

Green Roof and Wall Awards of Excellence 2012 Green Architecture for Urban Resiliency

Text by Paul Erlichman
Photography as credited

Green Roofs for Healthy Cities (GRHC) is North America's green roof and wall industry association. As North America has increasingly embraced green roofs and walls and their numbers risen across the continent, GRHC has sought to recognise excellence in green roof and wall design, research, and policy work through its Awards of Excellence programme.

This year's awards will be held at the *CitiesAlive: 11th Annual Green Roof and Wall Conference* in San Francisco, California. The theme of this year's CitiesAlive is "Securing Urban Resiliency with Living Architecture: Food - Water - Energy". This coming year's award winners will reflect the ability of green roofs and walls to make urban areas more resilient in the face of manmade action and natural disasters. Those who make the trip across the Pacific this October for the conference will be able to check out the most leading-edge green infrastructure in North America.¹

The Awards of Excellence acknowledges excellence in innovative and integrative green roof and wall design and raises awareness of the multiple benefits that green infrastructure can provide clients and the general public. They are selected by a seven-member, multi-disciplinary judging team that includes architects, landscape architects, engineers, and horticulturists. Submissions are evaluated according to a broad range of weighted criteria, including aesthetic, economic, functional, and ecological components. The seven design award winners, across seven categories, of 2012, are introduced.

Intensive Residential Green Roof

Project: One Cole
Location: Toronto, Ontario, Canada
Award Recipient: Diamond Schmitt Architects
Date of Completion: 2009
Size of Green Roof: 21,500 square feet

"While other projects strive to provide a rooftop garden, it is no exaggeration to call this a rooftop park."
—Donald Schmitt, Principal, Diamond Schmitt Architects

Regent Park was built in the late 1940s in downtown Toronto and is Canada's oldest and largest social housing project. One Cole is the first condominium residence to be completed in support of the 25-year reconstruction of the entire 77-acre site (32 city blocks) by the City of Toronto and the Toronto Community Housing Corporation, in partnership with the Daniels Corporation.

The building's focal point is its third-floor south-facing "Sky Park": 21,500 square feet of soft-landscaped rooftop outdoor amenity space, open for year-round use by all building residents. The park's size, lushness, and depth (a full five-foot depth of growing media will allow the full maturation and extended well-being of almost four dozen trees) make it unique among condominium residences in Canada. While some similar developments strive to provide a rooftop green space, it is no exaggeration to call this a full urban park.

Intensive Industrial/Commercial Green Roof

Project: The Ledge Kitchen & Drinks
Location: Dorchester, Massachusetts, USA
Award Recipient: Recover Green Roofs, LLC
Date of Completion: 2010
Size of Green Roof: 4,500 square feet

"The Ledge food roof came together successfully because of all the stakeholders' contributions. It took the vision of the ownership, the support of our vendors, the design/build collaboration between Recover and Highview Creations, the farming of Green City Growers, and, importantly, the patronage of the customers to bring food from roof to table."
—Mark Winterer, Director of Operations, Recover Green Roofs, LLC

Recover Green Roofs was contacted by The Ledge's executive chef, Marco Suarez, who was interested in using his 4,500-square-foot roof to produce food. Recover worked with Highview Creations to design a roof that maximised the use of local materials, utilised the most up-to-date water efficiency technologies, and minimised the labour efforts of the restaurant staff. Recover partnered a local farming company, Green City Growers, which handles planting, weekly farming responsibilities, and coordination with restaurant staff. The staff work with Green City Growers to learn more about the food they serve, how it's harvested, and what makes for the best produce possible. They help harvest food off the roof, planning menu items around each day's harvest. Time on the roof is the favourite part of many employees' day.



1. One Cole, Toronto, Canada
(Photo: Diamond Schmitt Architects).

2. The Ledge Kitchen & Drinks, Dorchester, USA
(Photo: Recover Green Roofs, LLC).

3. Center for Urban Waters, Seattle, USA
(Photo: Swift Company, LLC).



4. Royal York Condominium, New York City, USA (Photo: Town and Gardens, Ltd.).

5. Chicago Botanic Garden's Rice Plant Conservation Science Center, Chicago, USA (Photo: Chicago Botanic Garden).

This coming year's award winners will reflect the ability of green roofs and walls to make urban areas more resilient in the face of manmade action and natural disasters.

The Ledge is a great example of how a restaurant can use a rooftop garden to provide fresher produce to its patrons and shorten the supply chain. It is hoped that more restaurants around North America will take advantage of available rooftop space and start growing the most local foods that exist.

Extensive Institutional Green Roof

Project: Center for Urban Waters
Location: Seattle, Washington, USA
Award Recipient: Swift Company, LLC
Date of Completion: 2010
Size of Green Roof: 12,000 square feet

"The Center for Urban Waters green roof is part of an integrated ecological system in the middle of an industrial waterfront. The roof and the other sustainable strategies embody the values of the research pursued by the resident institutions and physically in a measurable way significantly increase the ecological function and health of the shoreline and uplands. This is not just a pretty object."

—Barbara Swift, Swift Company, LLC

The Center for Urban Waters is a new shared research facility for the City of Tacoma, University of Washington Tacoma, and the Puget Sound Partnership. The site is located on the north-eastern side of the Thea Foss Waterway, in what is the first non-industrial development in a currently heavily industrial area. As a LEED Platinum-certified facility, this project integrates sustainable building and site design.

The green roof is one of the components in the overall project strategy for energy

savings and stormwater management. The four-inch growing medium supports a variety of groundcover, perennials, grasses, and sedums including Coastal Strawberry, Yarrow, Mexican Feather Grass, Golden Moss Stonecrop, and many more. Larger areas meant to accommodate future photovoltaic panels were planted with sedums to provide the greatest drought- and shade-tolerant coverage. Combined with other energy reduction elements—such as sunshades and natural ventilation for cooling, ground-source heat pump for heating, natural daylighting of interior spaces, and the aforementioned use of photovoltaic panels for solar power generation—the green roof contributes to the whole story of energy reduction and careful resource management of this project.

The green roof has been wildly successful from its initial installation to today. The plantings are an integral part of the sustainable message of the facility and a key point for educational tours of the building.

Extensive Residential Green Roof

Project: Royal York Condominium
Location: New York City, New York, USA
Award Recipient: Town and Gardens, Ltd.
Date of Completion: 2009
Size of Green Roof: 14,000 square feet

"What's unique about the space is that we were able to make it seem larger in what is actually a very narrow space, while integrating not only green roof components, but also sculptural elements to enhance the concept."

—Michael Franco, Town and Gardens, Ltd.

Located in the Upper East Side of Manhattan, New York, the inner courtyard at Royal York Condominium covers approximately 15,000 square feet and occupies a two-level roof and ground-level garden space between three residential buildings. Redevelopment created the exciting opportunity to expand the visual impact and usability of the space for residents.

The four-to-five inches of growing media supports groundcover plants, such as *Pachysandra*, and perennials, such as *Heuchera* and *Liriopi*. The sailboat planters have their own distinctive plant selection, which as a whole make the green roof look quite stunning. Town and Gardens' comprehensive design at the Royal York expands the visual palette of extensive green roofs. Beyond its aesthetic offerings, the project has also provided a functional space for residents, thereby exemplifying what is possible to accomplish through a green roof.

Intensive Institutional Green Roof

Project: Chicago Botanic Garden's Rice Plant Conservation Science Center
Location: Chicago, Illinois, USA
Award Recipient: Chicago Botanic Garden
Date of Completion: 2009
Size of Green Roof: 16,000 square feet

"The Chicago Botanic Garden's green roof is unique because it contains both evaluation areas and display gardens and is open to the Garden's nearly one million annual visitors."

—Kris Jarantoski, Executive Vice President and Director, Chicago Botanic Garden

The Chicago Botanic Gardens, with over

958,000 annual visitors, is one of the most visited public gardens in North America. The green roof on the Botanic Gardens' Rice Plant Conservation Science Center serves as both a scientific resource and a display garden for these visitors. While keeping with the highest aesthetic standard expected at the Chicago Botanic Gardens, the Center also evaluates a broad range of plants on their performance. The aim is to help expand the plant palette of Chicago-area green roofs. Aiding these efforts, three weather monitors measure the speed, velocity, and direction of the wind, as well as the light intensity, humidity, air temperature, soil media moisture content, heat flux from the building, and rainfall.

With handicapped accessibility and public opening hours every day of the week, the green roof at the Rice Plant Conservation Science Center ensures not only that a green roof-championing city is provided with the most updated plant data, but also that all of the city's residents can enjoy a beautiful sky-level garden.

Extensive Commercial/Industrial Green Roof

Project: Halifax Seaport Farmers' Market

Location: Halifax, Nova Scotia, Canada

Award Recipient: Lydon Lynch Architects Ltd.

Date of Completion: 2010

Size of Green Roof: 16,000 square feet

"Our design intent was to create a public deck with a spectacular planted roof to increase interest in green roofs and to create a new grand public space on the edge of Halifax Harbour. We are extremely pleased with the result of our efforts, as well as the widespread acclaim from the local community and beyond."

—Keith Tufts, Principal, Lydon Lynch Architects Ltd.

Locally grown organic produce from farmers' markets is key to a healthy lifestyle and reduced environmental impact worldwide. The Seaport Market's LEED-Platinum design expanded upon this premise, creating an ecological showcase on the Halifax waterfront that employs sustainable principles to minimise materials, energy, and water use. The result is one of the most environmentally sustainable buildings in North America and a world-class example of healthy, sustainable living. The full-length, 300-foot-long deck affords unparalleled views of Halifax Harbour, as well as direct public consumption of the sustainable practices that lie at the heart of the Market, including the green roof, micro turbines, and solar energy.

The building's 16,000-square-foot green roof has become one of the community's favourite public spaces, as it allows market customers to view and appreciate the beauty of both the Atlantic Ocean and green roofs upclose. It fills up quickly during weekend markets. To motivate public interest, the planting strategy ensures that the roof vegetation continually changes and blooms throughout the growing months. The green roof and deck space are regularly rented out for events, weddings, and photo shoots, extending the reach of the roof's visual appeal.

The combination of rooftop renewable energy infrastructure (including rooftop micro turbines, solar thermal, and geothermal power generation) with the green roof have proved effective in generating attention to and building appreciation of green roofs.

6. Halifax Seaport Farmers' Market, Halifax, Canada (Photo: Lydon Lynch Architects Ltd.).

7. Corus Quay, Toronto, Canada (Photo: Diamond Schmitt Architects).



Green Wall

Project: Corus Quay

Location: Toronto, Ontario, Canada


Award Recipient: Diamond Schmitt Architects

Date of Completion: 2013

Size of Green Wall: 1,130 square feet

"The living wall biofilter is an energy-saving and eye-pleasing green solution that enhances the aesthetic indoor environment of Corus Quay and its highly visible atrium The objective is not only to improve air quality but also to provide a positive environment for employees and the public."
—Jack Diamond, Principal, Diamond Schmitt Architects

Located on the edge of Lake Ontario in downtown Toronto, Corus Quay is the principal catalyst for the city's waterfront regeneration. This 531,920-square-foot, eight-storey building on a former brownfield site is designed with restraint, minimalism, and simplicity to showcase the activities within and to complement its waterfront context, including the surrounding parks and promenades.

A five-storey living wall biofilter located in the atrium and café acts as an indoor air purifier consuming volatile organic compounds (VOCs) and other air contaminants. The system filters air through the roots of the plants into the building's mechanical system, providing clean, humidified, and tempered return air, thus lowering dependence on mechanical heating and cooling systems. The combined size of 915 square feet of this four-storey biofilter and 215 square feet of the one-storey biofilter behind it make the Corus Quay living wall installation one of the largest to date. 

1 Visit www.citiesalive.org for more information.