



# Understanding what **drives** your market

DESIGN SERVICES FOR FOOD & BEVERAGE



# Looking for a competitive advantage?

Stantec can help. Recognized worldwide for excellence in sustainability, functionality, engineering and cost-effective design—we're committed to helping you discover your competitive advantage, from initial concept to project completion.

Our passionate people develop integrated designs based on a deep understanding of markets, function, and best practices to help clients meet business objectives. Our team approach involves all stakeholders and disciplines to ensure environmentally, socially, and economically responsive design solutions.



**Frito Lay Canada, New Distribution Centre**  
Surrey, British Columbia

4000+

Industrial Food &  
Beverage projects in  
the past five years.



Fowler Packing Co.  
Fresno, California

60

years helping client  
achieve their goals.

## OUR VALUES

### WE PUT PEOPLE FIRST

People are at the heart of everything we do; they give our work purpose. That's why we listen to and design for the distinct needs of our clients—and those who live and work in the communities we serve. It's why we prioritize the safety of everyone our work touches. And it's why we define fulfilling careers for our own people, helping them set and then surpass their individual goals.

### WE ARE BETTER TOGETHER

When smart, passionate, creative people come together, real possibilities are unleashed. As our own community expands, we welcome everyone's contributions—diverse perspectives create extraordinary results. We draw on our global network to build the right team for each project because when we work together, no problem is too large or complex.

### WE DO WHAT IS RIGHT

We approach every project as a partnership because our work creates a lasting impact on our clients' communities. We are accountable to these communities—to strengthening them and making them resilient for whatever the future may hold. Integrity guides what we do, which means that we make the right choice even when it's the tough choice.

### WE ARE DRIVEN TO ACHIEVE

We believe that transformation—in our work and in ourselves—is truly possible. We're defined by our entrepreneurial spirit and our unwavering pursuit of not only what's next but also what's best. Bringing imagination and determination to every challenge, we leave no angle unexplored. As a result, we deliver the excellence that propels communities to success.



## A history of service

Since 1954, Stantec has provided award-winning, integrated design and engineering services to the food and beverage manufacturing industry. From frozen to confectionary, meat and fish to dairy, beverages to potatoes, we've been able to remain an industry leader by listening to our clients and working as a single team focused on collaboration, creativity, and vision.

While the industry is always changing, with new technologies, trends, and regulations appearing almost overnight, our focus remains the same: helping clients realize better cost, schedule, and safety performance. We expertly tune-in to what our clients tell us so we truly understand their priorities and objectives.

The scope of our experience and our multi-disciplinary resources sets Stantec apart from the competition. Whether it's a multi-million-dollar new build or a simple processing upgrade, let us help you find your edge in an unsteady sector.





## Services for Food and Beverage clients

- Feasibility and Planning
- Optimizing Production
- Process Engineering
- Energy Reduction and Sustainable Design
- Facility Design
- Project and Program Management
- Environment, Health, and Safety
- Water Treatment



Fowler Packing Co.  
Fresno, California

## Feasibility and Planning

Stantec recognizes the unique challenges faced by food and beverage manufacturers. Tight budgetary constraints. Pressure on productivity and efficiency. Regulatory and permitting delays. Rising utility costs. It can be a hard road, but it's one we know how to navigate.

It's our job to find innovative ways to expand or build capacity by leveraging existing resources to implement your vision. We provide the concept design and the numbers that make the most of your capital and keep you moving forward.

A keen understanding of market expectations is critical to ensuring that a facility plan reflects a client's capacity, capability, and flexibility requirements. Using a highly inclusive approach involving stakeholders from all levels of a client's organization, Stantec designs effective and functional programs that includes material input/output evaluation. This program ensures that the physical size of the building will accommodate operational requirements while serving as the foundation for future flexibility. We allot for maintenance and operational space requirements, including lay down space for goods, access, and guarding.



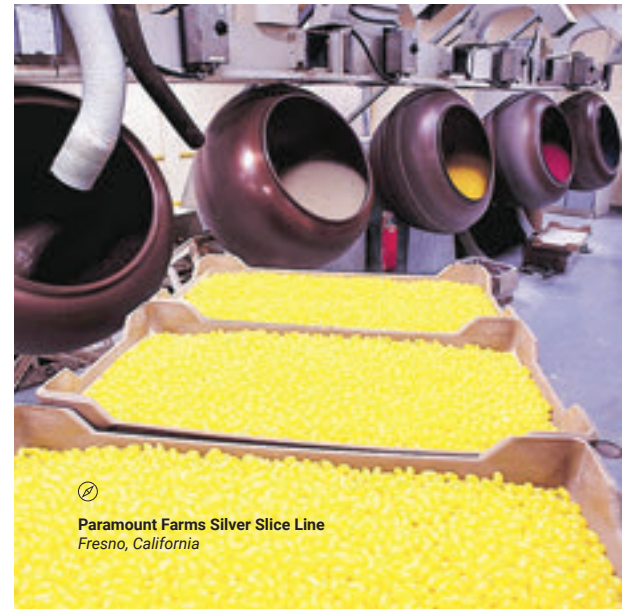
Food Development Center  
Portage La Prairie, Manitoba





### **FEASIBILITY AND PLANNING SERVICES:**

- Strategic facility master planning
- Concept design and feasibility
- Site evaluation and fit
- Due diligence reviews
- Distribution network and transportation studies
- Equipment and build-phased growth strategies
- Alternative floor plans and layouts designed around process
- 3D concept renderings with simulation
- Business case development
- Functional programming



**Paramount Farms Silver Slice Line**  
Fresno, California

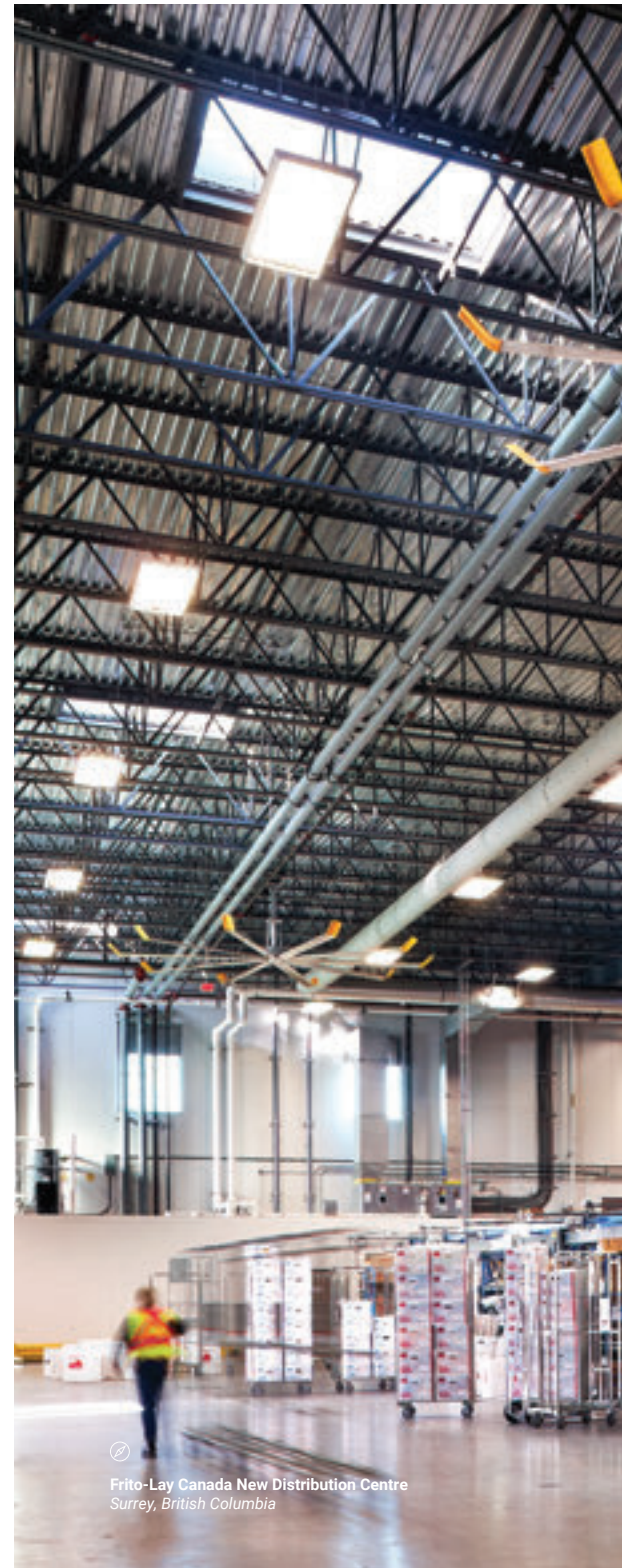
## Optimizing Production

If you're looking for optimum efficiency, reliability, and sustainability in your manufacturing facility, then we're a match. Our industrial engineers have the creativity and skills to find you complete solutions for your challenges, from generating plant and warehouse layouts that optimize productivity, to finding ways to reduce product loss.

Stantec's team looks for ways to recover operational space in your existing structure, reduce labor with work standards, time, and method studies, and right-size production steps and production flows. We can upgrade and expand current capacity with minimal downtime, balance the flow of materials through packaging lines, show you how through our simulation models, and improve your ability to measure productivity and KPIs.

We design for FSMA, CFIA, and GFSI standards. Our experts can facilitate Lean Optimization, as well as Kaizen and Change Management. And, the Stantec team provides HACCP and Good Manufacturing Practice (GMP) audits.

By developing solutions that don't impede process efficiency, our clients realize better cost, schedule, and safety performance.

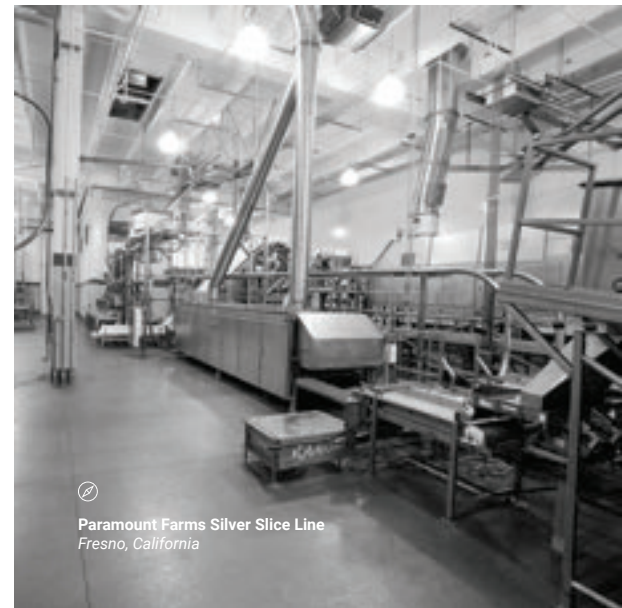


Frito-Lay Canada New Distribution Centre  
Surrey, British Columbia



**“Stantec provides targeted, cost-effective solutions to clients who are challenged with productivity, quantity, quality, safety, and/or logistical issues. Our designs take into account issues with operational, safety, personnel, and vehicle/personnel movement. Within the facilities.”**

– Jaimie Handscomb  
Principal, Food & Beverage



Paramount Farms Silver Slice Line  
Fresno, California



Ocean Nutrition Fish Oil Encapsulation Plant  
Halifax, Nova Scotia

## Process Engineering

Stantec knows food and beverage processors require innovative, economical, and high-quality solutions to thrive in a competitive marketplace. Advantages in process design and equipment technologies, together with strict attention to GMP, can go a long way in achieving business objectives.

Our process engineers are experts in the areas of process design, process engineering, conveying and packaging, custom equipment design and system integration, and automation and controls.

Whether you need one, a handful, or all of the following solutions, Stantec has the specialists that design processes to make your business cutting-edge and efficient.

### PROCESS ENGINEERING SERVICES

- Process equipment layout
- Instrumentation and control
- Utilities and new equipment commissioning
- Structural platforms and equipment upgrades
- Wastewater treatment strategies and design
- Utilities conservation
- Custom equipment design and modernization

### PROCESS DESIGN SERVICES

- Raw material receiving and bulk unloading
- Bakery product processing systems
- Solids and powder batching systems
- Liquid batching
- Liquid, gas, and powder storage systems
- Centrifuges
- Homogenizers and pasteurizers
- Clean-in-place (CIP) systems
- Complete fluid piping systems for receiving, batching, processing, packaging, and cleaning
- Plant floor operator interface systems and data collection systems
- Check weighers and metal detection
- Filtration, including micro-filtration, nano-filtration, and reverse osmosis
- Boilers and sterilization
- Refrigeration systems

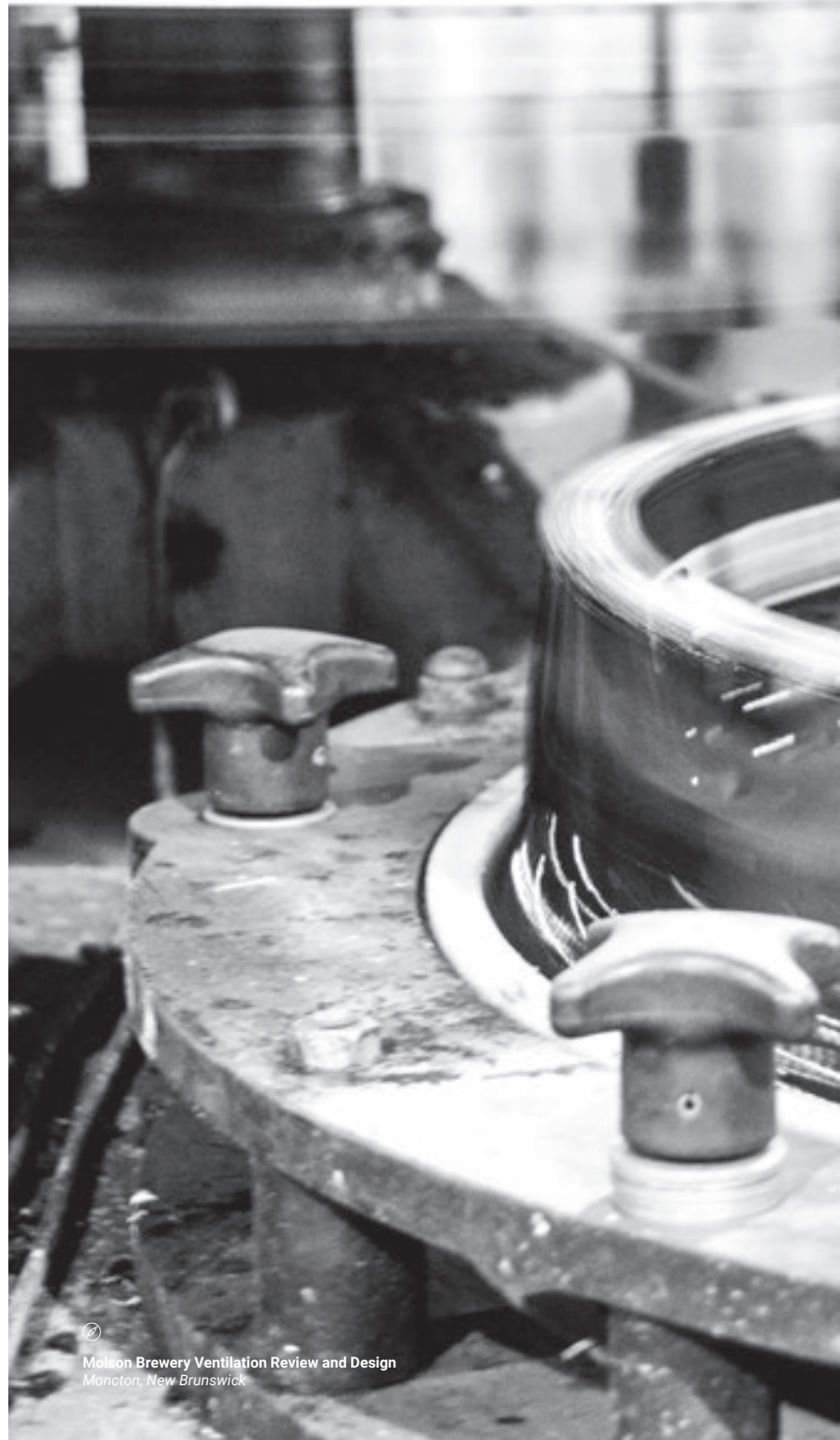
### CONVEYING AND PACKAGING SERVICES

- Liquid and aseptic packaging
- Pneumatic and vacuum conveying
- Wrappers and palletizers
- Package fillers
- Boxes, cartons, and jugs
- Belt, roller, pneumatic, bucket, screw, and vibratory conveyors

## Custom Equipment Design and System Integration

Want to increase throughput and automation while at the same time improve safety, ergonomics, reliability, and quality performance? We've got you covered. We apply innovative thinking and engineering techniques, along with the latest in computer-based 3D design tools, to deliver safe, cost-effective, and efficient manufacturing solutions.

Our experience includes equipment designed for high-speed packing systems, product processing systems, system integration, and material handling solutions.





## Automation and Controls

Stantec's involvement from concept through commissioning and production means you're well-supported in achieving consistent standards with automation and controls. Our process engineers will review your existing facility capabilities for the support of automation expansion or improvement, identifying infrastructure upgrades (including planning for personnel training), and material management and logistics changes.

We are fluent in multiple platforms, and use PLC's and HMI's to create customizable control systems for client-specific applications. Stantec's people incorporate plant-wide SCADA needs, and combine process with in-house plant cost accounting and MRP software with custom programming and development teams. Our experts, including safety engineers, design and improve electrical control systems and power distribution, and tackle equipment specifications, instrumentation, programming, and component procurement, as well as vendor-independent control systems.



## SUSTAINABLE DESIGN

With 740 LEED-accredited staff, 350 LEED-registered projects, and 328 LEED-certified projects to date, we take sustainable planning seriously.

Our team has extensive expertise in providing strategic advice to clients in the planning and sustainable design stage through to decommissioning and remediation. This team approach involves all stakeholders and disciplines to ensure environmentally, socially, and economically sustainable solutions.



**Freezers Infeed**  
*Fredericton, New Brunswick*



## Energy Reduction and Sustainable Design

Using innovation and solid design expertise, our process engineers can lead the discussion on utility, steam, and energy issues at the earliest stage. Together, we'll arrive at solutions that conserve or re-use energy, capital, and resources for process efficiency.

### **SUSTAINABLE DESIGN SERVICES:**

- Capture and re-use of waste heat
- Refrigeration systems upgrade for performance and efficiency
- Ice plant generation for time of day use
- Compressed air systems testing and upgrade
- Design of low-pressure boiler systems that meet demands of older steam boilers
- Bio-gas digesters to process food waste into energy (cogeneration)
- Electrical efficiency upgrades and national rebate programs
- Centralized energy systems and automation and control

## Facility Design

Our integrated facility design approach is the foundation for success. Stantec offers financially sound, practical solutions to complex facility planning, process, and manufacturing challenges. To minimize delays, every project begins with a permitting plan and a systematic outline for working through the approval process with regulatory agencies. Stantec's depth of knowledge of local and federal requirements specifically includes: FSMA /FDA, CFIA, HACCP, GFSI (e.g., FSSC22000, SQF, BRC), AIB, and GMPs.

Firmly committed to continuous innovation, our design and project management approach is highly collaborative, creative, and visionary. Characterized by clear ideas rooted in deep understanding of context, function, and best practices, Stantec's designs meet our clients' business objectives.

Our design team works closely with our clients and their operations and maintenance personnel to develop modern production facilities built around the process. We give special attention to developing unified facility design so lighting, HVAC, refrigeration, sanitation, and communication systems enhance the operation of the main process equipment.

Meanwhile, our engineers, architects and interior designers consider and respond to the safety, quality, and comfort of the work environment. From cost assessments to furnishings, Stantec plans with the client's goal in mind.

### **FACILITY DESIGN SERVICES:**

- New builds and expansions, and brownfield conversions
- Decommissioning for sale
- Land development and rezoning
- Workplace design for offices, locker rooms, and cafeterias
- Landscape architecture, fencing, gates, and signage
- Architectural services and permitting
- Structural, mechanical, communication, and electrical building services
- Fire protection and HVAC, specialty exhaust
- Warehouse and office design
- Refrigeration plants and process utility piping
- Site servicing, paving, and grading
- Utility upgrades and connections
- Sanitary design for HACCP, GMP, and GFS
- Cost estimating
- Geotechnical and environmental services
- Traffic flow studies
- OSHA Occupational Safety



Frito-Lay Canada, New Distribution Centre  
Surrey, British Columbia



Rogers Foods Ltd., Chilliwack Division Flour Mill  
Chilliwack, British Columbia  
ARCHITECT: NUMBER TEN ARCHITECTS

## Project and Program Management

Stantec's project and program management team provides you with expertise and resources for planning, implementing, and controlling capital programs. It's all about supporting better decisions and reducing your risk.

You'll always remain firmly in control of the project. We'll maintain project momentum and present high-quality information for better decision making along the way.

### **PROGRAM & PROJECT MANAGEMENT SERVICES:**

- Project advisory services
- Capital asset program management (multi-facility)
- Contract and tendering administration
- Permitting assistance
- Project oversight and monitoring
- Value engineering and constructability review
- Major project/program risk management
- Project controls (including scheduling, cost management, document controls)
- Phasing construction, transition, and move-in planning
- Construction administration, supervision, and safety
- On-site commissioning and start-up

## Environment, Health, and Safety

Stantec's team of professionals assist a wide range of food and beverage-related clients with environmental, health and safety projects across the globe.

### **INDUSTRIAL HYGIENE**

Our experts in safety and industrial hygiene are focused on compliance assurance assistance. From regulatory audits to program development, and from air and noise monitoring to worker's compensation claim defense, our clients appreciate the wide range of services they can choose from, including:

- Air monitoring and exposure assessments
- Diacetyl/ flavorings exposure assessments
- Respiratory protection programs and training
- Ergonomics assessments and training
- Asbestos management
- Noise surveys and control
- Hearing conservation programs and training
- Dust control system design

### **BUILDING AND EQUIPMENT CODE REVIEW**

Our industrial, mechanical, and electrical engineers provide additional safety services to our clients, such as code review and equipment operation in a number of different areas, including: fire prevention and safety services; arc flash investigation of electrical panels, and CSA verification of foreign-sourced equipment.

These engineers also conduct pre-start health and safety controls reviews (PSHSR) to address inadequate machine guarding—a common cause of serious worker injuries. We develop solutions, including PLC software controls, for machine guarding that doesn't impede process efficiency.

Stantec's hazardous environment classification and code review, meanwhile, checks for flammable fluids and explosive dust.

### **ENVIRONMENTAL ASSESSMENTS**

With over 900 environmental specialists, our team has the experience you need at any stage of your project. This includes strategic advice at the planning and design stage, regulatory approvals and permits, environmental construction inspection, and environmental monitoring programs.



Molson Brewery Ventilation Review and Design  
Moncton, New Brunswick



Paramount Farms Control Room  
Fresno, California



Molson Brewery Review and Design  
Moncton, New Brunswick



Paramount Farms Control Room  
Fresno, California



## Water Treatment

Whether a client is brewing beer, or making candy, or processing meat, the food and beverage manufacturing industry has a universal connection: water.

### **WATER PRE-TREATMENT AND REDUCTION**

Stantec provides project guidance through every stage of the water treatment lifecycle, from water quality analysis, conceptual design, and piloting design, through to construction and commissioning. We help our clients reduce and reuse water while maintaining GFSI standards.

### **WASTEWATER TREATMENT**

When it comes to wastewater treatment, we have a crystal-clear vision. Our innovative modeling systems reduce consumption and discharge, characterizes process streams, addresses hydraulic loading and variability, and troubleshoots process problems. At the same time, we identify pollution prevention alternatives and sustainable technologies specifically suited to each project.

Recent wastewater legislation in California, together with water reduction advisories across North America, have hit the food industry hard. Stantec's specialists in biological nutrient removal not only design effective treatments at the end of the pipe, but also look upstream with you to eliminate waste and safely reuse water where it's the most cost-effective.

### **WASTEWATER RECLAMATION AND REUSE**

Stantec is a leader in engineering water reclamation and reuse systems. We understand that existing systems often cannot keep pace with demands created by growing production, product expansion, drought, and other unforeseen occurrences. Water reclamation is a vital solution to our clients' businesses.


Stantec designs water reclamation and reuse systems that are used for a variety of services, including: vineyard and agricultural irrigation; encouraging groundwater replenishment; plant cooling and ventilation; and reuse in facility operations. We are dedicated to conserving this valuable resource and protecting our environment.

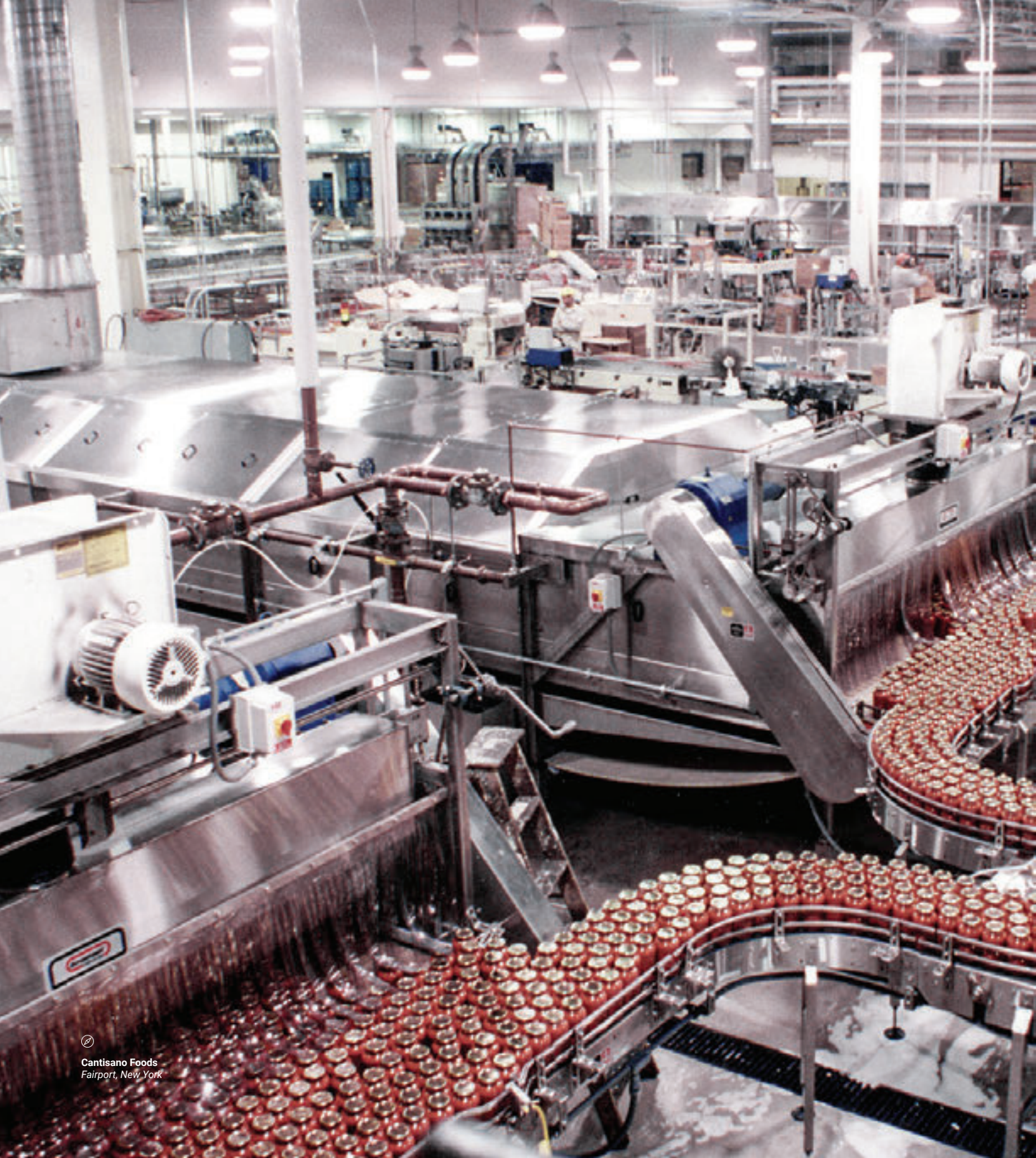
**PROJECTS**

# Additional Food and Beverage Facilities Experience

| CLIENT                             | PROJECT  | STANTEC RESPONSIBILITY |
|------------------------------------|--|------------------------|
| Cavendish Farms                    | New Production Facility Project<br><i>Alberta</i>  | Prime Consultant       |
| Sofina Foods Inc.                  | Sofina Poultry Plant<br><i>Alberta</i>   | Prime Consultant       |
| Government of NWT                  | Fish Process Plant Expansion<br><i>North West Territories</i>                            | Prime Consultant       |
| Frito-Lay Canada                   | Frito-Lay New Distribution Facility<br><i>British Columbia</i>                           | Prime Consultant       |
| McCain Foods Canada                | Process Line Expansion Project<br><i>New Brunswick</i>                                   | Prime Consultant       |
| Natural Factors Group of Companies | Natural Factors New Production Facility<br><i>British Columbia</i>                       | Prime Consultant       |
| J.R. Simplot Company               | New Production Facility<br><i>Argentina</i>  | Prime Consultant       |
| Labatt Brewing Company Limited     | Control Room Consolidation and Plant Upgrade Project<br><i>Ontario</i>                   | Prime Consultant       |
| Agropur Cooperative                | Agropur Cheese Cooler and Raw Milk Receiving Bay<br><i>Alberta</i>                       | Prime Consultant       |
| Nestle USA                         | Danville Wastewater Treatment Plant Upgrade  | Prime Consultant       |
| E. & J. Gallo Winery               | McCall New Facility Preliminary Engineering and Chiller Replacement<br><i>California</i> | Prime Consultant       |
| Wonderful Citrus                   | Lemon Packing Line and Equipment Upgrade<br><i>California</i>                            | Prime Consultant       |
| Simplot China Food Co., Ltd.       | Simplot Production Facility Expansion<br><i>China</i>                                    | Prime Consultant       |
| Fowler Packing Company             | Plant 2 Control System Design<br><i>California</i>                                       | Prime Consultant       |



 Frito-Lay Canada, New Distribution Centre  
Surrey, British Columbia





## CLIENTS

### Top Clients

E. & J. Gallo Winery  
Cavendish Farms  
The Wonderful Company  
J.R. Simplot Company  
Nestle USA  
Fowler Packing Company  
Blue Diamond Growers  
McCain Foods Ltd  
Frito-Lay North America Inc.  
Pepsico  
Labatt Brewing Company Limited  
Constellation Brands Canada Inc.  
Land O'Lakes, Inc.  
Conagra Brands  
Rogers Foods Ltd.  
Hemp Oil Canada, Inc.  
Agropur  
Lamb Weston  
Natural Factors Group of Companies  
PARMALAT CANADA  
Saputo Dairy Products Canada G.P.  
Ball Packaging Products Canada Corp  
Cargill Limited  
Manitoba Harvest Hemp Food and Oils

## THREE C'S

### COMMUNITY

When we say community, we don't just mean the neighborhoods people call home. We mean everyone with a stake in the work that we do, from our Stantec and industry colleagues, to the clients we collaborate with, and the people and places we impact.

Whether creating, sustaining, or revitalizing a community, we help diverse cultures and perspectives work together toward a shared success.

And although our work helps to create physical communities, our ultimate goal is to create something far more meaningful—a sense of community.

### CREATIVITY

For us, creativity is driven by purpose. Knowing that transformation is truly possible inspires us to approach every situation with a fresh perspective.

Our inventive and collaborative approach to problem-solving helps bring big ideas to life through elegant solutions.

Whether our contribution is a design that strikes the perfect balance between function and aesthetics, a feat of engineering that redefines what's possible, or a project management approach that delivers results, we strive for outcomes that transcend the challenges they solve and shape the communities we serve for the better.

### CLIENT RELATIONSHIPS

We're better together. This belief shapes how we collaborate with our clients, our partners, and our communities.

We listen so we can deeply understand our clients' needs, communicate with purpose so we maintain alignment, and remain open and flexible so we never miss an opportunity to strengthen a project and positively transform a community.

# Our people. Working together.

We're planners, designers, engineers, and architects. We're project managers, environmental scientists, technologists, and estimators. Together we design environmentally, socially, and economically sustainable food and beverage manufacturing solutions.

We are connected to the industry and work together with clients to find creative ways to enhance processes and optimize efficiency. These relationships guide us through challenging project issues and help us establish clear lines of communication to maintain schedules and budgets. Whether our clients are producing snack foods or health supplements, our methods remain flexible to meet specific production needs. We recognize that each manufacturer has its own objectives; each solution we propose aims to further enhance their goals.

We're ready to go to work for you. We're excited to share the knowledge, creativity, and solutions our people develop, and are confident in our ability to positively impact your business.



## CONTACT INFO

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Design with community in mind

