Queens Botanical Garden
Flushing, New York

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Queens Botanical Garden
Flushing, New York

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Queens Botanical Garden
Flushing, NY
Parsons Park

Chicago, Illinois

Client: Chicago Park District
Completion: 2010
Team: Terry Guen Design Associates
Parsons Park
Chicago, Illinois
Parsons Park
Chicago, Illinois
Omega Center for Sustainable Living
rhinebeck, new york

Client: Omega Institute for Holistic Studies
Completion: On-going
Awards: AIA/COTE Top Green Project Award, 2010
LEED: Platinum (anticipated)
Team: BNIM, John Todd Ecological Design, The Chazen Companies
The Omega Institute is situated within one of the most important watersheds in the world, the 13,400 square mile Hudson River watershed basin.

“Take care of the land and the land will take care of you....”

Hugh H Bennett
Omega Center for Sustainable Living
Rhinebeck, New York
© BNIM
Omega Center for Sustainable Living
Rhinebeck, New York
Kresge Foundation Headquarters

*troy, michigan*

Client: Kresge Foundation
Completion: 2006
Awards: Michigan ASLA Merit Award, 2009
  - ACEC NY Honor Award, 2007
  - Michigan Barn Commission Award for Innovative Use of Barn Reuse, 2007
  - AIA Chicago Distinguished Building Award, 2006
LEED Platinum, 2007
Team: Valerio Dewalt Train, Farr Associates, ARUP
Kresge Foundation Headquarters
Troy, MI

- Existing buildings
- New Buildings
- Native Landscape
- Green Roofs
- Permeable Paving
- Bioswale
- Water Feature/Detention
- Ornamental Landscape
- Water circulation
Kresge Foundation Headquarters
*Troy, MI*
Porous paving parking lot

Kresge Foundation Headquarters
*Troy, MI*
Connection to nature

Kresge Foundation Headquarters
Troy, MI
Kresge Foundation Headquarters
Troy, Michigan
Kresge Foundation Headquarters
Troy, Michigan
Client and Public Education

Kresge Foundation Headquarters
Troy, MI
Education: k-12

Lloyd Street Global Education School

Herget Middle School
Education: colleges + universities

Iowa State University College of Design

Waubonsee Community College

Walsh College
Walsh College Library Expansion

* troy, michigan *

Client: Walsh College  
Completion: 2008  
LEED Gold, 2010  
Team: Valerio Dewalt Train Architects
Walsh College Library Expansion
Troy, Michigan
Tellabs Corporate Headquarters
Naperville, IL
Tellabs Corporate Headquarters
Naperville, IL
Tellabs Corporate Headquarters
Naperville, IL
Johnson Controls Headquarters

Glendale, Wisconsin

Client: Johnson Controls, Inc.
Completion: 2009
Awards: Wisconsin Builder Magazine Top Projects award, 2009
LEED: Platinum (anticipated)
Team: Gensler
Johnson Controls Headquarters
Glendale, Wisconsin
Johnson Controls Headquarters
Glendale, Wisconsin
Johnson Controls Headquarters
Glendale, Wisconsin
AMCOL International Corporation

Headquarters

hoffman estates, illinois

Client: AMCOL International Corporation
Completion: 2009
LEED Silver, 2009
Team: Gensler, Leo Pardo
AMCOL International Headquarters
Hoffman Estates, Illinois
AMCOL International Headquarters
Hoffman Estates, Illinois
Aquascapes Headquarters
St. Charles, IL
Aquascapes Headquarters
St. Charles, IL
Integrating Native Landscapes

Bridgestone Bandag Headquarters
Muscatine, IA
Ann Arbor Municipal Center

ann arbor, michigan

Client: City of Ann Arbor
Completion: on-going
LEED: Platinum (anticipated)
Team: Quinn Evans Architects, InSite Design Studio, Atelier Dreiseitl
Ann Arbor Municipal Center
Ann Arbor, Michigan
Health Care

Advocate Lutheran General

Advocate Good Shephard

Northwest Community Hospital
Lutheran General Hospital Patient Tower

park ridge, illinois

Client: Advocate Health Care
Completion: 2009
LEED Gold, 2010
Team: Cannon Design, Gewalt Hamilton Associates
Advocate Lutheran General Hospital
Park Ridge, IL
Lutheran General Hospital Tower
Park Ridge, Illinois
Advocate Lutheran General Hospital
Park Ridge, IL
Healing garden + children’s roof garden

Advocate Lutheran General Hospital
Park Ridge, IL
Site Design Features: Enhancing Sustainability
Advocate Lutheran General Bed Replacement Tower Project

The integrated design of the gardens and surface water management system for the new bed tower was conceived to tell the story of water in a visible way that celebrates its value to life. The design includes an extensive green roof, permeable pavement, rain gardens and a rich plant palette all of which work together to create a sustainable landscape environment for patients, staff and visitors.

Green Roof.
At the top, the bed tower has an extensive green roof that holds, filters and evaporates rainwater and releases it slowly through internal building drains to the rain garden system. A little more than 70% (71.4%) of the main bed tower roof is covered with plants.

Permeable Pavement.
Most of the internal roads between Tower Drive and Western Avenue is constructed of a concrete paver that is permeable to water due to holes between the individual pavers. These pavers are stronger than asphalt and will last significantly longer without requiring repair or resurfacing. The stone bed under the pavers is constructed of 1/4" open graded stone that is close to 2.5' deep. This depth is deliberately calculated to hold the maximum amount of water for 24 hours as required by the Metropolitan Wastewater Reclamation District of Chicago. The water is slowly released from the stone to the city stormwater system significantly cleaner and cooler than it would have been when released by a standard system. This system is more protective of the Des Plaines River watershed.

Rain Gardens.
The integrated rain garden system consists of a series of six terraced planting beds on both sides of the road from the Patient Discharge area on the northwest corner of the new bed replacement tower to the eastern end. They are filled with a specially manufactured soil made with a high sand content so it is very pervious to water. These gardens receive water that falls on them and the water that is released from the green roof. Each rain garden consists of three terraces that step down from west to east. If the first one fills with water it will spill over to the second terrace and then to the third. If they all fill, there is an overflow drain so they don’t flood on to the sidewalk.

There is also a western rain garden next to the maintenance that receives water from a section of the roof in the SW corner of the tower via a stainless steel tunnel that runs along the back of the rain garden. Water is first released into this rain garden to the stone channels that transport the garden in line with the stone benches.

The rain gardens are designed to be “dry” gardens in that the same layer of stone that is under the permeable pavement is also under the special soil in the rain gardens to detain the water that passes through the amended soil.

Storing Rain Water.
Approximately 35% of the volume of the stone layer under the permeable pavers and rain gardens is void space that holds the water that is received from surface rains and meltwater and slowly releases it to the City stormwater system. The rate of release is controlled by specific restrictor valves that are part of the system.

Surface Runnels.
The retaining walls that form the north side of the rain gardens reflect the curve of the building. A bronze outlet flow on the east side of the retaining walls releases water from the stone layer under the pavement and rain gardens to a concrete runnel that becomes integrated into the Spiral Garden at the east side of the property. The end point of the runnel in the garden is the end point of the surface water management system.

Landscape Design.
The landscape was deliberately designed to eliminate the need for lawn, reduce the need for watering and eliminate mowing. All plant species were selected for their adaptability to dry conditions. They include a mix of native plants, cultivars of native plants and non-native species that are adapted to the expected conditions of the site. Once established, they should not require supplemental watering.

LEED.
The LEED credits supported by the water management system and landscape design include: SS 6.1 Site Development: Protect and Restore Habitat; SS 1.2 Site Development: Maximize Open Space; SS 6.1 Stormwater Design: Quantity Control; SS 6.2 Stormwater Design: Quality Control; SS 7.1 Heat Island Effect: Non-roof; SS 7.2 Heat Island Effect, Roof; WE 1.1 Water Efficient Landscaping: Reduce By 50%; and WE 1.2 Water Efficient Landscaping: No Potable Use or Irrigation.
Public education

Advocate Lutheran General Hospital
Park Ridge, IL
Lake Cook Courts
Highland Park, IL
Lake Cook Courts
Highland Park, IL
Josey Heights
Neighborhood
Milwaukee, Wisconsin
Sidewalk  Bioswale  Permeable paver street

Non-woven needlepunch filter fabric (LINQ 120EX or approved equal)
Amended topsoil

Concrete roll curb (by others)

slope

Perforated pipe
Open graded aggregate under parkway bioswale and sidewalk
6" Coarse sand bed vertically mixed 2" into subgrade

3 RIGHT OF WAY CROSS SECTION
NOT TO SCALE
Josey Heights Neighborhood

Rain Gardens  Street Bioswales  Permeable Paving
Josey Heights Residential Neighborhood
Milwaukee, WI
Residential Porous Pavement and Rain Garden Application
Elmhurst, IL
McDonalds Green Prototype
Chicago, IL
SUGGESTED HIGHWAY AND STREETSCAPE CONCEPTS FOR THE HIGHWAY 20 / SIXTH STREET RECONSTRUCTION AND ENHANCEMENT PROJECT
Iowa Green Streets
west union & charles city, iowa

Completion: on-going
Iowa’s Green Streets Pilot Project
A Sustainable Vision for West Union, Iowa

The City of West Union
Main Street West Union
Iowa Department of Economic Development
TeKippe Engineering, P.C.

Conservation Design Forum
Iowa Green Streets Pilot Project
West Union, Iowa
Charles City Green Streets
Charles City, Iowa
Charles City Green Streets

Charles City, Iowa
Communications

- Develop and implement community communications strategy
Implementation/Funding

- Pursue range of support/funding opportunities
Unsustainable Row Crop Agriculture

Sustainable Agriculture

Rotational Seed & Biomass Production

Sustainably harvested woodlot

Organic produce

Rotational Grazing