

SAP Design Project Main

ENS 201 Spring 2015

☆ Org Visible

Design Assignment

The assignment

The Brief

SAP Mission Statement and Handbook

GVSU, LEED, and Living Building Standards



Inspiration: Michigan tourist cabins and cottages



Inspiration: Michigan Barns





Giant City Lodge, Makanda IL & Timberframing

The Roof: The roof's first solar cells will be replaced within a few years when new solar cells offering more electrical generating power become available. The plan is for the building to generate more electrical power than it needs and, in fact, to have to a surplus.

The Landscape: North side of the building is protected by an earthen berm and tree grove. No pesticides will be used for the gardens, which do a lot more soil food on the east side of the building.

The Interior: The interior is designed to change and adapt over time. Carpeting is leased from the manufacturer, which will recycle the carpeting for reuse. The wood used to make the desks and chairs comes from a sustainable forest. Sealing material used for the stairs in the building is biodegradable.

Solar Design: The design includes overhanging eaves and shading systems that shade the summer sun while allowing winter heat gain.

The Sun Pits: The glass outside the main entrance features a sun pit. To take advantage of available heat, heat pumps warm water.

Lighting: To take advantage of available heat, heat pumps warm water.

North Entrance: Auditorium (seating for 100)

Living Machine: biorganic water purification system

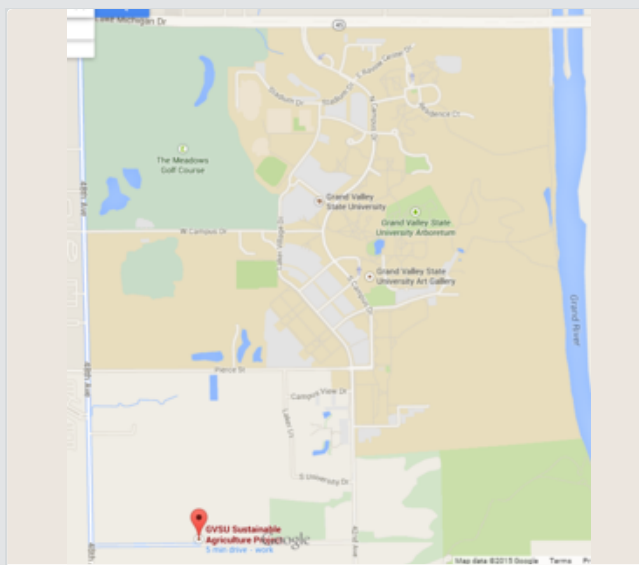
The Pond: The key function of the pond is water storage for irrigation. Water seeps into the ground, filtered by the grass, trees, organisms, and soil. The plan is to someday use a portion of this water for recharging.

Inspiration: Lewis Center for Environmental Studies at Oberlin College

The Luce St. Site

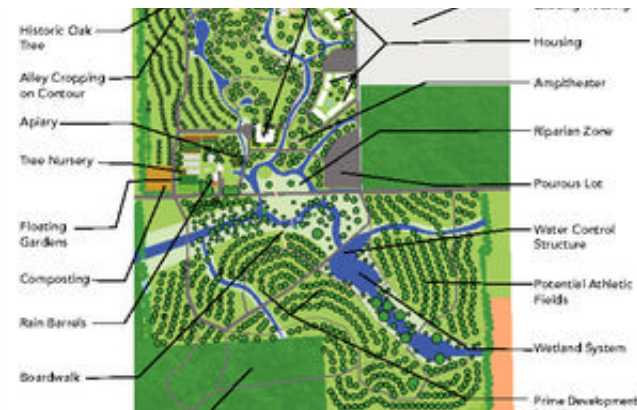


Sustainable Agriculture Project webpage



SAP Map





Youssef's site plan



Field and Tree

GVSU Campus Master Plan 2008

Step 1: Empathize

List of stakeholders

Uses and Wishlist

Step 2: Define

Sort, synthesize, and refine the discovered needs/wants for the project

Indoor processing space, with kitchen, cold storage for food and a separate space for seed bank, and large dining/conference room. Size not too unwieldy as campus is full of classrooms for winter and summertime is outside.

Step 3: Ideate

Brainstorming to generate a large number of possible solutions: Absurd to Obvious

Step 4: Prototype

Rapid and cheap prototyping of best ideas:

Drawings

Models

<http://www.ochs.co.ozaukee.wi.us/Archive/ClousingBarns/Barn%2012.jpg>

I was put in mind of an octagonal barn. See link for photo

Step 5: Test (??)

Overall look



Inspiration: Ox-Bow (Saugatuck)