, Alberta

Client: EDP Renewables

Services:

- Feature extraction from aerial LiDAR
- Base/parcel mapping research, correction, and adjustment
- Utility surveys and crossing plan/map preparation
- Legal subdivision surveys

Project Description

The Sharp Hills wind farm project is located near the hamlets of Sedalia and New Brigden, within Special Areas No. 3 and 4 in Alberta. At completion, the project will consist of 67 wind turbines and produce upwards of 300 MW of power. GeoVerra has supported EDP Renewables throughout the development of the project with legal survey expertise, acting as trusted advisors. Services include the field survey of existing legal evidence, the adjustment of base mapping for all impacted parcels, survey, and preparation of crossing plan/maps, lease exhibits and ALTA plans, as well as support with the subdivision application, survey, and plan registration for the project substation and operation/maintenance yard.

Why GeoVerra?

GeoVerra's combination of state-of-the-art Global Navigation Satellite System (GNSS) equipment and robotic total stations assisted the survey crews in completing the field portion of the scope with high accuracy and in a timely manner. Our experienced Alberta land surveyors, large resource pool of talented CAD technologists, and data processors have been a great benefit to the client. The team has worked together in a collaborative approach to prepare quality deliverables on time while providing valuable support and regional knowledge concerning legal survey requirements in Alberta.

Outcome

With a safety-first mindset coupled with custom solutions and innovative tools, GeoVerra provides the best possible service and efficient overall project management.



GeoVerra Team Experience

Transportation / Metrolinx Regional Express Rail



Location: Greater Toronto and Hamilton Area
Client: Hatch (part of the 4TRANSIT Joint Venture)
Services:

- Engineering and legal boundary surveys
- 3D Laser Scanning
- Reference Plans (R-Plan)
- Expropriation Plan
- Survey sketch for compiled boundary

Project Description

Metrolinx is undertaking a transformation of the GTHA GO rail network to expand its services from primarily commuter transport to a fully integrated rapid transit system providing reliable, efficient rail connections. For the first two phases of the RER, GeoVerra supported the joint venture called 4Transit to provide geomatics surveying and inputs on project-specific output specifications (PSOS) in a sub-consultant capacity.

GeoVerra will continue to provide surveying for the third phase starting at the end of 2022 through a new joint venture ONxpress Transportation Partners.

Why GeoVerra?

The RER program has presented several unique challenges to performing the required survey work including populated areas and tight corridors with active electrification. These challenges heightened the safety guidelines and requirements of the project. The GeoVerra survey teams received additional training and worked closely with the onsite flagman personnel to ensure the safety of all workers within the restricted railway corridors.

Throughout the project, GeoVerra has delivered on a range of survey requests involving tight turnaround times and technical challenges that required customized solutions. Being the largest geomatics firm in Canada, GeoVerra can pull survey team resources from other regions enabling delivery on short notice requests. From a technical perspective, GeoVerra owns many of its own advanced technology and equipment but also has solid third-party relationships for other high-tech solution requests. For example, photogrammetric mapping and satellite imagery were used to supplement the traditional topographic surveys.

Outcome

"I like working on challenging projects that get you out of your comfort zone. The RER program with Metrolinx has required a range of surveying techniques from conventional to high-tech, as well as providing strategic input through to quality execution." – Project Manager, Tony Pu, GeoVerra



GeoVerra Team Experience

Industrial / Sturgeon Refinery, North West Redwater Partnership



Location: Sturgeon County, AB

Client: North West Redwater Partnership (NWR)

Services:

- Ground disturbance
- 3D scanning
- Construction surveys
- As-built surveys
- UAV support
- Control surveys and monitoring
- Underground facility database management
- Legal surveys

Project Description

The North West Redwater Partnership (NWR) is a 50/50 partnership between Canadian Natural Resources Limited (CNRL) and the Alberta Petroleum Marketing Commission (APMC). Together, the partnership owns and operates the Sturgeon Refinery, the first refinery of its kind to champion sustainability with carbon capture and bring resources and revenue back to the province through a unique business model.

Project Background

Located 45 km northeast of Edmonton in Sturgeon County, the NWR Sturgeon Refinery is the first refinery designed from the ground up with a carbon capture solution that uses leading technology to maximize performance and minimize environmental impact while producing the high-value, low-carbon products needed to meet North Americans' energy demands.

The Sturgeon Refinery is now fully operational. By capturing carbon emissions produced during the refining process, the new refinery produces lower carbon-intensity fuels from bitumen. The CO₂ is gathered and transported by the Alberta Carbon Trunk Line system to Central Alberta for enhanced oil recovery and permanent safe storage.

Why GeoVerra?

GeoVerra has been providing a variety of services to the Sturgeon Refinery since the construction of the facility began in 2013. The team continues to be involved, providing ongoing survey and line locating support.

As one of Canada's largest geomatics firms, GeoVerra is the market leader in advanced customized survey solutions for a wide variety of construction projects. Our team of licensed land surveyors and project managers are focused solely on achieving client objectives to provide seasoned expertise you can rely on – it's the GeoVerra partnership promise.



GeoVerra Team Experience

Pipeline / TC Energy Coastal Gaslink



Location: Chetwynd, British Columbia

Client: TC Energy

Services:

- Staking the ROW for clearing, stripping and ditching
- Staking ditchline, engineering features and appurtenances
- Supporting pipe stringing by tallying all pipes
- Weld-mapping pipes as they are welded above ground
- Topographic surveys (primarily for crossings)
- Horizontal directional drilling (HDD) and valve site support
- Hydrotest, caliper pig run and ROW cleanup support
- Legal Survey support to comply with BC regulations

Project Description

TC Energy is constructing the Coastal GasLink pipeline to safely deliver natural gas across northern British Columbia to the LNG Canada facility in Kitimat. When complete, the Coastal GasLink pipeline will enable liquefied natural gas (LNG) to be shipped to global markets to replace coal-fired electricity, making it a significant project for the client, the Canadian economy and the planet.

Coastal GasLink's approved route was selected as the best option for the environment and surrounding communities, and considered Indigenous, landowner and stakeholder input, archaeological and cultural values, land use compatibility, safety, constructability and economics. The total project is a 670 km, 48-inch pipeline with an initial capacity of 2-3 billion cubic feet per day with future expansion through additional compressor stations.

GeoVerra is providing construction and legal survey services for the first 140 km of the route near Chetwynd, British Columbia. Starting in July of 2020, the Coastal GasLink site surveys for construction are slated until the end of 2022 with ongoing survey support for clean up and legal surveys through the summer of 2023.

Why GeoVerra?

With four offices located along the Coastal GasLink path and 14 crews in the area, GeoVerra was poised to provide TC Energy with fast, flexible resourcing for the project. This capacity enabled GeoVerra to double the number of crews from four to eight over the course of the project. Having previously worked on the Pacific Trail Pipeline spanning a similar route as the Coastal GasLink, GeoVerra was already familiar with the terrain, environment and stakeholders.



Having the background knowledge and capacity for the project is certainly key, but to execute and deliver high quality surveying services and documents that the client can trust takes experience and expertise combined with the right technology and processes. The GeoVerra team dedicated to the Coastal GasLink project has hundreds of years of combined experience, with over half having more than 10 years each. Each member brings specialized expertise in project management, surveying, mapping, data processing and CAD technology specific to pipeline projects.

GeoVerra's geospatial group had ready access to the latest advanced technologies such as unmanned aerial vehicles (UAVs) coupled with laser scanning to enable efficient and accurate right-of-way (ROW) surveys. They also used bathymetric surveys to measure water bodies for engineering design, as well as to ensure volumes for pipeline hydrotesting.

To process the vast amounts of data, GeoVerra used specialized pipeline software enabling automatic checks between actual pipe tallies and the original manifest expediting the QC process. This daily processing of the data is key to GeoVerra's ability to provide a quick and accurate turnover following completion of the project, as well as interim deliverables when requested. Additional QC was completed using ISO 9000 approved processes which included in-house developed workflows, work instructions and checklists, as well as random, company-wide project audits.

Deliverables

- **As-Built Survey:** Includes positional information, pipe specifications, survey description (e.g., bend, weld, appurtenances, etc.), crossing information, and land (type, owner, use, legal location), as well as any construction notes that come from the construction contractor.
- **Redline Drawings:** Markup of all Issued for Construction (IFC) drawings, indicating the actual as-built information in red to compare to the engineered design information shown on the original IFC. These are prepared for IFC alignment sheets, design crossings, typical crossings, valve sites and any other plans issued by the client.
- **Pipe Reconciliation:** Ensures all the pipe that was planned for the project is accounted for.
- **Hydrotest Sketches:** Indicate each test section and the pipe included within it, allowing the engineers to calculate the volume of water needed for the testing, as well as the points of possible concern (critical high and low elevations).
- **Materials List:** Indicates all appurtenances and other items that have been installed on the pipeline, to ensure all appurtenances that were planned for the project are accounted for.
- **Final Tie-In Sketches:** Show the final welds in between test sections or at the beginning/end of the pipeline.
- **Survey Control Report:** Indicates any control point placed throughout the project.
- **Valve Site and Facility As-builts:** Completed via laser scanner to produce 3D PDFs for all facilities.
- **Legal Survey Plans:** Required to be registered with BC Land Titles to obtain the permanent ROW.
- **Additional Documentation:** Volume reports for excavation, grading plans, and maps for access, water sources etc., and KMZ files for pipe information, land information, access, etc.





To learn more about GeoVerra's partnership promise and our commitment to provide responsive, trustworthy service with a solutions-oriented approach, visit our website, email us at info@geoverra.com, or contact your local office to speak to one of our industry experts.

geoverra.com |   