This project explores our human relationship with water, ecology, and the natural environment on a site located at the urban / natural threshold.

This semester you will be designing a Center for Great Lakes Ecology. The Great Lakes contain the largest supply of freshwater in the world, holding about 18% of the world’s freshwater and 90% of the freshwater in the US. Combined, the Great Lakes cover an area of over 94,000 square miles and supply drinking water to over 40 million US and Canadian citizens. The great lakes basin is a diverse and complicated ecosystem which is home to numerous species and varied habitats. 1.

1. NOAA Great Lakes Environmental Research Laboratory: http://www.glerl.noaa.gov/

The design intent this semester is to create an innovative and thoughtfully conceived interpretive center that will house exhibits and educational programing on sustainability, environmental stewardship and water ecology. The Ecology Center will educate visitors about water ecology within the great lakes region and provide spaces for education, research and outreach.

Successful designs will be driven by a clearly articulated design concept and must engage the context of the city and the lake. Your design should be a site specific act, relating directly to the unique features of the project site. Projects should seek a deeper connection to the City of Chicago, becoming emblematic of the unique physical, political, historical, social and cultural aspects of the site and city. Successful projects will create a narrative with the site through the creation of connections and memorable spaces for visitors. Designs must create both physical and emotional connections
between visitors and the natural environment, creating an awareness of our human relationship to with water and the natural world. Your project should embody the idea of environmental stewardship and sustainability.

SITE CONTEXT

Latitude and Longitude: 41° 54’N, 87° 37’W
Site Area: 39,950 SF (.92 Acres)
Site: looking Northeast
PROGRAM REQUIREMENTS
(Approx. 7,500 SF total enclosed building area, including 15% circulation factor. Note: Square footages are for initial planning purposed and may evolve as the project is developed)

PUBLIC SPACES:

ENTRY VESIBULE(S): 150 SF ea.
Provide entry vestibules at all primary points of entry.

RECEPTION: 200 SF (Adjacent to Entry Vestibule)
Provide a space for orientation and initial gathering for visitors. This space should include an information desk.

EXHIBIT (INTERPRETIVE CENTER AND THEATER): 2000 SF
This space is the main exhibit space for environmental education exhibits. This space should be flexible, capable of accommodating educational exhibits in a variety of formats and media, including both permanent and temporary exhibits. This space should also include a small video theater space for film screening with seating for 10 persons.

CAFÉ: 450 SF (public and visible)
Provide a Café with seating for 15 patrons. Seating may be both indoor and outdoor. This space should have a high level of visibility. This space includes area for a sales counter, product display, and back of counter prep areas.

CAFÉ STORAGE: 100 SF (Adjacent to Café)
Provide a small storage area for non-perishable food and supply storage.

GARBAGE: 100 SF (Adjacent to Café)
Provide a garbage room that opens directly to the outside for ease for garbage collection. This room must accommodate two (2) 95 gallon roll out standing garbage containers.

RESTROOMS: (2) at 200 SF ea.
Provide one accessible restroom (2 water closets) per each gender. This space should be highly accessible to the public. Restrooms must be designed in accordance with the American with Disabilities Act. Consult Graphic Standards chapter 21 for information regarding universally accessible restrooms.
EDUCATION AND LAB SPACES:

CLASSROOMS: (2) at 600 SF ea.
Design should include (2) classroom spaces that will be used for educational activities. Each classroom should accommodate a minimum of 24 seats with movable classroom style table seating. Classrooms should also have a sink, counter space, and built-in storage for supplies and educational activities.

INTERACTIVE LABORATORY: 800 SF
Include a laboratory space for conducting small scale scientific experiments. This space may also be used to provide interactive educational programs which include a hands on research portion. The lab space should have several lab style work tables. This space should also accommodate a 4’x8’ interactive hydrology table. The laboratory space should also include two lab sinks, counter space, and built-in storage for scientific equipment.

OFFICE / SUPPORT SPACES:

DIRECTORS OFFICE: 125 SF
Provide one private office space for the Ecology Center director. This space should have at least a desk, side table and chair.

STAFF OFFICE: 200 SF (Adjacent to Director’s office)
Provide an open office area that can accommodate at least two staff work areas. This space should also provide space for general storage, copy and printing areas.

CONFERENCE ROOM: 200 SF (Adjacent to Director’s office)
Designs should include a conference room with conference style seating and a projection screen. This space should also include a counter surface and built-in storage.

MECHANICAL: 150 SF
Provide a back of house space for mechanical, electrical, and plumbing equipment.

BUILDING STORAGE: 150 SF
Provide a back of house space for general building storage.

EXTERIOR SPACES:

OUTDOOR CLASSROOM:
Include an open, exterior classroom for educational events. This space should seating areas and a stage for small performances or lectures. This space must accommodate up to a maximum of 30 people seated comfortably. Consider the design of seating areas as an architectural element.
DOCK / SHORELINE:
Projects may manipulate and redefine the existing shoreline, within reason. Designs may choose to incorporate temporary dock space for a small EPA research vessel (87' coast guard cutter).

PARK SPACES:
Designs should incorporate a variety of outdoor public spaces and seating areas designed to take advantage of the natural setting of the site. Terrace areas may be considered an extension of the building, providing additional public space for the education center, café or exhibit areas. Consider defining exterior spaces with architectural elements that relate to the concept or formal characteristics of the building. Designs should ‘master plan’ the entire site into a cohesive park plan that includes the Ecology Center fully integrated into its existing context.

ROOF TERRACE / OBSERVATION AREA (optional):
An optional space may be provided on the roof (or in an elevated element) to accommodate outdoor use and to provide a platform for viewing. This space must be fully accessible, and will require ramps or an elevator.

PARKING:
Dedicated parking for this facility will be accommodated through the exiting Chicago park district lot at North Avenue Beach. Designs should address circulation and entry with this in mind.

CODE REQUIREMENTS

- Spaces must have a minimum clear height of 8'-0".
- Openings must be a minimum of 3'-0" wide and 6'-8" in height.
- Stairs must have a maximum riser of 7” and a minimum tread of 11”. Stairs must be a minimum of 44” wide.

- Load Bearing Elements: Load bearing walls must have a minimum thickness of 12”. Columns must be a minimum of 8” square. Beams must be a minimum of 12” deep to span 20’. Long span structures must be developed for spans exceeding 20'-0" in length. (You may deviate from these rules as your design becomes more specific as to the actual proposed structural system)

- All spaces must be fully accessible. Ramps must have a maximum of 1:12 slope. Ramps with a slope greater than 1:20 must include handrails. Ramps over 30 feet in length must include an intermediate landing.

- Elevators are not permitted for this project, with the exception of serving the optional roof terrace / observation area.
OTHER CONSIDERATIONS

Wall Planes:
Use wall planes to differentiate spaces and provide the appropriate level of enclosure.

Level changes:
Level changes will be required for spatial organization and delineation.

Structural grid:
Your designs should include a structural grid (system) with a 25'-0" maximum span. Your designs should start with a 20’ – 25’ rectangular structural grid, but you will be allowed to deviate from this as the design progresses and you become more specific with the structural system that you are proposing.

Like wall planes, which define program functions, structure is a space organizing system. The structural system or grid should not be imposed on the building plan, but must be considered in relation to all other aspects of the project during the design process.

Spatial Delineation / Choreography of space:
Look back to your study of the Barcelona pavilion last year. Remember how the experience of space was created by the composition of architectural elements. Like this assignment, these elements include roof planes, wall planes, level changes and structural elements. Use your understanding of these elements to define space in your pavilion.