
Extensive energy solutions

Energy Services Capability Statement

Buildings | Australia & New Zealand





A community of experts

Stantec's global network of designers, engineers, scientists and project managers work together at the intersection of community, creativity and client relationships. Careful balancing of these priorities results in projects that advance the quality of life in communities across the globe.

But wherever Stantec is located it is our local teams who have the skills, experience and knowledge to drive the projects in their own back yards. In Australia and New Zealand (ANZ), our local offices of award-winning multi-disciplinary engineers have been helping both private and government clients build communities for over 60 years.

Our people have long-standing client relationships and are inspired to advance the communities in which they live, delivering cost-effective, quality consultancy services.

Whether we're partnering with clients to design a hospital or mixed-use development, a research facility or industrial park, an education campus or airport, we design with community in mind because we believe in the **power of places to transform lives, to meet the needs of a community today, to help fulfil its potential tomorrow.**

Our global business

25K

Employees

400+

Locations

6

Continents

#01

From start to finish. Our team leaders continue to manage the projects for which they tender, right through to completion. Change in team management causes delays and undermines a project's stability and design direction. Continuity is more conducive to achieving your goals within programme and budget.

#02

Value-adding innovation. Stantec's Creativity & Innovation program encourages our global network of engineers to develop tools, processes and technology. These creative ideas might save time at the design stages of a project, reducing client costs. Others offer powerful marketing potential for stakeholder engagement. Celebrating our best ideas with investment means they are fully developed to benefit all our clients and communities, wherever they may be.

#03

The right experience. From research stations in Antarctica to solar projects in rural Australia. From bespoke luxury residences to affordable high-rise apartments. From stadiums to play parks... and everything imaginable in between. We have the right skillsets to help you achieve your construction goals.

#04

Focus on buildability. Engaging with engineers in the early stages can save time and money in the long-term. Pragmatic spatial considerations, site-appropriate construction methods, informed materials selection, compliance with legislation and consideration of the operational environment. Our advice gives reassurance to stakeholders, boards and financiers that all factors have been fully considered.

#05

We're at the right tables. Our people are active proponents within Australia's property industry, seeking positive change on behalf of their communities. The influential tables at which we sit include the Urban Development Institute of Australia, the Property Council of Australia, Consult Australia and Green Building Council of Australia.



We don't just say we deliver outstanding solutions and client service. We prove it.

Stantec has been recognised numerous times at the independently assessed Beaton Client Choice Awards in Australia and New Zealand.

2022 Beaton Client Choice Awards Winner:

- Best Provider to Property

2019 Beaton Client Choice Awards Winner:

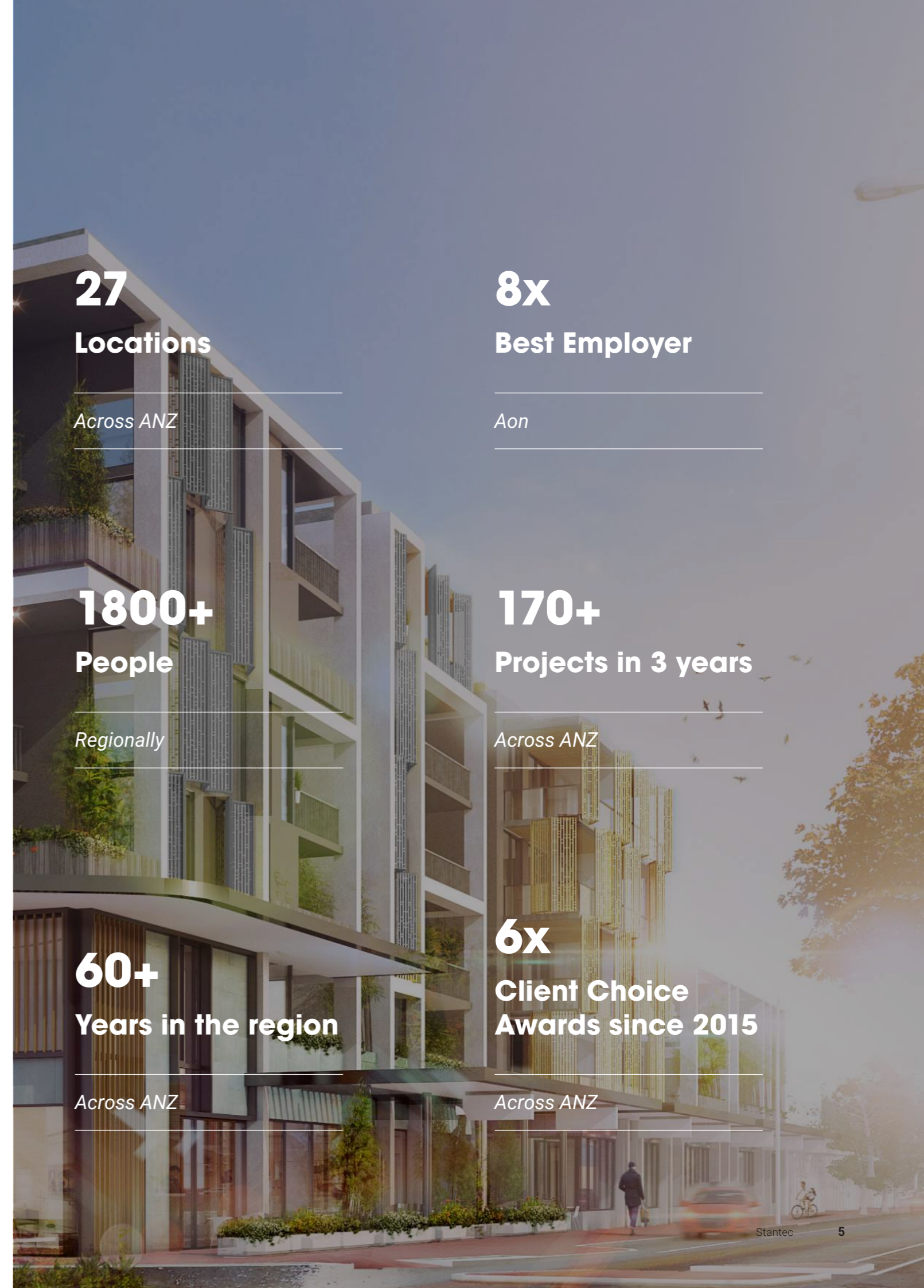
- Most Client Focused Consulting Engineer

2017 Beaton Client Choice Awards Winner:

- Best Consulting Engineering Firm (revenue \$50m-\$200m)

2016 Beaton Client Choice Awards Winner:

- Best Provider to Property Sector



27
Locations

Across ANZ

8x
Best Employer

Aon

1800+
People

Regionally

170+
Projects in 3 years

Across ANZ

60+
Years in the region

Across ANZ

6x
Client Choice Awards since 2015

Across ANZ

Energy services

Securing efficient and sustainable energy supplies at a reasonable price is a key challenge facing our industry. Our whole-of-life approach delivers professional technical services across all aspects of power generation and delivery.

Our highly technical and experienced team are abreast of the advances in alternative energy generation, storage technologies, network access approval processes, as well as the associated complexities of the energy market.

Energy is more than just the standard authority supply of electricity, gas and water.

Today, you have the influence to determine your consumption, generation, on-selling, efficiency, demand reduction and load shifting of your energy.

Our Energy Services team specialises in a number of alternative energy systems, including:

- Solar Photovoltaics
- Wind energy
- Co-generation/Tri-generation
- Bio-gas and other bio-fuel solutions
- Waste-to-energy
- Energy Storage (Battery & others)
- Hybrid systems
- Off-grid solutions

Stantec has the expertise in the core engineering disciplines required to provide our clients with high performance, cost-effective energy solutions.

What we offer:

- Bespoke designs and data analysis
- Supply authority liaison and facilitation
- Spatial planning
- Feasibility analysis
- Embedded networks
- Energy efficiency audits
- Energy contract review and tendering
- Power Purchase Agreement (PPA) review and tendering
- Post-construction reviews and verifications
- One-stop shop with related engineering, including electrical, mechanical and structural available in house

Our experience:

- We understand the intricacies of the energy market, which means we can assist interpreting your electricity costs and advise how energy can reduce them
- We have a strong team ethos by working alongside electrical contractors, integrators and project managers, as well as asset owners and managers
- We understand the approval and technical requirements of integrating renewable energy generation systems into complex projects

Why clients choose Stantec

We're structured for exceptional service – Each project we work on has a designated Project Engineer, who is responsible for every facet of our service.

We have the experience – Our large team has a wealth of collective experience in a variety of disciplines, giving clients a one-stop shop for their project needs.

You'll be working with high-performing staff – As a consulting firm, we're defined by our people and it's no surprise that motivated staff perform at a high level.

We'll save you money – Our unique structure means that your hand selected engineering team are with you from beginning to the end of the project, creating a seamless approach. We foster an environment where the team are engaged, motivated, committed, skilled and suitably resourced to successfully deliver your project objectives.





Project value:
Undisclosed

Completion:
2012

Perth Zoo

As part of the Australian Government's Solar Cities program, Perth Zoo was one of five locations across the metropolitan region to showcase its solar energy capabilities.

The first phase of the upgrade occurred in 2011, with 303 solar panels installed across eight buildings, providing 90.9kW.

A year later, Stantec was involved in completing the system with another 452 solar panels installed on a specially designed 'solar pergola' at the main entrance. The 100m structure was custom-built to house solar panels and delivers 146.5kW.

Stantec was engaged to provide electrical engineering design and supply authority application and negotiations for connection approval.

The system has a total power rating of 237.4kWh, which provides approximately 370,000kWh of energy per year, meeting around 30% of the Perth Zoo's energy needs.



Uterne Solar Farm

Commissioned by SunPower Pty Ltd, Stantec provided specialist electrical engineering services for the 1-megawatt project in Alice Springs, featuring more than 3,000 solar panels mounted on an innovative ground-mounted solar tracking system.

The project was completed under the Australian Government's Solar Cities program. The site has since been sold to a private solar operator who collects revenue from the power production.

Services provided by Stantec included the unique high-voltage DC design and protection within the site, negotiation with manufacturers for the supply of two 500-kilowatt inverters, through to earthing and connection at 22kV to the NT Power and Water Corporation network.

In August 2010, the Uterne Solar Farm received the prestigious Engineering Excellence Award at the Engineers Australia Northern Division Awards.

Project value: \$6.6 million
Completion: 2010

Aveley Secondary College

This project involved a 592.64kW solar PV system for Aveley Secondary College (formerly Ellenbrook North Senior School). It's one of the largest rooftop installations on the Western Power Network, generating enough electricity to power 150 homes.

Stantec designed the electrical protection, interconnection and controls system in relation to the solar PV system.

The team also completed the application for grid connection of the power station and obtained approval from Western Power for unconstrained access to their network.

Stantec supervised the system commissioning and produced design and as-constructed drawings for the entire system.

Project value: Undisclosed
Completion: 2017



Growler Airborne Project

This project is a new Growler Airborne Electronic Attack Capability Aircraft (Growler) facility at the RAAF Base in Amberley. Stantec's electrical, energy services, fire detection, mechanical and vertical transportation services were heavily involved in design documentation for the defence bases in QLD and NT.

The high security facilities will include new squadron headquarters and hangars for the fleet of twelve EA-18G Growler aircraft, as well as high-tech workshops, offices, car parks, flight simulator facilities and flight lines.

Due to the remote nature of the NT Bases, the Stantec energy services and electrical teams worked on the implementation of a large state of the art hybrid solar PV system with battery and diesel generator backup for the new accommodation buildings and associated recreational facilities, range operation control offices, maintenance workshops and climate-controlled storage facilities.

This power solution is predicted to save greater than \$5 million in running cost over the life of the facility.

Project value: \$300 million
Completion: 2018



Broadway Shopping Centre

Working with solar energy provider Infinite Energy, Stantec completed the electrical engineering design, supply authority applications and negotiations for connection approval to complete WA's largest rooftop solar PV system (at the time).

Broadway Fair Shopping Centre has 948 panels, generating 312kW and is capable of providing around 30% of the centre's energy needs, generating almost 500,000kWh per year.

With over 6km of cable in the complex design, the system is expected to save the centre around \$240,000 per year in power bills, funds which can be redirected to crucial capital works.

Project value: \$600,000
Completion: 2016



Project value: \$5 million

Completion: 2015

Fremantle Aquatic Centre

The Fremantle Aquatic Centre heating project is the first in Australia to utilise cutting-edge renewable technology and combine a 75 kW co-generation system with a ground source heat pump geothermal bore system to warm the pool.

Stantec was engaged by Energy Made Clean to assist with the preliminary design and electrical infrastructure upgrade to accommodate the co-generation plant. The City of Fremantle appointed Evo Industries Australia to undertake design refinement and construction.

Stantec was retained to provide specialist knowledge in parallel power generation and to assist with the protection design and authority approvals.

The new pool heating system has been assessed as providing optimal payback and carbon offset to the City of Fremantle via pool heating efficiency and reduced operational costs.





RAC HQ – EV Charging Station

RAC has developed Australia's first Electric Highway, allowing users to charge their Electric Vehicles (EVs) while driving from Perth to Augusta, and back. The RAC Electric Highway features 11 locations with publicly accessible EV fast-charging stations.

The project includes two charging outputs:

- DC fast charge of 0-100% in approximately 30

- minutes
- AC slow charge of 0-100% in 4-8 hours

Stantec were engaged to design the EV charging station at RAC's Perth CBD headquarters, as well as Supply Authority application, construction inspections and provide an impact safety assessment.

Project value: Undisclosed
Completion: 2016



Reading Cinema Energy Audit

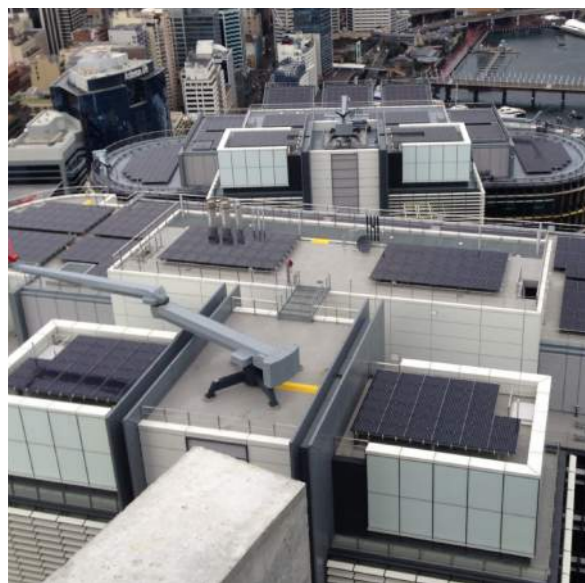
Stantec were engaged to conduct an Energy Audit at Reading Cinema to investigate where substantial energy consumption reductions could be achieved. This also included the installation of a 100kW solar photovoltaic (PV) rooftop array.

As per network requirements (at that time), Stantec's electrical team designed a solution utilising a Fronius Agilo 100kVA inverter with integral transformer to ensure no direct current (DC) was injected into the network.

Stantec recently completed a system performance and savings audit to demonstrate the financial and sustainability savings more than 18 months after practical completion was granted.

As a result, Stantec calculated an average 10% reduction on the cinema's electricity, which is approximately \$31,000 per year.

Project value: \$150,000
Completion: 2017



Barangaroo Solar PV

Stantec were engaged to support world-class photovoltaic panel manufacturer, sunpower, in delivering the solar PV installation to the entire Barangaroo development in Sydney, developed by Lend Lease.

Stantec's structural engineering team designed raised platforms to support grouped PV arrays, ensuring shading from surrounding structures and parapet walls was kept to an absolute minimum.

Stantec's electrical team completed the string design, earthing and bonding design and the site's electrical protection design on this HV connected precinct to support the embedded generation.

Project value: Undisclosed
Completion: 2017



Synergy Virtual Power Plant

Energy retailer Synergy created a virtual power plant in Western Australia (WA) to collect and store energy from solar hotspots. Commercial-grade batteries installed at ten school locations in Perth and Kalgoorlie, collect and store excess energy from various solar networks. The batteries are virtually aggregated and centrally controlled to alleviate strain on the network. The theory was straightforward--putting it into practice was more complex.

Drawing on skills from similar projects and liaising extensively with numerous stakeholders, our energy specialists completed feasibility studies and financial modelling for the client, helping to shape the project.

We supported Synergy with technical advice and project management assistance to achieve the Battery Energy Storage System approvals and to establish a process.

Connecting the commercial grade batteries demanded an understanding of the infrastructure at each school. We helped identify appropriate and secure locations for the sizeable installations, complying with both Dangerous Goods Requirements and noise regulations for educational and residential environments.

We contributed significantly to the success of Synergy's pilot project, who are extending the model in WA's regional areas-conserving clean energy for community use.

Project value: \$213 million
Completion: 2027



Project delivery and offering

Buildings ANZ project coordination

No matter what the project, no matter what your needs are, we have the team to help make it happen.

A Stantec Project Engineer will be:

- Responsible for ensuring cohesive team delivery
- The first point of contact for the client

What does this mean for our clients?

Not only will you receive the very best from all Stantec consultants, you will receive seamless design integration across all Stantec disciplines. This will result in identifying and minimising scope-gap, cost or programme risks.



Working together

Communities are fundamental. Whether around the corner or across the globe, they provide a foundation, a sense of place and of belonging. That's why at Stantec, we always design with community in mind.

We care about the communities we serve—because they're our communities too. We're designers, engineers, scientists, and project managers, innovating together at the intersection of community, creativity, and client relationships. Balancing these priorities results in projects that advance the quality of life in communities across the globe.



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