



# THE EVELYN PEASE TYNER INTERPRETIVE CENTER

**Welcome to  
Glenview's  
Showcase  
*for Green*  
Technologies**



at Air Station Prairie

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Glenview, Illinois

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*a facility of the Glenview Park District*

[glenviewparks.org](http://glenviewparks.org)

# LEEDING *the WAY* to a **BETTER FUTURE**

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## **THE EVELYN PEASE TYNER INTERPRETIVE CENTER AT AIR**

**STATION PRAIRIE** is a unique facility built with many cutting edge “green” technologies incorporated into the building and its mechanical systems. The inclusion of environmentally sound design attributes and use of sustainable building techniques has led to the Tyner Center being recognized by the United States Green Building Council as a LEED Platinum building, one of the first to achieve this rating in this area. The Tyner Center gives visitors the opportunity to learn first hand about these technologies and how they can be incorporated into their own homes. It’s a great example of how easy it is to be green!



If every newspaper printed for just one Sunday edition of the Chicago Tribune were to be recycled, we would save 75,000 trees.

## WHAT is LEED?

The United States Green Building Council (*USGBC*) is a non-profit organization that certifies sustainable businesses, homes, schools, hospitals and neighborhoods. The USGBC is dedicated to expanding green business practices, and has developed the LEED (*Leadership in Energy and Environmental Design*) system to rate how environmentally responsible a building is. Buildings can earn points on anything from the materials used in construction to where the building is placed on the site. The Tyner Center has earned LEED Platinum status, which is the highest rating that can be attained through the USGBC.

## GREEN PRACTICES HELP PRESERVE *the PAST for the FUTURE*

Prior to settlement, 60% of Illinois was covered by prairies. That's about 22 million acres! Today, less than 2,000 acres of prairie remain in Illinois. Using sustainable building techniques can help preserve what little open space we have left. As you visit the Tyner Interpretive Center, discover all the sustainable building practices that went into making the building as environmentally friendly as possible.



the Tyner Center porch

If just 25% of U.S. families used 10 fewer plastic bags a month, we would save over 2.5 BILLION bags a year.



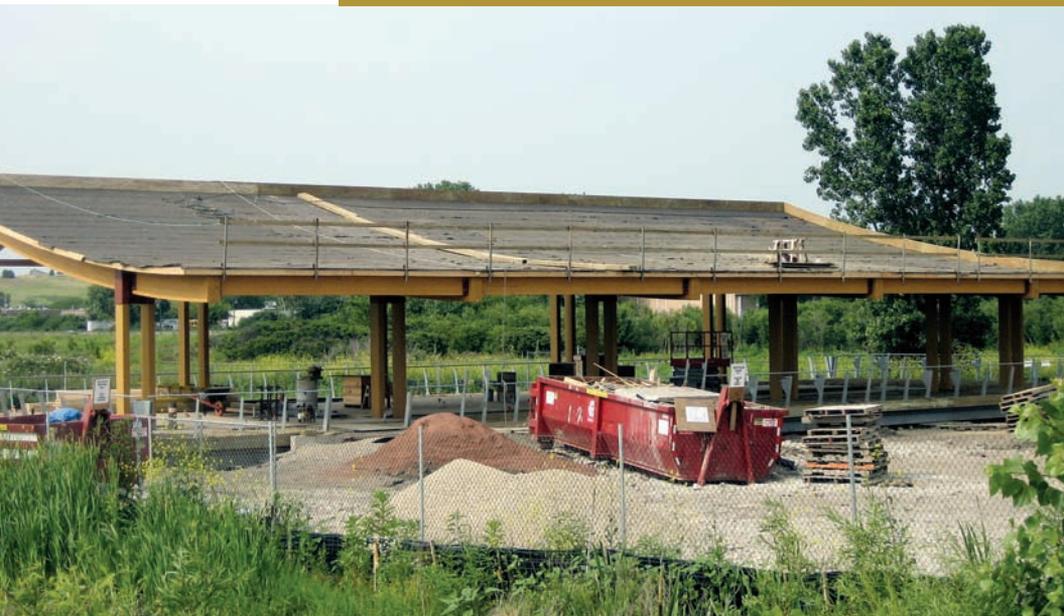


One ton of carbon dioxide that is released in the air can be prevented by replacing every 75 watt incandescent light bulb with energy efficient bulbs.



## WHAT *a* FUNNY LOOKING ROOF!

The Tyner Center's steeply angled roof performs multiple tasks for the comfort and convenience of its users. The 495 SOLAR PANELS (see *bottom right, opposite page*) on the western portion of the roof are angled to take advantage of the southern exposure to the sun. This 15kW system of solar panels converts sunlight into electricity and is capable of producing up to 18,000 kWh of electricity per year, depending on the weather conditions. That's enough electricity to light a 100 watt bulb for 180,000 hours! This electricity is used to power the building's geothermal system and other electrical needs.



The remaining two-thirds of the Interpretive Center's roof is "green". The plants on the roof are not all native prairie plants (*see below*), but have been chosen for their hardiness and drought resistance. These plants help insulate the building, keeping it cooler in the summer and warmer in the winter. Green roofs also help reduce the urban heat island effect caused by roads and building materials absorbing heat from the sun. The green roof is composed of six inches of an engineered soil, and utilizes a GARD NET SYSTEM (*see right*) to hold the soil in place. Take a look at our green roof exhibit to learn more about green roofs.



roof-top sedum plants



the Tyner Center roof,  
solar panels on the west end,  
plants on the east



Insulating your attic reduces the amount of energy loss in most houses by up to 20% percent.



a discovery is made at the green roof exhibit



*Illustration courtesy of  
American Hydrotech, Inc.*

This illustration shows the many layers of the Tyner Center's green roof. Most of the roof-top plants are alliums and sedums.

# THE POWER *of the* WIND and SUN

The Tyner Center's location on the Air Station Prairie was selected to take maximum advantage of the southern winds. Fresh air enters the building through the windows at the top of the southern wall and warm, stale air exits through the windows at the top of the northern wall. This ensures a continuous circulation of fresh air throughout the facility, and cuts down on energy usage.

the north windows



red-tailed hawk



the green roof in spring time



Glass produced from recycled glass instead of raw materials reduces related air pollution by 20%, and water pollution by 50%.

one of the many crayfish  
on the prairie



## LET IT RAIN

There is no basement at Tyner Center. Instead the building stands on **PIER FOOTINGS** (*see below*) much like buildings in coastal areas, and allows the wetlands to grow or recede during the rainy season. The green roof also assists in storm water management by absorbing the rainfall, which would run off a traditional roof into the sewer system. The front walk and parking spaces consist of **UNILOCK PERMEABLE PAVERS**, which allow rainwater to percolate back into the soil and groundwater. The Air Station Prairie and Tyner Interpretive Center are designed to effectively manage storm water on site, allowing the ephemeral wetlands to expand or recede naturally.



## GREEN INSULATION

The interior walls are insulated with Ultratouch recycled denim batting. This type of insulation is made from 85% post-production, pre-consumer denim, which means that all those scraps left over from cutting out jeans are reused instead of taking up space in a landfill! RECYCLED DENIM INSULATION (see bottom images) is fire retardant, mold resistant, pest resistant and impedes the growth of fungus. There are no chemical irritants and no harmful airborne particulates!

The exterior walls are insulated with SOY-BASED SPRAY (see top right) foam insulation which can expand to 100 times its original size between studs to fill in every crack, crevice or void. The spray foam contains no formaldehyde, releases no volatile organic chemicals, and is also mold and pest resistant.

exterior foam insulation being installed



the interior insulation is made up of denim jeans scraps

## POWER SAVERS

Feel the power of the motion activated hand dryer in the bathrooms! Using motion activated appliances saves energy by only turning on devices when they are needed. The lights, faucets and hand dryer are all motion activated.

In the bathrooms, the toilets and sinks are low flow, which reduces the amount of water used. The average person uses approximately 80-100 gallons of water per day, which can add up significantly over a year's time. By using low flow toilets, faucets and shower heads, thousands of gallons of potable water can be saved annually.



Six feet below the surface, the geothermal loop field is working

## WARMING UP *and* COOLING DOWN

GEOHERMAL HEAT PUMPS are used for heating and cooling the building. This geothermal system uses a series of closed loop pipes that extend horizontally underneath the prairie, approximately 6 feet below the surface, where the temperature stays constant year round (50-70°F). The pipes are filled with an alcohol-based antifreeze and water system, which flows through the pipes transferring the heat to and from the ground. In the winter, heat is transferred from the ground into the building. In the summer, this process is reversed and heat from the building is transferred back to the earth. The geothermal pumps are powered by electricity, which cuts down on the amount of fossil fuels used to heat the building.



By recycling all of your newspapers for one year, you alone can save four trees, 2200 gallons of water, and fifteen pounds of air pollutants!

## RENEWABLE WALLS

The interior walls are decorated with two types of paneling: wheatboard and cork. The **WHEATBOARD PANELING** (see top right) is made from wheat straw that has been processed and bonded together, is emission free and contains no formaldehyde. Wheatboard is made from the part of the wheat stalk that is usually discarded, and comes in a variety of colors and patterns to fit any home décor!

**CORK PANELING** (see top right) is a renewable resource that is harvested from the cork oak tree. The cork bark can be harvested every nine years without any harm to the tree. Cork is durable enough to be used as flooring as well as paneling, and contains a natural substance, suberin, which repels insects, mold and mites. Suberin also prevents the cork from rotting and is a natural fire inhibitor.

wheatboard  
cork paneling



interior heating & cooling ductwork



## CARPETING

The carpeting is manufactured by a company that is committed to reducing its impact on the environment. Interface Flor has developed a way to manufacture carpeting which reduces the amount of waste produced. Instead of one large piece of carpeting, the floor is covered by **CARPET SQUARES**, so that if one square becomes damaged or stained, it can be removed and replaced with a new square. This eliminates a lot of waste; instead of buying a whole new carpet and throwing out the old one, only damaged squares need to be replaced.



Ev Tyner (front, right) sprinkling the first prairie seeds

## EVELYN PEASE TYNER

Evelyn Pease Tyner is a longtime Glenview resident who was instrumental in saving important natural areas in Glenview, such as The James Woodworth Prairie, The Grove, and most recently, the Air Station Prairie. The Evelyn Pease Tyner Interpretive Center located at the Air Station Prairie honors this staunch prairie advocate, and stands as a legacy to her preservation efforts in our area.

Special thanks to the following for all their help and support with the development of this brochure:

American Hydrotech Inc.

Intrinsic Landscaping

Pepper Construction

Village of Glenview

Water Furnace



The Evelyn Pease Tyner Interpretive Center at Air Station Prairie is a facility of the Glenview Park District.

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