BUILDING *Smart with* BASEMENTS AND PARKADES

2015 Half-Day Workshop

Presented by the British Columbia Building Envelope Council (BCBEC) and the Homeowner Protection Office (HPO), a branch of BC Housing.

Thursday, February 19, 2015

8:00 AM to 12:05 PM

(Registration, breakfast and tradeshow start at 7:00 AM)

The Italian Cultural Centre Society
3075 Slocan Street, Vancouver, B.C.

This half-day workshop will focus on the design, construction, maintenance and remediation of basements and parkades in residential buildings. Industry leaders will discuss code requirements, soil condition assessments, building systems, remediation strategies, and depreciation reports. Presentations will showcase recent research studies in single and multi-unit residential buildings.

Register at BCBEC.com.

BRITISH COLUMBIA

Homeowner Protection Office
Branch of BC Housing

BCBEC

BUILDING *Smart* with BASEMENTS AND PARKADES

Schedule

2015 Half-Day Workshop

	Registration, Tradeshow and Buffet Breakfast	**7:00 – 8:00 AM**
	British Columbia Building Envelope Council **Homeowner Protection Office**	**8:00 – 8:05 AM** Opening Remarks **8:05 – 8:15 AM** Welcome Participants
1	**Opening Session**	**8:15 – 8:55 AM**
	Murray Frank *Constructive Home Solutions*	Digging into Basements – The Building Science of Below Grade Assemblies that Work
2	**Second Session**	**8:55 – 9:35 AM**
	Karen Savage *Horizon Engineering Inc.*	Soils and Geotechnical Conditions
	Tradeshow and Coffee Break	**9:35 – 10:05 AM**
3	**Third Session**	**10:05 – 10:45 AM**
	Sylvie Mercier *Read Jones Christoffersen Ltd.*	Design, Construction and Maintenance of Parking Structures to Standard S413
4	**Fourth Session**	**10:45 – 11:25 AM**
	Jason Teetaert *Structure Monitoring Technology Ltd.*	Waterproofing Quality Assurance – The Last 1%
5	**Fifth Session**	**11:25 – 12:05 PM**
	Tony Gioventu *Condominium Home Owners' Association*	Out of Sight, Out of Mind – The Underground Workings of a Strata Depreciation Report

AIBC credits – 3.5 core learning units
RCI credits – 3.25 core learning units

Program + Bios

1 Digging into Basements – The Building Science of Below Grade Assemblies that Work

One of the most complex assemblies in a building is the part that is buried in the ground. Moisture loads, structural loads, soil mechanics, plants and animals all test our designs for the life of the building. Understanding the building science of design and construction of below grade assemblies is imperative. This session highlights key concepts and acceptable assemblies using graphics and videos as a primer for the discussions throughout the workshop.

Murray Frank

Murray is recognized as a premier building science specialist in British Columbia. He has been instrumental in the development of the understanding of moisture problems, energy performance and sustainability relating to single family and multi-unit residential buildings as well as building envelope concerns relating to commercial, industrial and institutional projects. Murray's combined technical expertise and practical experience help advance the understanding of construction and design issues in the various climates across British Columbia.

2 Soils and Geotechnical Conditions

Horizon Engineering Inc. was retained by the Homeowner Protection Office to prepare a technical guide, which is intended to provide general recommendations and guidelines pertaining to subsurface conditions expected in the various regions of British Columbia, site selection considerations, and foundation construction basics for single and multi-family residential developments. The guide was prepared to promote best practices with respect to geotechnical issues, and emphasizes some basic Building Code requirements for geotechnical building projects, reducing risks and subsequent problems related to soil and groundwater conditions. This presentation will include discussion of these topics as they relate to basements and parkades, as well as excavations, engineered fill and backfill, drainage and subsurface water management.

Karen Savage

Karen Savage is President of Horizon Engineering Inc. Drawing on over two decades of experience, Karen provides geotechnical engineering services to the BC building industry. Areas of specialization include: geotechnical design services for foundations, slope stabilization, excavations, shoring and retention systems, pavements, stormwater management, as well as sediment and erosion control, especially for LEED projects. Karen has served on numerous boards of directors and industry taskforces, most recently as a Councillor for the Association of Professional Engineers and Geoscientists of BC.

Program + Bios

3 Design, Construction and Maintenance of Parking Structures to Standard S413

Parking structures are unique. They are exposed to many severe influences such as de-icing salts, freeze-thaw cycles, temperature changes, wear and snow removal. And even though they are subjected to these influences, they are quite often the most neglected part of a complex from both a design and maintenance point of view. In many cases, immediate savings are pursued in design and/or construction, which is then followed by minimal maintenance, resulting in potentially significant short and long-term consequences. In this presentation, the design requirements in CSA-S413, the Parking Standard, will be reviewed. The importance of the requirements will be discussed with examples on what can happen if they are ignored both at the design phase and long-term occupancy phase.

Sylvie Mercier

Sylvie Mercier specializes in the evaluation and repair of concrete structures, prime consulting and the functional planning, design and restoration of parking facilities. Her wealth of experience includes facility condition assessments, project management and design of parking structures, institutional, research and commercial buildings, as well as seismic upgrades and renovations. After completing her education at the University of Waterloo and working at an engineering firm in Montreal, Sylvie joined RJC Vancouver in 1992. Sylvie is an active member of the Canadian Parking Association, and keeps abreast of current trends in parking design throughout North America.

4 Waterproofing Quality Assurance – The Last 1%

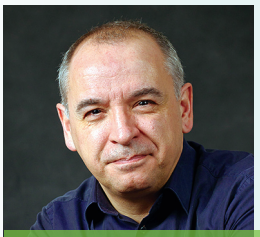
The quality assurance of waterproofing on podiums, parkades, and inverted roof assemblies can be completed using visual methods, random inspections, point-in-time measurement tools, and permanently installed monitoring systems. How do you reduce failure rates from variability of installation methods, site conditions and locate damage "by others"? This presentation will demonstrate various methods of quality assurance, monitoring systems and scanning methods that can be used for verification and reporting purposes. Real life practical applications, installation details, site conditions, and monitoring results of podium waterproofing in BC's Lower Mainland will also be showcased during various stages of the building life cycle including new construction and existing buildings.

Jason Teetaert

Jason Teetaert is the Vice President of Business Development at Structure Monitoring Technology. He has over 20 years of project management and electrical engineering experience, and more recently structure monitoring systems. He leads the design of moisture detection systems in residential, educational, and institutional projects. Jason graduated from the University of Manitoba with a Bachelor of Science Degree in Electrical Engineering. He volunteers in the building industry as the Past-President of the Board of Directors on British Columbia's Building Envelope Council and the current National Building Envelope Council President.

5 Out of Sight, Out of Mind – The Underground Workings of a Strata Depreciation Report

The introduction of depreciation reports in 2011 has been instrumental in assisting strata corporations with identifying their aging building systems and structures. In BC, the practice of parking garage podium and landscape overburden has enabled developers and consumers to maximize parking use with minimal impact on property excavation. Many of the structures and landscaping overburdens have now reached their projected life cycles and are due for major upgrades, such as structural enhancement, waterproofing, and electrical service upgrades. The session will provide an overview of the existing conditions by profiling three properties, the options available for the strata, cost projections and changes on how we approach planting and use of facilities.



Tony Gioventu

Tony has over 30 years of experience in management, real estate development, construction, building operations, governance and strata property legislation. In addition to acting as the editor of the CHOA Journal, a quarterly magazine with a province wide distribution of 14,000 copies, Tony is also the weekly Condo Smarts columnist for The Province, The Times Colonist, and "24". Tony is the co-host of the AM650 Talk About Strata show, and has served as a director/committee member for the Homeowner Protection Office, BC Building Envelope Council, Canadian Standards Association, Real Estate Council of BC. He continues to play an active role in research and development of building standards, legislation for strata corporations and consumer protection. Since 2002, Tony has written over 700 columns and information bulletins that are exclusively dedicated to strata living.

Notes

Notes

Homeowner Protection Office
Branch of BC Housing
Technical Research and Education

1701 – 4555 Kingsway
Burnaby, BC V5H 4V8
www.hpo.bc.ca

Telephone: 1-800-407-7757
Email: hpo@hpo.bc.ca

BC Building Envelope Council

1410 – 55th Street
Delta, BC V4M 3K5
www.bcbec.com

Telephone: 604-294-0037
Email: info@bcbec.com