

A Project of the City of Fort Bragg and Sonoma State University

# NOYO CENTER

FOR SCIENCE AND EDUCATION

CITY COUNCIL PRESENTATION

08.23.2010

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ARCHITECTS  
LANDSCAPE ARCHITECTS  
PLANNERS

B A U E R A N D W I L E Y  
ARCHITECTS

# AGENDA

/// PROCESS

/// SITE ANALYSIS

/// DESIGN PREMISES

/// DESIGN

/// SUMMARY



# GOALS

## **FUNCTION** - People/Activities/Relationships

Create a **PLACE** for researchers, students, families and visitors - that promotes research and education supporting **OCEAN** and **COASTAL** ecosystem **RESTORATION** and **SUSTAINABLE MANAGEMENT**.

Make use of the opportunities presented by the **PROXIMITY** to the **OCEAN** by providing educational experiences, programs and exhibits that cannot be duplicated in a conventional setting or classroom.

To **INTERPRET** the history of the site and region and recognize fishing, lumber, and Pomo tribal legacies.

To create a facility that expresses the goal of moving from **EXTRACTION** to **SUSTAINABLE** economics and embodies the multi-faceted values of ocean and coastal ecosystems.

To provide a **CONFERENCE HALL** to serve workshops, lectures, conferences and public presentations.

Plan the facility to serve as a **COLD WATER MARINE** research center for the community college and state college system, and other issues.

To provide for the husbandry, holding, and care of **LIVE ANIMALS** in support of the educational programs.

To provide for **CLEAN SEA-WATER** delivery and storage for the Aquatic exhibits and research.

Develop a facility and program with **MAXIMUM FLEXIBILITY** for current needs (multiple use spaces) and adaptation for future needs.

Facility to **SHOWCASE** sustainability and achieve **LEED** standard **GOLD** certification.

Provide for back-up and emergency **POWER**.

**GATEWAY** to areas of coastal stewardship (Johnson Point).

Provide a sense of approach and orientation of the **COASTAL BLUFF TRAIL**.

# GOALS

## **FORM** - Space/Environment/Quality

To provide a facility to **EDUCATE** the **PUBLIC** through exhibits, lectures, classes and guided tours about the impacts that humans have on our marine and terrestrial environment.

To create **INSPIRATIONAL** environments that encourage creativity and motivate the participation of individuals engaged in the activities.

Locate facilities to take full advantage of the **NATURAL RESOURCES** and attributes that would maximize efficient operations.

Plan the facilities with opportunities that encourage **COLLABORATION** and chance encounters to enable social **CONNECTION** among researchers.

Plan for opportunities for **COLLABORATION** and interaction of different user groups between researchers, educators and visitors.

To demonstrate **ENVIRONMENTALLY RESPONSIVE** design.

To express the **GENUINE FEELING** of a working scientific environment.

To select materials and systems that can withstand the corrosive effects of the harsh **NEAR OCEAN ENVIRONMENT**.

To respect and enhance the site's qualities of **LIGHT** and **SPACE**.

Provide a **SAFE** environment for learning and experiencing nature for all **AGES** and **ABILITIES**.

Buildings should be appropriate to the **DRAMATIC** and **RUGGED BEAUTY** of the Mendocino coast, where forest and coastal prairies meet the dynamic Pacific Ocean.

Reflect cultural **HERITAGE** of Fort Bragg.

Observer should receive a spiritual **IMPRESSION** of soaring beyond current limitations to a future of hope, light and optimism, which will be achieved through seeking greater **UNDERSTANDING** of the forests, the sea, and the land that joins them. Some features of the facility should impart this sense of pride, elation, and wonder.

# GOALS

## **ECONOMY** - Initial Budget

To plan the **PROJECT** for a **\$TBD BUDGET**.

To explore potential **PARTNERSHIPS** with local utilities, agencies, college districts, Native American tribes and other interests for funding, operations and collaborations.

To plan the project for an **INITIAL EXPENDITURE** of **\$7 MILLION** for Phase I.

To **MINIMIZE** operating costs through generation of   X   % of on-site power and reclaiming   X   % of water usage.

To **OPERATE** the **SITE** at **NET ZERO ENERGY** to the City of Fort Bragg.

To control **OPERATIONS** and **MAINTENANCE** costs through **LIFE-CYCLE COST** planning.

To provide for a **HIGH LEVEL** of **FUNCTIONAL QUALITY** - lasting, durable, genuine, and functional.

To provide for a **RESEARCH FIELD STATION LEVEL** of **AESTHETIC QUALITY** - working and scientific.

To use and demonstrate the **BEST** practices and **CUTTING** edge systems.

To provide a **CARBON NEUTRAL** facility.

## **TIME** - Past/Present/Future






To **PHASE** the Development based on funding.

To **OCCUPY PHASE ONE** by **2016**.

To develop a **LONG RANGE PLAN** through **2025**.

To develop a plan that **ANTICIPATES** and **ALLOWS** for change.

# SPACE REQUIREMENTS

	PHASE I	PHASE II	
 LABS/RESEARCH	1,872 NSF	2,050 NSF	
 ADMINISTRATION	1,242 NSF	630 NSF	
 SUPPORT FACILITIES	859 NSF	600 NSF	
 HOUSING	0 NSF	3,600 NSF	
 INTERPRETIVE CENTER	4,458 NSF	3,300 NSF	
TOTAL NSF	8,431 NSF	10,200 NSF	18,631 NSF
<b>TOTAL GROSS</b>	<b>10,970 SF</b>	<b>13,272 SF</b>	<b>24,242 SF</b>

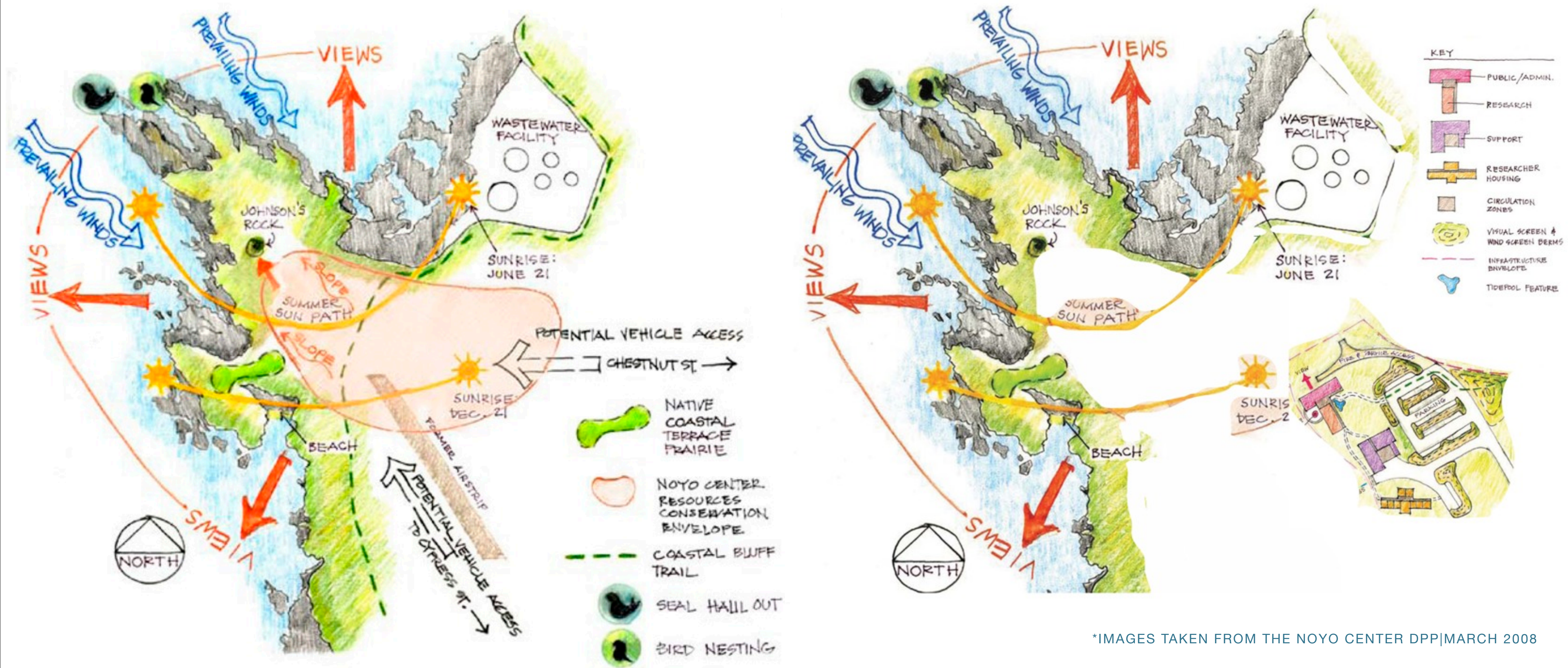
PROGRAM

# COASTAL TRAIL



SITE ANALYSIS

# SITE OPPORTUNITIES + CONSTRAINTS



\*IMAGES TAKEN FROM THE NOYO CENTER DPP|MARCH 2008

SITE ANALYSIS



# SITE + CONTEXTUAL IMAGES



SITE ANALYSIS

# SITE



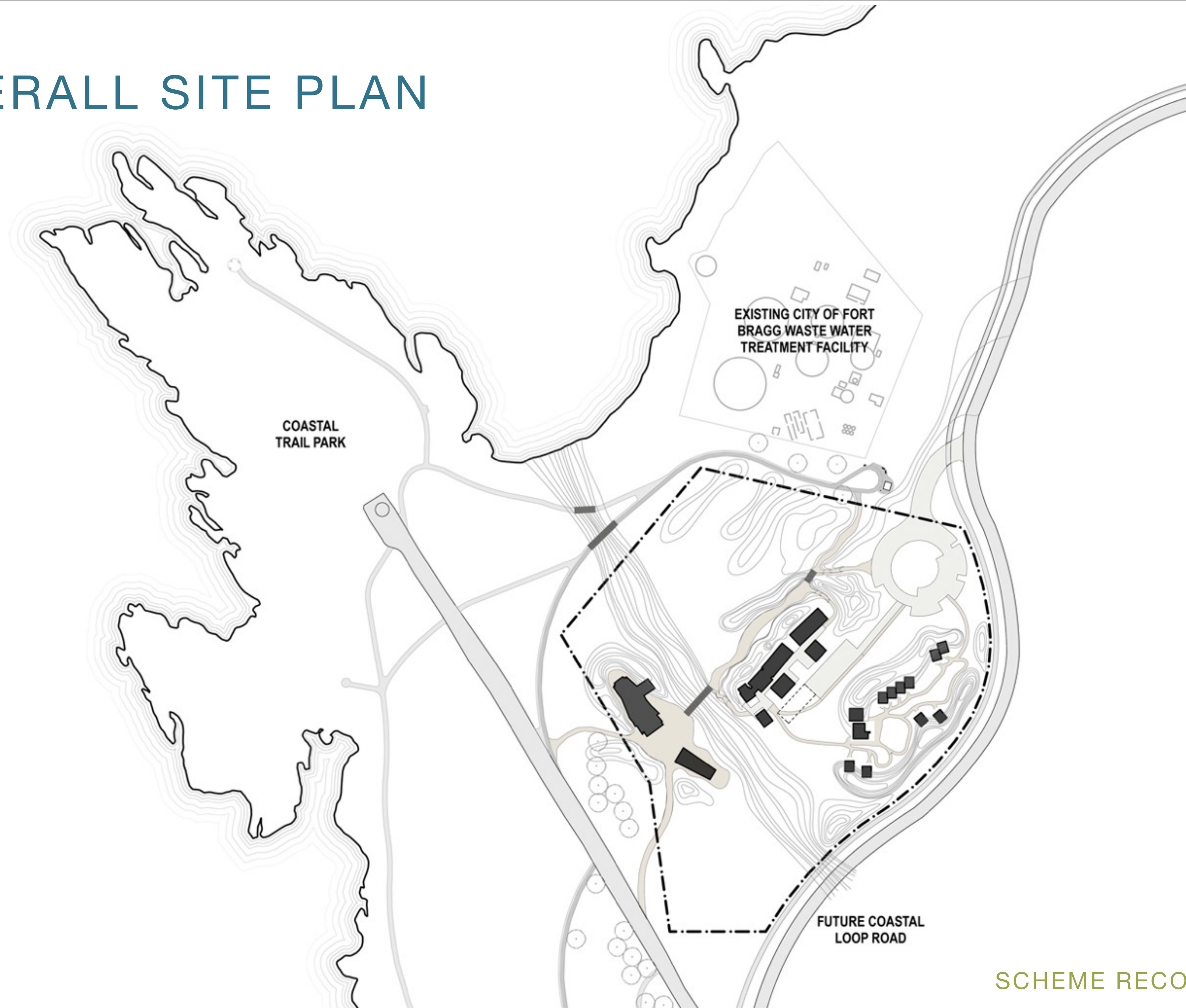
SITE ANALYSIS

# SITE LOCATION



SCHEME RECOMMENDATION

# OVERALL SITE PLAN



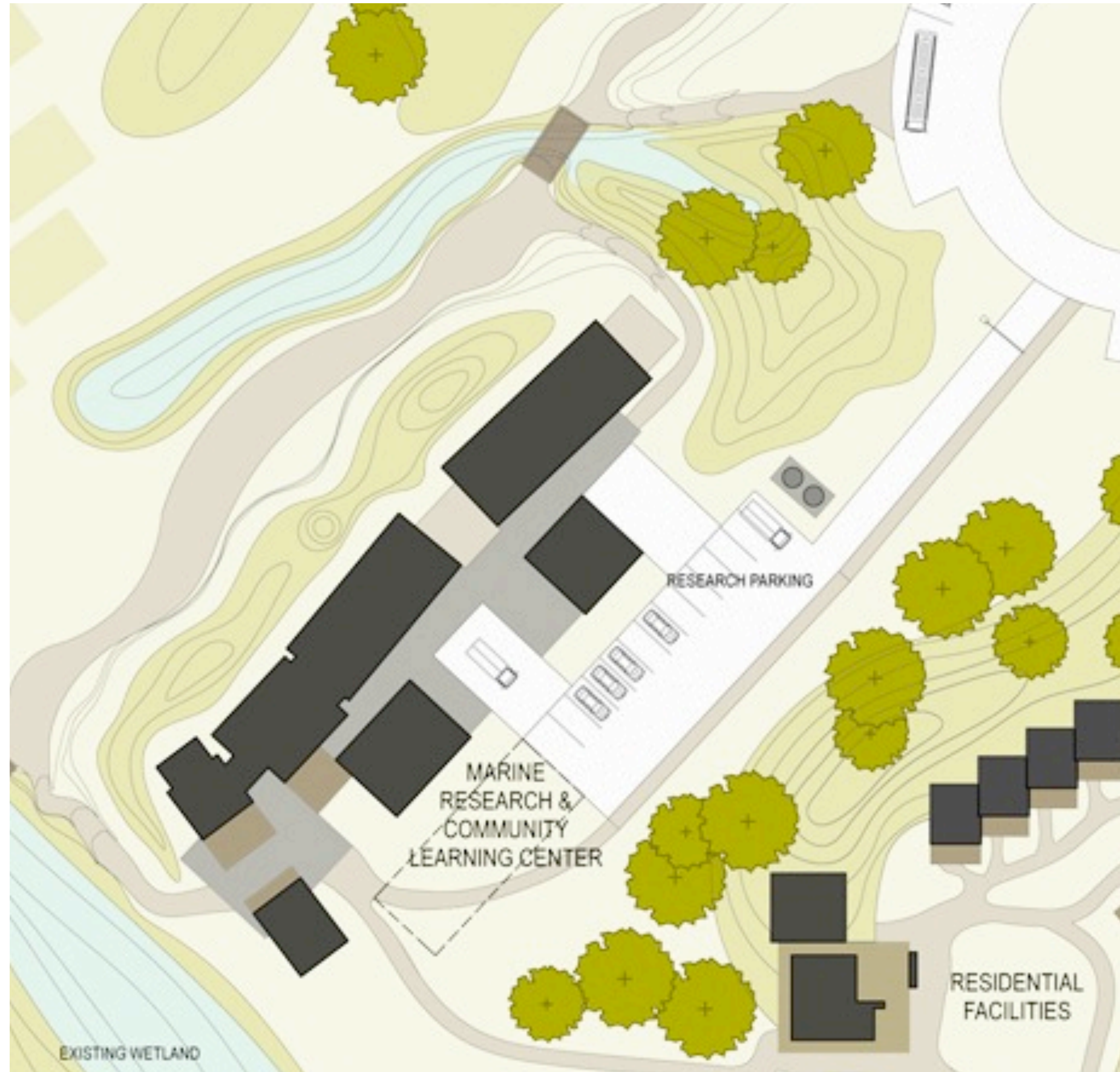
SCHEME RECOMMENDATION

# ILLUSTRATIVE SITE PLAN



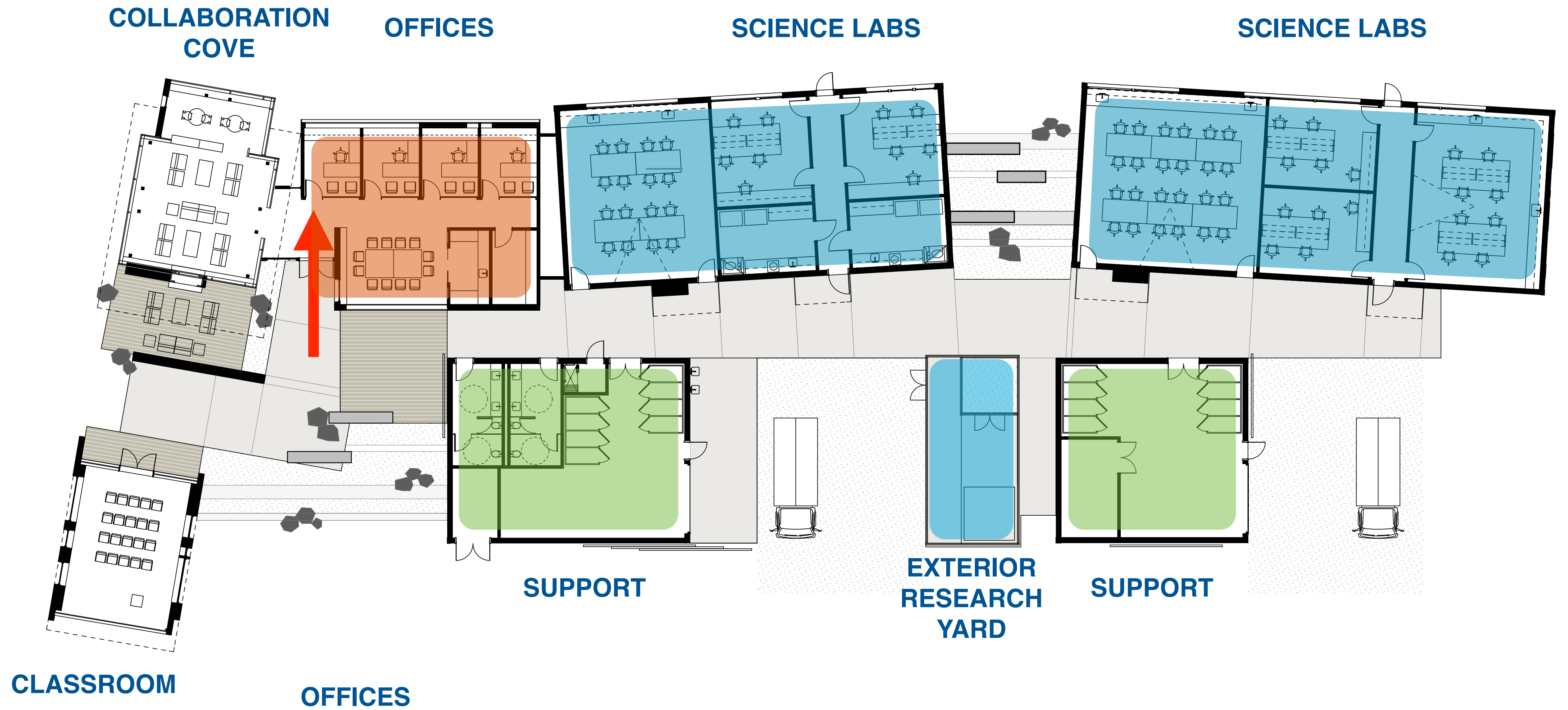
SCHEME RECOMMENDATION

# RESEARCH SITE PLAN

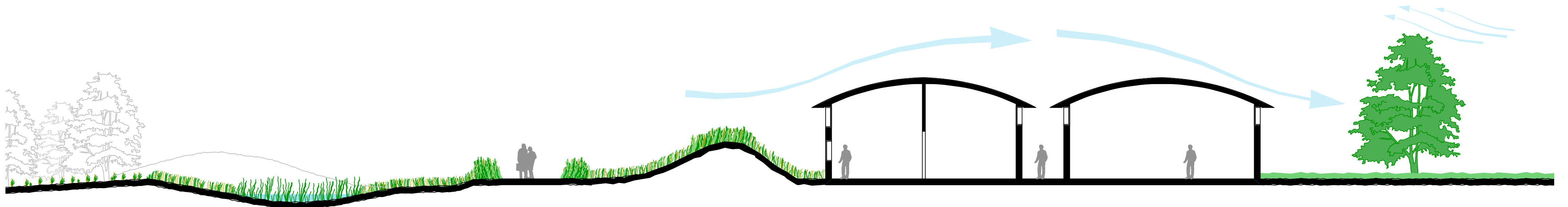


DESIGN

# RESEARCH\_PLAN



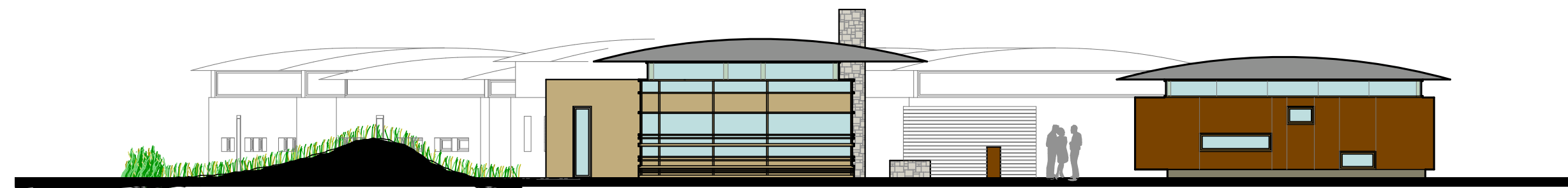
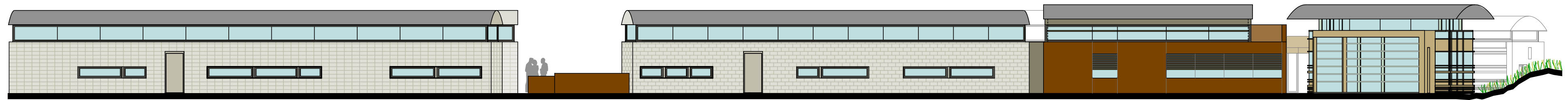
# RESEARCH \_SECTIONS



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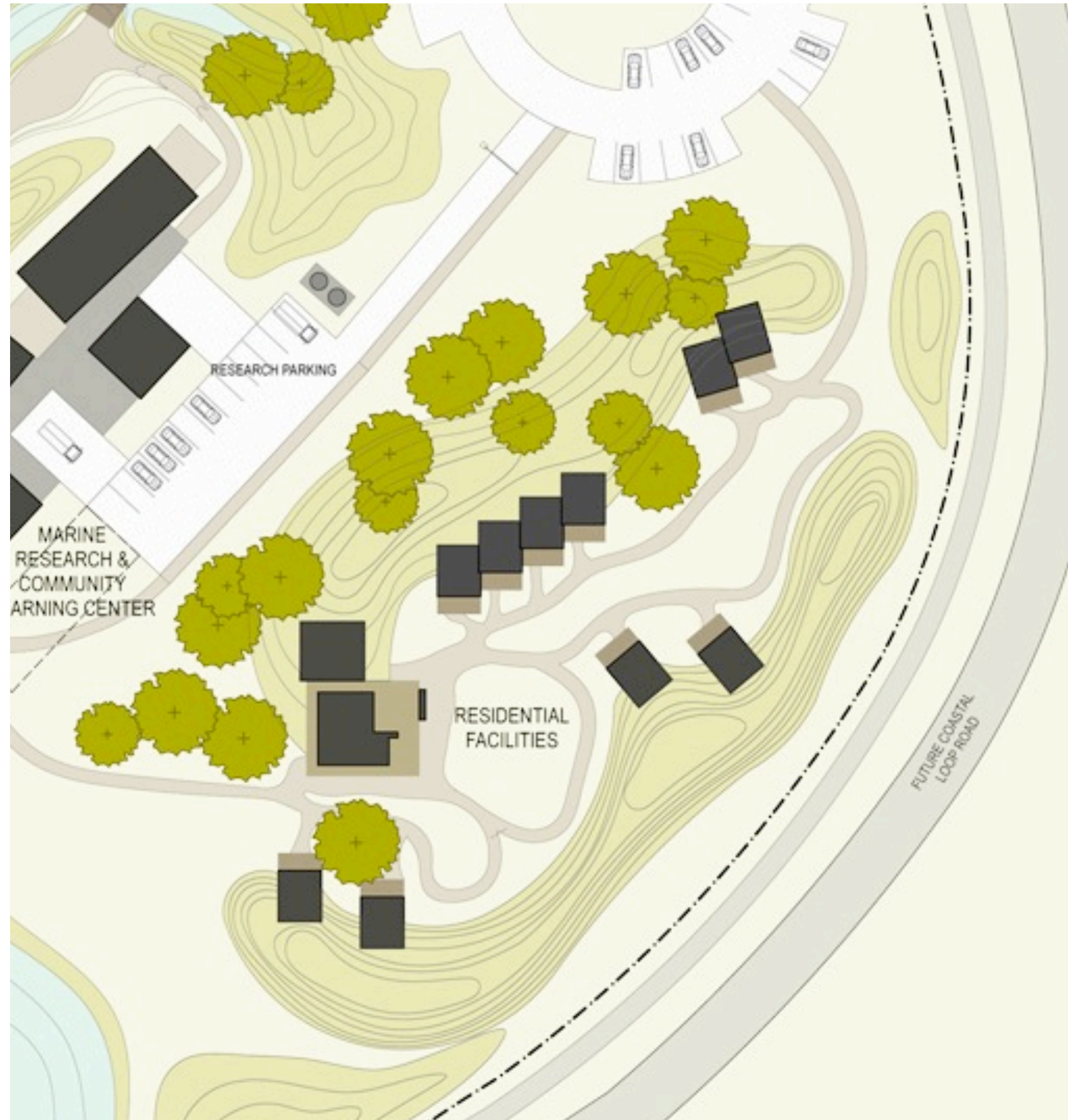


# RESEARCH \_ELEVATIONS



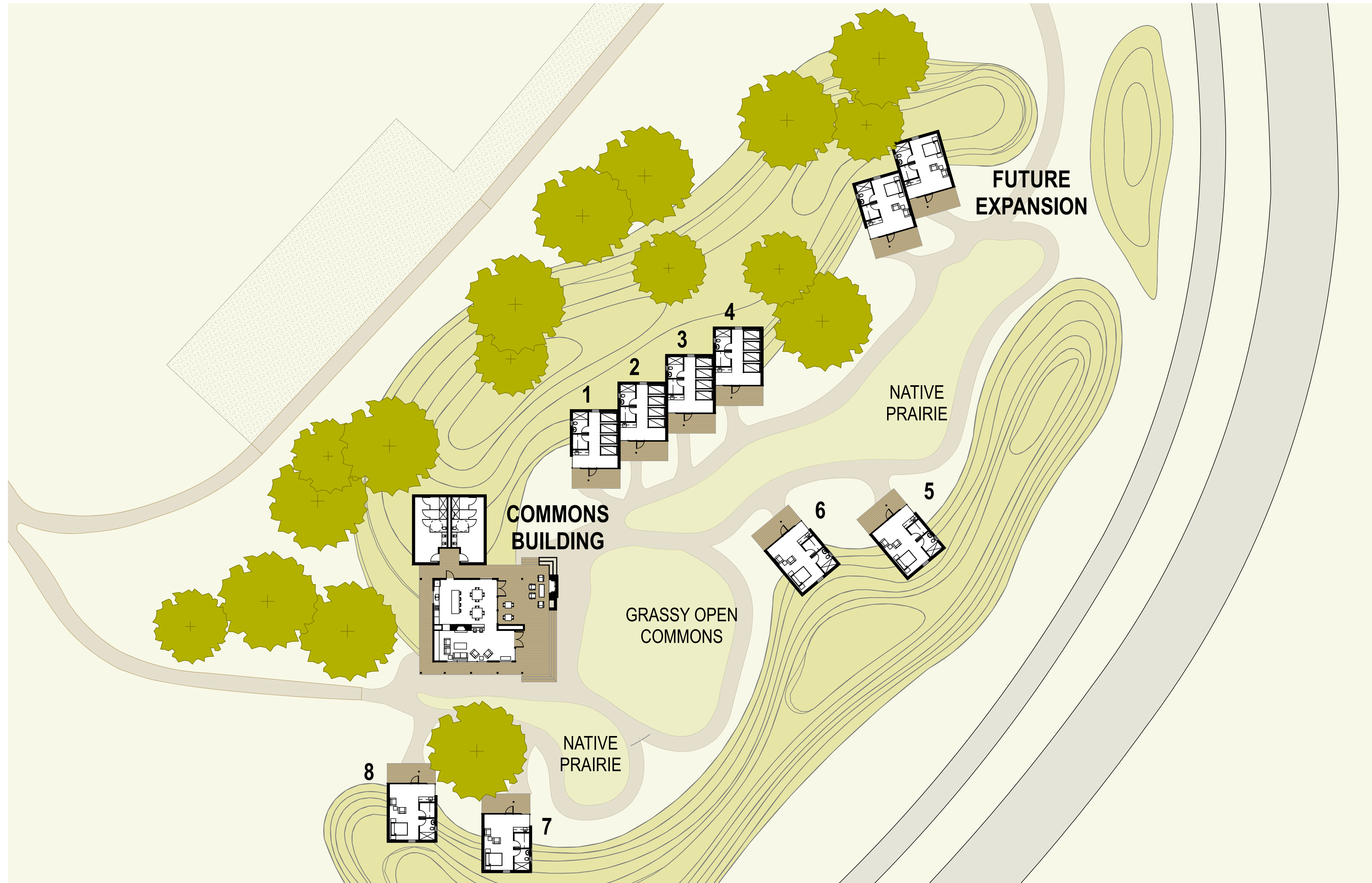
DESIGN

# LODGING \_SITE PLAN



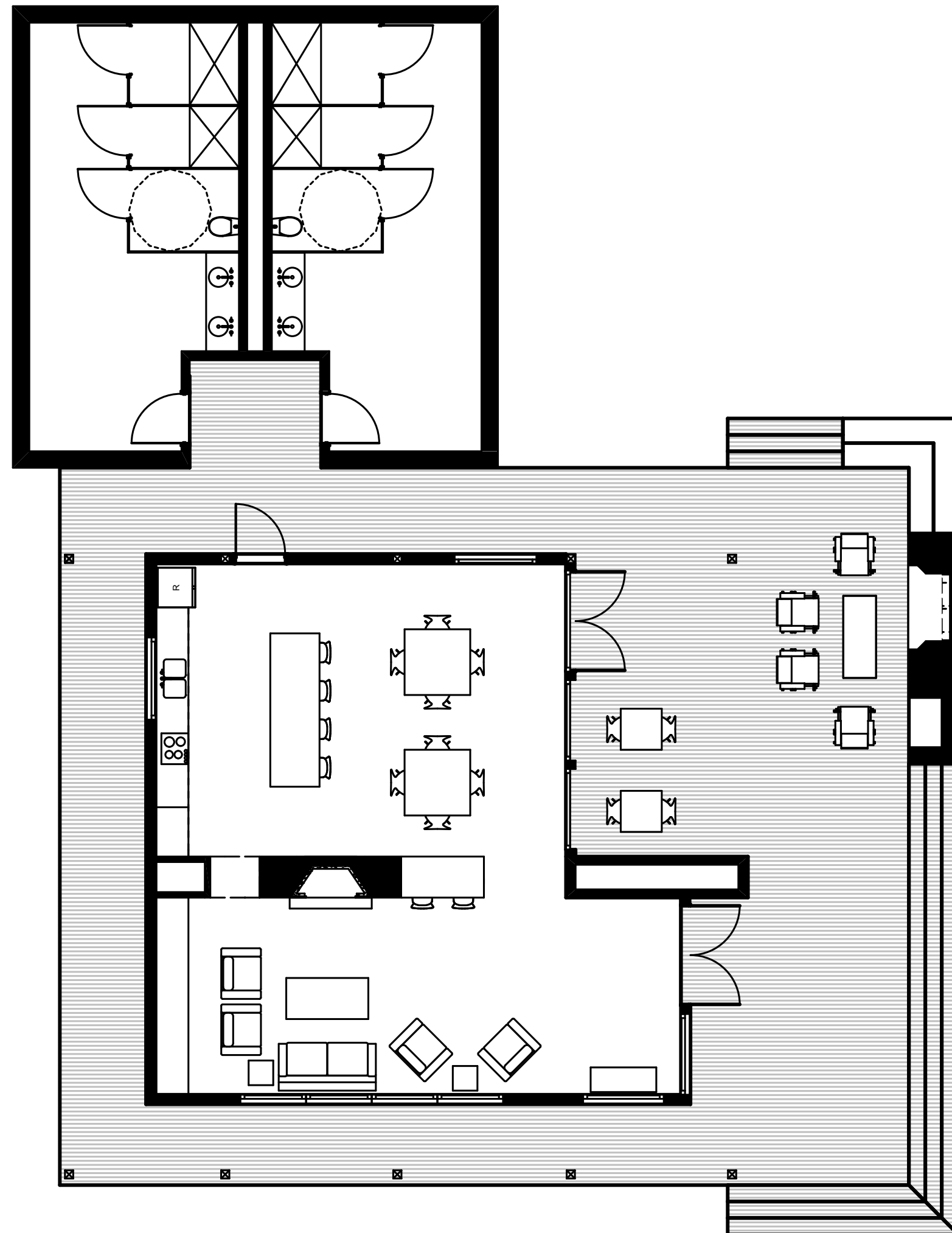
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# LODGING \_SITE PLAN



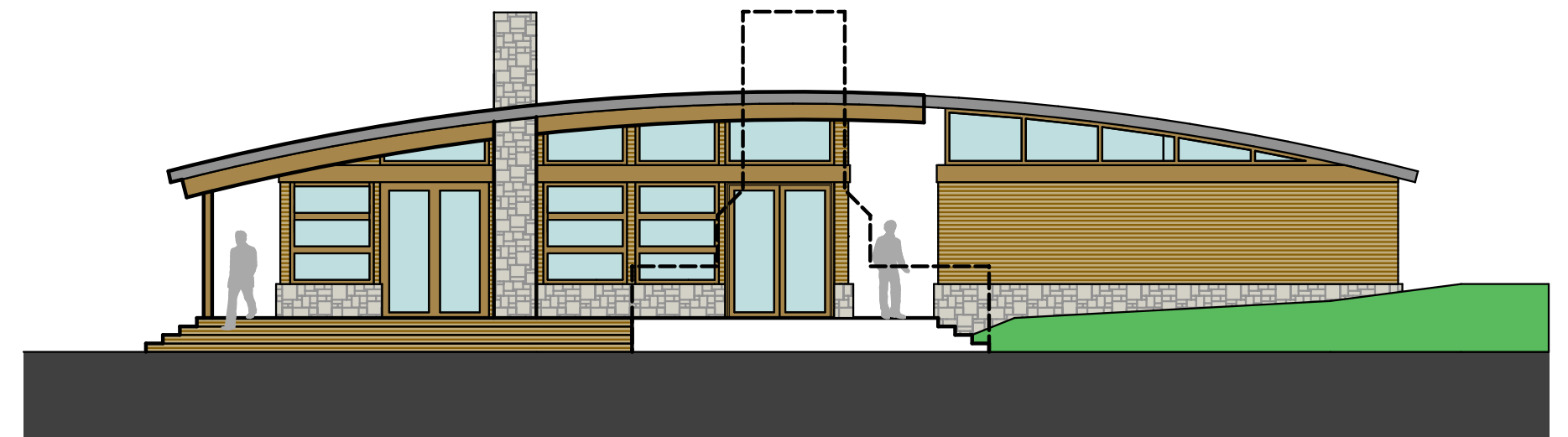
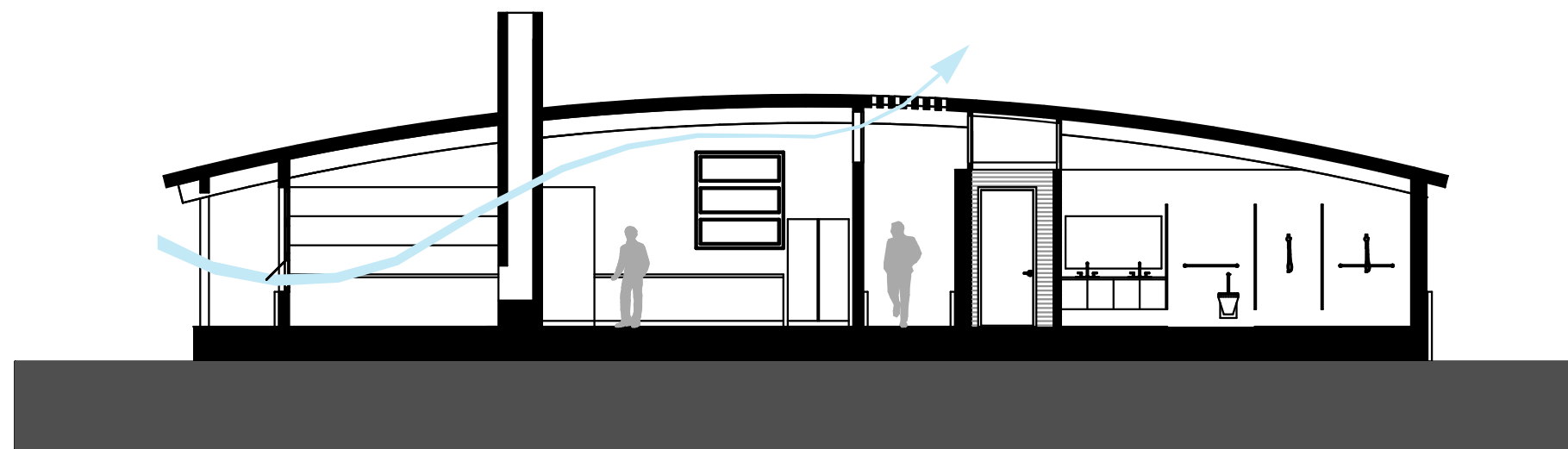
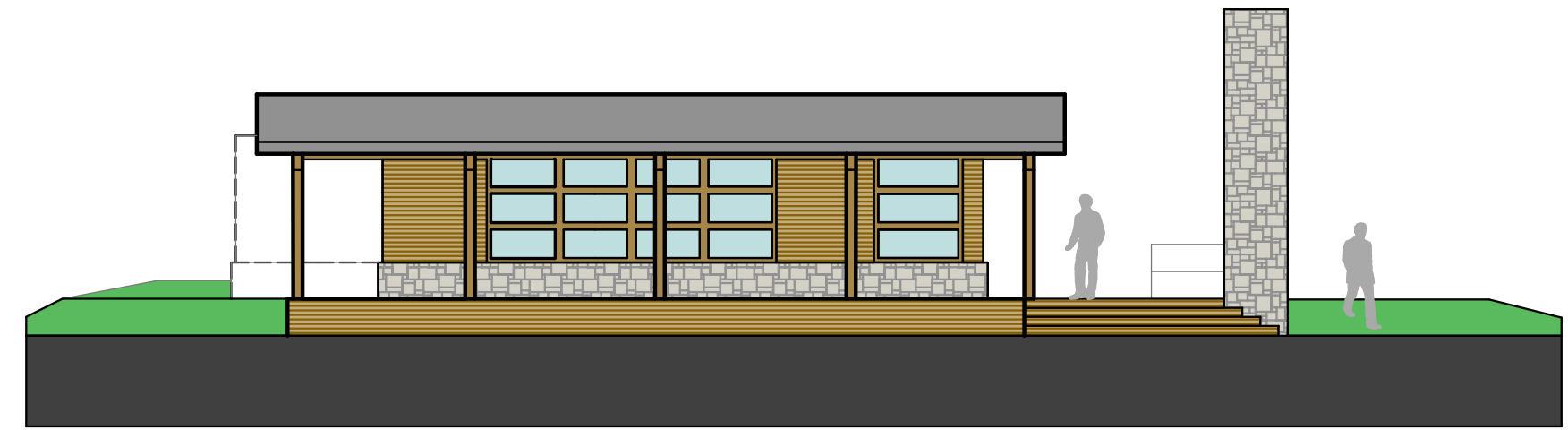
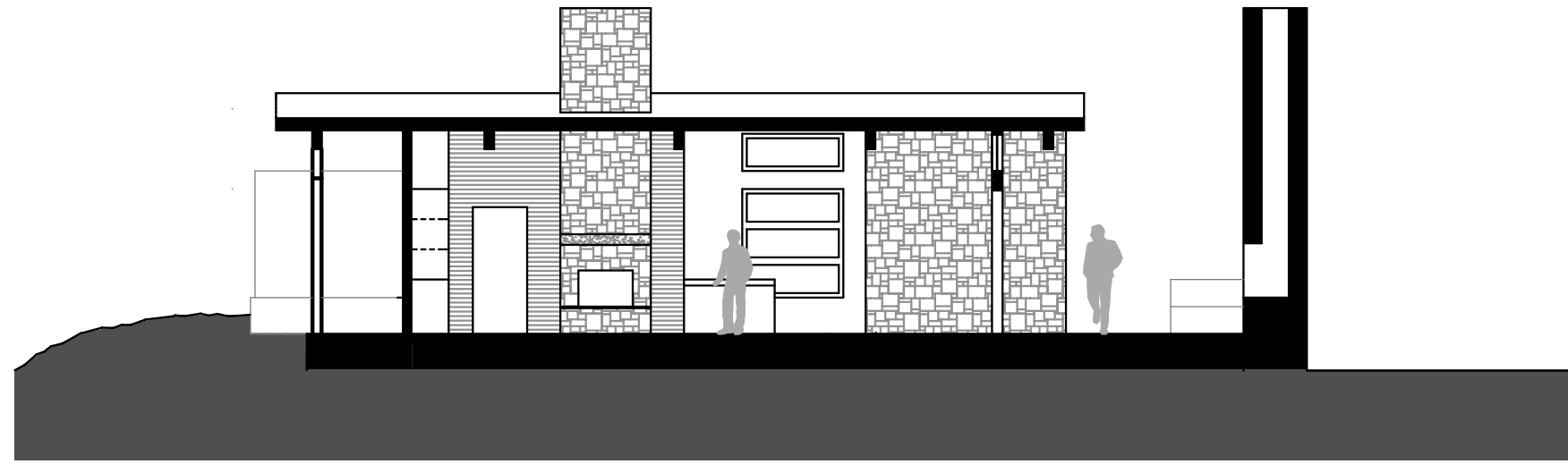
DESIGN

# LODGING COMMONS: "the LODGE" \_PLAN



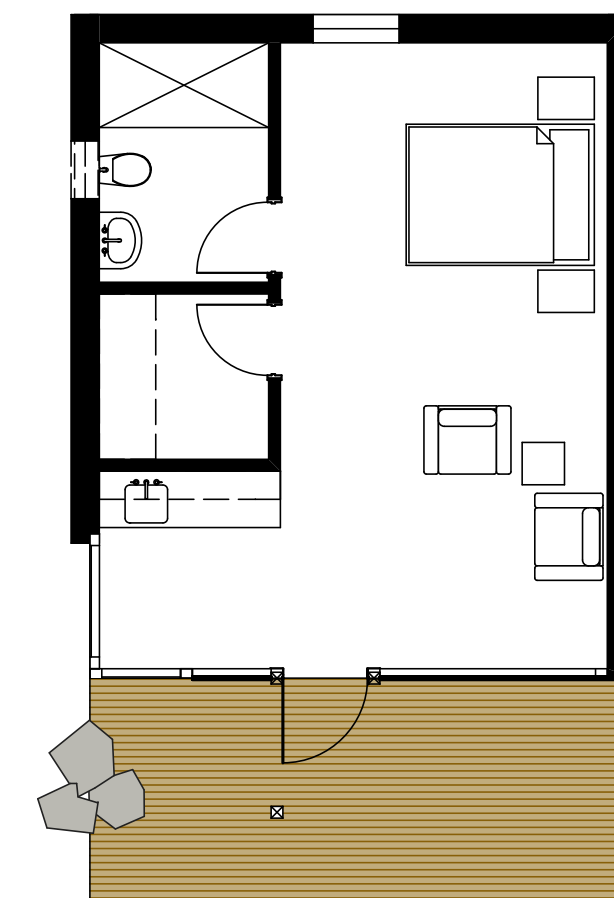
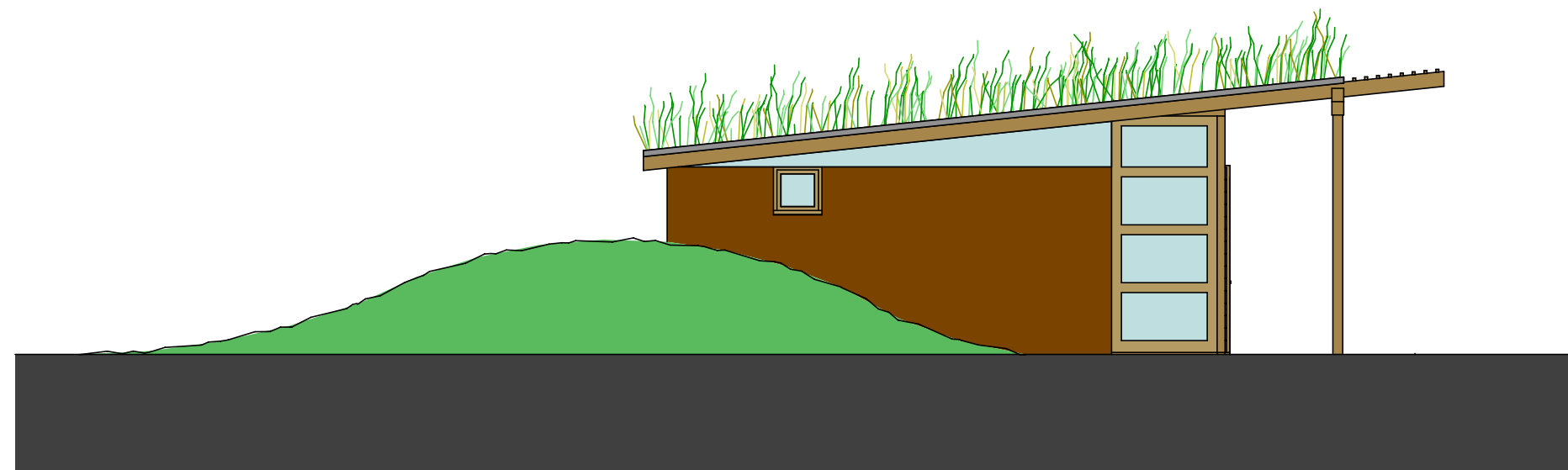
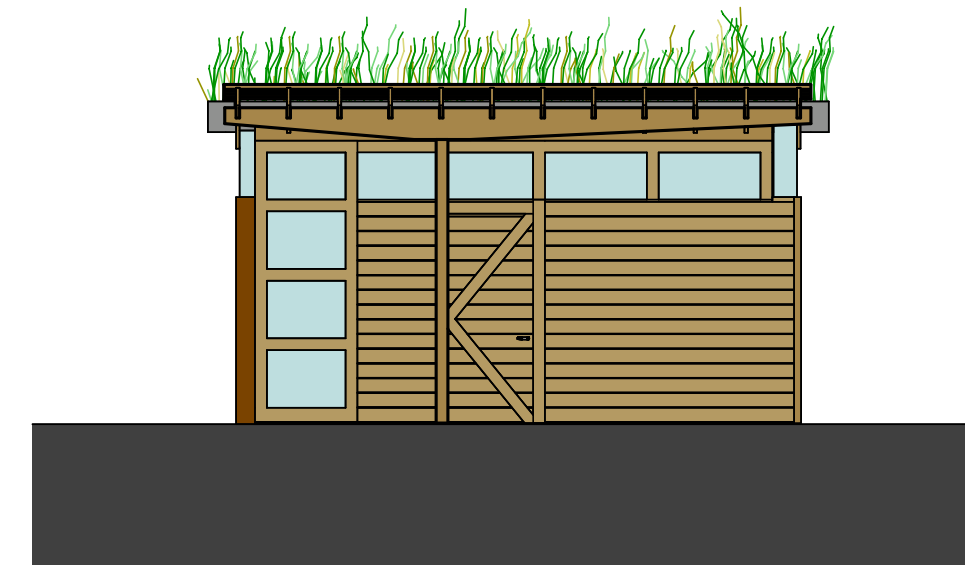
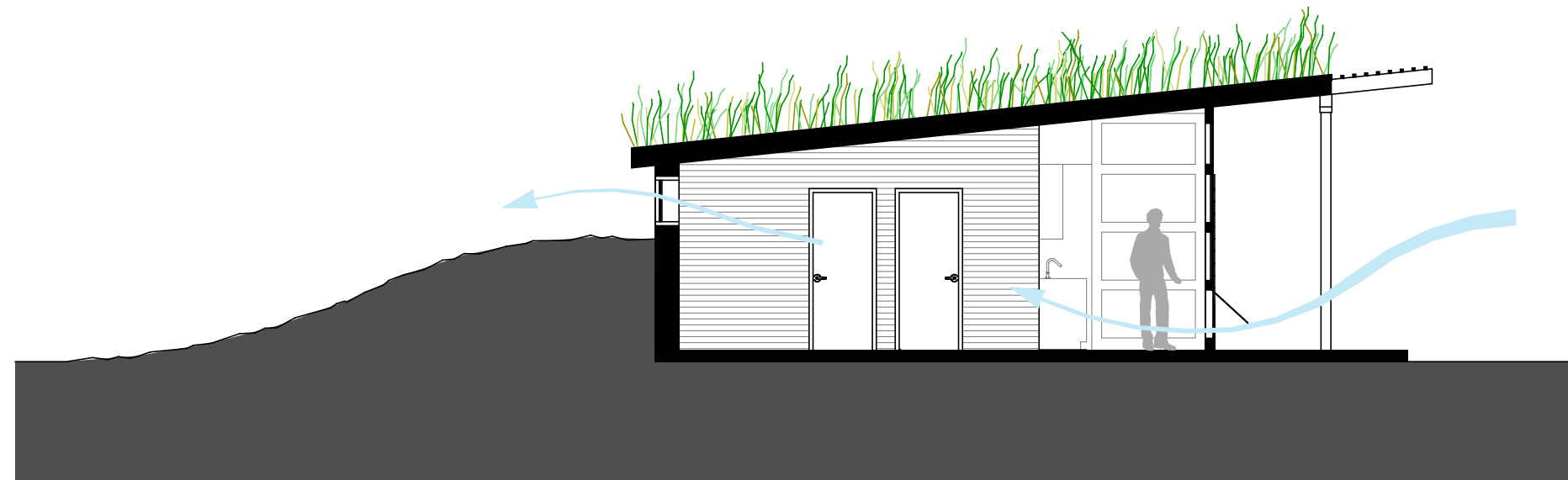
DESIGN

# LODGING COMMONS: "the LODGE" \_SECTIONS

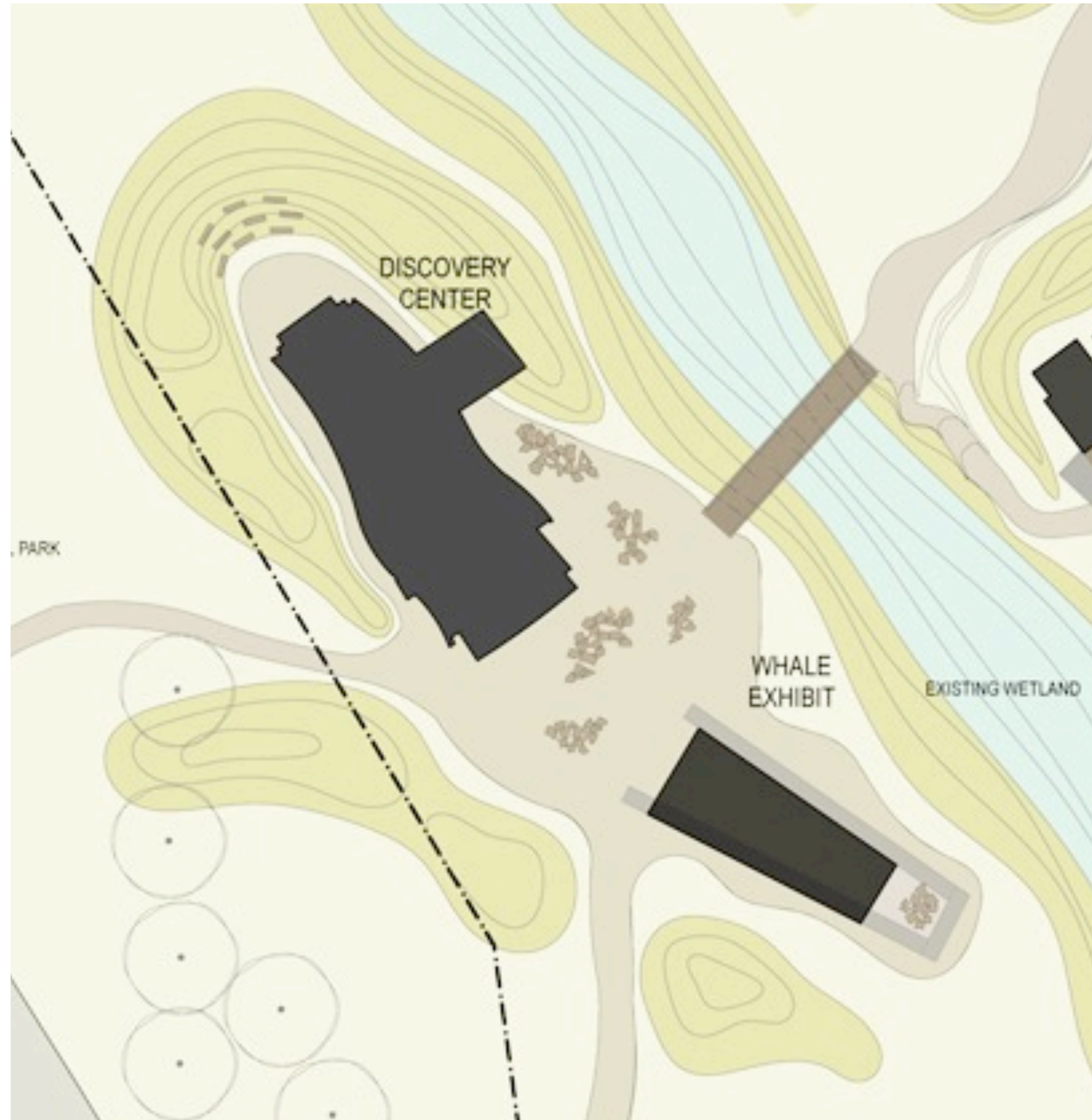


DESIGN

# LODGING \_PLAN + SECTION + ELEVATIONS

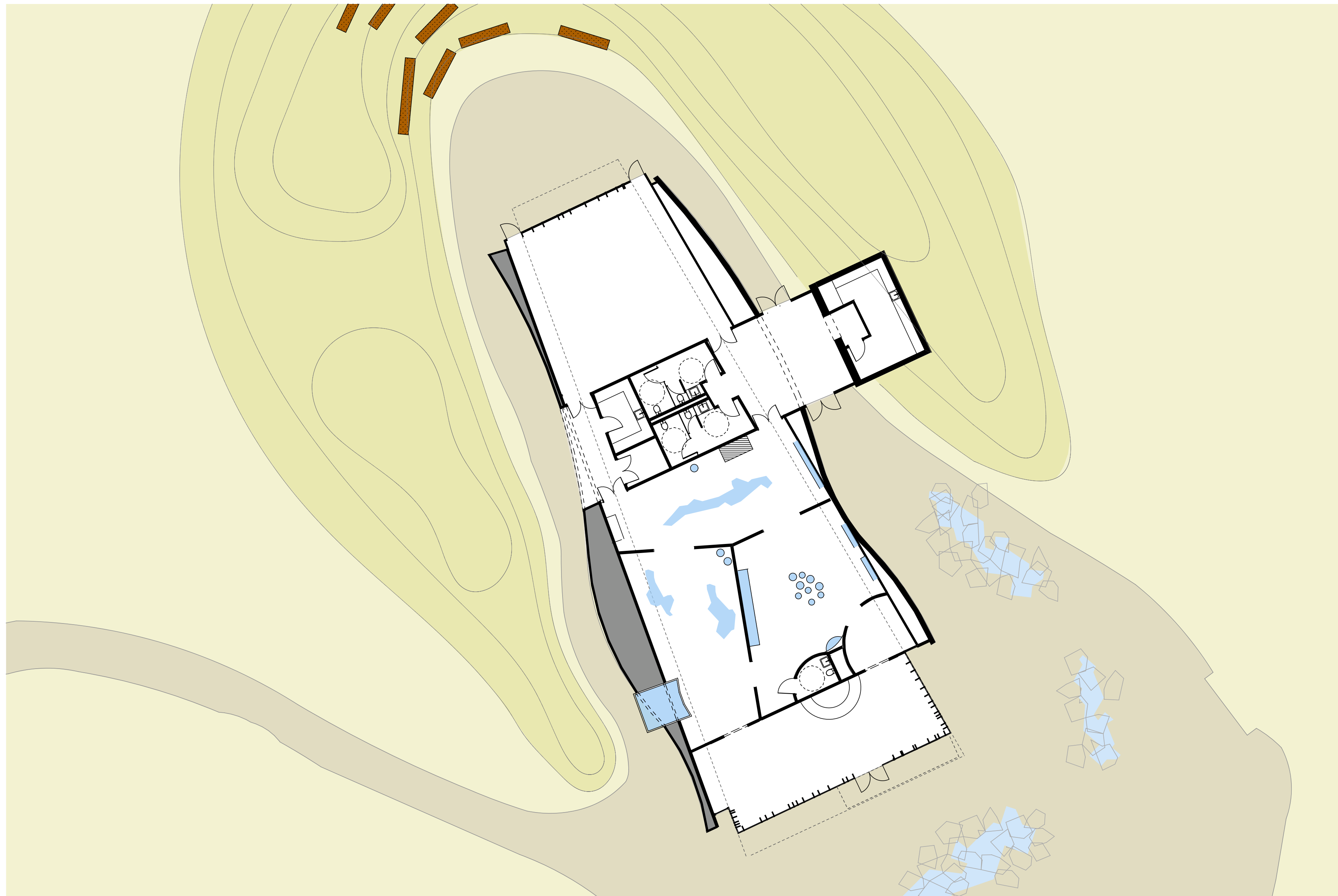


# DISCOVERY/WHALE \_PLAN



DESIGN

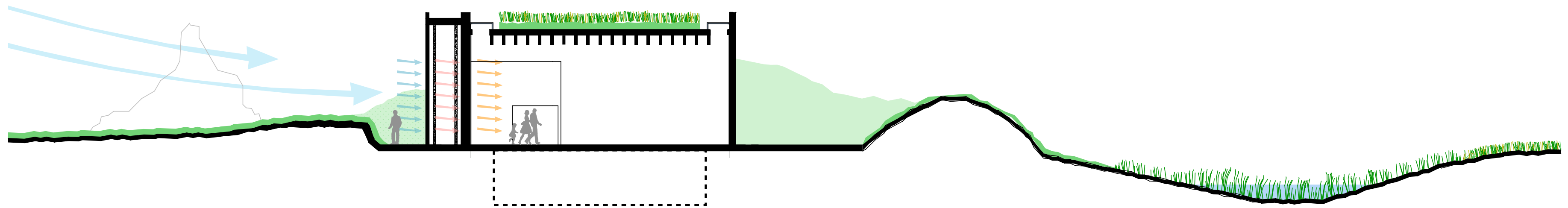
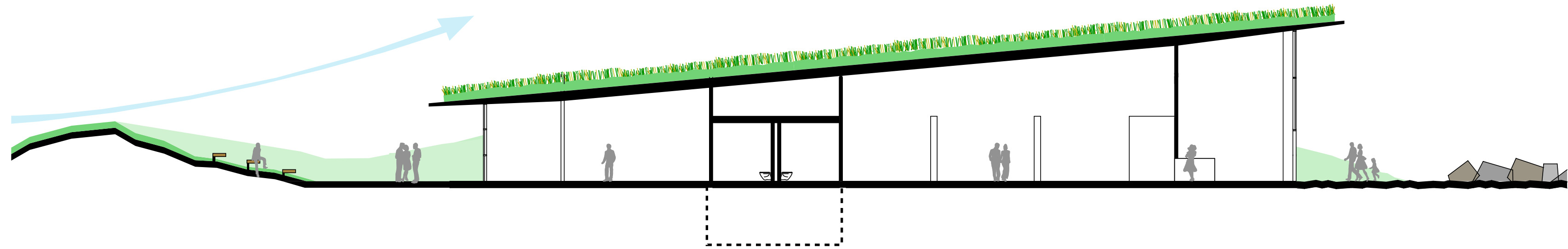
# DISCOVERY \_PLAN



DESIGN

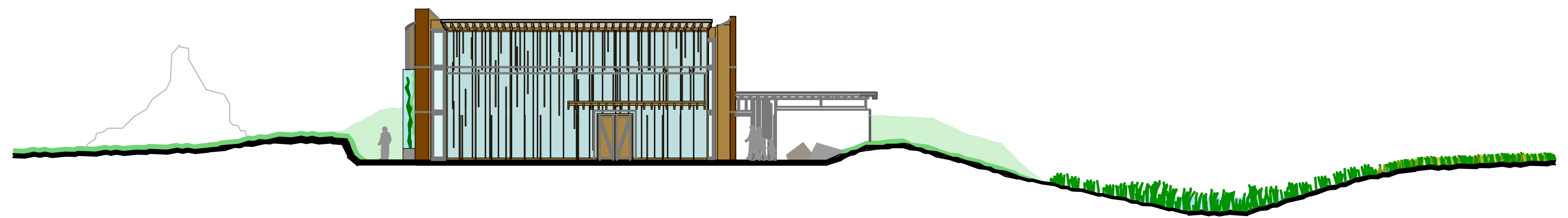
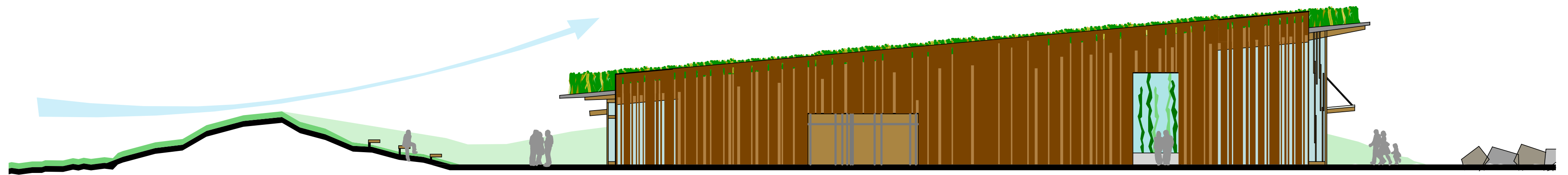


# DISCOVERY \_SECTIONS



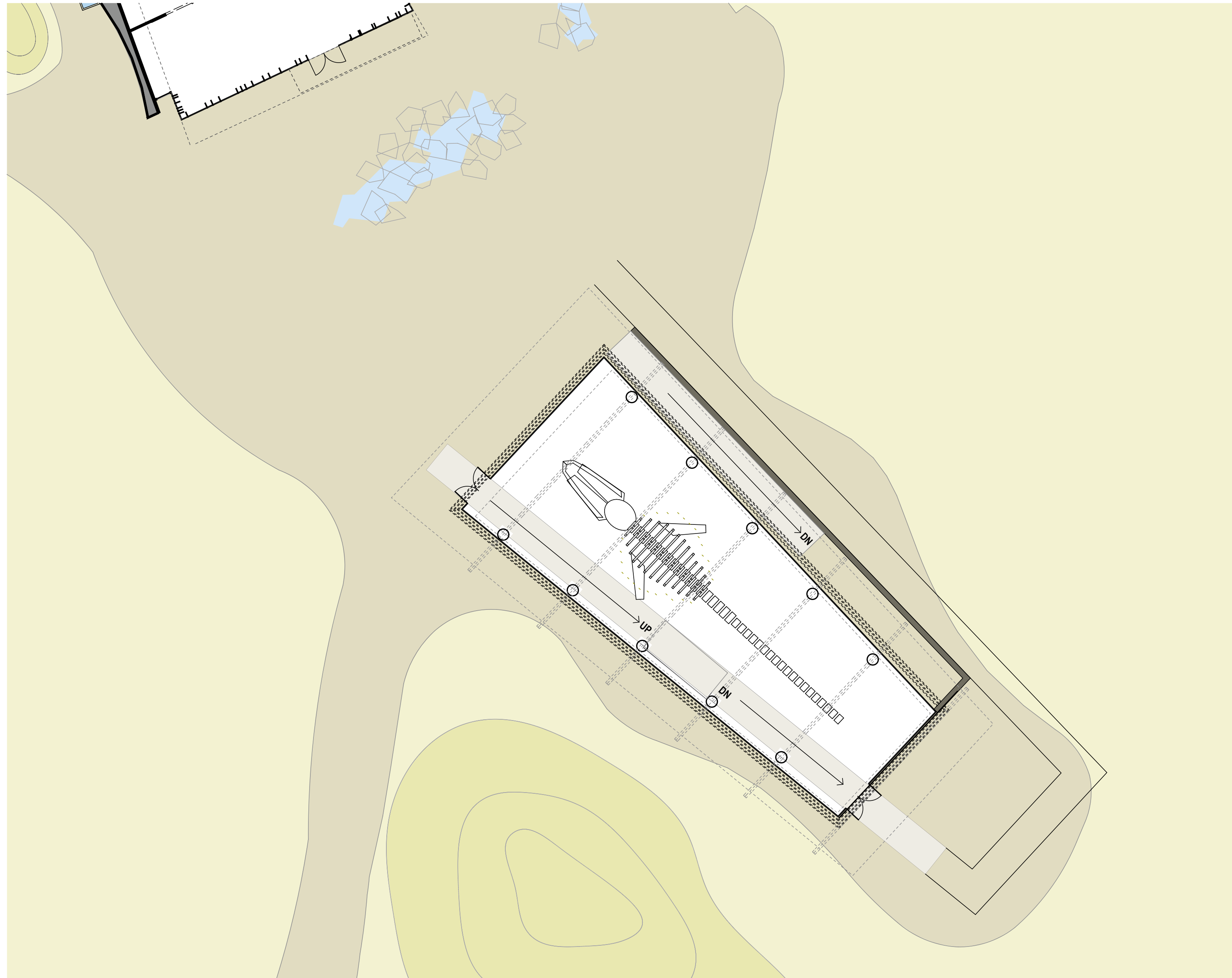
DESIGN

# DISCOVERY \_ELEVATIONS



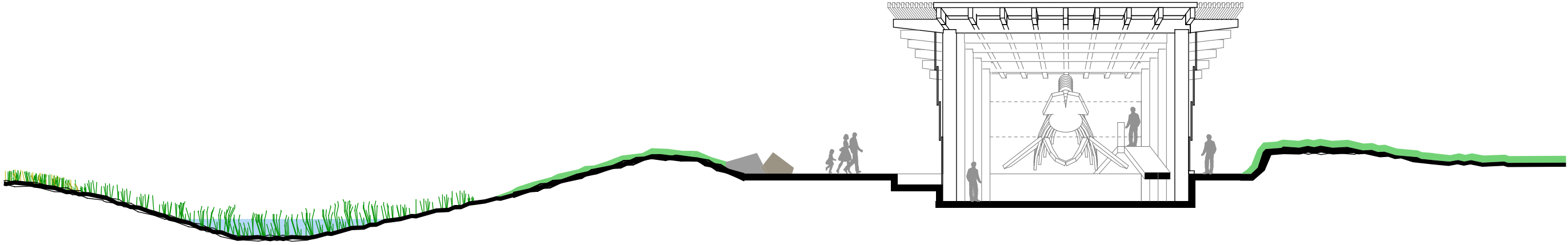
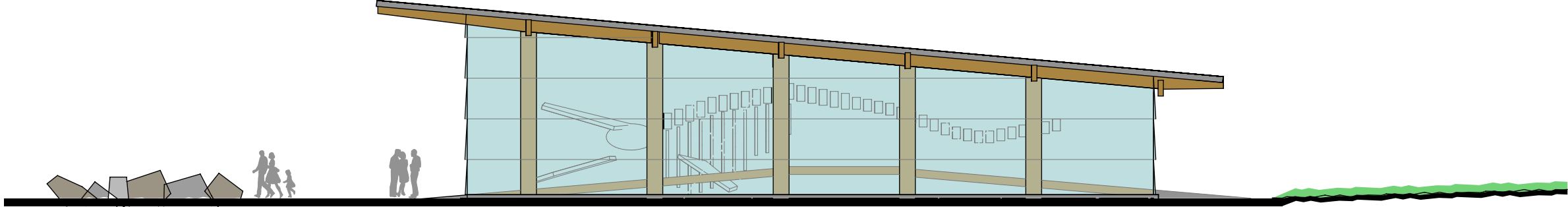
DESIGN

# WHALE EXHIBIT \_PLAN



DESIGN

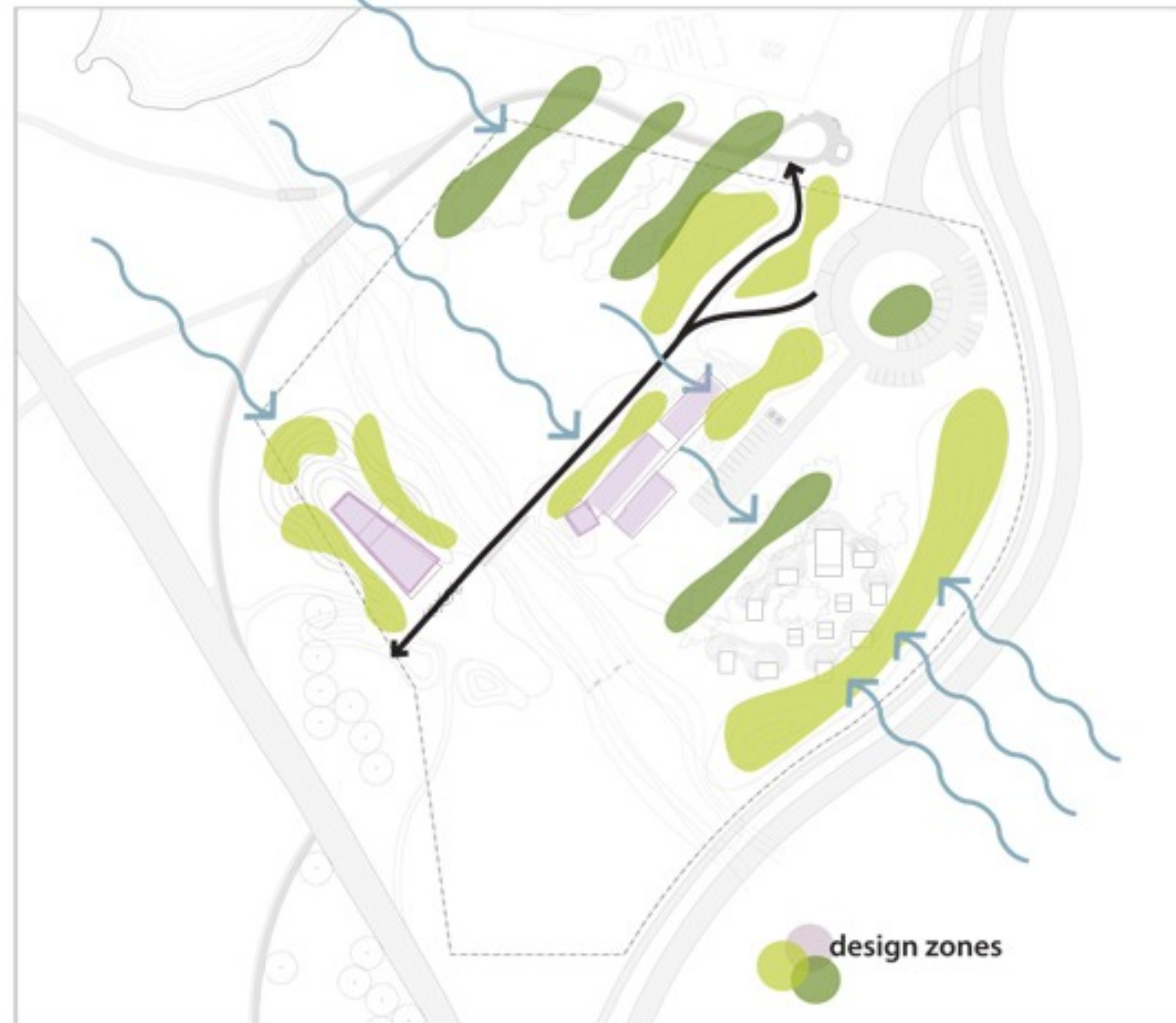
# WHALE EXHIBIT \_ELEVATIONS







# WIND

**WIND:** integrated design supports research, sustainability and education goals

design



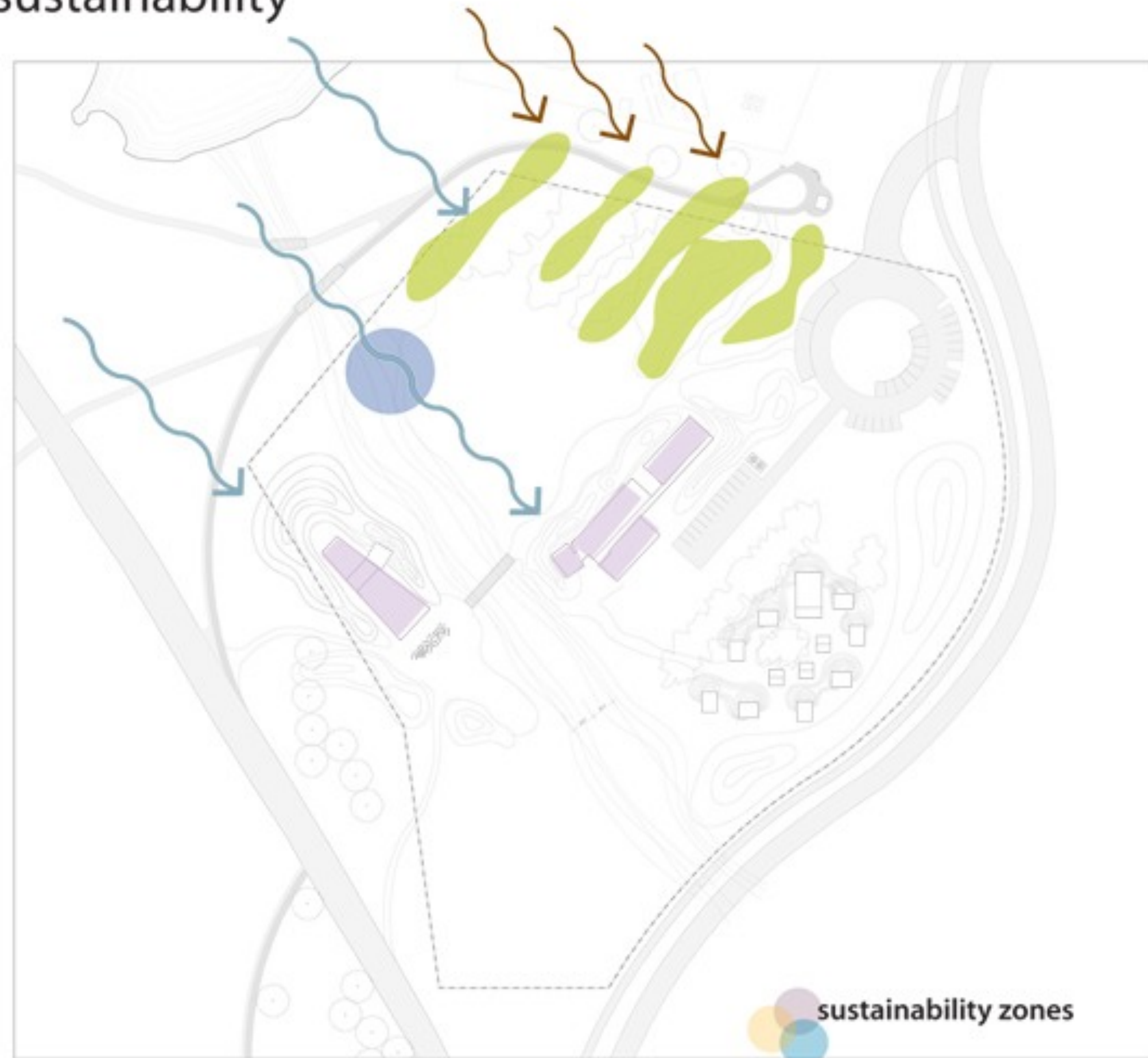
wind shapes design

-  berms direct wind above and over pedestrian zones
-  trees direct and diffuse wind
-  buildings respond to wind by capturing or deflecting wind
-  central path provides protected and exposed experiences of wind in the landscape

# WIND

**WIND:** integrated design supports research, sustainability and education goals

sustainability



wind provides functional and experiential sustainable qualities

- berms and trees control unpleasant odor from adjacent sources
- pleasant sounds enhance experience and understanding as the wind blows through prairie grasses and shares coastal water and wildlife sounds
- wind power supplements primary energy sources
- natural ventilation creates healthy indoor air quality and enhances connection to the outdoors

# WIND

**WIND:** integrated design supports research, sustainability and education goals

interpretation & public education



## experience of wind at Noyo site

- sheltered pockets**  
protected pockets provide experiences of warmer microclimates sheltered from the wind by berms, trees and buildings
- wind exposure**  
limited unprotected areas provide experiences of the power of the wind
- tree form responds to wind**  
native cypresses and pines respond to the powerful northwesterly summer winds
- native coastal prairie**  
expansive coastal prairie captures and makes visible the powerful forces of wind
- coastal prairie and grassland nursery and research beds**  
nursery and research plots provide opportunities to highlight and investigate the role that wind plays in shaping the environment and the species of California's coastal landscapes

● interpretive points & paths

● interpretation zones

# WATER

**WATER:** integrated design supports research, sustainability and education goals  
design



water was a primary design inspiration



enhanced wetland quality and function and design element



building form responds to need to collect, store, filter and re-use water



viewsheds focus attention on nearby freshwater habitats and larger marine habitats

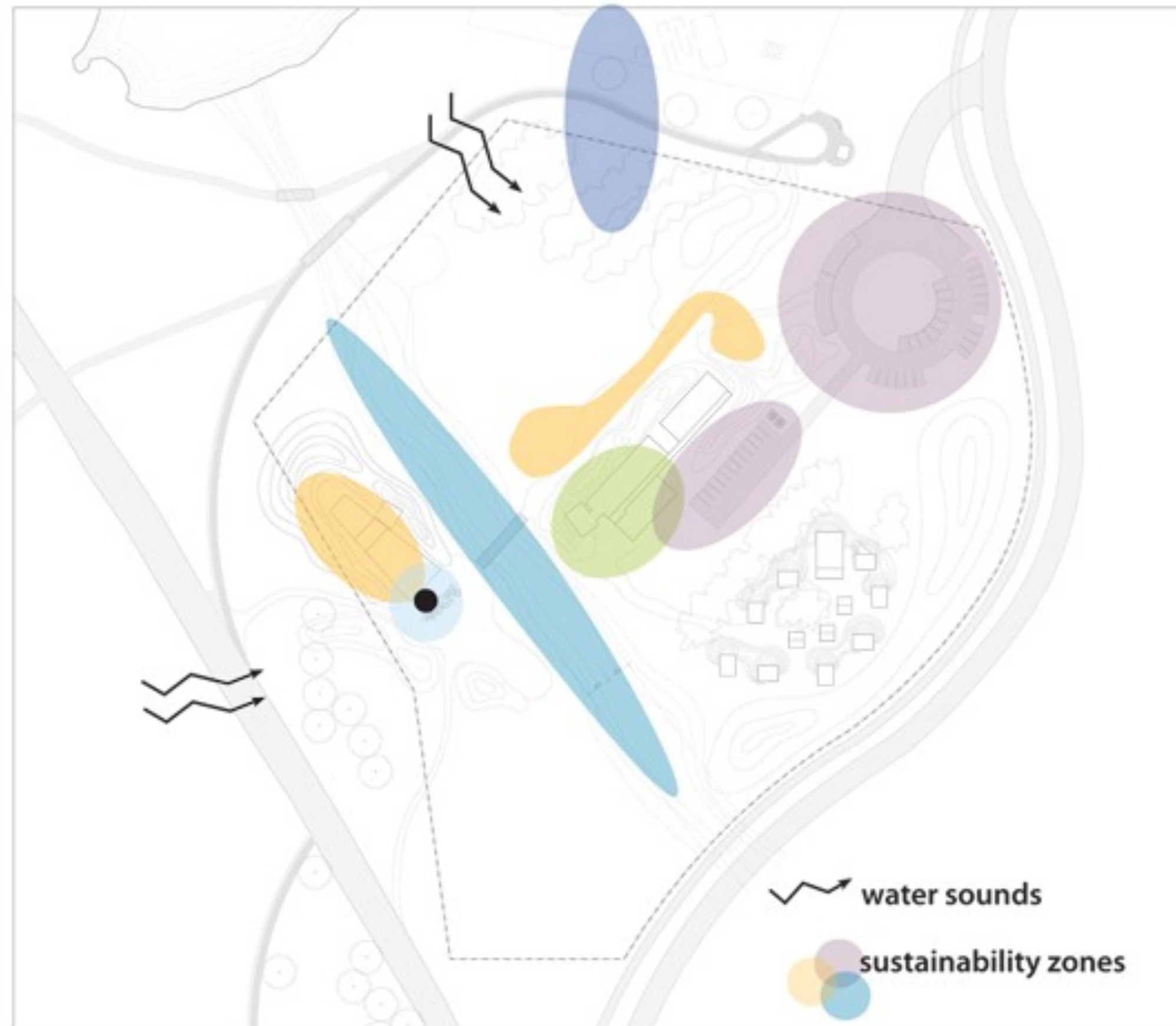


central path of experience provides diverse opportunities to experience water's many forms



# WATER

**WATER:** integrated design supports research, sustainability and education goals  
sustainability

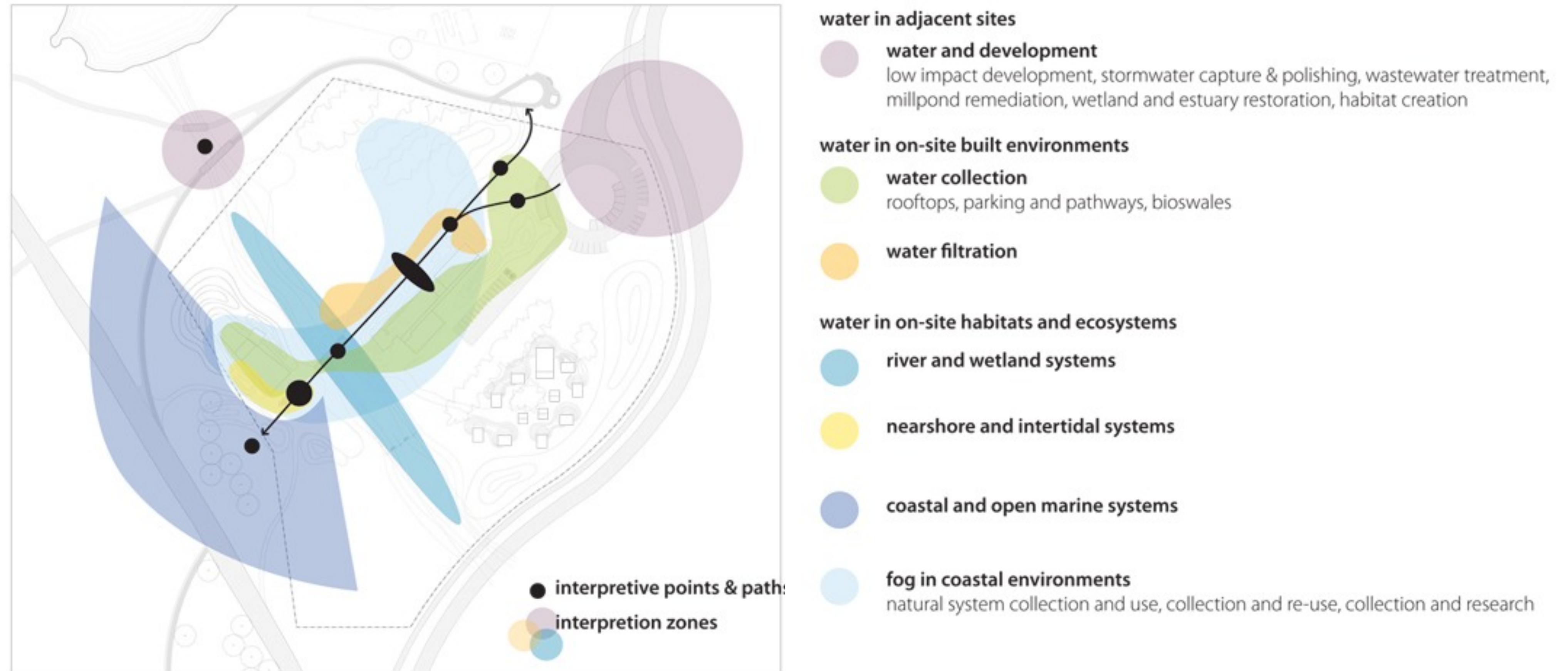


## water provides variety of sustainable opportunities

- water collection and reuse**  
capture abundant fog, rainwater, and graywater for reuse
- water filtration**  
filter contaminants from stormwater naturally with green roofs and bioswales
- wetland habitat**  
enhance existing into a wetland with diversity of habitat
- aquifer recharge**  
infiltrate in parking and path areas

# WATER

**WATER:** integrated design supports research, sustainability and education goals  
interpretation & public education







# SUSTAINABILITY

**ECOLOGY:** integrated design supports research, sustainability and education goals  
design



## restoration enhances design

-  native prairies are restored
-  native trees are reintroduced to the coastal terraces
-  green roofs planted with native prairie species increase the habitat and species diversity of the site
-  enhanced wetlands and treatment swales add wetland habitat diversity to the site and increase its value for a variety of birds and animals