



## St. Christopher School

Historically, Ontario Report has served as a vehicle for information exchange on a wide range of internal issues. For this edition I thought it was appropriate to review a single project, St. Christopher School in Windsor. This project deserves special attention for a multitude of reasons which I hope to capture in this issue of Ontario Report.

### The Project Genesis

Following a presentation by Scott Wylie of Wytech Building Envelope Solutions to the Windsor Essex Catholic District School Board on green roofing, discussions began on a small green roof at Mount Carmel School. This initial project was coordinated by Frank Foxx and Mark Ponkey from

roofing component of the system, everyone in the industry has been masquerading as an expert in the horticultural field, this has resulted in less than satisfactory outcomes. One of our major competitors has had far too many of the plants die as a result of poor plant selection. The simple truth is that no one area of Canada or even Ontario will not survive in a green roof effort to determine the correct plant and soil selection.

Horizon Roofing. Following this installation, negotiations began among the School Board, Tremco and Joe Passa of Passa Associates the Architect for the school renovations and addition to St. Christopher's School. The addition would include green roofs on two levels.



and we wanted to be a major contributor. Our first critical decision was to put together a team that included experts that were external to our organization. Historically, Tremco and our competitors have bundled the entire green roof assembly as a single source deliverable. Regardless of the fact that

After the St. Christopher project we are changing our policy on green roofing. From now on we will be submitting joint proposals, for more information see page 4. This is best for our clients and best for Tremco.

GREEN ROOFING DIVISION

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Mark Ponkey's long-term expertise is in the water industry has essentially the same component. Industry wide outcomes. One of our major competitors on their green roofs die because they use plants that will thrive in one area but not in another. It takes an expert to determine the correct plant and soil selection.

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## The Concept

Joe Passa's goals were to provide an energy efficient building within the School Board's budget while providing an imaginative and functional design with the belief that all building owners should endeavour to save energy and give back to the environment as much as possible.



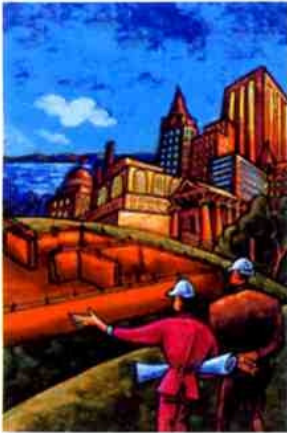
- ◆ Intention was for this project to be a model for future projects of the Windsor Essex Catholic District School Board (WECDSD) utilizing the CBIP program.
- ◆ Passa & Associates approach started with meetings involving all parties for input in the project design stage.
- ◆ Architect, engineering consultants and the owner all were asked to provide ideas on how to provide a sustainable design.
- ◆ The Principal Architect was responsible for the overall design but made decisions based upon knowledgeable suggestions by the owner, energy consultant and material suppliers.
- ◆ WECDSD considers itself the first school board in Ontario to mandate CBIP compliance for all their new projects with the

hope that other school boards will follow their example.

- ◆ St. Christopher's was to have a 5,000 SF Green Roof the largest of its kind in the Region. Why?
  - Green roofs significantly increase the life expectancy of the waterproofing component of the assembly
  - Portion of green roof visible from second floor corridor was to 'stimulate and educate students'
  - Environmental benefit with the reduction the 'urban heat island effect'
  - Better storm water management on site (less roof run-off)
  - Additional processing of airborne toxins 'Re-oxygenates' the air
  - Green roof will help reduce noise transmission into the building (located next to highway)

**Note: St. Christopher School was completed on time and under budget**

### What Is The Commercial Building Incentive Program (CBIP)?



Natural Resources Canada's office of Energy Efficiency encourages the design and construction of new, energy-efficient commercial, institutional and multi-unit residential buildings and facilities. The Commercial Building Incentive Program (CBIP) provides design assistance and funding of up to \$60,000 for eligible organizations based on building energy savings.

Energy-efficient buildings yield long-term energy savings. An eligible building design must demonstrate a reduction in energy use by at least 25 percent when compared with the requirements of the Model National Energy Code for Buildings (MNECB). MNECB itself is 10% more energy efficient than the Ontario Building Code which is the minimal requirement for construction in Ontario

- ◆ CBIP Technical Review completed in February, 2005 indicated that this project would be 59.5% more energy efficient than the MNECB equivalent
- ◆ **This result makes St. Christopher's the most energy efficient elementary or secondary school in the province and the fifth best in Canada**
- ◆ CBIP incentive is calculated at \$50,076

## The Board's Objective

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Under the leadership of Michael Moher, Director of Education and Tim Robins, Controller of Facilities Services, the WECDSB wanted their schools to be the model for all Ontario schools. The Boards objectives?

- ◆ Build efficient well designed buildings
- ◆ Ensure that they are cost effective – both to construct and to maintain
- ◆ Utilize new proven building technologies
- ◆ Access grants to off-set design costs – CBIP
- ◆ WECDSB adopted CBIP compliance requirement for all New Pupil Place Grant (NPPG) construction projects – Fall 2003.
- ◆ Green sustainable concepts had to be introduced but in a 'cost-neutral' fashion
- ◆ WECDSB has faith and commitment to continue using these environmentally and cost friendly concepts
- ◆ WECDSB will continue to build on it's reputation as an environmental and energy efficiency leader

### Approach:

Establish a design team which included the following membership; Board, Architect, Engineers and Energy Consultants, Material Suppliers

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### The Team

- ◆ Joe Passa, Passa & Associates
- ◆ Tim Robins, WECDSB
- ◆ Scott Wylie, Wytech Building Envelope Solutions
- ◆ Mark Popkey, Horizon Roofing
- ◆ Terry McGlade, Gardens In The Sky
- ◆ Rick Buist, LandSource Organix
- ◆ Paul St.Pierre, Landscape Effects



**Tremco's TRA & Tremlar were installed at St. Christopher's by Horizon Roofing**



**The Pontarolo filter component was sourced by Scott Wylie from Italy and this system is superior to anything else available in North America. The product was installed by Gardens In The Sky.**



**Blowing of soil conducted by LandSource Organix Ltd**



**View of plant materials after installation by Landscape Effects**



**Plant material after just two months of growth**

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## **Our New Green Roof Process**

Based upon the success of St. Christopher School we will be joint venturing with Gardens In The Sky on all future projects in Ontario. Our proposals will be submitted jointly with Gardens In The Sky. We will highlight the benefits of our TRA/Tremlar system and Gardens In The Sky will highlight their landscape design and plant selection.

Unless there is a unique situation that calls for a different approach, all roofing contractors bidding on a Tremco Green Roof project will carry the Gardens In The Sky price for the garden component.

### **WHY?**

- ◆ Because we have in Terry McGlade and Gardens In The Sky a partner who will bring a level of experience and expertise that will be unmatched in Ontario.
- ◆ Our approach will deliver a world class garden roof to our clients.
- ◆ This process allows us to concentrate on the waterproofing component of the assembly. We know how to keep water out of a building! What do we really know about landscape design, plant and soil selection?
- ◆ This will differentiate us from our competitors.