



## Curriculum Vitae – Roy Ojala, P.Eng.



Roy Ojala has over 25 years of electrical engineering experience in a variety of areas of design including power distribution, lighting, data communications, security, and life safety.

23-826 King St. N Waterloo,  
Ontario N2J 3G8

Ph. (519) 570-5002  
Fx. (519) 888-1915

### Work History

#### 2001 – Present

Roy Ojala has over 25 years of electrical engineering experience in a variety of areas of design including power distribution, lighting, data communications, security, and life safety. The following summarizes Roy's experience with particular engineering projects.

Principle engineer for a variety of credit unions, new and renovation work for commercial applications, industrial plant improvement projects in the automotive and food industry sectors, school renovations, municipal projects, new office buildings and energy efficiency design for specific high efficiency applications. Specific projects include:

Engineer of record (principal engineer) for electrical design of new 60,000 sq. ft. credit union head office facilities in Swift Current SK. Responsibilities included primary and emergency power systems, lighting systems, life safety systems, communication systems, site power distribution, power coordination and protection design, and coordination with other disciplines during design (mechanical, structural, architectural). Client: First Financial Building Corporation, Greg Ward, 519 747 1504. Total contract value of \$6,000,000. each, electrical contract \$800,000.

Engineer of record (principal engineer) for base building electrical design and project supervision of new 37,300 sq. ft. Ontario Lottery Corporation Slot Gaming facilities in Elora Ontario. Responsibilities included primary and emergency power systems, lighting systems, life safety systems, communication systems, site power distribution, high voltage design, power coordination and protection design, and coordination with other disciplines during design (mechanical, structural, architectural). Client: MCL Management, Peter Maaten, 519 332 5023. Total contract value of \$14,000,000. each, electrical contract \$1,600,000. Owner/Contact: Grand River Raceway, Ted Clarke.

Engineer of record for two new school projects, one of construction value of \$2.5M in Waterloo and a second of value \$1.1M in Windsor. Other school projects included renovation work to various schools in the Waterloo Region with values not exceeding \$900K.



Engineer of record (principal engineer) for electrical design and project supervision of two new 13,300 sq. ft. Ontario Lottery Corporation Slot Gaming facilities in Woodstock Ontario and Dresden Ontario. Responsibilities included primary and emergency power systems, lighting systems, life safety systems, communication systems, and coordination with other disciplines during design (mechanical, structural, architectural). Client: MCL Management, Peter Maaten, 519 332 5023. Total contract value of \$2,000,000. each, electrical contract \$600,000. each. Additional responsibilities included client fit-up design for Schedule 'C' themeing upgrades in coordination with themeing architect.

Engineer of record (principal engineer) for electrical design of over 20 individual projects ranging in size from 2000 sq. ft. to 15000 sq. ft primarily for commercial and institutional building services. Project costs ranged from \$15,000. to \$2M. Services include power systems designs of 4160 volts and below, electrical coordination studies, energy efficiency studies, fault current calculations, communication application systems, audio-visual systems, emergency lighting and fire alarm systems. Scope of work included construction and site supervision, site inspections and final inspections for conformance to design. Building uses included schools, credit unions, hospitals, group homes, and small manufacturing facilities.

Various site lighting projects in the Region of Waterloo and across Ontario.

### 2000

Engineer of record (principal engineer) for electrical design and project supervision of two new 13,300 sq. ft. Ontario Lottery Corporation Slot Gaming facilities in Clinton Ontario and Hanover Ontario. Responsibilities included primary and emergency power systems, lighting systems, life safety systems, communication systems, and coordination with other disciplines during design (mechanical, structural, architectural). Client: MCL Management, Peter Maaten, 519 332 5023. Total contract value of \$2,000,000. each, electrical contract \$600,000. each.

Engineer of record (principal engineer) for electrical design of waste water emergency power generator retrofit to existing waste water sewage pumping section of a waste water plant for the Regional Municipality of Waterloo. Work included integration of emergency power with existing pump control system and auxiliary ultrasonic level control. Client Karl Cober, P.Eng. Regional Municipality of Waterloo, 519 575 4441. Project cost was \$120,000.

Engineer of record (principal engineer) for electrical design of approximately 20 individual projects ranging in size from 2000 sq. ft. to 15000 sq. ft primarily for commercial and institutional building services in retrofit and new construction scenarios. Project costs ranged from \$15,000. to \$2M. Services include power systems designs of 4160 volts and below, electrical coordination studies, energy efficiency studies, fault current calculations, communication application systems, audio-visual systems, emergency lighting and fire alarm systems. Scope of work included construction and site supervision, site inspections and final inspections for conformance to design. Building uses included schools, credit unions, hospitals, group homes, and small manufacturing facilities.

### 1998 - 2000

Senior engineer for electrical design, design supervision and project supervision of approximately 40 individual projects per year. Scope of work was as described in the above.





## 1993 - 1998

Electrical engineer and principal engineer for electrical design, design supervision and project supervision of approximately 5 individual projects per year. Scope of work was as described in the above. Work included coordination with mechanical engineer acting as senior engineer for ventilation and water pumping energy savings projects.

Other projects included electrical energy efficiency studies, electrical design and electrical construction supervision for implementation of study recommendations for existing facilities such as Waterloo Library (ventilation & lighting); Waterloo City Hall (lighting & ventilation); Town of Ingersoll (municipal water pumping energy efficiency improvements – study and implementation); and Global Stone (lime plant) (fans, lime batching and conveyors for kilns). The work at Global Stone included re-design of existing 600 volt, 1200 amp power distribution center for fans and conveyors for the kiln operation. Other electrical energy studies were carried out for Sunnybrook Medical Centre (Toronto) general ventilation, Mississauga City Hall ventilation fan efficiency. These project costs varied between \$15,000 and \$250,000.

## Career History

2000 – Present      Partner  
Rombald Inc.

**Electrical Systems Design** – Commercial industrial & institutional power transformation and distribution; demand load calculations; fault load calculations; voltage drop calculations.

**Data/Voice Systems Design** – High speed data riser design; future-proof design for data/voice systems; building topology wiring design; copper and fibre cabling designs.

**Lighting Design** – Fluorescent, halogen and high intensity discharge lighting for indoor and outdoor applications; software based lighting level simulations; emergency and backup lighting.

**Auxiliary Electrical Systems Design** – Emergency generator power design; uninterruptible power systems design;

**Security Applications** – Design of security systems layout; magnetic door locks; door strikes; cameras; card readers; tamper resistant electrical fixtures.

**Life Safety Designs** – Fire alarm systems design (single and two-stage systems, addressable systems); emergency lighting design; emergency power for fire pumps and elevators.

**Energy Savings Analysis** – Energy efficiency design for new construction; energy efficiency analysis and reports for existing facilities.





## Career History – cont'd

**1998 – 2000                      Senior Electrical Engineer**  
**Mighton Engineering Ltd.**

**Electrical Systems Design** – Commercial industrial & institutional power transformation and distribution; demand load calculations; fault load calculations; voltage drop calculations.

**Lighting Design** – Fluorescent, halogen and high intensity discharge lighting for indoor and outdoor applications; software based lighting level simulations; emergency and backup lighting.

**Auxiliary Electrical Systems Design** – Emergency generator power design.

**Life Safety Designs** – Fire alarm systems design (single and two-stage systems, addressable systems); emergency lighting design; emergency power for fire pumps and elevators.

**1993 - 1998                      Consultant**  
**Roy Ojala Services**

**Energy Savings Analysis** –Energy efficiency analysis and reports for existing facilities; capital cost financing of energy savings projects; payback analysis; energy payback contracts. Project electrical design and construction supervision. Market sectors included steel, material handling, commercial and institutional.

**Electrical Systems Design** – Industrial, commercial & institutional power transformation and distribution; demand load calculations; fault load calculations; voltage drop calculations.

**Data/Voice Systems Design** – High speed data riser design; future-proof design for data/voice systems; building topology wiring design; copper and fibre cabling designs.

**Lighting Design** – Fluorescent, halogen and high intensity discharge lighting for indoor and outdoor applications.

**Wireless Communications Consulting** – Chief designer of a short-range wireless communication system for small packet transmission of utility and life safety information to and from a residence or commercial building. Successfully patented a transmitter device for this application.

**1990 - 1993                      Energy Management Manager**  
**Sutherland-Schultz Ltd.**

## Energy Service Contracting

**Energy Savings Analysis** –Energy efficiency analysis and contracting for existing facilities; capital cost financing of energy savings projects; payback analysis; energy payback contracts. Supervision of the capital improvements.





## Career History – cont'd

**1988 - 1990**                      **Technical Development Manager**  
**SAF Drive Systems** (Division of Sutherland-Schultz Inc.)

Electric motor drive speed and torque controller development. Supervised the design of a microprocessor-based motor controller including the application software development. The primary design of the controller is still in production today.

**1986 - 1988**                      **Software Engineer**  
**Linton Technology Inc.**

Developed software for the voice communications industry. Software was PC-based and interfaced with digital telephone switches, tracking call duration, destination numbers and toll rates.

**1983 - 1986**                      **Software Engineer**  
**Bell Northern Research**

Developed PC-based software for optical character recognition systems.



## Education

- 2002 - Cutler-Hammer Protection & Control Course
- 2002 - Nordx/CDT Structured Cabling Course
- 2001 - ENCON Loss Control Seminar
- 2001 - Lithonia Lighting Simulation Seminar
- 2000 - Nordx/CDT High Speed Cabling Design Course
- 1992 - Electrical Efficiency Course, Energy Systems Institute
- 1991 - ISA HVAC Control Optimization Course
- 1984 - Post-Graduate Course, Computer Engineering, Carleton University
- 1983 - BAsc. Electrical Engineering, University of Waterloo



## Affiliations

University of Waterloo Alumni Board of Directors

Past Commissioner, Waterloo North Hydro

Member of Professional Engineers of Ontario (PEO)

Past Chair, Kitchener-Waterloo Chapter PEO

Judge, Waterloo Regional and Canada-Wide Science Fair

## Patents

1999 - Environmental Condition Detector Transmitter Interface

U.S. Patent Number 5,914,656

## Special Clearance

2001 - Holder of access to sensitive areas clearance with the OLG.

