The design, printing, and editing of this booklet was directed and funded by the Mississippi Watershed Management Organization and the Minnehaha Creek Watershed District.

The funders and volunteers of the Legacy Committee for the 5th Annual Greening Rooftops for Sustainable Communities Conference conceptualized the booklet, provided writing and editorial assistance, and gave feedback on layout and design.

Special thanks to Corrie Zoll for the many volunteer hours he contributed to this project.

The list of green roofs shown here comes from a web-based database which was developed and is maintained by the Minnesota Green Roofs Council (MGRC). The MGRC will continue to keep the database up to date; please visit www.mngreenroofs.org for the most recent information on green roofs in Minnesota. Funding for the website is provided by American Hydrotech, Carlisle SynTec, Tecta America Corporation (Central Roofing Company) and Sika-Sarnafil. The Minnesota Green Roofs Council was formed in 2007 in order to promote green rooftop technology and educate stakeholders in Minnesota.
INTRODUCTION

The Minnesota Green Roof Profile was printed as the Legacy Project for the 5th Annual Greening Rooftops for Sustainable Communities Conference held in Minneapolis, Minnesota, April 28 – May 2, 2007. The goal of the Minnesota Green Roof Profile is to help promote awareness of green roofs, and to showcase the area’s growing green roof industry.

Seven case studies are presented here, profiling a variety of established green roofs from the greater Minneapolis–St. Paul metropolitan area that different in age, size, building type and plant community. An inventory of known green roofs found in Minnesota as of March, 2007, follows. Please note that this booklet represents a snapshot in time, and that green roofs are being added to the Minnesota landscape in increasing numbers.
WHAT IS A GREEN ROOF?

A green roof (or green rooftop) is a roof that uses living plant material as part of a roofing system. Green roofs generally include the following components:

- A waterproof membrane (keeps the water out)
- A root barrier (to keep roots from damaging the membrane)
- Thermal insulation (to insulate both plants and the building)
- A drainage system (to keep excess water off the roof)
- A filter layer (to keep growing medium from washing away)
- Growing medium (lighter than “soil” and designed for green roof plants)
- Living plant material

Plaza areas with minimal green space or planter boxes, while they provide benefits to urban areas, are not considered green rooftops.

THE STATE OF GREEN ROOFS IN MINNESOTA

As of March of 2007, over 60 green roofs were identified across the state of Minnesota. This represents more than one million square feet of green roofs, or about 23 acres.

To put this in perspective, many green roof professionals consider Germany to be the world leader in promoting green roof technology. Many of the technologies used in green roofs in Minnesota were developed in Germany in the 1950s and 1960s. One in twenty German buildings features a green roof, and one in eight new buildings includes a green roof. This amounts to billions of square feet of green rooftops installed over the past 50 years.

In North America, the City of Chicago leads the way in promoting green roofs. In 2006, Chicago boasted 2 million square feet of green roofs either installed or underway.

The City of Minneapolis is considered one of the more progressive cities supporting green roofs and can be favorably compared to cities like Portland, Seattle, and Boston in promoting green roofs. The city’s Stormwater Utility Fee Credit System is a strong driver for the increase in green roofs and other stormwater management practices.

The number of green roofs in Minnesota has doubled in the past five years, and we expect that number to double again in the next five years.
Green roofs are booming in number because they bring multiple benefits to buildings and to communities. These benefits include:

**REDUCING ROOF REPLACEMENT COSTS.**
In Minnesota, a typical gravel-ballasted flat roof is expected to perform for 15–20 years before replacement is necessary. Roof membranes deteriorate when exposed to the hot and cold temperature extremes we experience in Minnesota, and also when exposed to UV radiation from sunlight. The components of a green rooftop protect a roof membrane from these two aging factors. The membrane under a green rooftop can be expected to perform for 35–50 years before replacement is necessary. This means that a building can avoid 1–2 roof replacements over a 50-year lifespan. This reduces life cycle costs as well as significantly reducing the volume of roofing materials deposited in our landfills.

**REDUCING ENERGY COSTS.**
Green roofs can reduce heating and cooling demands. During a Minnesota winter, the insulation layer and growing medium of a green roof can add r-value to a building’s roof. In the summer, the impact is more significant. Living plant material evaporating moisture from leaf surfaces will cool the rooftop surface, reducing cooling demand up to 25 percent.

**REDUCING STORMWATER MANAGEMENT COSTS.**
An extensive green roof with four inches of growing medium can be expected to hold a one-inch rainfall event before any water runs off the roof surface. Nearly all of the rainfall events we receive in Minnesota are less than one inch. This four-inch green roof can be expected to capture two-thirds of the rain that falls on its surface over the course of a year. With a deeper layer of growing medium or with rainwater or greywater harvesting systems, a green roof can be used to manage a significantly larger volume of water. As a part of a building’s stormwater management infrastructure, a green roof can reduce the cost of other stormwater management systems, and in some cities can reduce monthly stormwater management fees. The City of Minneapolis uses a stormwater utility fee structure that provides incentives for using green roofs to manage stormwater on-site.

**IMPROVING URBAN AIR QUALITY.**
Green space improves air quality. Green rooftops provide opportunities to increase the amount of green space in densely developed urban areas where green space can be hard to find. A 1998 study by Green Roofs for Healthy Cities developed a model showing that, if six percent of the rooftop surfaces in the City of Toronto were replaced with green rooftops, the additional green space would remove 30 tons of airborne particulate matter each year.
MITIGATING CLIMATE CHANGE AND THE URBAN HEAT ISLAND EFFECT.

Urban areas like Minneapolis-Saint Paul are generally 2–5 degrees °F warmer than surrounding rural areas. This is known as the Urban Heat Island effect. On top of that, the USEPA projects a 2–7 degree °F increase in aggregate temperature for our region over the course of the 21st Century. It is projected that a three-degree aggregate temperature increase in Minneapolis would triple annual heat-related deaths from 60 to nearly 200. By cooling rooftop surfaces and improving air quality, a critical mass of green rooftops can mitigate each of these impacts.

PROVIDING URBAN GREEN SPACE.

Green roofs can provide opportunities for significant green space amenities in urban areas. East Village Apartments in the Elliot Park neighborhood of Minneapolis features an at-grade green rooftop installed over underground parking. The green space includes picnic tables and provides an amenity to this affordable housing development. The green rooftop at Brit’s Pub on Nicollet Mall in Minneapolis can be used for lawn bowling and private parties. And pedestrians using the Loring Greenway in Minneapolis may not even realize that they are walking on green roof surfaces above occupied spaces. Hospital administrators know that patients who can see green space outside their windows can recover from illness more quickly. Nursing home and elder care facilities can use green roofs as part of horticultural therapy programs.

TYPES OF GREEN ROOFS

Intensive vs. Extensive and Modular vs. Integrated

**Extensive And Intensive Green Roofs**

Many types of green roofs can be installed in Minnesota. Some green roofs have less than two inches of growing medium and some have more than a foot of growing medium. Some will support only a few varieties of sedums while others will support native flowers and grasses, highly maintained turf grass, or even trees and shrubs. Generally, green roofs are considered to be either intensive or extensive.

*Extensive:* Extensive green roofs are generally designed to be lightweight and to maximize the performance and environmental benefits that a green roof can bring to a building. Extensive green roofs feature a layer of growing medium that is six inches deep or less and are generally planted with sedums or native plant species. Extensive green roofs are generally not accessible to the public. Extensive green roofs in Minnesota include the Ramsey-Washington Metro Watershed District in Little Canada and the Visitor’s Center at Lebanon Hills Regional Park in Eagan.

*Intensive:* Intensive green roofs are generally designed as an amenity space that can be used by building tenants or by the general public. Intensive green roofs are generally heavier, include a deeper layer of growing medium, support a wider variety of plants, and have greater needs for irrigation and maintenance. The most visible intensive green roof in Minnesota is probably the lawn bowling club...
at Brit’s Pub in Downtown Minneapolis. The Crowne Plaza Northstar Hotel, also in Downtown Minneapolis, has an intensive green roof that was originally installed in 1978 and features maple trees that are now ten inches in diameter.

Semi-intensive green roofs include features of both intensive and extensive green roofs. These are referred to as semi-intensive green roofs. The Green Institute’s green roof at the Phillips Eco-Enterprise Center is a highly visible semi-intensive green roof. While the roof features a range of extensive plantings and is designed to be low-maintenance, it is also fully ADA accessible and can hold 30 people for events.

**Modular And Integrated Green Roofs**

Many green roof systems developed by German and American companies are available in Minnesota. Some green roofs are rolled out like sod, some are pre-planted in boxes, and some are installed layer by layer. Green roof systems can generally be divided into two types, integrated roofs and modular roofs.

*Integrated:* Most green roofs installed in Minnesota are integrated green roofs. The green roof components are installed as a series of layers. The Minneapolis Central Library, East Village Apartments, and many other local green roofs use integrated systems.

*Modular:* Modular green roofs are partially assembled off-site and installed in units. Some modular systems feature plastic or metal trays that are filled with growing medium and placed on the rooftop. Plants can be grown in these trays before or after installation. Other systems feature plants pre-grown in mats that are laid onto the roof surface. The Macalester College “fishbowl” green roof in Saint Paul features modular Green Roof Blocks and Green Roof Paks systems. Firehouse 14 in Northeast Minneapolis uses a GreenGrid modular green roof system. The Marcy-Holmes Neighborhood’s Rainwater Resources Recycling project features a Xeroflor modular green roof on a pitched residential garage in Southeast Minneapolis.
The Phillips Eco-Enterprise Center features the most visible green rooftop in Minnesota, with more than ten thousand light rail passengers passing by daily on the Hiawatha Line.

The green rooftop is just one of scores of sustainable building practices on display at the Phillips Eco-Enterprise Center, the first speculatively-built green office warehouse in the United States. Other features include a geo-exchange heating and cooling system, active daylighting systems, and incorporation of salvaged, recycled, and sustainable building materials.

Green roof components such as increased joist density, concrete deck, monolithic membrane, root barrier and drainage layer were installed during the original construction in 1999. However the green features include a geo-exchange heating and cooling system, active daylighting systems, and incorporation of salvaged, recycled, and sustainable building materials.

Native grasses and flowers were chosen to replicate plants growing on a Minnesota river bluff prairie.
The roof system was not completed until 2004 when the Mississippi Watershed Management Organization, the Metropolitan Council, The McKnight Foundation, the Beim Foundation, and the Frederick O Watson Foundation provided additional financial assistance.

Pro bono design services were provided by Kestrel Design Group. More than 150 volunteers participated in the installation, contributing more than 1,000 hours of labor.

Two depths of growing medium support two plant communities on the rooftop. Sedums and other extensive plants grow in two inches of growing medium, while grasses and flowers native to Minnesota river bluff prairies grow in six inches of growing medium.

The roof features an American Hydrotech membrane, Floradrain 60 drainage system and an electric field vector monitoring system installed by International Leak Detection.

Extensive green roof plants were shipped from Emory Knoll Farms, while native plants were grown by Dragonfly Gardens and Prairie Restorations.

Performance monitoring is still underway. Data collected includes plant survival, rainwater runoff volume, and rooftop surface temperature as compared to a reference rooftop.
Minneapolis’ Marcy-Holmes Neighborhood drains directly into the Mississippi River, a polluted waterway. Stormwater runoff is a significant source of pollution in the Mississippi River. To show neighborhood residents what they can do in their own “backyards” to help improve water quality of the nearby Mississippi River, The Kestrel Design Group led the Marcy-Holmes Neighborhood in securing funding for and implementing the Marcy-Holmes Neighborhood Rainwater Resource Recycling Demonstration Project. Made possible by a generous grant from the Mississippi River Watershed Management Organization, the project included design and installation of numerous rain barrels and raingardens installed by neighborhood members.
volunteers, a pervious pavement parking area, a green roof installed by contractors, as well as extensive community education presented in many forms.

The Marcy-Holmes Neighborhood Rainwater Resource Recycling Demonstration Project’s demonstration green roof is a pre-grown Xero Flor XF301 Vegetated Roof System, that weighs only 11 lbs/square foot saturated. Installed on a residential garage, the green roof is visible from the adjacent alley as well as from the street that leads into the alley, and catches the eye of many passers-by who are surprised to see vegetation growing on this garage roof. The owner of the roof reports that the garage has become much more comfortable to work in on hot summer days since the green roof was installed.

The Marcy-Holmes Neighborhood was recently nominated one of the top 10 eco-neighborhoods in America.
The much-anticipated Minneapolis Central Library was designed by Cesar Pelli & Associates Architects and locally-based Architectural Alliance. The building proves the backbone for the Minneapolis Public Library system.

The library’s green roof operates as part of the building’s stormwater management system. To complement the stormwater management capacity of the green rooftop, the library also features a 7,500 gallon rainwater harvesting system. Captured rainwater can be used to irrigate at-grade landscaping as well as to irrigate the green roof during drought periods.

The Central Library includes two green roofs. A larger, 18,000 square foot green roof on top of the building, and a smaller green roof that is visible from the Teen Central section on the library’s second floor.
The extensive roof system developed by Kestrel Design Group uses four inches of growing medium. Plantings include a variety of sedums as well as plants native to Minnesota Bedrock Bluff Prairies. The addition of native plants greatly enhances the value of the green rooftop as wildlife habitat. This mixture of natives and sedums can better support birds and beneficial insects than sedums alone. Native plants also enhance a sense of regional identity.

The roof features an SBS modified bitumen membrane installed by Rosenquist Construction. Mortenson/Thor, AMBE, Ericksen Ellison & Associates and Aloha Landscaping were also involved in the installation.
The Edgewater residence is located on the East shore of Lake Calhoun at the gateway to the vibrant Uptown neighborhood. The building contains 24 dwellings and is designed with an intimate feel.

The Edgewater features 3,480 square feet of green rooftops divided into two areas. An intensive at-grade green rooftop covers underground parking, while an extensive green roof on top of the building is accessible only to the three penthouse units on the fifth floor.

Growing medium on the upper green roof varies in depth from 3-5 inches to support different plant communities and to create visual variety. Plantings include a mixture of sedums and native varieties.

The lower green roof features turf grass while the upper green roof is planted with a mixture of sedums and native plants.

The building was designed by Elness Swenson Graham Architects with structural engineering from MJB Engineers. Oslund & Associates were the landscape architect who designed the lower roof while Kestrel Design Group designed the upper green roof.
Privately accessible deck areas overlook Lake Calhoun.
The Ramsey-Washington Metro Watershed building was completed in 2005 with the goal of establishing a zero runoff site demonstrating a wide range of best management practices for stormwater. The building site contains six rain gardens, prairie upland landscaping, native trees & shrubs, no mow turf grass, porous asphalt parking lot and a green roof.

The building was designed by Sarah Nettleton Architects and Michael Huber Architects. Engineering for the project was done by Barr Engineering Company. The extensive green roof is an American Hydrotech Garden Roof™ located on the District garage. The system was installed and planted fall 2005. A second supplemental planting was performed in September 2006.
B.A. Associates, Inc. installed the roofing membrane and Garden Roof™ system. District staff planted the roof and maintain the roof as necessary.

The roof is pitched 3:12 with a slant toward the parking lot to match the office design and to aid in viewing. American Hydrotech Floratec FS 75 was installed to hold the growing medium in place while providing a drainage layer and a small amount of insulation for the roof.

1,140 square feet of roof is planted with a mix of Minnesota native plants and sedums. Growing medium on the roof averages two inches in depth. Plant survival has been monitored since installation. Water quality monitoring will begin in 2007.
The corporate headquarters for ER Systems and Prairie Technologies is a 50,000 square foot manufacturing and office facility located in Rockford, MN. The building and site were designed to meet the needs of a functioning, fast-growing corporation while mitigating the environmental impact. Although the industrial use of the building and site provided a number of challenges, this same use offered many opportunities for sustainable design.

The building features several sustainable building strategies including permeable parking, prairie restoration area, and rainwater harvesting. The building won the 2005 “Excellence in Design” Award from the National Roofing Contractors Association.
The building’s green roof demonstrates the company’s own products, including an ER Systems membrane and Prairie Technologies’ own Prairie Green Roof system. The extensive system uses three inches of growing medium planted with sedums. The system weighs 10–12 pounds per square foot when dry, and fully saturated weighs 17–19 pounds per square foot.

Prairie Technologies is using its green rooftop to study the cooling effects of green roofs on rooftop surfaces. Rooftop green space adjacent to air intake units can be shown to reduce the summer temperature of intake air, thereby reducing the energy required to cool that air.

A live web cam and real-time weather data can be viewed on the ER Systems web site.
LEBANON HILLS REGIONAL PARK VISITOR’S CENTER

The Lebanon Hills Regional Park Visitor Center serves visitors enjoying the park’s amenities. Dakota County designed the Visitor Center to showcase green building strategies, including low-VOC building materials, natural lighting, high efficiency wood heating and rapidly renewable resources.

Growing medium was installed using a blower truck.

The most visible green building strategy is the vegetated roof. The park suffers from flooding, and minimizing stormwater runoff was imperative. A vegetated roof greatly reduces runoff compared to conventional roofs and provides a complementary aesthetic to the park.

WHERE: 860 CLIFF ROAD
EAGAN, MN 55123
SIZE: 7,500 SQ FT
TYPE: EXTENSIVE, INTEGRATED
YEAR: 2003
PLANTS: SEDUMS
FEATURES: SLOPED GREEN ROOF VISIBLE FROM OUTSIDE THE VISITOR’S CENTER.
MORE INFO: WWW.CO.DAKOTA.MN.US/LEISURERECREATION/PARKS/LEBANONHILLS
The 7,500 square foot roof was first planted in June 2003 with over 6,000 young plants. Unfortunately, that summer’s drought, combined with inadequate watering, led to the loss of over half of the plants. During 2004, staff extensively investigated the four inches of soil-less mix used, researched drought tolerant plant species, and found few problems that aggressive maintenance during an establishment phase couldn’t solve. In 2005, the roof was replanted, and with better maintenance, is now thriving.
The following pages include an inventory of Minnesota green roofs. To the best of our knowledge, this is the most comprehensive effort in the state. The inventory was developed by volunteer stakeholders including architects, developers, roofing companies and landscape firms using an online database provided by the Minnesota Green Roofs Council. This database will continue to grow online, and additions or corrections to this inventory can be made at www.mngreenroofs.org.

Bakken Museum
LOCATION: 3537 ZENITH AVENUE SOUTH
MINNEAPOLIS, MN 55416

Bookmen Stacks Restaurant
LOCATION: 526 4TH STREET NORTH
MINNEAPOLIS, MN 55401
SIZE: 8,750 SQ. FT.
ROOF YEAR: 2005

Brit’s English Garden Pub
LOCATION: 73 SOUTH ELEVENTH STREET
MINNEAPOLIS, MN 55403
SIZE: 11,200 SQ. FT.
ROOF YEAR: 1997

Bryant Village
LOCATION: 2824 ALDRICH AVE. S.
MINNEAPOLIS, MN 55408

Bureau of Criminal Apprehension
LOCATION: 1430 MARYLAND AVENUE EAST
ST. PAUL, MN 55106
SIZE: 11,000 SQ. FT.
ROOF YEAR: 2003

Carleton College Green Roof Project
LOCATION: 1 NORTH COLLEGE STREET
NORTHFIELD, MN 55057
SIZE: 666 SQ. FT.
ROOF YEAR: 2005

Church Street Garage
LOCATION: 401 CHURCH STREET SOUTH EAST
MINNEAPOLIS, MN 55455

Community of Peace Charter School
LOCATION: 471 EAST MAGNOLIA
ST. PAUL, MN 55101

Como Park Visitor and Education Resource Center
LOCATION: 1225 ESTABROOK DRIVE
ST. PAUL, MN 55103

Crowne Plaza Northstar Hotel
LOCATION: 618 2ND AVENUE SOUTH
MINNEAPOLIS, MN 55402
ROOF YEAR: 1978
Cummins Residence
LOCATION: Deephaven, MN
SIZE: 6,000 SQ. FT.
ROOF YEAR: 1998

Deacon Flats
LOCATION: 115 Main Street SE
Minneapolis, MN 55414

East Village Apartments
LOCATION: 1423 11th Avenue South
Minneapolis, MN 55404

Eclipse
LOCATION: 240 & 258 Hennepin Avenue
Minneapolis, MN 55401
SIZE: 15,000 SQ. FT.

Empire Wastewater Treatment Plant
LOCATION: Empire Township, Minnesota
SIZE: 1,800 SQ. FT.
ROOF YEAR: 2006

ERSystems / Prairie Technologies
LOCATION: 6900 Bleck Drive
Rockford, MN 55373
SIZE: 5,000 SQ. FT.
ROOF YEAR: 2004

Flour Sack Flats
LOCATION: 521 2nd Street SE
Minneapolis, MN 55414
SIZE: 7,100 SQ. FT.

Fred's Glass
LOCATION: 134 E. 9th Street
St. Paul, MN 55101
SIZE: 3,000 SQ. FT.
ROOF YEAR: 2006

Greenleaf Lofts
LOCATION: 2000 Nicollet Ave.
Minneapolis, MN 55404

Groveland Terrace
LOCATION: 50 Groveland Terrace
Minneapolis, MN 55403

Holiday Erickson Corporate Headquarters
LOCATION: 494 & France Avenue
SIZE: 20,000 SQ. FT.
ROOF YEAR: 1986

International Market Square
LOCATION: 275 Market Street
Minneapolis, MN 55405
SIZE: 800 SQ. FT.
ROOF YEAR: 2005

Jackson Lofts Parking Area
LOCATION: Jackson Lofts
Minneapolis, MN 55418

Kravig Garage
LOCATION: Marine on St Croix, MN 55047
SIZE: 1,600 SQ. FT.
ROOF YEAR: 2006

Lagoon Irving Condos
LOCATION: 2910 Irving Ave S
Minneapolis, MN 55408
SIZE: 2,200 SQ. FT.

Lagoon Mixed-Use Development
LOCATION: 1320 Lagoon Avenue
Minneapolis, MN 55408
SIZE: 25,214 SQ. FT.
Lebanon Hills Visitor Center,
Lebanon Hills Regional Park,
LOCATION: 860 CLIFF ROAD
EAGAN, MN, 55123
SIZE: 7,500 SQ. FT.
ROOF YEAR: 2003

Loring Greenway
LOCATION: THE LORING GREENWAY
MINNEAPOLIS, MN 55403

Macalester College First Green Roof
LOCATION: MACALESTER COLLEGE FISHBOWL
1600 GRAND AVENUE
ST. PAUL, MN 55105
SIZE: 600 SQ. FT.
ROOF YEAR: 2006

Marquette Plaza
LOCATION: 250 MARQUETTE AVE.
MINNEAPOLIS, MN 55401

Midtown Lofts
LOCATION: 2840 BRYANT AVENUE SOUTH
MINNEAPOLIS, MN 55408

Minneapolis Central Library Green Roof
LOCATION: 310 NICOLLET MALL
MINNEAPOLIS, MN 55401
SIZE: 19,000 SQ. FT.
ROOF YEAR: 2005

Minneapolis Fire Station 14
LOCATION: 1704 33RD AVE N
MINNEAPOLIS, MN 55412
SIZE: 2,840 SQ. FT.
ROOF YEAR: 2006

Minneapolis Waterworks
LOCATION: EAST RIVER ROAD
MINNEAPOLIS, MN 55412
SIZE: 2,500 SQ. FT.
ROOF YEAR: 2005

Nokomis Square Cooperative
LOCATION: 5015 35TH AVENUE SOUTH
MINNEAPOLIS, MN 55417
Phillips Eco-Enterprise Center
LOCATION: 2801 21ST AVENUE SOUTH
MINNEAPOLIS, MN 55407
SIZE: 4,000 SQ. FT.
ROOF YEAR: 2003

Phoenix
LOCATION: 221 MAIN STREET SOUTH EAST
MINNEAPOLIS, MN 55414
SIZE: 5,900 SQ. FT.

Pineburst
LOCATION: 3500 50TH STREET WEST
MINNEAPOLIS, MN 55410

Plymouth Public Safety Building
LOCATION: PLYMOUTH, MN
SIZE: 4,000 SQ. FT.
ROOF YEAR: 2004

Ramsey-Washington Metro Watershed District
LOCATION: 2665 NOEL DRIVE
LITTLE CANADA, MN, 55117
SIZE: 1,140 SQ. FT.
ROOF YEAR: 2005

Residential Urban Garage Demonstration (Marcy-Holmes Neighborhood Association)
LOCATION: 1205 7TH ST. S.E.
MINNEAPOLIS, MN 55414
SIZE: 600 SQ. FT.
ROOF YEAR: 2004

Residential Urban Garage Upgrade
LOCATION: 115 RUSTIC LODGE WEST
MINNEAPOLIS, MN 55419
SIZE: 1,367 SQ. FT.
ROOF YEAR: 2002

River Towers Plaza
LOCATION: HENNEPIN AVENUE & 2ND STREET NORTH
MINNEAPOLIS, MN 55401
SIZE: 60,000 SQ. FT.
ROOF YEAR: 2003

Riverview Tower
LOCATION: 1920 SOUTH 1ST STREET
MINNEAPOLIS, MN 55454

Shakopee Mdewakanton Sioux Community Wastewater Treatment Plant Green Roof
LOCATION: 15364 ORION ROAD
PRIOR LAKE, MN, 55372
SIZE: 31,000 SQ. FT.
ROOF YEAR: 2006

Skyscape
LOCATION: 953 PORTLAND AVENUE
MINNEAPOLIS, MN 55404

St Anthony Main
LOCATION: ST ANTHONY MAIN
MINNEAPOLIS, MN 55414

The Bancroft
LOCATION: 3500 WEST 50TH STREET
MINNEAPOLIS, MN 55410
<table>
<thead>
<tr>
<th>Location</th>
<th>Address</th>
<th>Size</th>
<th>Roof Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Edgewater Condominiums</td>
<td>1805 Lake Street West</td>
<td>3800 sq. ft.</td>
<td>2006</td>
</tr>
<tr>
<td>University of Minnesota Civil Engineering</td>
<td>500 Pillsbury Drive South East</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Minnesota Classroom Office Building Plaza</td>
<td>1994 Buford Avenue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Minnesota Coffman Union</td>
<td>300 Washington Avenue North East</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Minnesota Humphrey Institute</td>
<td>301 19th Avenue South #307</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Minnesota Law School</td>
<td>229 19th Avenue South Walter Mondale Hall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Minnesota Riverbend Commons</td>
<td>220 Delaware Street South East</td>
<td>145,000 sq. ft.</td>
<td>2002</td>
</tr>
<tr>
<td>University of Minnesota Sanford Hall</td>
<td>1122 University Ave South East</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University of Minnesota Williamson Hall</td>
<td>31 Pillsbury Drive South East</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Village Green</td>
<td>1212 West Lake Street</td>
<td></td>
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</tr>
</tbody>
</table>
Because rooftops are generally not very accessible spaces, sometimes it can be difficult to see green roofs up close. But several green roofs in the Twin Cities are accessible (or at least visible) to the public.

The Bakken Museum  
3537 Zenith Avenue South  
Minneapolis, MN, 55416  
(612) 926-3878  
Accessible to museum visitors

Brit’s Pub  
1110 Nicollet Avenue  
Minneapolis, MN 55403  
(612) 332-3908  
Open seasonally during business hours

Lebanon Hills Regional Park Visitors Center  
860 Cliff Road  
Eagan, MN, 55123  
(651) 554-6530  
Sloped green roof can be seen from the ground outside the visitor’s center

Minneapolis Central Library  
310 Nicollet Mall  
Minneapolis, MN, 55401  
A small section of the green roof can be seen from the library’s teen section on the second floor

Phillips Eco-Enterprise Center  
2801 21st Avenue South  
Minneapolis, MN 55407  
The green roof can be seen from the Hiawatha LRT line just north of the Lake Street/Midtown station, and can be accessed by appointment by calling (612) 278-7100

Ramsey-Washington Metro Watershed District  
2665 Noel Drive  
Little Canada, MN, 55117  
(651) 792-7950  
Sloped green roof can be seen from the parking lot