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MORPH

McCall Field Campus

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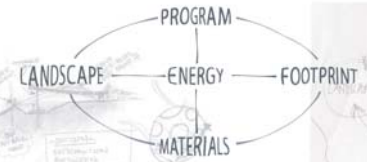
concept:

(1) the evolution of earth as architecture
(2) a seamless transition of the environment into architecture

MORPH (v)



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program:

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design strategies:

the U of I McCall Field Campus will introduce and invovle visitors in the education of natural resources through the integration of both class and field work; promoting a regenerative lifestyle.

1. "OFF THE GRID": ON SITE ENERGY GENERATION
   - Geo-Exchange: Horizontal Ground Closed Loops
     - under slab placement
   - Solar Power: Photovoltaic Panels and Films
     - integrated implementation
   - Wind Power: Turbines
     - near lake for minimal use
   - Passive Strategies: Light, Air, Heat
     - operable systems
     - ground insulation
     - material selection
2. VEHICULAR USE REDUCTION
   - Public Transportation: Extension of Bus System
     - alternative fuel
   - Human-Powered Transportation: Paths to Downtown

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design strategies:

3. RE-ESTABLISHING NATIVE VEGETATION
   - Minimal Maintenance: Absorption of Carbon Dioxide
4. RE-USE OF ON SITE MATERIALS
   - Displaced Soil: Use for berm construction
   - Cleared Trees: Use for new building construction
   - Existing Buildings: Dining Facility as Welcome Center
   - Demolition Waste: Used as new building construction
5. NEW MATERIAL SELECTION
   - Regenerative Materials: Efficient reuse capability
     - biodegradable materials
     - high recycled content materials/products
   - Regional Materials: Manufactured less than 500 miles from site
   - 40% fly ash in concrete mixture (footings, walls, etc.)

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design strategies:

6. WATER MANAGEMENT
   - Bio-swale and Detention Basins
   - Living Machine
   - Rainw Water Harvesting
   - Composting Toilets
7. EDUCATIONAL
   - Demonstration and Learning Nodes
   - Wayfinding and Signage
8. FIRE PROTECTION
   - Drastic Reduction of Fuel Load
   - Buffer Zones Around Buildings
   - On Site Water Storage

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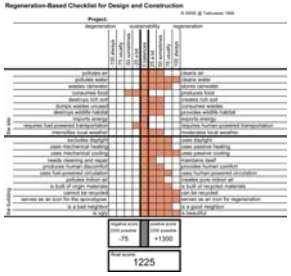

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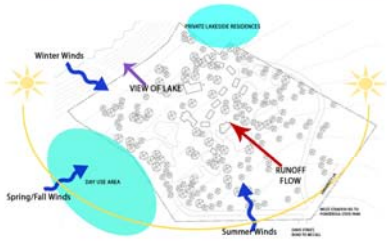
site analysis:



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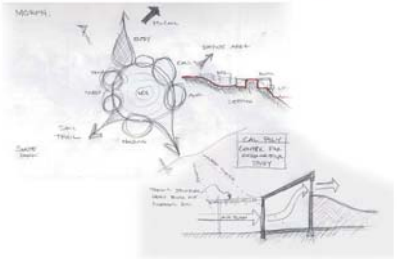
process:



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process:

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process:

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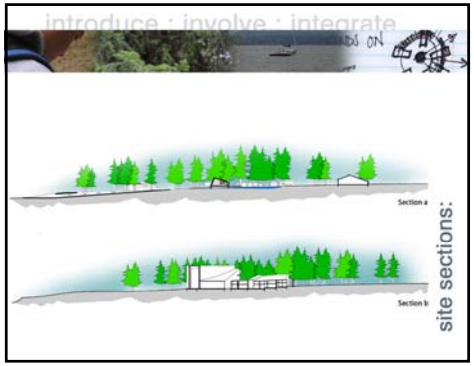
cabins
guest suites
grad
staff
amphitheater
bio swale/ detention pond
living machine
dining
service
auditorium
indoor/outdoor classrooms
conference
offices
process:

MASTER PLAN
A

B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site sections:

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aerial perspective
vignettes:

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welcome center
guest suites
conference/class room
auditorium
vignettes:

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guest cabins
staff housing
living machine
main circulation
vignettes:

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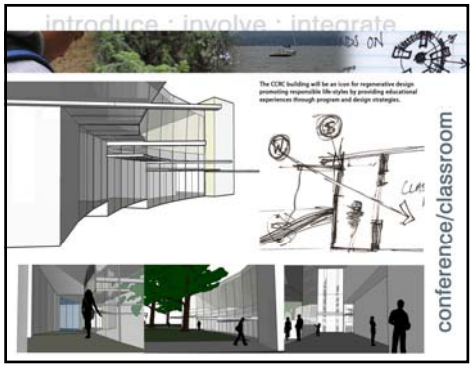
vignettes:
education lake access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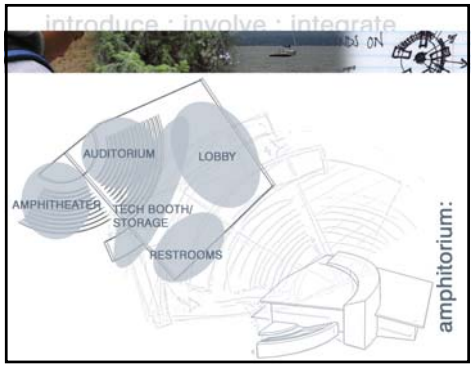
conference/classroom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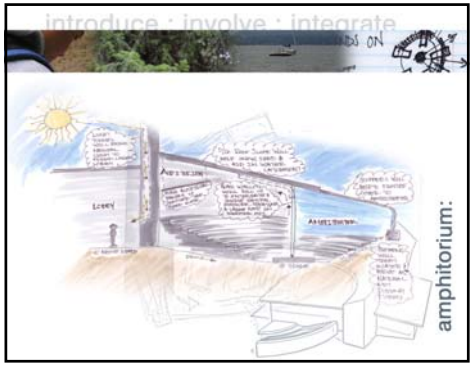
AUDITORIUM
LOBBY
AMPHITHEATER
TECH BOOTH/
STORAGE
RESTROOMS
amphitorium: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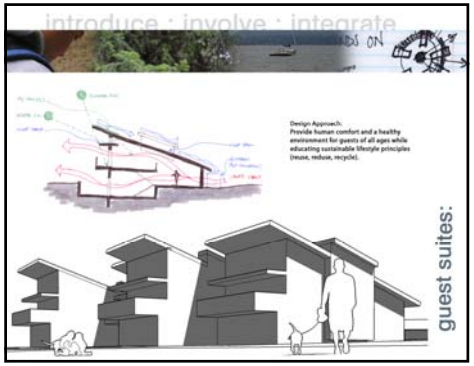
amphitorium: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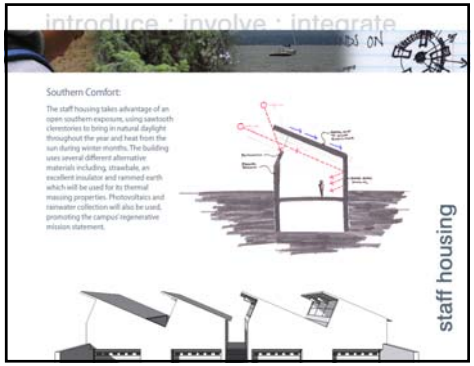
Design Approach:
Provide human comfort and a healthy environment for guests of all ages while educating sustainable lifestyle principles (reuse, reduce, recycle).
guest suites: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Southern Comfort:
The staff housing takes advantage of an open southern exposure, using sawtooth clerestories to bring in natural daylight throughout the year and heat from the sun during winter months. The building uses several different alternative materials including, strawbale, an excellent insulator and rammed earth which will be used for its thermal massing properties. Photovoltaics and rainwater collection will also be used, promoting the campus' regenerative mission statement.
staff housing