## Groundswell THE LANDSCAPE PRACTICE OF BNIM



#### About BNIN

BNIM is an innovative leader in designing high performance environments. BNIM's instrumental development of the USGBC, LEED, and the Living Building concept, combined with projects, methods, and research, shaped the direction of the sustainable movement. Through this involvement, the firm has redefined design excellence to elevate human experience together with aesthetics and building performance. In practice, this multifaceted approach to design excellence has yielded national acclaim, including the design recognition nationally and internationally. BNIM is Building Positive, a notion that describes how our practice leverages its collective capacity for design thinking to solve issues at every scale in a way that is focused on building the positive attributes of community and the built environment. Through an integrated process of collaborative discovery, BNIM creates transformative, living designs that lead to vital and healthy organizations and communities.

Landscape Architecture Services

Project Planning (Programming) Landscape Architecture Site Planning and Design Parks and Recreation Design Campus Planning Environmental Planning Regional and Community Planning Urban Design and Planning Infrastructure Planning Site Selection and Analysis



We deliver beautiful, integrated, living environments that inspire change and enhance the human condition.

## What We Do

BNIM is Building Positive.

We challenge convention to enhance the human condition by leveraging collective capacity for design-thinking to solve local and global issues. Advocating a systems-based approach, our practice builds inspiring, integrated experiences between people and place. We create positive change, projects that respond to the complex demands of our time by rethinking how we share and exchange. We are building visionary ideas and embodied experiences.

Our landscape studio is a fully integrated part of a multidisciplinary firm. This provides more capacity to bridge disciplines, allowing us to explore and develop highly innovative solutions that lead teams toward successful outcomes.



# By the year 2050, 75 percent of the world's population will live in cities.

As designers, we are responding to this profound change in our cities by using the power of design to meet the urban challenges of tomorrow and to transform the places we all live. BNIM's Landscape Studio is designing our collective future in these key ways:

# <sup>1</sup>Weaving Together Landscape and Place

<sup>2</sup>Landscape as Infrastructure

<sup>3</sup> Designing for Human Vitality

The best way to predict the future is to create it. Abraham Lincoln



# <sup>1</sup>Weaving Together Landscape and Place

## Between inside and outside Between nature and the city Between the design disciplines

By uniting natural and built environments, we are building new connections between nature and the city. The built environments of our time will reflect new ways to dwell among the city, to understand urban fabrics as natural processes. Our designs explore themes of discovery to educate and tell stories of urban and civic life. As narratives, these landscapes provide the framework for nature to grow and flourish. Fundamentally, we believe in seamless connections between outdoors and indoors, nature and the places where we work, live, and play.

As our work blurs the boundaries between interior and exterior spaces, we are creating landscapes that can adapt and change over time. We advocate systemic designs, understanding sites as interconnected places with inherent cultural, social, and natural processes. We are redefining the lines between structure, space, and site.

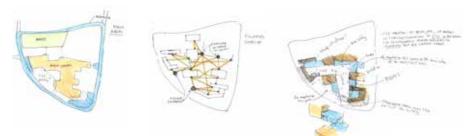
In working across disciplines, we are reimagining integration and designing adaptive reuse. Our teams work across locale, supporting holistic designs strategies. Our environments flow into one another, supporting and strengthening project goals.











#### Integration

We are redefining how buildings and landscapes can work together. Gardens, vegetation, and urban nature grow within the framework of our designs, providing spaces for relaxation, conservation, or food production. Construction and buildings can have a profound impact on a site or community, and design should embrace the context and provide space for community. The built environment will increasingly reflect ideas on how nature can be implemented to support financial, cultural, and sustainable goals. Landscapes will shape the future of how we build and exchange.





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Designing the Changing City: Edmonton City Centre Airport Redevelopment Plan Edmonton, Alberta, Canada

Landscape ideas can inspire the way we redevelop our neighborhoods and cities. They can create frameworks for sustainable, functional, and beautiful infrastructure at all scales.

The Edmonton Airport Redevelopment transforms a defunct city airport into a new neighborhood in the center of the city. The masterplan re-envisions the runways as linear parks that bring the aspen forest back into the heart of the city to serve new urban development.



We are able to form more seamless environments by harnessing the abilities of many disciplines—landscape, architecture, and interiors. The edges of buildings become hard to discern as they release into welcoming landscape environments. By integrating the overall campus around public spaces, public amenities, and clear circulation systems, the buildings and campuses that comprise our cities gain extended usable space. These vibrant areas and outdoor rooms support group work, creative thinking, or impromptu gathering.

#### Beautifying the Heart of the City: Kansas City Missouri City Hall and Streetscape Pilot Project Kansas City, MO

The building's exterior North Plaza features reused granite from the existing plaza, limestone walls with integrated LED lighting, and an irrigation-free landscape design that utilizes native plant species. Local, recycled, and healthy materials were used, including the steel framing that is approximately 90% recycled. Cold Springs Granite of Minnesota supplied the granite, and the limestone was supplied from Indiana – both quarried within 500 miles of the City Hall site.







# <sup>2</sup>Landscape as Infrastructure

## Our approach is a resolute commitment to Human Purposed Integrated Design, or HP.id

Our HP.id process stresses the human component of design because humans have insights, instincts, and vitality that must be valued above all. Human Purposed Integrated Design supports invaluable human insight by focusing on specific needs that can be met and enhanced through systemic design.

Our practice is reintegrating natural systems back into the built environment, which has largeley evolved with minimal consideration for underlying natural systems. However, cities are complex ecosystems that necessitate the thoughtful integration of the natural with the cultural, creating a hybrid form of urbanity. This urban form mimics the natural functions of the site within the programmatic demands of the city.

We reinvent typology by creating landscapes as places to discover and explore. By drawing on deep and broad internal expertise and a network of national subject experts, we create holistic design solutions that weave the science of natural systems into the culture of daily life.

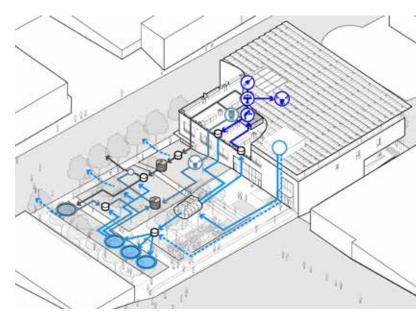


#### Building Positive: A 4-in-1 Prototype 1640 Baltimore, Kansas City, MO

1640 Baltimore is an adaptive reuse project conceived as a mixed-use office and commercial space, designed as a prototype for the interplay of four sustainable, site, and wellness standards. While working on the three-story, 43,000 square-foot building and adjacent site, landscape architects became the champions of the water narrative. The native and adaptive landscape was designed to improve soil health, showcase native species, provide habitat for pollinating insects, and connect habitats in the urban core. The project provided shade, connected alleyways and provided open space in a dense urban area

#### Infrastructure Systems

Infrastructure is the basic, underlying framework of systems, especially systems of the city. Our designs use natural systems to augment man-made elements and ideas, organizing the flows of people, water, or growth. To inform our design, we examine the predevelopment condition of sites, their history, character, and impact. No project exists in isolation, each connected to a broader urban or regional fabric. As the most fertile ground to explore this idea, we design infrastructure and landscapes that support cities and reimagine the future of place.



Using landscape as green space, but also as integrated water infrastructure that works with surrounding buildings

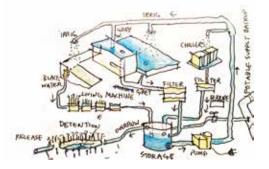
#### Living Building, Living Landscape: Omega Center for Sustainable Living Rhinebeck, NY

The Omega Center for Sustainable Living in Rhinebeck, NY is a highly sustainable wastewater filtration facility with a strong educational component focused on water. The project replaces the current wastewater disposal system for 119 buildings on a 195-acre campus by using biological methods of treatment via an Eco Machine. The project is the first in the nation to receive 'Living' status in Living Building Challenge 1.3 and LEED Platinum certification.



## Emulating Nature's Infrastructure

Landscape design can be a call to a greater purpose for solving issues of water and waste with natural infrastructure solutions. By thinking in a different way about landscape and systems—one based on ecology and place—we find solutions for water and waste management that are unexpected, but purposeful, resilient, and restorative to their site.



Pacific Center Campus Amenities Building Water System

#### Resilient Framework: Greensburg Main Street Streetscape Greensburg, KS

The City of Greensburg, Kansas, is developing a downtown environment that provides a unique experience for residents and visitors, and helps the city reach its community goals. As one of the first major infrastructure projects in Greensburg since the EF-5 tornado destroyed the majority of the town in 2007, the Main Street Streetscape is a signature project and will help to sustain the momentum for rebuilding a model sustainable town.

By looking at the street design features as an integrated system, the design team has incorporated stormwater management techniques, innovative material use, and energy efficiency measures. All components, from planting and irrigation, to seating, paving and materials will be sustainable. This is the greenest Main Street in the United States.

#### Native Landscapes

We believe that native and adaptive landscapes have the power to restore not only a sense of place, but also important biodiversity that makes a place thrive. Planting palettes that evoke the character and ecology of a place are an important part of the solution. The performance benefits are clear—greater biodiversity provides more natural habitats, ecosystem balance, and can beautify infrastructure design that is necessary to our communities.

Blurring the Boundary Between Building and Landscape: Pacific Center Campus San Diego, CA

The Pacific Center Campus is the transformative redevelopment of an existing 20-acre campus for a major Fortune 500 technology company. The design transforms a generic, vehicle-oriented suburban office development (dominated by surface parking and water-dependent fescue lawns) into an immersive, pedestrianoriented campus environment. A result of intense multi-disciplinary collaboration, the project blurs the lines between landscapes and architecture, creating a cohesive series of indoor and outdoor spaces that reconnect the users to each other and to the beautiful indigenous landscapes of northern San Diego County. The project has transformed the physical environment and subsequently the culture on campus.



# <sup>3</sup> Designing for Human Vitality

## Our work centers on human experience. We are creating places that connect people and frame new ways to share and exchange.

Using design as a research vehicle, our designers are continuously asking new questions to respond to the complex demands of our time. By rethinking how design can address specific needs, from beauty, wellness, and connectivity to achievement and resilience, we promote human health and well-being, transform locations into sites, and empower local communities. Our Landscape Studio is reimagining the frameworks in which life can unfold. Each design brings clarity to its context through holistic strategies, beautiful spaces, and embodied experiences.

In our work, design can comfort, encourage, and heal, and space can increase productivity, encourage engagement, and transform culture. Our designs are grounded in the evolving nature of workplaces and research on human engagement metrics. These include beauty, well-being, connectivity, performance, and resilience.





## Transforming Culture

Innovative companies are constantly looking for better ways to evolve their cultures and workplaces. Landscape architecture can lead this evolution by melding active campus design ideas and innovative workplace strategies with native plant ecosystems, innovative water strategies, and the physical and psychological benefits of being surrounded by nature.





#### Blurring the Boundary Between Building and Landscape: Pacific Center Campus San Diego, CA

The Pacific Center Campus Development in San Diego, CA project illustrates the trend toward more integrated work environments via greater use of landscape architecture. By integrating the disciplines of landscape, architecture and interiors to form a seamless environment, it is hard to know where buildings stop and the site begins. The landscape features quiet terraces, sloping rooftop prairies, gabion-shaped spaces and outdoor rooms with walls of local plants and grasses. A functional organic farm with overflowing veggies and produce provides food to be harvested and used on campus in the cafe. A central meadow is a giant pause of open space traversed by decomposed granite trails that connects the campus to the Lopez Canyon trail beyond.





Pop-up Purpose: Better Block Kansas City, MO Tellen i

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#### Empowering the Public

We empower the public and give diverse communities a voice. Each of our human engagement metrics are studied and recorded through the lens of civic and systemic design. We look at how pop-up projects, installations, or unconventional landscapes can build better cities and advocate change.

We understand the value of beauty and inspiration — and the importance of these qualities in the built environment. Beautiful cities ground community pride and establish ownership in the places we call home. We design for comfort and connectivity as a means to support well-being, be it through thoughtful streetscapes or reflective gardens. We also understand the need for projects to be adaptable and resilent, achieving the highest levels of performance as a standard across landscape, architecture, and interiors.

> Reviving the Block: AVA Arts District Los Angeles, CA

#### Nature as Teacher

Decades of research confirms what we instinctively know: proximity to natural settings makes people healthier, happier, and more productive. Most people spend the vast majority of time inside, so BNIM deeply integrates natural landscapes and native ecosystems into our projects. This takes many forms, from the thoughtful integration of views between interior and exterior, to the creation of passive and active recreation spaces, to the design of healing gardens where plants have therapeutic benefits. These benefits transcend project type and geography.

#### Revealing Missouri's Natural Assets: Anita B. Gorman Discovery Center Kansas City, MO

Educators with the Missouri Department of Conservation imagined a place in urban Kansas City where children could connect with their natural environment and where conservation services could be provided to an urban audience. The program for the facility on twelve acres of previously developed land was to accommodate six educational workshops that promoted conservation strategies, metro offices for the Department, as well as multiple-sized meeting spaces and a large 250-seat auditorium available to the community.

The theme of discovery and rediscovery permeates the building and landscape as both become teaching tools unto themselves, with the building in particular mimicking natural processes to provide energy efficiently and handle its waste intelligently.



Prices for products in districts with trees were on average about 11 percent greater than in no-tree districts; the quality of products were rated 30 percent higher than in areas with no sidewalk landscaping.

Living in a high-sprawl area has the equivalent effect on your health as aging four years.

Trees in Business Districts: Positive Effects on Consumer Behavior, University of Washington, 1998

RAND, 2004

Humans prefer nature in their landscapes because it is a key ingredient of human habitat, is essential to our psychological and social health, and has a beneficial effect on blood pressure, heart rate, mood, day-to-day effectiveness, social behavior, cognitive functioning, and work performance.

Frances E. Kuo, "Coping with Poverty: Impacts of Environment and Attention in the Inner City," Environment and Behavior, 2001

The concept that plants have a role in mental health is well established. A review of 10 years of medical records showed that patients with tree views had shorter hospitalizations, less need for pain killers, and fewer negative comments in the nurses' notes, compared with patients with brickwall views. Study participants living in the greenest areas had a 12 percent lower death rate than study participants living in the least green areas.

Howard Frumkin, American Journal of Preventive Medicine

R. S. Ulrich, "View through a Window May Influence Recovery from Surgery," Science 1984

Harvard School of Public Health, 2016

Creation of or enhanced access to places for physical activity produced a 48.4 percent increase in the frequency of physical activity. Open spaces such as parks and recreation areas can have a positive effect on nearby residential property values and can lead to proportionately higher property tax revenues for local governments.

American Journal of Preventive Medicine

Active Living Research/Robert Wood Johnson Foundation

Levels of vegetation in common spaces for urban housing residents predicted the formation of neighborhood social ties. Parks and greenways can mitigate air pollution and increased temperatures. Mature tree canopies can reduce air temperature five to ten degrees, helping to counteract the urban heat island effect. A survey of 1,200 high technology workers found that quality of life in a community increases the attractiveness of a job by 33 percent.

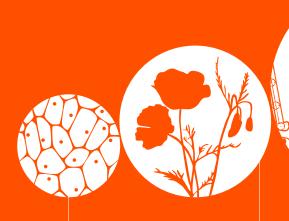
University of Illinois & the University of Chicago

University of Washington's Center for Urban Horticulture

KPMG, 1998

#### **BNIM's Design Approach**

From the elemental to the regional, our approach is informed by the importance of each scale of design that comprises built and natural systems. The interdependence of these scales is critical to building communities that are vibrant, holistic, livable, and sustainable.





Each individual element of a design concept should relate to all others so that it reinforces the whole. Small design details and individual components become integral parts of a larger sustainable system by contributing to the design expression, performing practical functions, and educating users. Detail elements in the built environment convey a spirit of place and belonging that allows users to emotionally connect and engage in fully experiencing built environments. Building upon the elemental scales, a site concept emerges to build larger systems and define the personal experience of each user and visitor. This level of design — with its visible and experiential nature — builds cohesiveness by connecting the smaller scales and larger contexts. Understanding the social and psychological impacts that design can impart is fundamental at this scale of design. Intuitive investigation of potential design concepts is an important aspect to achieving a heightened experience.

The quality of the public realm is the most influential force for people when determining where they would like to live, work, and visit.

At the urban scale, individual and even isolated projects form the public realm. This interaction forms networks of neighborhoods, produces sensorial experiences and reveals typologies. We consider underlying infrastructure networks, such as transportation, and their historical impacts when evaluating the entire equation for new (and traditional) solutions that can regenerate the built environment and shape the landscape into one that is livable and vibrant.

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Regional networks — connections of vast systems and urban areas — unify the scales of design and introduce larger natural, constructed. and political systems. The influences of both watersheds and political boundaries have a tremendous impact. Designing at this scale requires a comprehensive understanding of large landscape systems, regional vernacular, political relationships, and the components of each subordinating scale that comprise this whole.



### Passionate About Design

BNIM's Landscape Studio specializes in the planning and design of urban settings. We have a diverse team of experts in various facets of our field including planning, water, ecology, horticulture, architecture, and construction.

We understand the profound impact that nature has on human well-being and strive to strengthen its presence in our cities. We are known for creating thoughtful, innovative work that considers the natural and built environments as integrated, connected systems. The places we design draw people into the environments around them providing them with joy, solace, and rejuvenation.



























**bnim** is building positive

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