E.S. Fox Limited

Construction Services



COMPANY CONTACT

E.S. Fox Limited — Construction www.esfox.com 905-354-3700

HEAD OFFICE

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SERVICES

- ENGINEERING
- FABRICATION
- CONSTRUCTION
- NUCLEAR
- STRUCTURAL STEEL
- BRIDGES
- TECHNICAL SERVICES



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E.S. Fox Limited

CORPORATE OVERVIEW

Since 1934, E.S. Fox Limited (ESFL) has set the standard for safety and quality in the construction and fabrication industry. ESFL, a privately owned, Canadian, multi-trade company, providing a single source for Industrial, Institutional, Commercial, and Energy projects. With over 3.5 million direct -hire person-hours last year, we self-perform Structural Steel Fabrication and Erection, Mechanical, Electrical, Sheet Metal, HVAC, Refrigeration, Millwright / Rigging, and Boiler Making.

The strength of our company stems from the vast experience of its people, the integration of a variety of skilled trades, and dedication to total control of construction through computerized planning and monitoring techniques.

ESFL has established a reputation for high quality workmanship, operational flexibility, efficiency, and timely project completion.

CONSTRUCTION CAPABILITIES

As a fully integrated, multi-trade construction firm, E.S. Fox Limited provides clients with a single source solution for their detail engineering, fabrication, construction, and maintenance needs. We are a solutions based provider that delivers a superior level of service from "cradle-to-grave," as we offer multi-trade, service oriented solutions for all your ICI and Energy projects.

FABRICATION CAPABILITIES

E.S. Fox Limited is proud to operate three state-of-the-art fabrication facilities across Ontario. At our main fabrication facility in Port Robinson, we offer over 83,000 square feet of production space. We work to the highest standards to produce Pipe Spools, Modules, Cryogenic Cold Boxes, and Pressure Vessels. With over 800 weld procedures and 40 quality certifications including nuclear, E.S. Fox Limited continues to be a leader and a symbol of Canadian strength and tradition in the supply of Quality Fabrication Services for the Industrial, Commercial, Institutional, and Energy markets for over eight decades.



E.S. Fox Limited Environmental Health and Safety

SAFETY CULTURE

At ESFL, employee safety, protection of the environment, and work quality are the main focus of our safety culture. Both management and employees work together in an effort to further advance knowledge of safety and incident prevention. Together we work to ensure a safe work environment for all. Our employees believe in the fundamental principle that safety is everyone's responsibility.

One of our core values is to "Prevent the Event." Incident prevention is the integral part of every job with the safety and well-being of each individual the <u>number one priority.</u>

SAFETY PROGRAM KEY ELEMENTS

- Corporate Safety Manual
- Site Specific Safety Plans
- Orientation and Training
- Incident Investigation
- Lessons Learned Bulletins
- Job Safety Analysis
- Workplace Inspections
- Senior Management Review

- Safety First Attitude
- Trending and Analysis
- Setting Objectives and Targets
- Safety Workshops
- Mentoring Program
- J.H.S.C.
- Strong Communication
- Accountable Supervision
- Safety Meetings







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E.S. Fox Limited Quality Assurance



E.S. Fox Limited - Safety and Quality Assurance Certifications

ISO

- ISO 9001:2015
- ISO 14001
- ISO 45001



CWB

- Structural Steel CWB W47.1 Div. 1
- Structural Aluminum CWB W47.2 Div. 1



CSA

- CSA N285.0 Nuclear Class 1, 2, 3, & 4
 Parts, Components & Support
- CSA N285.0 Nuclear Material Supply Ferrous and Non-Ferrous (3 Locations)
- CSA N286-12 Nuclear
- CSA N299.1 2016
- CSA B51 Boiler, Pressure Vessels & Pressure Piping & Repairs
- CSA B51 Category A, B, C, E & H
 Type Welded Non-Welded Fittings
- CSA B51 Hot Tap & Line Stopping
- CSA B52 Mechanical Refrigeration Code
- CSA Z7396. 1-17 Medical Gas Pipeline Systems Part 1

ASME

- ASME Section III, Division 1: N, NPT, NA, NS
- ASME Section VIII, Division 1 & 2 Pressure Vessels
- ASME U, U2, S, & PP Stamps
- ASME B31.1 Power Piping
- ASME B31.3 Process Piping
- ASME B31.5 Refrigeration Piping
- National Board Registration for ASME Section I, III, VIII



COR

 COR and Infrastructure Health and Safety Association Certification





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E.S. Fox Limited Locations & Facilities

Head Office: Niagara Falls, ON —250,000 square feet

Branch Location	Capabilities		Square Footage
Darlington, ON	Construction		
Hamilton, ON	Construction	Fabrication	10,000 sq. ft.
Kingston, ON	Construction	Fabrication	17,000 sq. ft.
Port Robinson, ON		Fabrication	83,000 sq. ft.
Thunder Bay, ON	Construction	Fabrication	5,000 sq. ft.
Tiverton (Kincardine), ON	Construction		
Vaughan (Toronto), ON	Construction		
Oshawa, ON	Construction		
Sarnia, ON	Construction		
		Total Fabrication	115,000 sq. ft.



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FABRICATION CAPABILITIES

At our main fabrication facility in Port Robinson, Ontario, we offer over 83,000 square feet of production space. We work to the highest standards required to produce Cryogenic Cold Boxes, Pipe Spools, Modules, and Pressure Vessels. With more than 800 weld procedures, we fabricate:

Modules and Vessels

- Process Modules and Equipment Skids
- Cryogenic Air Distillation Columns for: Oxygen, Nitrogen, and Argon
- Air Liquefaction / Separation
- Hydrogen Purification
- Catalyst Reclamation
- Oil/Water Purification

Pipe Fabrication

- Stand alone contracts & support of field projects and other fabrication projects
- Area of expertise is high alloy materials: Stainless Steel, Aluminum, Titanium, Chrome-Moly
- Carbon Steel up to 84" Diameter
- Victaulic—Roll Grooved Piping up to 48" Dia.
- Jacketed Pipe



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We provide the following Construction Services:

- Construction Management
- Piping
- Electrical
- Structural Steel
- Ironworking
- Millwrighting
- Boiler Making

- Sheet Metal
- HVAC
- Instrumentation & Controls
- Operating Engineering
- Insulation
- Carpentry
- Refrigeration



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NUCLEAR SERVICES

E.S. Fox Limited is a people-first, environmentally conscious, socially responsible EPC provider in the Nuclear sector with every aspect of its development. E.S. Fox Limited's Nuclear Services contributed millions of hours in support of Ontario's safe and reliable Nuclear power industry. We provide our clients with a streamlined solution for their detailed engineering, fabrication, construction, and maintenance needs. As the Nuclear power generation sector evolves from large Nuclear reactors to Small Modular Reactors, we are primed to support the transition.

We provide the following Nuclear Services:

- Safety & Quality Control
- Nuclear Fabrication
- Project Management
- Engineering, Procurement, & Construction (EPC)
- Indigenous Relations



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STRUCTURAL STEEL AND BRIDGE DIVISION

E.S. Fox Limited's Structural Steel & Bridge Division operates as a fabrication and erection service provider throughout Canada. With our highly skilled team of erectors and supervision, E.S. Fox Limited has distinguished itself through our dedication to quality and excellence in all phases of Structural Steel construction. From Commercial and Industrial projects to Bridges and Roller Coasters, E.S. Fox Limited continues to be an industry leader focused on organizational excellence through principles such as Safety, Quality, and Service.

We provide the following Structural Steel and Bridge Services:

- Architecturally Exposed Structural Steel
- Commercial and Industrial Steel
- Institutional Steel
- Bridges
- Themed Entertainment



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TECHNICAL SERVICES AND MAINTENANCE

ESFL's highly-qualified factory-trained technicians provide services on all types and brands of equipment encountered across all Industrial, Commercial, Institutional, and Energy markets. They are certified for specialized critical environments such as oil & gas (onshore, offshore, oil sands), nuclear, biopharmaceutical research, healthcare, data centres, museums, and art galleries.

ESFL offers maintenance agreements tailored to meet the specific needs of different systems and owner priorities.



WE OFFER SERVICES FOR:

- Installations
- Heating, Ventilation, & Air Conditioning
- Mechanical Repairs & Maintenance
- Refrigeration
- Technical Services Building Analysis
- Energy Retrofit Projects
- Savings & Incentives

From HVAC and Controls to Design-Build systems, ESFL offers a wide range of technical services.



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Rainy River Gold Mine MPEI Grinding Building—Interior

Client

New Gold Inc.

Scope

- MPEI Contract 015—Crusher Building
- Supply and installation of all piping, electrical, and HVAC systems
- Installation of all major owner supplied equipment associated with:
 - ♦ SAG Mill
 - ◆ Ball Mill
 - ♦ Pebble Crusher
 - ♦ Pre-leach Thickener
 - ◆ Concentrator
 - Cyclopack
 - ♦ Screens

- Conveyor Systems
- Transformers and MCC's
- Modular Electrical Rooms
- ◆ Intensive Cyanidization Unit
- Process Pumps
- Wet Scrubber Cyclone

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GM Canada—New Chiller Plant

Client

GM Canada

Scope

We self-performed the mechanical, ironwork, electrical, and Sheet Metal installation. The work included:

- Erection of a new chiller building
- Installation of two new chillers complete with controls
- Installation of all Victaulic/welded piping systems
- Installation of all electrical services including high voltage gear and motor
- Control Centers (MCC's)

Trades

Pipefitters | Millwrights | Ironworkers | Electricians | Sheet Metal | Building Cladding | Roofing

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St. Lawrence Cement Slag Mill

Client

CRH formerly St. Lawrence Cement

Scope

- Civil | Structural | Architectural | Mechanical
- Foundations, structural, equipment required to transfer Granulated Furnace Slag (GBFS) from pad to bin and grinding process

Trades

Ironworkers | Sheet Metal Workers

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Cytec Niagara Falls—Phosphine Plant Expansion

Client

Cytec Niagara Falls

Scope

E.S. Fox Limited was a Prime Contractor for the plant expansion at Cytec's facility in Niagara Falls, which produces Phosphine and Phosphine derivative products for industrial, mining, and agricultural products. ESFL was awarded several contracts including:

- Utility Racks
- Thermal Oxidizer & Flare Building—Mechanical & Electrical Process Systems Installation
- Phosphine / Compression—Mechanical & Electrical

Trades

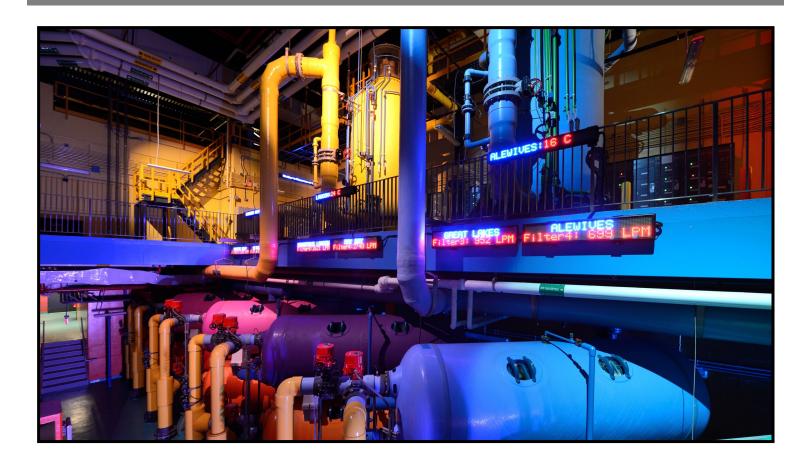
Pipefitters | Millwrights | Ironworkers | Electricians | Sheet Metal

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Ripley's Aquarium Life Support System

Client

Ripley's Entertainment

Scope

- ESFL was contracted for the supply and installation of all components associated with the Life Support Systems for the new Ripley's Aquarium at the base of the CN Tower in Toronto
- Due to its location, deliveries of materials and equipment had to be meticulously coordination as there was limited space for staging work

Trades

Pipefitters | Plumbers

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Niagara Falls - Casino Niagara

Client

Ontario Casino Corporation

Scope

Contract was for the complete electrical installation at the temporary Casino in Niagara Falls. This was a fast-tracked project that was completed on time with the following included in E.S. Fox Limited's scope:

- Design review, Power Distribution, Fire Alarm System, Telephone Data Systems and Cabling, Security Access, Slot Machine Data Wiring, PA System, Gaming Area Lighting, Site Area Lighting, Marquee Lighting, Kitchen/Bar Wiring
- ◆ Emergency Power, Backup Power Supply, Wiring of All Devices, Underfloor Bus Duct, Automatic Load Transfer Equipment, Installation of 13,800 Volt Transformer and 1250 KW Backup Generator

Trades

Electrical | Controls

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Hilton Hotel Niagara Redevelopment

Client Hospitality Resorts Inc.

Scope Under subcontract to Hospitality Resorts Inc., E.S. Fox Limited performed the

mechanical scope of work for the Hilton Niagara Redevelopment Project. E.S. Fox Limited completed installation of all mechanical equipment, HVAC and piping systems (plumbing, heating or otherwise) including all associated controls within the new 53 storey tower expansion. The work encompassed more than 70,000 person-hours of

labour.

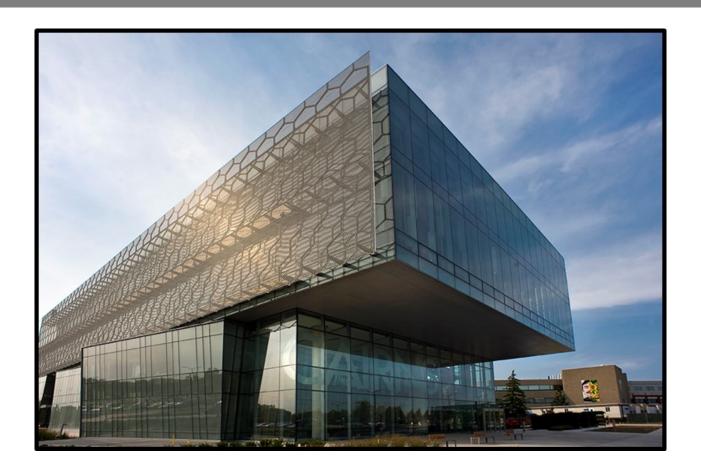
Trades Electrical | Controls

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Brock University—Niagara Health & Bioscience Research Complex

Client

EllisDon

Scope

Under subcontract to EllisDon, E.S. Fox Limited was the main contractor responsible for the supply of all materials, labour, tools, and equipment required to execute the complete installation of mechanical and electrical systems for the new Niagara Health and Bioscience Research facility at Brock University. The scope including all piping (registered & non-registered), sheet metal, HVAC, fire protection, insulation, lighting and power, data and communications, fire alarm, etc.

Trades

Electrical | Pipefitters | Sheet Metal | HVAC | Insulation

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Kingston General Hospital—Phase 2 Redevelopment

Client

PCL Constructors Canada

Scope

The electrical work for the KGH Redevelopment Project required 120,000 person-hours of labour and a three year duration, the scope included:

- Removal and replacement of 5KV switchgear and PCB's, replaced with 2000 and 2250 KVA transformers
- Installation of new buss duct feeders, new transformers, new transfer switchers, new distribution, power, lighting and receptacle panels, new low voltage lighting controls, data and communications, cable baskets, and other electrical and fixtures

Trades

Electrical | Controls

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Toronto Pearson International Airport Expansion

Client

Greater Toronto Airports Authority

Scope

- An 'airside' expansion to an existing and occupied terminal adjacent to live operations
- Reinforcing was also included at the Customs area on an off-shift
- The schedule was 1 year long with an overall tonnage on the project of 2,500 tons

Trades

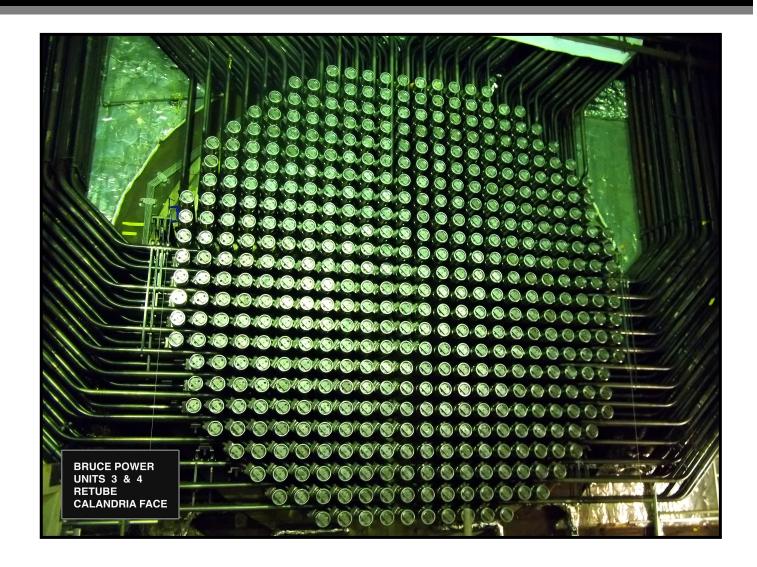
Ironworkers

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Feeder Tubes—Bruce Retube Project

Client Bruce Power

Scope ◆ Fabricate and install 1,920 replacement Feeder Tub Sections (Bruce 1&2)

Original specification called for welded fittings on compound bends

Specification changed to utilize all bent feeders (welded elbows eliminated)

Trades Production Workers | Pipefitters

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Magnolia Generation — Microturbine Installation

Client

Magnolia Generation

Scope

- Design/Build project within existing operational High Rise Residence
- Installation of four 65kW micro-turbines exhausting into two heat recovery boilers
- ◆ Acted as the Prime to the owner in a CCDC 2 Contract 4,000 hour job
- ◆ Installation of four new 65kW National Gas Micro-Turbines and all associated instrumentation systems dependent for these engines
- Pumps, heat exchangers, piping, etc. along with process instrumentation for the new heat recovery portion of the job
- Installation of necessary switchgear, panels, transformers, wiring, etc. for the project

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Portlands Power Generation Centre—550 MW Combined Cycle Facility

Client

SNC Lavalin Inc.

Scope

E.S. Fox Limited performed he all-trades installation of two GE Frame 7FA Gas Turbines rated at 180 MW each, two DLN Combustion Turbines, all associated equipment, electrical and piping as well as the offsite assembly, transportation, and erection of tow 20' diameter bypass stacks. The scope of work included:

- Transporting and setting of GE 7FA Gas Turbine Generators
- Exhaust Diffusers
- Exhaust Ducts c/w Air Inlet Filter Houses
- Filter House Structural Steel
- Ducting
- Accessory Modules
- LEC Modules
- LCI Modules
- Turbine Enclosures
- Piping and Supports, Tubing and Supports, Valves, other specialty equipment
- Supply and install all cable tray, conduit, supports, and accessories necessary

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