



### Green Partner's Sustainable Business Park

"The Village of Amherst - small town atmosphere with big city possibilities."

#### Program

A program would provide a place for children to enjoy themselves while providing a place for parents to meet and converse. This fits in with our goal of creating a place for the community to come together.

Along with adding to the recreation opportunities, the playground itself can be created with fully recycled material and designed in an environmentally friendly way to use surrounding natural resources for the playground.

The steps on the map is taken from an example in Wisconsin, WI called as it's length. The size of the playground is 1.5 acres. A playground this size is equivalent to a football field. It's a single use facility to the local city and the Community Foundation. The total cost of the project was 1.5 million. A smaller playground in Amherst would be more realistic. To make the project more affordable, cheaper options such as a soccer field or basketball court would still provide opportunities for outdoor recreation and a variety of options for all ages.



#### Ecological Benefits

The large steps provides the opportunity for the Village to host events such as concerts that can bring in revenue to the community businesses. It would also help create a sense of community as it provides a place for community members to come together.

The benefits will be realized and designed in an eco-friendly way with many an edge from local career resources within the community. One possible option would be to work with a local business and an artist. They would be the first to be designed in Amherst.



#### Question or Outdoor Classroom

These would provide the community a place to gather and get out of a place for the school to bring students to learn while being outdoors. Some research has shown that getting outside helps students to improve their emotional, intellectual, and behavioral development.



#### Sustainability

Sustainability is one of the main focuses of the master plan. Throughout the business park, it is easy to see multiple design features which improve and add to the sustainability of the Amherst business park.

Creation of an open space low impact park. The creation of a sustainably designed park adds to sustainability in many ways. Open green space helps by promoting nature focused activity while protecting biodiversity by promoting natural habitats.

Low impact development principles in the design of the park emphasize the storm water drainage on the site. Water management of the site helps regulate the water which drains back into the aquatic habitats around the business park like the Tomacous River.



Creation of a solar energy microgrid and storage system for the business park. The master plan shows locations of solar panels on the southwest and northeast portion of the business park. 1.15 MW of energy will help to help the business park sustainable by reducing fossil fuel usage, increase the efficiency of energy usage such as HVAC systems and add to the grid's stability and safety against cascading failures.

Addition of more walking/biking paths and routes. The master plan has two new paths designed for the business park, included are paths around the exterior of the business park as well as through the open space low impact park and out into the residential area adjacent to the business. These walking and bike paths will help reduce the use of automobiles within the business park, lowering emissions from cars, as well as increasing the health of the community adding to the community's resiliency.



#### Community Garden

A community garden in the park would give another great opportunity for individuals to come together outdoors. It gives nearby residents a space to grow their own food or businesses to grow food for their restaurants.



#### Distributed Energy Generation Solar Farm

The addition of an 8-acre, 1.15 MW solar farm to business park would be enough to completely use energy needs of the business within the business remaining unused energy would allow for the village to invest in solar energy for extra profit.

Due to the make-up and design of solar farms, use as well as additional plants can be added as to help the vegetation acreage of the park as well.

This will allow for the business within the business work independently of the grid even when there are problems within the grid such as blackouts.

Similar in size and production of the Santa Rita US District, this microgrid would be able to make use on the site much more efficient through HVAC use grid stability.



#### Low Impact Development Storm Water Manage

The term low impact development (LID) refers to system practices that use or mimic natural processes that result in infiltration, evapotranspiration or use of stormwater to protect water quality and associated aquatic habitat. Rain gardens are an attractive tool to accomplish the goal as urban gardens which help process and treat runoff accumulated on impervious surfaces like roofs, roads and parking lots.

As well as processing and treating runoff, rain gardens are an effective tool to use to fight against storm water problem flash floods or regular flooding on a site. The addition of rain gardens can be placed along roads, parking lots, buildings and the business park to help facilitate rainwater.



#### Biking and Walking Paths

Creating paths around the business park provides the opportunity to enjoy the outside while also providing them access to the busier in the park. There will also be sidewalks and designated crosswalks with flashing lights to safety for pedestrians who enter the business. This increases the walkability of the business. The planned pathways go all the way around business park, through the recreation park as well into the adjacent residential area.

Along the pathways there will be natural features such as native vegetation and flower gardens.



#### Goals

1. Create a public recreation and meeting space for the whole community to come together.
2. Encourage the creation of an environmentally friendly, renewable energy focused independent business park.
3. Make the area walkable, bikable and provide ease of access for pedestrians in adjacent neighborhoods.

I

the  
at the  
a park. The  
get of  
the plants  
a increase  
to park to  
are  
the School  
's building  
lots and

most  
s and  
in the  
order to  
of all of this  
water that  
I walking?  
in be an  
to such as  
I can garden  
paths within

the  
in  
more  
more  
park.  
park.  
the  
at out  
are

the  
at