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# Capital Communiq



### **ASHRAE - AMERICAN SOCIETY OF** HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS

http:/www.ashrae.ottawa.on.ca

**OTTAWA VALLEY CHAPTER** e-mail:contact@ashrae.ottawa.on.ca

October 2007

DATE: Tuesday October 16, 2007. Social: 17:30 Dinner: 18:30 Program: 20:00

CLEO Banquet Center, 156 Cleopatra Dr., Nepean, Ont., (613) 225-2255

N/A replaced with Life Cycle Costing Seminar TECH

**TEGA / Student** THEME:

PROGRAM: Implementing a LEED Building Design

SPEAKER: Jonathan Westeinde, Founder and CEO, Windmill Development Group

**OVERVIEW:** The presentation will provide insight into practically developing and implementing LEED

designs. Jonathan has agreed to take the time to discuss his experiences on the over

\$500M of LEED projects presently under development by the Windmill Development Group.

Jonathan is responsible for overall corporate strategy, finance and business development for the Windmill Group of Companies. Jonathan was recently recognized as one of the Top 40 under 40 in his home town of Ottawa, Canada. Windmill currently has over \$500M of projects presently under development across Canada, which are all a minimum of LEED Gold in design intent. The largest project presently under development by Windmill. Dockside Green in Victoria BC in partnership with VanCity, is currently North America's first LEED Platinum planned urban community. Windmill also wholly owns a sustainable development consulting company, Buildgreen Consulting, that is currently consulting on a diversity of projects across North America including venues for the 2010 Vancouver Olympic Games, 2014 Halifax Commonwealth Games Bid and a complete sustainable resort village in Loreto Bay, Mexico. Prior to founding Windmill, Jonathan was a founding partner of Venbridge, the venture capital services division of Gowlings, one of Canada's leading law firms. Previously, Jonathan was CEO and founder of LOSC, Inc., a Boston based venture capital firm, and had senior positions with Corel Corporation and Exocom Consulting post completing his MBA. Jonathan has also spent several years in the real estate development industry in various leasing and financing positions.

MBA, Dublin University, 1998 BA Economics, University of Western Ontario, 1990

Chairman, Commission for Environmental Cooperation of North America's Green Building Advisory Council (a NAFTA initiative)

Treasurer and Executive Committee, Canadian Green Building Council

### **EVENING PROGRAM**

SPEAKER BIO:

**SESSION** 

Roderic Potter Frank Bann

COMMITTEES Audit

Francois Belair Research Prom.

Glenn MacLean Membership Christine Kemp

Program Jeff Jarvis

**Student Activities** Stephen Lynch

TEGA Thomas Chiykowski

Chapter Historian Roderic Potter

**Golf Tounament** Cathy Godin

**Curling Bonspiel** Chris Healev Communiqué

Georges Maamari **Publicity** 

François Belair

Table Top Frank Bann

Telephone Cathy Godin

Greeter Mike Swayne

Roster Kevin Toll

Webmaster Roderic Potter

Al Oakes Award Glenn MacLean

**Nominations** David Eastwood

CRC Robert Lefebvre

### Menu

Hot and Cold Buffet Coffee and Tea, Assorted Pastries Chapter Members: \$30.00 Guests: \$45.00











# President's Message By Robert Lefebvre P.Eng., LEED AP

2007-2008 OVC President

Our first meeting of the year was at the Prescott Hotel. There was an excellent turn out by our membership and it was great to see everyone. I was particularly impressed with the number of new members who attended. Kudos to Rod Potter for his presentation of our chapter history and to Engineered Air for sponsoring the square pizza. Read more about the evening's events in Patrick St.Onge's <a href="What You Missed">What You Missed</a> article.

Our October meeting is back at LaContessa ... er... I mean Cleo. That's right, the name and management have changed, but the location, chef and staff are all the same. The theme for the evening is Student Activities and TEGA. Please take the time to introduce yourself to a student, sit down with them during dinner and let them know what our industry and ASHRAE are all about. They are our industry's future leaders; let's point them in the right direction!

I am writing this article the day after the ASHRAE Golf tournament held at Loch March. Once again it was another successful event that went off without a hitch. Congratulations and thank you to Cathy Godin and her committee for their hard work in organizing, preparing and running the event. See Cathy's article for more on the golf tournament. I would also like to thank all of the companies that contributed to the event by either putting in teams and/or sponsoring holes, prizes, etc.

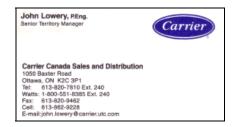
Segue.....

Last month I discussed how fortunate our chapter is to have such a vibrant membership. But there is another group that makes our chapter tick and that is the local HVAC community. Behind each chapter member or chapter event, there is a company supporting them. Whether it is paying an employee's ASHRAE dues, purchasing a tabletop display, providing a speaker for a meeting, sponsoring an event, etc., our local companies are there to help support ASHRAE. While the companies do receive a benefit from their financial support (next month's article), with some companies, I truly believe there is a sense of community support as well. I can think of a number of occasions where for one reason or another, plans have fallen through on a particular ASHRAE event and a local company has stepped-up (often unsolicited) to help out. So on behalf of the ASHRAE Ottawa Valley Chapter, a big THANK YOU to all the local firms who have supported ASHRAE in the past, and will hopefully continue to do so in the future.

I look forward to seeing you at October's meeting.

Yours very truly,

Robert Lefebvre, P.Eng., LEED AP ASHRAE Ottawa Valley Chapter 2007-2008 President











## History Update by Rod Potter Governor, Chapter Historian, Gopher and Webmaster

Just a quick note here to keep you all apprised of what has been happening in the History section of the website over the last month:

- Chapter Newsletters from 1972-1973 (Harry Atkinson) right through until 1999-2000 (Joel Primeau) have been posted. It was interesting to note that the Newsletter officially became the "Communiqué" in January 1987, before which it was merely the OVC Newsletter. These documents are rather more important than the Minutes that have been posted previously because they offer an easy to read snapshot of what was going on all those years ago.
- **Little Arrows** are being added to each of the Chapter Years pages in the History section so that you can easily navigate from one year to the other without having to return to the main History page first.
- **Photos** from the Past President's meeting in May 2000, including the trip to the Diefenbunker, have been posted.
- Photos from our first meeting of this season, September 2007 at the Prescott Hotel, have been posted.
- **Photos** taken during the golf tournament on September 27<sup>th</sup> 2007 at Loch March have been posted.

There is much more History yet to be discovered, and it is my privilege to post it. Roderic Potter
Rodders CAS

Committee Chair Too pretty for a picture!!!!

### **TEGA Month**

by Thomas Chiykowski P.Eng., 2007-2008 TEGA Committee

Short daylight hours, crimson trees and TEGA month, it must be autumn.

As the new chairman of the TEGA Committee, my first task was to find out what the heck TEGA meant. Well, I have crossed off my first task....Technical, Energy and Government Activities. Here are a few other items we have on our "to do" list:

As always, the chapter would like to have a strong showing from the local community for TEGA award submittals. Be prepared for a knock on your door-TEGA Wants You!

The TEGA Committee would also like to expand its chapter library both in readership and content...that's correct, we actually do have a chapter library. It is located at the Ottawa Construction Association on Bronson Avenue. Next time you are in the vicinity take a moment to have a look.







(...cont.)

Part of the TEGA mandate is to act as a liaison between ASHRAE and Government. This task is ongoing and we will be attempting to make more contact with the various government agencies in our area.

It may not be glitzy work but the TEGA Committee will be working behind the scenes for the chapter. Your input and involvement is always appreciated.





### History Article Follow-Up by Don Weekes

I really enjoyed the History article in the September 2007 Capital Communiqué, particularly with regards to the World Trade Center. The sixth anniversary was Tuesday 11<sup>th</sup> September, and it was a subject of some controversy in New York. Many of the families of the victims were upset because this was the first time that the memorial ceremonies were held offsite due to the ongoing construction on the site. There was an article recently in the New York Times about 'memorial fatigue', where many people in New York are saying, 'enough is enough', in terms of an annual memorial. Rudy Guiliani's presence at the ceremony was also controversial, since he is running for President, and some see this as a photo opportunity for him.

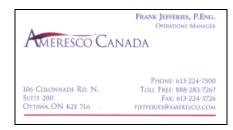
I worked in the World Trade Center as a project manager for asbestos abatement on a number of projects in the 1980's and 1990's. It was a hard building to work in, since the transportation of equipment and removal of the waste were complicated. But I enjoyed my time there, particularly a lunch at the top of the building one day. It was a magnificent view!

As far as the people who worked in the World Trade Center, you were correct to say that many of them were working on financial matters related to Wall Street. However, it is also interesting to note how many different types of workers there were in the buildings that day. Restaurant workers in the Top of the World restaurant; state workers and Port Authority workers; shop owners in the mall under the buildings; maintenance workers, including window cleaners, elevator workers, bathroom maintenance staff, parking attendants, delivery personnel, etc.; mail room workers and mail delivery personnel; day care workers; security guards; and visitors from around the world. Over 120 nations had at least one casualty in the building, including approximately 30 Canadians.

I met a man in San Francisco that was attending a meeting on the 70<sup>th</sup> floor that day in the second tower. He left when the first plane hit, and he was going down the stairs when his tower was hit, at the 70<sup>th</sup> floor. He was from Arizona, and it was only his second day in New York, on his first trip there. He drove with a colleague back to Arizona, since the planes were not flying for a week.

I guess what I am saying, is that this is a tragedy that is ongoing, particularly for New Yorkers. It will remain the defining moment for this generation of New Yorkers, including myself. I have been back a couple of times since 9/11, and it constantly moves me to see the site. I hope this conveys a bit more about what has happened, and is happening, with the World Trade Center.

Cheers, Don Weekes InAir Environmental Ltd.











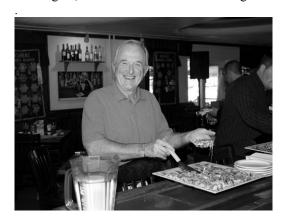
### What You Missed by Patrick St-Onge P.Eng., LEED AP 2007-2008 Chapter Secretary

After last year's historic return back to the Prescott Hotel, which had been the site of the very first meeting of our chapter's history, the Chapter has once again organized the first meeting of the season in this fabulous establishment. What a perfect venue for the evening that had History for a theme.

Those who showed-up early enough were able to enjoy free square pizza, the "table-top" of the evening, and enjoy a good beer and the perfect weather on the patio.

The evening program started immediately after the short business session with the presentation of a slide show put together by our historian, Roderic Potter. Since no technical speech was planned, the rest of the evening was an extension of the social. It was a perfect opportunity for networking with industry associates and colleagues while reminiscing and viewing some of the achievements of our Chapter predecessors.

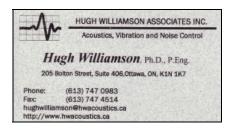
Once again, the visit to the Prescott was a great success!



















### Membership by Christine Kemp

by Christine Kemp 2007-2008 OVC Membership Promotion Chair

ASHRAE Ottawa Valley Chapter would like to welcome the following new members: Liam Berry, Georges Maamari, Andrew Fewtrell & Randall Holmes.

We are also happy to have two new student members: Frederic Desbiens and Athanasius Phillips.

Hope to see you all at our next chapter meeting.

Thanks, Christine Kemp ASHRAE Ottawa Valley Chapter Membership Chair Person





### **Research Promotion**

By Glenn MacLean P.Eng. 2007-2008 OVC Past President

As past president of the Ottawa Valley Chapter the duty of promoting investment in ASHRAE Research is my responsibility for the 2007/2008 season. To kick off this year's campaign we had our very popular and highly successful ASHRAE Golf tournament at Loch March. Thank you Cathy Godin, Christine Kemp, Cynthia Gillis, Stan Milross, Christine MacLean, and all the other volunteers, sponsors and participants.

Through prize donations, raffle tickets and a live auction for some pre-season hockey tickets we were able to raise just over \$2000 dollars for this year's campaign. Our goal for Research Promotion this year is \$18,500. Last year's goal of \$16,000 was surpassed by Jay Doshi who collected just over \$17,900 - well done Jay. On Jay's behalf I would like to thank all the individual and corporate investors from last year - your support is genuinely appreciated. The early recognition this year goes to Mike Swayne who presented me with the first individual contribution of the year last night at the tournament - thanks Mike.

Currently there are 4 projects in the Ottawa area receiving funding from ASHRAE research - one at Carleton University, two at NRC and one at CANMET. We will be presenting more information on the local Research scene in the months to come, and hopefully touring one of the facilities. Every dollar invested in Canada stays in Canada, and generally Canadian Researchers receive up to 4-times the monies collected in Canada. It truly is a great way to support our industry and the future of what our industry will become.

Thanks again to all our participants and I look forward to your support for this year.







E-Mail: jack,teevens@siemen Please visit: www.siemens.ca

Jack Teevens





## ASHRAE Student Activities By Stephen Lynch 2007-2008 OVC Student Activities Chair

As most of you know, the October meeting is our first of two student nights. So I encourage everyone to invite, bribe or take by force, a student to October's meeting. You will not only be helping a student but you will also be contributing to your chapter. I have been visiting the Universities and Colleges and I am amazed that so few students know what ASHRAE is. October's meeting is a great introduction to ASHRAE and our chapter. This in turn will expand our membership which is the driving force of any chapter. (If you can not find a student I would gladly share one of mine)

We have setup an aggressive year for Student Activities and we need volunteers to achieve our goals. Some people have already approached me and offered to participate in this year's activities. I will be hosting a Student Activities night at the Regulvar Canada office (1250 Old Innes Rd, unit 518) on October 17<sup>th</sup> at 5:00 pm. The meeting will be a strategy session for the following areas:

- 1. Presentations to Universities and Colleges:
  - a. Carleton University
  - b. University of Ottawa
  - c. Algonquin college
  - d. La Cite
  - e. CEGEP de l'Outaouais
- 2. Presentations to High Schools
- 3. Career Fair '08
- 4. National Engineers Week
- 5. ASHRAE winter meeting (New York)

Bring you ideas and your appetite.

(RSVP slynch@regulvar.com, or call 613-565-2129 ext. 2127)

As with all other monthly meetings, we encourage individuals or companies to support a student through sponsoring their meals. Please let the greeters at the front know that you would like to sponsor a student for the night. If you would like to sponsor student meals throughout the year we will recognize your contributions by issuing you a receipt for your investment in Student Activities, publish your name and/or company's name on our website, and include you in our list of previous donors in the Capital Communiqué.

Thank you for your support,

Stephen Lynch

### Check out ASHRAE's Student Design Competition for 2008! Enjoy!

The ASHRAE 2008 Student Design Competition features a 60,000 ft<sup>2</sup> Community Recreation Center. The original project was designed for the Nashville, Tennessee area. The recreation center includes:

- A gymnasium with two full size basketball courts and a running track
- A wellness center complete with both a fitness equipment room and an aerobics room
- A natatorium with a six lane swimming pool
- Indoor racquetball courts
- Men's and women's locker rooms
- Administrative office space

The teams may compete in one or more of the three subcategories: HVAC System Selection, HVAC System Design and Architectural Design.

HVAC Systems Selection – Encourages students with a solid HVAC base to use life-cycle cost process to select the building HVAC system(s) as well as incorporate the sustainability process promoted by ASHRAE by integrating the US Green Building Council's LEED™ Rating System into the project.

**HVAC Systems Design** – Focuses on "right-sizing" HVAC equipment and systems to provide an energy efficient design for the facility. Students are required to determine heating and cooling loads, and design an HVAC system for the recreation center while complying with ASHRAE Standards 55-2004, 62.1-2004 and 90.1-2004.

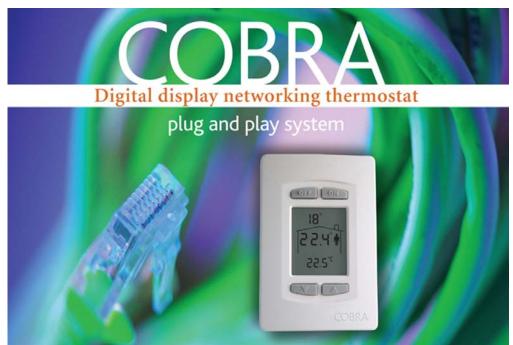
**Architectural Design** – Architectural students are asked to "redesign" the building in an effort to achieve a LEED<sup>TM</sup> Silver Rating. Students will be asked "document" select LEED<sup>TM</sup> Credits to measure how their design meets the sustainability goals. An emphasis on integrating the requirements of the mechanical and electrical systems should be a strong element throughout the design.

For more information: http://www.ashrae.org/students/page/1420





Table Top Display
By Imtee Baksh
B.Eng.



Quick, simple and economical, the Cobra System<sup>TM</sup> is an affordable modern technological solution which exceeds the industry's standards VVT control systems. The intrinsic network capability of the Cobra System<sup>TM</sup> allows the control of an air handling unit while managing the heating or cooling needs of the various zones within a facility.

#### Ouick

The use of standard **Ethernet** cables and connectors allows the Cobra Network and room thermostats to be connected with a simple click. Cobra System<sup>TM</sup> certified cables are offered in various lengths and enable quick installation, while eliminating any risk of misconnections. All it takes is a few **Plug & Play** connections to assemble the various elements of the Cobra System<sup>TM</sup>.

### **Simple**

A typical wiring method is used to connect the air handling unit to the Cobra System<sup>TM</sup>, using multiconductor cables. All system terminations are identified with the standard wire coding (R, G, Y,W, etc.) used on most packaged units. As a result, the Cobra System<sup>TM</sup> is suitable for new installations, retrofits and upgrades of existing installations.

#### **Economical**

The Cobra System<sup>TM</sup> is a cost effective solution which results in immediate savings right from installation. Another asset that contributes to making Cobra a real Plug & Play system is that the **preset parameters** require no adjustments. As a result, the commissioning fees are considerably reduced. Also, the installation of the Cobra System<sup>TM</sup> is so easy it can be performed by any contractor with a general knowledge of HVAC systems. The Cobra System<sup>TM</sup> comes with efficient **energy management** features such as a time clock, an outside air temperature sensor and a built-in demand management function. These allow for energy cost savings while ensuring maximum **comfort** to all tenants.











News Update
By Robert Lefebvre
P.Eng., LEED AP
2007-2008 OVC President

### **Technical News:**

### **Energy-Saving Measures Proposed for ASHRAE/IESNA Standard 90.1**

September 21, 2007, ATLANTA

ANSI/ASHRAE/IESNA Standard 90.1, *Energy Standard for Buildings Except Low-Rise Residential Buildings*, provides minimum requirements for the energy-efficient design of buildings except low-rise residential buildings. Fourteen proposed addenda to the standard currently are open for public comment.

Under proposed addendum *l*, closed circuit cooling tower requirements to help reduce energy consumption would be added to the standard. The addendum would add minimum efficiency and certification requirements for both axial and centrifugal fan closed circuit cooling towers, also known as fluid coolers.

"These requirements will provide consulting engineers, system designers and contractors with guidelines for the selection of independently certified, energy-efficient closed circuit cooling towers," Mick Schwedler, chair of the 90.1 committee, said. "This change also will complement existing minimum and certification requirements for open circuit cooling towers, helping prevent confusion between the requirements for open vs. closed."

Also open for public comment is addendum *n*, which extends variable air volume (VAV) fan requirements for large single-zone units. VAV fan control currently is required in the standard for multiple-zone systems. Extending VAV control to single-zone units would save energy by reducing fan energy consumption when space cooling loads are reduced, he said.

The change would take effect in 2012, allowing air conditioning unit manufacturers time to redesign and test their units. Manufacturers are currently redesigning to meet the 2010 phase-out of certain refrigerants.

"Utility rebate programs and other incentives should encourage wider demand for these units and help this requirement to see real savings before 2012," he said.

In addition, addendum r, which would change informative Appendix G's performance rating method into a normative appendix, is open for comment. Making the performance rating method normative, or required, would allow its adoption into advanced energy standards, such as proposed Standard 189P, *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, being developed by ASHRAE in conjunction with the Illuminating Engineering Society of North America and the U.S. Green Building Council. Additionally, language has been changed to make Appendix G enforceable allowing adoption by model codes.

(cont...)







Proposed addenda open for review until Oct. 14, 2007, are:

- Addendum *h* addresses any potential conflict between Standards 55, 62.1 and 90.1 and takes advantage of the energy savings potential of direct digital controls.
- Addendum *j* updates mechanical test procedures and references.
- o Addendum *n* extends VAV fan requirements for large single zone units.
- o Addendum q modifies vestibule requirements for Climate Zone 4.

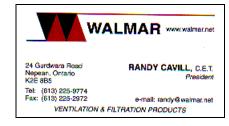
Proposed addenda open for public review until Oct. 29, 2007:

- Addendum d modifies the requirements in both the lighting and envelope sections to better allow daylighting.
- Addendum f expands the roof requirements to include cool roofs, which are shown by research to reduce the conduction loads through roofs into conditioned space.
- o Addendum g updates the building envelope criteria for metal buildings.
- o Addendum i applies a 4-zone lighting power density approach to exterior lighting requirements.
- Addendum k revises Tables 6.8.1E and 7.8 to identify the specific sections of the referenced standards;
   updates to reflect Federal efficiency levels for residential water heaters; and adds a requirement for electric table top water heaters.
- Addendum *l* adds minimum efficiency and certification requirements for both axial and centrifugal fan closed circuit cooling towers. In addition, a reference to the Cooling Technology Institute test standard for closed circuit cooling towers has been added.
- Addendum m establishes, effective Jan. 1, 2010, an additional path of compliance for water-cooled chillers.
- o Addendum o adds requirements for low voltage dry-type transformers.
- Addendum p provides the necessary pressure credits for laboratory exhaust systems that allow prescriptive compliance of systems serving fume hoods.
- O Addendum *r* changes informative Appendix G performance rating method into a normative appendix. Additionally, some language has been modified to make the appendix enforceable.

Proposed addenda to ASHRAE standards are available during public review periods. To read the addenda or to comment, visit <a href="https://www.ashrae.org/publicreviews">www.ashrae.org/publicreviews</a>.







### **Sustainability News:**

### Take me out to the Green Ballpark

September 13, 2007

WASHINGTON — The new Washington Nationals professional baseball franchise may finish the 2007 season in last place but come next spring they will lead the league when they swing for the fences in the first environmentally sustainable sports stadium in the United States.

The \$611 million, 41,000-capacity ballpark — aesthetically defined by its use of glass and steel in a joint-venture design by the Kansas City-based sport division of Hellmuth, Obata and Kassabaum and Washington architectural firm Devrouax-Purnell — will leverage its brownfield-redevelopment status in an attempt to become the first LEED-certified major league baseball stadium.

"Regardless of whether or not the ballpark achieves LEED certification, the number of sustainable elements that were incorporated make this project kind of unique," says Susan Klumpp, AIA, project manager and LEED coordinator for HOK/Devrouax-Purnell.

Earlier this year, Washington became the first major U.S. city to pass legislation requiring all new commercial building developments greater than 50,000 square feet to conform to the same sustainable design standards adopted by public projects. The city's Green Building Act mandates LEED standards for major commercial construction beginning in 2012 and for all publicly financed buildings starting in 2008.

"It was a goal of the former mayor, and the city council and sports commission envisioned a sustainable ballpark from day one," Klumpp says. "The difficulty came in figuring out a strategy to get there on time and within budget."

During the past several years, LEED standards and guidelines have been progressively tailored and refined for specific types of buildings, such as schools or commercial developments.

The District of Columbia Sports and Entertainment Commission, which oversaw the ballpark's development, emphasized a set of sustainability objectives from energy- and water-efficiency to urban renewal and public transportation.

However, because there are no established guidelines specifically for sports venues, the Nationals project provided an interesting learning process for all involved, from the owner/developer group to the architects to the USGBC itself.

"We're cutting into a completely new area," Klumpp says. "A ballpark isn't like an office building where you're trying to do things, such as increase daylighting and indoor air quality."

"It really became about what happens when 41,000 people descend on the venue 81 days a year," she says. "Those 41,000 fans are eating peanuts and spilling beer and flushing toilets all at the same time."

The project's size, complexity and innovative aspects presented significant challenges in terms of the decision-making process, where achieving timely consensus among stakeholders and project principals was essential for success.

"When you have this many people involved, from the roofing guy to the owners to the developers, it's a real challenge to get everyone rowing in the same direction," Klumpp says. "It takes a whole lot of massaging to get where you need to go."

A major element of the commission's efforts to achieve LEED certification centered on the stadium's proximity to the Anacostia River and the desire to manage water runoff from the facility, officials say.

(cont...)

"We didn't want to add to the woes of the Anacostia River, which is in the middle of a massive clean up project," Klumpp says.

A comprehensive three-phase filtration system was custom-designed to separate and treat both storm and facility water. Composed of six three-chamber sand filters that are 40 feet long, 20 feet wide and four stories deep, the filtration system is designed to eliminate general debris, stadium-specific organic matter — such as peanut shells — and fertilizers before the water is released.

The water management system was the most expensive individual component incorporated into the stadium and given the project's budgetary constraints, the design team had to develop an understanding of the vision and objectives of stakeholders to determine essential and nonessential sustainable components.

"Trying to stay within budget, while doing all the things that needed to be done to go green, and making it happen in a very limited time frame was perhaps the biggest challenge," Klumpp says.

Due to budgetary constraints, the design team was unable to incorporate several sustainable elements into the project. Solar arrays that would also act as canopies over the parking lots were ruled out because the design team couldn't get the costs down to a point that would make it feasible.

"Almost every aspect of the project had some thought put into it about what we were doing to enhance sustainability," Klumpp says. "We accomplished most of what we wanted to do."

Landscaping around the ballpark will feature drought-resistant plant materials to eliminate the need for irrigation and reduce the facility's overall water consumption. Water-conserving plumbing fixtures, such as flow lavatories and faucets, will be used throughout the facility's 1,100 public restrooms, officials say. The water conservation measure is projected to yield water savings of 37 percent over Energy Policy Act baseline water-use requirements, which equates to an estimated 3.6 million gallons of water per year.

"People hear that and start to take notice," Klumpp says.

Energy-efficient lighting systems will also be used throughout the facility, from the stands and concessions to field lighting and scoreboard displays. The National's lighting system is projected to consume 21 percent less energy compared to traditional field lighting systems, which equates to energy savings of approximately 300 kilowatts of power per year, officials say.

The stadium will incorporate reflective roofing materials to reduce the heat island effect. All construction materials used on the project feature at least 10 percent recycled content and the materials were produced and sourced regionally when possible to reduce the costs and impact associated with long-distance transportation. Interiors of the facility, which include 30,000 square feet of administrative space, feature low-VOC adhesives, sealants, paints and carpeting to enhance air quality.

As part of the commission's effort to eliminate ground contamination on the 25-acre park site, which sits adjacent to a sprawling Navy shipyard, approximately 300,000 tons of soil, much of it heavily laden with pollutants, was removed during the project's preconstruction phase.

Developers initiated a comprehensive recycling program for materials and debris used or generated during the construction phase, with an estimated 5,500 tons of construction waste to be recycled. Several waste reduction measures — including environmentally friendly concession packaging — will be implemented when the stadium becomes operational and hosts its first game, officials say. The facility will feature dedicated recycling-collection space for glass, aluminium, plastic and cardboard.

In an effort to further mitigate the environmental impact of thousands of fans descending on the ballpark for 80-plus games per season, the facility is situated in close proximity to the existing public transportation network with nearby metro stations and bus routes. Offering 1,225 car and 30 bus parking spaces, the stadium will provide onsite garaged parking for fuel-efficient vehicles and carpools.

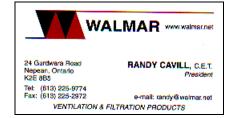
"In the end, it was about providing a better facility all around," Klumpp says. "The owner should see an appreciable difference in facility performance and the fans should notice a difference too and have a better experience."

"We're happy because we're conserving resources," she says. "That's really worth something."

This article is based on a news release from Green Building News











### ASHRAE OVC Annual Golf Tournament 2007.09.27

by Cathy Godin Chapter President 2004-2005

The 2007 ASHRAE Annual Golf Tournament took place on September 27, 2007 despite the rainy morning and the threat of further precipitation throughout the day.

The winning group of this best-ball event was comprised of Peter Paciorek, Wayne Stoughton and Ryan Belluz. Congratulations men on your -10 score! The same winning score as last year – single negative digits will never measure up.

Longest drive honors went to Andrew Douma and Ingrid Herman.

Closest to the pin winners were Larry Branson and Debby Bates.

The traditional Jimmy Moore award went to Peter Baird and he gulped down the "Windex".

Many thanks to all of the participants – the turn-out was impressive even with the dreary forecast.

Hole sponsors also deserve our recognition; they were: Breckmar, Direct Energy, E.H. Price, Honeywell, HTS Engineering, Mastron/Nailor, McKee Engineering, Modern Niagara, Regulvar, Thermec Insulation, Total HVAC, Trane, Walmar Ventilation and Wesmec.

Additional sponsorships took the form of a beverage for each golfer, provided by Longhill Energy, and many thanks for a sleeve of balls for each participant, provided by Total HVAC.

Thank you also for the many gifts that were dropped off, in spite of the fact that we did not solicit these. If I fail to mention you, it is not by design, but from memory: thanks to Engineered Air, HTS Engineering, Honeywell, Walmar Mechanical, Walmar Ventilation and many others.

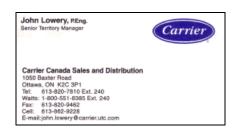
The raffle of prizes raised \$2,005.00 for ASHRAE Research and the additional auction of Senators tickets donated by Engineered Air added a further \$300 to the kitty. This contribution is submitted in the Ottawa Valley Chapter's name and will give the 2007-2008 campaign a great jump start.

Finally, many many thanks to Patrick Albert, Cynthia Gillis, Christine Kemp, Glenn MacLean, Christine MacLean and Stan Millross for all the help during the day and prior to the event.

You can view the photographs taken during the tournament at http://picasaweb.google.com/ashraeovc/20070927 Golf.

Cheers,

Cathy Godin S.K. Sheet Metal Past President 2004-2005











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