



# BUILDING ENGINEERING SERVICES

Structural  
Mechanical  
Electrical  
Building Science



**CROZIER**  
CONSULTING ENGINEERS

We provide structural, mechanical, electrical and building science engineering services with your business needs in mind; finding the balance between functional design and cost efficiency.

We call this **Value Engineering**, and it's the **Crozier Way**.

## Our Services

When Crozier & Associates was founded in 2004, we primarily focused on civil servicing and water resources for private sector land developers.

Since then, we have developed a full-service Building Science, Structural, Mechanical, and Electrical (BSME) team to provide integrated engineering and design services to our clients.

Today, 1 in 5 team members at Crozier work solely in building engineering services. Whether it's performing building condition assessments, designing structural, mechanical or electrical building components, or tendering construction services, our team of experienced engineers, designers and technologists are able to provide end-to-end solutions for our clients' building needs.

## Our BSME Team

- 6 Professional Engineers
- 4 Engineering Graduates
- 8 Technicians
- 2 Engineering Students

## Our Work

- Building design in steel, concrete, heavy timber, wood frame, aluminum, and glazing
- Building condition assessments
- Reserve Fund Studies
- Performance Audits
- Building envelope assessment, rehabilitation, and restoration
- Bridge & dam design
- Code consulting
- HVAC system design
- Fire suppression and alarm
- Building Automation Systems (BAS)
- Lighting systems
- Energy modelling
- Construction contract administration and review

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# Structural Engineering

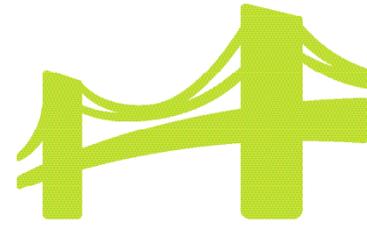
■ With a strong focus on mid-rise developments, our Structural Engineering team delivers Value Engineering to your project under tight deadlines and budgets. Our experience in mid-rise projects ranges from simple wood-frame systems on frost walls, to full site underground parking garages with podium mid-rise structures. Material systems will vary based on your timeline and construction costing budget. These material systems include steel frame, reinforced concrete, precast concrete, or wood structures.

Whether obtaining building construction or demolitions permits, designing residential developments, completing comprehensive performance audit investigations, or securing occupancy permits for your tenancy, our structural team provides technically sound and cost effective solutions to help you meet your project goals. Our clients include developers, building contractors, architects, homeowners, and government agencies.

# Building Science

■ If you are experiencing nuisance water infiltrations, roofing and building system ventilation concerns, or are contemplating a building system upgrade or replacement program, you need a team of qualified engineers and building professionals on your side.

Crozier & Associates' Building Science services evolved organically through the integration of our civil, structural, mechanical and electrical engineering disciplines. In addition to this technical foundation, our team also brings invaluable construction knowledge and hands-on experience to building envelope issues. From building condition assessments and performance audits to reserve fund planning, our Building Science team can help you identify specific issues and provide practical solutions.



## Our Structural Engineering services include:

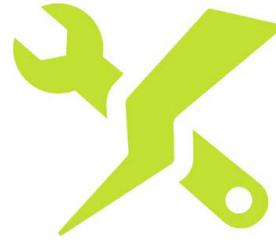
- Structural performance audits
- Building condition assessments
- Industrial and commercial building superstructure systems
- Foundation design
- Municipal structures (pump stations, holding tanks, stormwater reservoirs)
- Earth retention structures
- Dams, bridges, culverts
- Drawing & specification preparation



## Our Building Science services include:

- Building condition assessments
- Building and site servicing performance audits
- Reserve fund studies
- Energy audits
- Building code consultation
- Project management
- Tender/contract preparation
- Construction administration/review

# Mechanical & Electrical Engineering



■ When you require an existing systems analysis, upgrade, or new facility design, you need versatile partners who are able to work within time and input constraints, with an emphasis on delivery. Our mechanical & electrical teams recognize that your project requires a unique balance of system quality, capital cost and operational costs in order to be successful.

Crozier & Associates' engineers have broad experience with applicable codes and industry best practices. Close working relationships with equipment suppliers give our clients access to the most advanced products and technologies. From design of equipment or system installations including life-cycle cost analysis to comprehensive review of building facilities, we design safe, efficient, high quality systems while keeping costs and timelines in check. This includes proactive procurement strategies including prepurchases of items with long lead times and the coordination of fabricated equipment assembly.

## Our Mechanical and Electrical Engineering services include:

- HVAC
- Fire suppression and alarm
- Domestic water, sanitary and storm
- Building automation systems (BAS)
- Electrical power systems
- Lighting (building and street)
- Drawing and specification preparation
- Tender and construction review services
- Code compliance review



# HARBOUREDGE OFFICE BUILDING

Collingwood, Ontario



The HarbourEdge Building is not only the home of our head office, but a prime example of the commercial structural design Crozier & Associates has been producing for over a decade.

Design and Approvals: 2010

Construction: 2010 - 2011

Construction Value: \$4.0 million

Client Reference: DunnCap

■ Crozier & Associates was retained to complete the structural design for the three-story, 40,000 square foot (GFA) steel frame structure. Working with Montgomery King Architect and the owner through the duration of the project, Crozier oversaw the project from design selection through to commissioning, proactively responding to and addressing any issues that might impact timelines. Our range of duties spanned pre-construction structural assessment and detailed structural design through to construction management and contract administration.

The building structure evolved as an integrated design of renovation and new construction whereby pre-existing structural elements were assessed for feasibility. The ultimate structure was composed of reinforced concrete foundation and shear walls supporting a steel frame skeleton.

Wrapped with floor to ceiling window expanses which overlook sweeping views of Georgian Bay, marble entrances, and a half story penthouse fitness room, The HarbourEdge, stands as Collingwood's premier office building and home to our head office.

## The Sixth Oakville, Ontario



**Client:** Toma Valley Homes

**Architect:** Global Architects

**Size:** 6 x Four-Storey Wood Midrise Buildings (184,000 sqft GFA)  
Single level underground full-site parking

## Yonge Station Barrie, Ontario



**Client:** Pratt Homes

**Architect:** ISM Architects

**Size:** 2 x Four-Storey Wood Midrise Buildings (223,000 sqft GFA)  
Single level underground parking

## Gallery Condominiums Barrie, Ontario



**Client:** Pratt Homes

**Architect:** ISM Architects

**Size:** 3 x Six-Storey Wood Midrise Buildings (404,000 sqft GFA)  
Two level underground parking

## 345 Davis Drive Newmarket, Ontario



**Client:** GH Capital

**Architect:** Raw Design

**Size:** 2 x Four-Storey Wood Buildings (33,000 sqft GFA)  
Single level underground full-site parking

## Junction Condominiums Barrie, Ontario



**Client:** Pratt Homes

**Architect:** ISM Architects

**Size:** 2 x Six-Storey Wood Midrise Buildings (182,000 sqft GFA)

## Coho Village Cambridge, Ontario



**Client:** LCL Builds Inc.

**Architect:** TAES Architects Inc.

**Size:** 3 x Three-and-a-Half Storey Wood/Steel Buildings (196,000 sqft GFA)

## Tanglewood Collingwood, Ontario



**Client:** Sierra Homes

**Architect:** Flanagan, Beresford & Patteson Architects

**Size:** 2 x Three-Storey Wood/ Steel Buildings (141,000 sqft GFA)

## Regent Condominiums Collingwood, Ontario



**Client:** Mon Desir Group

**Architect:** Tim Fanstone

**Size:** 1 x Four-Storey Steel Frame Building (36,000 sqft GFA)  
Single level underground full-site parking