

REVOLUTIONARY GREEN

THE CLIENTS SPEAK! ABOUT THEIR INNOVATIVE GREEN INFRASTRUCTURE PROJECTS

INTERVIEWED BY: JENNIFER FODEN WILSON

FRANCISCO ZAMORA,
DIRECTOR, COLORADO RIVER DELTA
LEGACY PROGRAM, SONORAN
INSTITUTE

DANICA DJURKOVIC,
DIRECTOR OF FACILITIES
PLANNING AND DEVELOPMENT,
CITY OF VANCOUVER

WHAT INSPIRED YOU TO TAKE ON THIS PROJECT?

FRANCISCO: The Sonoran Institute, with our partners, is involved in creating a new recreation-oriented community park in Baja California, Mexico on the Colorado River corridor about 45 miles south of Yuma, Arizona. Using local

resources, we are transforming depleted, underutilized land into a destination-style community park. The project was inspired by our desire to reconnect communities and people to the wonders and benefits of nature. Our idea is that if we can engage and build local appreciation for the natural assets

of a community, such as water, river-ways and wildlife, these resources become the building blocks for jobs, economic activity and community building.

DANICA: In a context of The City of Vancouver and Vancouver Park Board Facilities long-term renewal plan and our

commitment to sustainability to become a Greenest City by 2020, VanDusen was a perfect location to create a living building. The Visitor's Centre is designed to be self-sustained, off the grid and with the net zero impact to the existing eco system. It was important that City show leadership in sustainable



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VANDUSEN BOTANICAL
GARDEN (14,000 SF
GREEN ROOF)

VANCOUVER,
BRITISH COLUMBIA

OPENED 2011

DANICA DJURKOVIC,
DIRECTOR OF FACILITIES
PLANNING AND
DEVELOPMENT, CITY OF
VANCOUVER

buildings, particularly because of the significant educational value for the many visitors of the botanical garden.

WHY IS THIS PROJECT INNOVATIVE?

FRANCISCO: This project is innovative because it will only succeed through local engagement and ownership. We are directly involving nearby communities and their residents in

the required restoration activities to transform a depleted area into a lush, thriving place for tourism and recreation. In addition, the project links the economic benefits it generates through restoration job opportunities to the quality of life of nearby communities.

DANICA: This facility is designed to be net zero energy, with a combination of solar

and geothermal systems in place to generate heating and electricity. Natural ventilation in a building is enhanced by a “heat sink”—the asymmetrical perforated aluminum panel installed inside the glazed oculus. When possible, local resources were utilized. Rainwater collected on the roof is used for toilets and landscape irrigation through on-site percolation. Stormwater from the entry

plaza is channeled through a small creek where plants act as a biofilter to remove contamination in wastewater. Blackwater and greywater are being treated on site and reused. The planting/grasses as well as the growing medium on the green roof were carefully selected to provide a relatively maintenance free roof. A green roof that could survive the wet and dry climates of the Pacific



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LAGUNA GRANDE
COMMUNITY PARK
(APPROX. 261,000 SF
COMMUNITY PARK)

BAJA CALIFORNIA, MEXICO

TO BE COMPLETED
BY 2015

FRANCISCO ZAMORA,
DIRECTOR, COLORADO
RIVER DELTA LEGACY
PROGRAM,
SONORAN INSTITUTE



Image provided by: Francisco Zamora / Sonoran Institute

Northwest without the need of irrigation. This was as much of a technical response to the Living Building Challenge as it was also an aesthetic choice that results in a roof that changes dramatically and naturally through the seasons.

GIVEN THE INNOVATIVE NATURE OF THIS PROJECT, HAVE YOU ENCOUNTERED ANY CHALLENGES THAT YOU HAD TO OVERCOME?

FRANCISCO: We expected challenges since community-building that is sustainable takes

time. We initially encountered vandalism at the site, but we are experiencing this less and less as the community becomes engaged and takes ownership and pride in the park. Local volunteers worked to educate community members.

DANICA: Due to the Federal funding, tight timelines required fast track delivery of a fairly intricate building. The project team had to be creative and use innovative approach to pre-fabricate roof panels complete with insulation, most

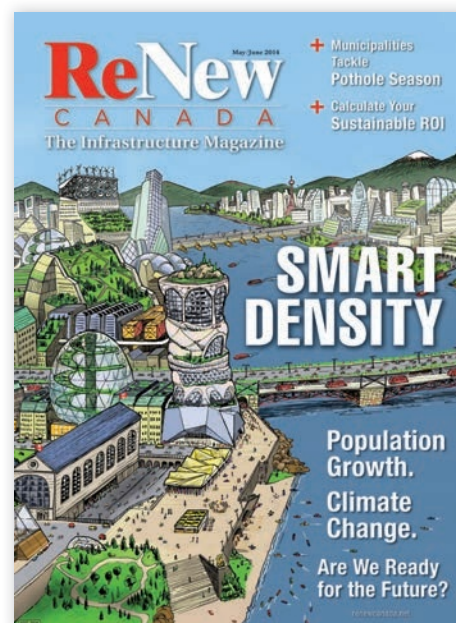
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DESIGN SCHEMATIC OF VANDUSEN BOTANICAL GARDEN GREEN ROOF

Image provided by: Perkins + Will

mechanical and electrical services, including finishes. Architects, engineers and contractors used 3D modeling to design and deliver the complex nature of the roof forms. These panels were pre-assembled in an off-site plant, shipped and installed on site in a record timeline.

WHAT ARE SOME OF THE PERFORMANCE BENEFITS OF THIS PROJECT?

FRANCISCO: There are several economic, social and environmental benefits to this project, including, but not limited to employment generation, tour-

ism and recreation, increasing property value, community building, improving the quality of life and creating habitat.

DANICA: Interpretive material within the building helps to inform and educate visitors of the building's innovative and sustainable systems, as well as the importance of plants, diverse ecosystems and conservation.

Jennifer Foden Wilson is the editor of the Living Architecture Monitor magazine.

FIND OUT MORE

To read about the teams who worked on these projects visit: <http://goo.gl/jwNX6>.



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