

**IN THE MATTER OF** the *Public Inquiries Act, 2009*, S.O. 2009,  
c. 33, Sched. 6

**AND IN THE MATTER OF** the Elliot Lake Commission of  
Inquiry, established by Order in Council 1097/2012

**APPENDIX A TO CLOSING SUBMISSIONS OF  
EXP GLOBAL INC. (TROW)**



## Andrew Kaminker, P.Eng., B.A.Sc.

### Senior Technical Specialist

+1.905.695.3217 | [andy.kaminker@exp.com](mailto:andy.kaminker@exp.com)

#### Areas of Expertise

- Parking Structures – Design, Investigation & Repair
- Concrete Rehabilitation
- Heritage Buildings

#### Overview

Andy Kaminker's engineering experience combines strong analytical and research skills with over 49 years of practical experience in many areas of structural engineering. Andy's special interest is structural investigation, structural design and durability of buildings. He reviews the firm's parking structure projects from the durability perspective and provides the technical staff with the required specialized expertise. Since 1983, Andy has led or been involved with the investigation and reporting on numerous parking structures as well as their repair. He provided extensive court expert testimony at the Bell Canada vs. Olympia & York litigation pertaining to the Place Bell Canada multi-storey above-mall parking structure.

Andy was Job Captain for the structural design of the 9,300 car Toronto Pearson International Airport Post-Tensioned Cast-in-Place Parking Structure/ This won the 2003 Ontario Concrete Cast-in-Place Concrete Structural Design Innovation Award.

From 1992 to 2002 he was chairman of the Canadian Standards Association (CSA) Technical Committee on the Design and Construction of Parking Structures, and is currently co-vice-chairman. He is also actively involved with the technical committee of CSA Standard A23.1 on concrete materials, and is a past member of the technical committee of CSA Standard A23.3, Concrete Design. In 1994 he was presented with the Canadian Standard Association "Award of Merit" for his work in the "development of standards for the design, construction and maintenance of parking structures".

#### Professional Registrations

- P.Eng. - ON

#### Education & Training

- B.A.Sc. (Structural – Honours Graduate), University of Toronto, 1964

#### Affiliations & Memberships

- Member, Association of Professional Engineers of Ontario
- Co-Vice Chair of CSA Technical Committee S413, "Parking Structures"
- CSA Technical Committee A23.1 "Concrete Materials and methods of concrete construction"
- ACI Committee 222, Corrosion of Metals in Concrete, Associate Member
- Designated Consulting Engineer, Ontario
- American Concrete Institute

#### Languages Spoken

- English

#### Project Experience – Award Winning Projects

- Toronto Pearson International Airport Parking Garage, 9300 cars, Mississauga, Ontario, Canada (*award-winning project*)
- Parking Structure III & Student Services Centre, York University, Toronto, Ontario, Canada (*award-winning project*)
- Parking Structure II, York University, Toronto, Ontario, Canada (*award-winning project*)
- Parking Structure I, York University, Toronto, Canada (*award-winning project*)



**Andrew Kaminker, P.Eng., B.A.Sc. – Continued**  
**Senior Technical Specialist**

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**Project Experience (Partial List of Projects)**

***Investigation of Existing Parking Structures***

- 8199 Yonge Street Post-Tensioned Garage Investigation, Thornhill, Ontario, Canada
- Yonge Parkade Toronto Eaton Centre – Above-Mall Parking Garage Investigation and Repair, Toronto, Ontario, Canada
- Square One Shopping Centre Precast Garage Investigation, Toronto, Ontario, Canada
- Commerce Court Garage Investigation and Repair, CIBC Development Corporation, Toronto, Ontario, Canada
- Leonard Avenue Garage, Toronto Western Hospital, Investigation and Rebuild, Toronto, Ontario, Canada
- Rosedale Glen Condominium Parking Garage Investigation and Repair, Toronto, Ontario, Canada
- Dundas Parkade Toronto Eaton Centre– Above-Mall Post-Tensioned Garage, Investigation and Repair, Toronto, Ontario, Canada
- 155 Gordon Baker Road – Post-Tensioned Garage Investigation, Toronto, Ontario, Canada
- Women’s College Hospital Parking Garage Investigation and Repair, Toronto, Ontario, Canada
- Meadowvale Post-Tensioned Parking Garage Investigation & Repair, Mississauga, Ontario, Canada
- Constellation Hotel Post-Tensioned Parking Garage Investigation, Repair & Strengthening, Etobicoke, Ontario, Canada
- Place Bell Canada Post-Tensioned Garage Investigation & Litigation, Ottawa, Ontario, Canada

***Design of New Parking Structures***

- The award winning projects listed on page 1
- Bayshore Shopping Centre Parking Structure – Ottawa, Ontario, Canada
- GO Transit Aurora Parking Garage – Compliance & Owner’s Representative, Aurora, Ontario, Canada
- Canadacar System Garage, Code Compliance Equivalency, Guelph, Ontario, Canada
- Sears Canada - St. Laurent Precast Parking Garage, Ottawa, Ontario, Canada
- Sunnybrook Health Sciences Centre Parking Garage, Toronto, Ontario, Canada



## **John A. Bickley, P.Eng**

### Summary

Specialised in concrete technology since 1955. Site and/or laboratory experience on projects in UK, Canada, USA, Bahamas, Jamaica, Malta, Jordan, Saudi Arabia, Abu Dhabi, India, Pakistan and New Zealand.

From 1990 to 2002, a Principal Investigator with Concrete Canada (CC), the Network of Centres of Excellence on High-Performance Concrete (HPC).

Administered research on HPC, and participated on many occasions in Canada, the USA, and abroad in the technology transfer of HPC technology to the Construction Industry through seminars and conferences.

As Implementation Manager of Concrete Canada, managed the many demonstration projects carried out with financial and technical support by CC.

Included in these projects were a number of prototype bridges using HPC in Ontario, and Nova Scotia. Cast-in-place and Pre-cast concrete were included in this programme.

Participated in the drafting of a specification for HPC adopted in 1998 by The Ontario Ministry of Transportation as their preferred concrete for bridge construction. Provided similar input to Transportation Agencies in Newfoundland, Manitoba and Alberta.

Member of the Independent Engineer team on the re-decking of the Jacques Cartier Bridge.

Published a number of papers on the specification and application of HPC for structures. Member of CSA A23.1 responsible for facilitating the use of HPC in the 2000 edition published in September 2000.

Co-author, with Professors Hooton and Hover, of two NRMCA publications on Performance Specifications, Preparation of a Performance-based Specification for Cast-in-Place Concrete, January 2006 and Guide to Specifying Concrete Performance,, March 2008

### **Education**

Diploma in Civil Engineering, UK, 1948

### **Professional Memberships**

From

1967-to date	Registered Professional Engineer, Province of Ontario
1977-97	Licensed Professional Engineer, Province of New Brunswick
1984-97	Licensed Professional Engineer, Province of Alberta

1948-to date Institution of Civil Engineers  
1969-to date Engineering Institute of Canada/Canadian Society for Civil Engineering  
1973-to date Registered Consulting Engineer, Province of Ontario  
1974-86 Designated Specialist (Construction Materials), Ontario  
1973-87 Registered Specification Writer

### **Professional Experience**

1989 to date

Sole Practitioner

1986 to 1988

Trow Inc. Consultant, Concrete Technology.

1967 to 1986

Trow Ltd. (formerly The Trow Group Limited), Partner and Manager, Concrete Technology Services. Assignments included five trips to the Middle East to investigate concrete problems.

1965 to 1967

Warnock-Hersey, Toronto, Ontario, Manager, Materials Engineering.

1955 to 1965

Messrs. Sandberg, London, England. Head of Concrete, Soils and Asphalt Section. During this period, provided consulting, testing and inspection services on major suspension bridges, expressways, dams, dockyards, airfields, conventional and nuclear power stations and experimental nuclear reactors. Included in this work was about 20 trips to Europe, Malta, New Zealand, Pakistan and Jordan.

By 1965, this appointment involved the control of some 25 laboratories on major sites, as well as a central research and development laboratory. Engineering and technician staff directed was approximately 140.

1953 to 1955

Site Engineer on Industrial Construction projects.

1948 to 1953

Army Service with the Royal Engineers.

### **Awards**

Fellow Institution of Civil Engineers, 1979.

Fellow American Concrete Institute, 1980.

Construction Practice Award, American Concrete Institute, 1980.

Engineering News Record Citation, 1981.

Award of Merit, Canadian Standards Association, 1988.

Principal, Network of Centres of Excellence on High Performance Concrete; (Concrete Canada), 1990 to 1998

Appointed Adjunct Professor, Department of Civil Engineering, University of Toronto, 1993-1998.

Fellow Canadian Society for Civil Engineering, 1996.

Delmar Bloem Award, American Concrete Institute, 1997.

Ted Seeberg Award, Canadian Parking Foundation, 1999.

Honorary Doctorate, D.Sc. from Ryerson University conferred June 12<sup>th</sup>, 2009

### **Committees**

#### **American Concrete Institute (ACI)**

1987-90	Board of Direction
1982-88	Education Activities
1982-88	Convention
1979-90	362 Parking Structures
1982-to date	214 Evaluation of Test Results

1982-94	228 Non Destructive Testing of Concrete (Chairman 1988-90)
1990-94	231 Properties of Concrete at Early Ages
1990-to date	363 High Strength Concrete (Chairman 1994-1998)
1994-98	Concrete Research Council
1979-81	Ontario Chapter Committee, The Investigation and Repair of Parking Structures (Chairman)

### **Canadian Standards Association (CSA)**

1967-00	A23 Concrete Materials and Methods of Construction
1983-90	S413 Durable Parking Structures (Chairman)
1988-90	Task Force on Repair of Concrete
1994-00	A438 Concrete Construction for Housing and Small Buildings

### **American Society for Testing and Materials (ASTM)**

1977-00	C9 Concrete and Concrete Aggregates
1977-92	C9.02.05 Non Destructive Testing
1990-00	C9.61 Methods of Testing of Concrete for Strength

### **R.I.L.E.M.**

1991-94	TC126-1PT In-Place Testing
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### **Transportation Research Board (TRB)**

1983-88	A2E03 Mechanical Properties of Concrete
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## **Publications**

Over 50 papers published in Canada, US, UK, Norway, Denmark, Pakistan, India, Venezuela and China.

## **EXPERT TESTIMONY**

1. York Condominium Corp. No. 76 v. Rose Park Wellesley Investments Ltd. et al. (1948), 48 O.R. (2d) 455
2. New Brunswick Telephone Company, Limited v. John Maryon International Limited et al. (1981), 33 N.B.R. (2d) 543 (Q.B.)
3. Toronto (City) v West York Construction Ltd., (1985) O.J. no 521 (H.C.J.)

4. Bell Canada v. Olympia & York Development Ltd. (1992) O.J. No. 2802 (Gen. Div.)
5. Durham Condominium Corp. No 76 v. H.Kassinger Construction Ltd., (1995) O.J. No. 2660 (Gen. Div.)
6. St. Lawrence Cement Inc. v. Bono General Construction Ltd., (1997) O.J. No 2455 (Gen. Div.)



## **John Ryell, P. Eng.**

### **Senior Consultant, Concrete Technology**

John Ryell was appointed Senior Consultant, Concrete Technology, with Trow Consulting Engineers Ltd. now **exp**, in December 1990, following a number of senior management positions with Trow.

Mr. Ryell has had extensive private and public sector experience in concrete construction and rehabilitation, and in the engineering materials industry. He has made important contributions to the current "state-of-the-art" in construction quality assurance, pavement skid resistance and driving quality, the evaluation, testing and performance of concrete and concrete aggregates, the rehabilitation of concrete structures, the establishment of standards for the durable construction, and the application of high performance concrete in high-rise construction and transportation structures.

John Ryell has presented numerous papers to the U.S. Transportation Research Board, the American Concrete Institute, and the Transportation Association of Canada. He has worked in CSA Standards Committees since 1960 and has been a member on almost every committee and task force dealing with cement, aggregate, concrete, and allied material. From 1982 to 1984, he served as Chairman of the CSA Standard Steering Committee of Concrete.

#### **Rehabilitation of Concrete Structures**

Mr. Ryell has gained extensive experience in the performance and rehabilitation of concrete structures. His early experience was connected with the rehabilitation of older bridge decks on the Q.E.W., Hamilton, and some pre-World War II structures in Northern Ontario. During the 1960s, when the steel corrosion related distress in modern concrete structures in Ontario first became apparent, he carried out work to determine the nature of the problem and possible measures that would lead to durable structures, mostly deck slabs.

Following the publication of the Ministry of Transportation and Communications (MTC) Report RR203 "Durable Bridge Decks" that he co-authored with Dr. D.G. Manning and which represented a state-of-the-art report on the technology relating to the attainment of durable bridge decks, John Ryell was appointed Chairman (in 1975) of a Task Force at MTC with the objective of implementing the recommendations of the RR203 report and carrying out additional projects connected with structure rehabilitation and the attainment of durable new construction.

The Task Force carried out a comprehensive program of work over the next eight years in connection with demonstration projects, laboratory tests, condition survey procedures, cost analysis, and corrosion protection of concrete structures. During this time John Ryell and his MTC colleagues acquired considerable knowledge of bridge component deterioration and rehabilitation resulting in agency policies and strategies that established Ontario as a leader in the technology of concrete bridge rehabilitation and durable new construction. The use of epoxy coated steel reinforcement, initially in bridge decks (1978) and later (1981) in some substructure elements, was a key element in early MTC policies for long life, low maintenance structures.

### **Rehabilitation of Concrete Structures (con't)**

Since joining Trow Consulting Engineers Ltd. in 1986 as Manager, Concrete Technology Division, John Ryell has remained active in the performance monitoring and rehabilitation of concrete structures. He and his colleagues have introduced some innovative solutions for the rehabilitation of badly deteriorated parking structures including the retrofitting of a large Toronto parking structures using epoxy coated tendons and a bridge deck cathodic protection system. Mr. Ryell has worked with Ontario agencies on monitoring the performance of parking garage rehabilitation systems and has designed a standard condition survey format for post-tensioned parking structures.

John Ryell was a member of the Ministry of Housing Advisory Committee that in 1988 published the report "Deterioration of Parking Structures".

He provided expert court testimony with an extensive testing programme for the Ottawa area concrete basement problems.

### **Concrete Materials and Construction**

At Ministry of Transportation and Communications (MTC), John Ryell made important contributions to the Ministry's concrete pavement and concrete structure construction programs including initiatives in the introduction of granulated blast furnace slag into highway concrete, concrete pavement surface textures, research into grout for long post-tensioned bridge decks, high strength concrete technologies, and performance type specifications for concrete and concrete materials.

In the area of QA/QC programs for concrete construction John Ryell was Vice-Chairman of a Ministry study, on Quality Assurance in Construction, that in 1976 produced a three part project report recommending fundamental changes to Ministry practices and systems.

At Trow, Mr. Ryell has made important contributions to the development of 70 MPa and 85 MPa concrete used on a large scale in five high rise projects constructed in the City of Toronto since 1986 particularly in innovative methods for the prequalification of concrete suppliers and concrete mix proportions, improved technology for testing concrete cylinders and modelling of concrete temperature gradients in large sections as a basis to eliminate thermal cracking.

Recent work on the application of high performance concrete for rail tunnel precast segments has included chloride diffusion and permeability studies.

During his term as Vice President, Engineering and Quality, with Trow, John Ryell was the prime author of the company's quality and management manual that documented standards, policies and procedures for engineering work.

In 2003 Mr. Ryell was presented with the Ontario Concrete Awards, Certificate of Achievement, for "Outstanding Work on Concrete Filled Columns, GTAA New Terminal Development".

### **Education**

B.Sc. (Civil), University of Aston (U.K.), 1951

**Professional Affiliations**  
**(Past & Present)**

- Professional Engineers Ontario
- Member, Institution of Civil Engineers (U.K.)
- Member, American Concrete Institute
- Member, Concrete Society (U.K.)
- Member, Canadian Society of Civil Engineers
- Member, Institution of Structural Engineers (U.K.)

**Technical Committees**

- Member, CSA Committee A3000, Hydraulic Cement and Supplementary Cementing Materials
- Member, CSA Technical Group on Alkali-Aggregate Reactions
- Member, CSA Task Group on Evaluation and Management of AAR Affected Structures
- Member, CSA Committees, A23.1 & A23.2 Concrete Materials and Methods of Concretes Construction

**Professional Experience**

In December 1999, John Ryell was appointed Senior Consultant, Concrete Technology, Trow Consulting Engineers Ltd., Brampton, Ontario.

In 1986, Mr. Ryell joined Trow Consulting Engineers as Manager of the Concrete Technology Division and from 1994 to 1990 was Vice President, Engineering and Quality.

Mr. Ryell was Head, Demonstration Project Section, Transit Office, for the Ministry of Transportation, Ontario, from 1983 to 1986.

Between the years of 1957 to 1983, Mr. Ryell worked for the Ministry of Transportation, Ontario, as a construction materials specialist. He was Head of the Concrete Section, Engineering Materials Office from 1979 to 1983; from 1972 to 1979, John was Senior Research Engineer, R & D Branch with the Ministry; from 1957 to 1972, he worked as Concrete Engineer in the Materials and Testing Branch. From 1956 to 1957, Mr. Ryell worked for Lazarides and Lount Ltd., Consulting Engineers, Toronto, as a Civil Engineer.

Mr. Ryell was a Resident Engineer with the London country Council, U.K. in 1955 to 1956.

R.M. Douglas (Construction) Ltd., U.K., employed Mr. Ryell as a construction Engineer from 1954 to 1955.

From 1952 to 1954, Mr. Ryell was in the Military Services as part of the Royal Engineers, U.K.

Mr. Ryell was employed by the British Reinforced Concrete Engineering Co. Ltd., U.K., as Engineer-in-Training and Reinforced Concrete Design Engineer from 1945 to 1952.