TEAM 5

Biological Storm Water Treatment

- Bolsa Intervention: Strategizing Performative Ecologies
- Dismantle/Rebuild: A New Framework for Willets Point
- Sweet Avenue Parking Lot

Precedent Studies
Arch/Larc 453 Fall 2012
Meghan Craig
Skye Woodhouse
Nick Kirsch
Michael Thomas

{ Bolsa Intervention: Strategizing Performative Ecologies }

Students: Oscar Gomez and Aaron Reece

Location: Huntington Beach, CA
USA

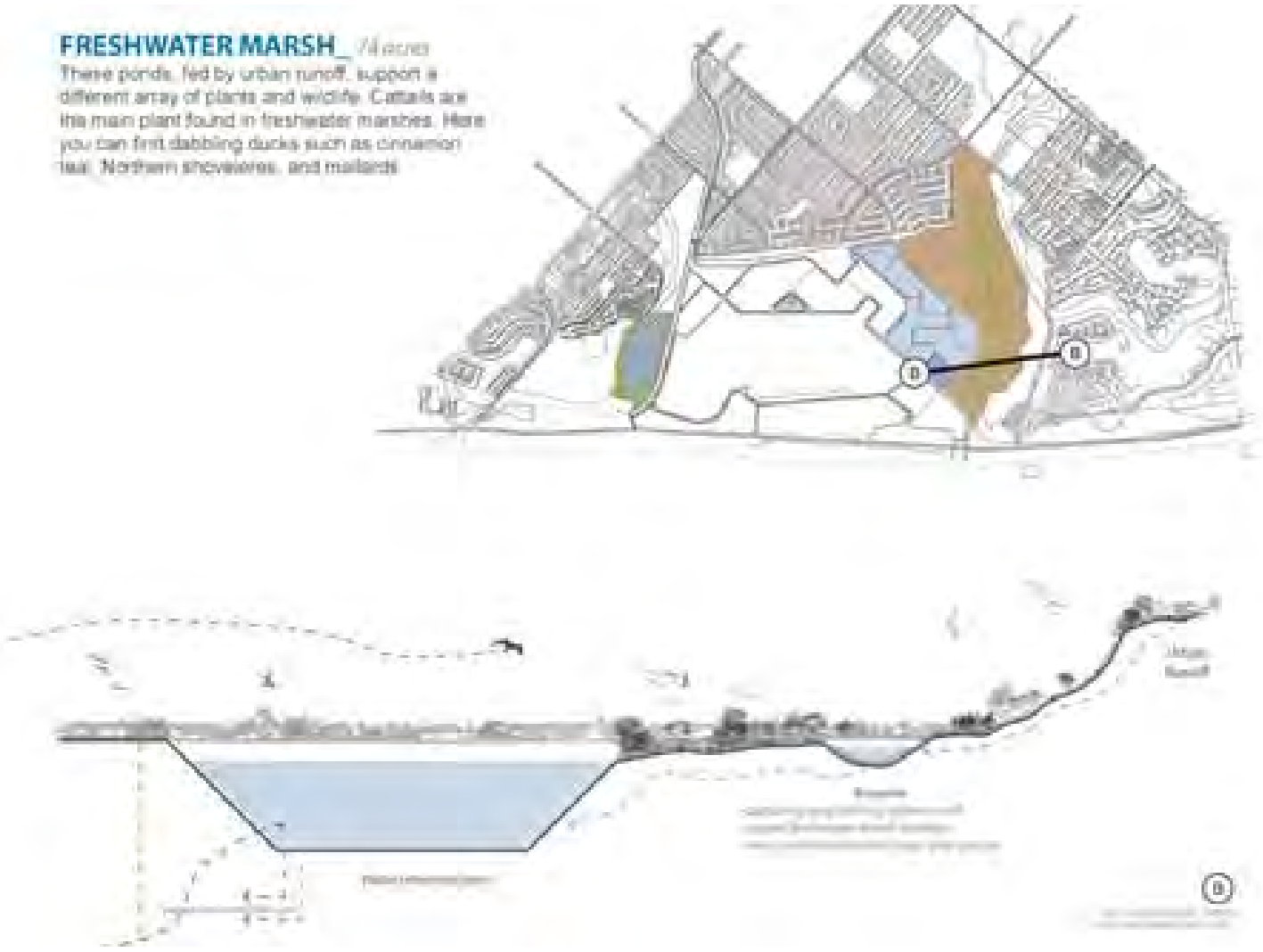
Project Area: 1,300 Acres

Project Year: 2011 ASLA Student Awards

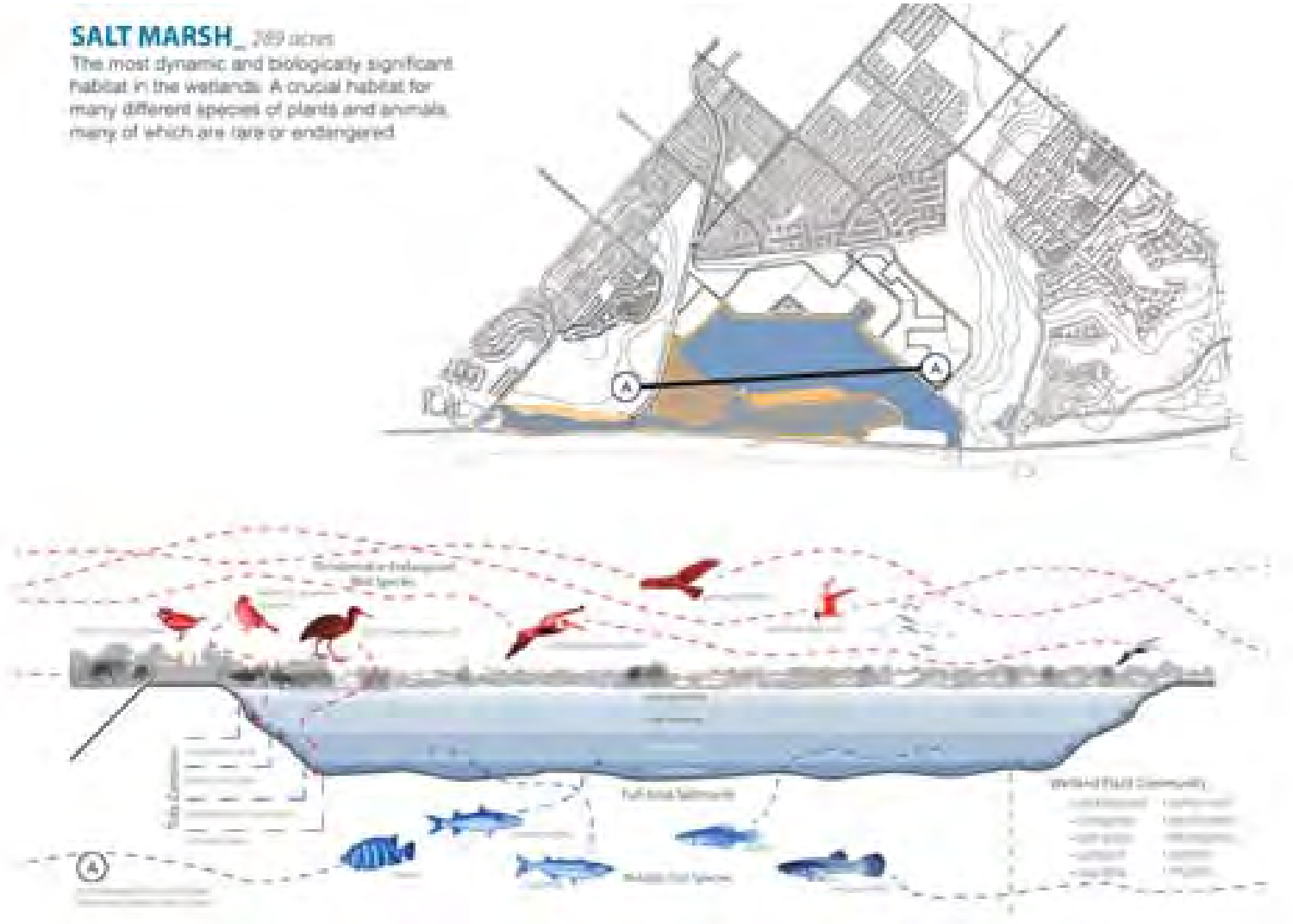
Project Statement:

"Bolsa intervention proposes a reconfiguration of the infrastructure at Bolsa Chica Wetlands to treat regional storm water runoff and provide an opportunity for biological productivity in local habitats to be greatly increased. This restructuring of the site will also make key connections to the adjacent communities, drawing people in and fulfilling their innately human need to experience the wild and intricate forces at play in the environment."

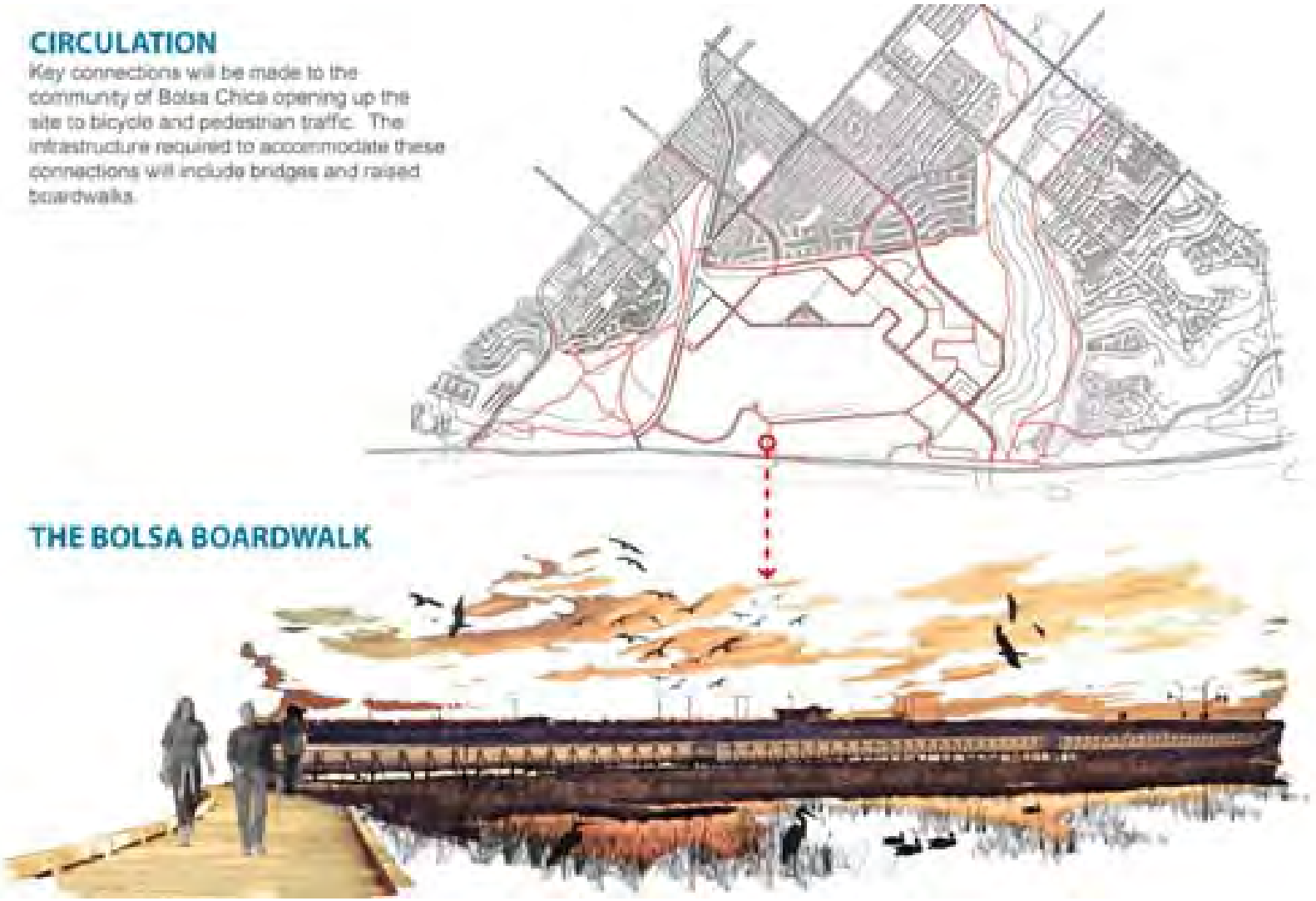
History:


FRESHWATER MARSH_ 74 acres
These ponds, fed by urban runoff, support a different array of plants and wildlife. Cattails are the main plant found in freshwater marshes. Here you can find dabbling ducks such as cinnamon teal, Northern shovelers, and mallards

Strategic Planning



Community Connections:



Habitat:

{ Dismantle/Rebuild: A New Framework for Willets Point }

Student: Melissa S. How

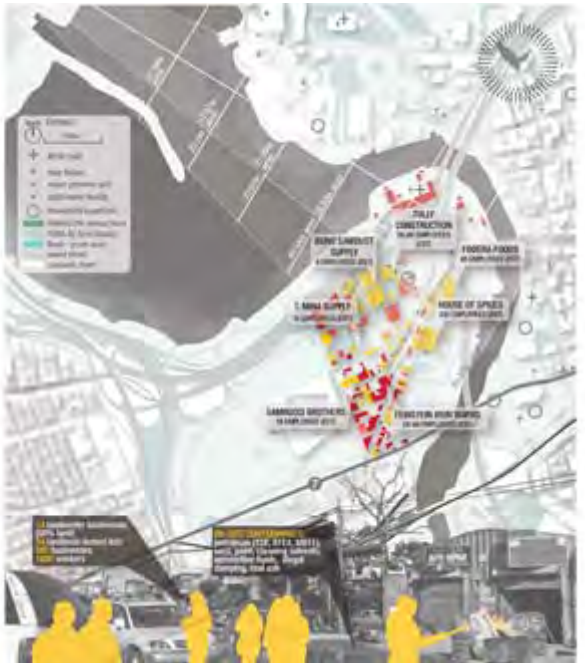
Location: Queens, NY
USA

Project Area: 62 Acres

Project Year: 2012 ASLA Student Awards

Project Statement:

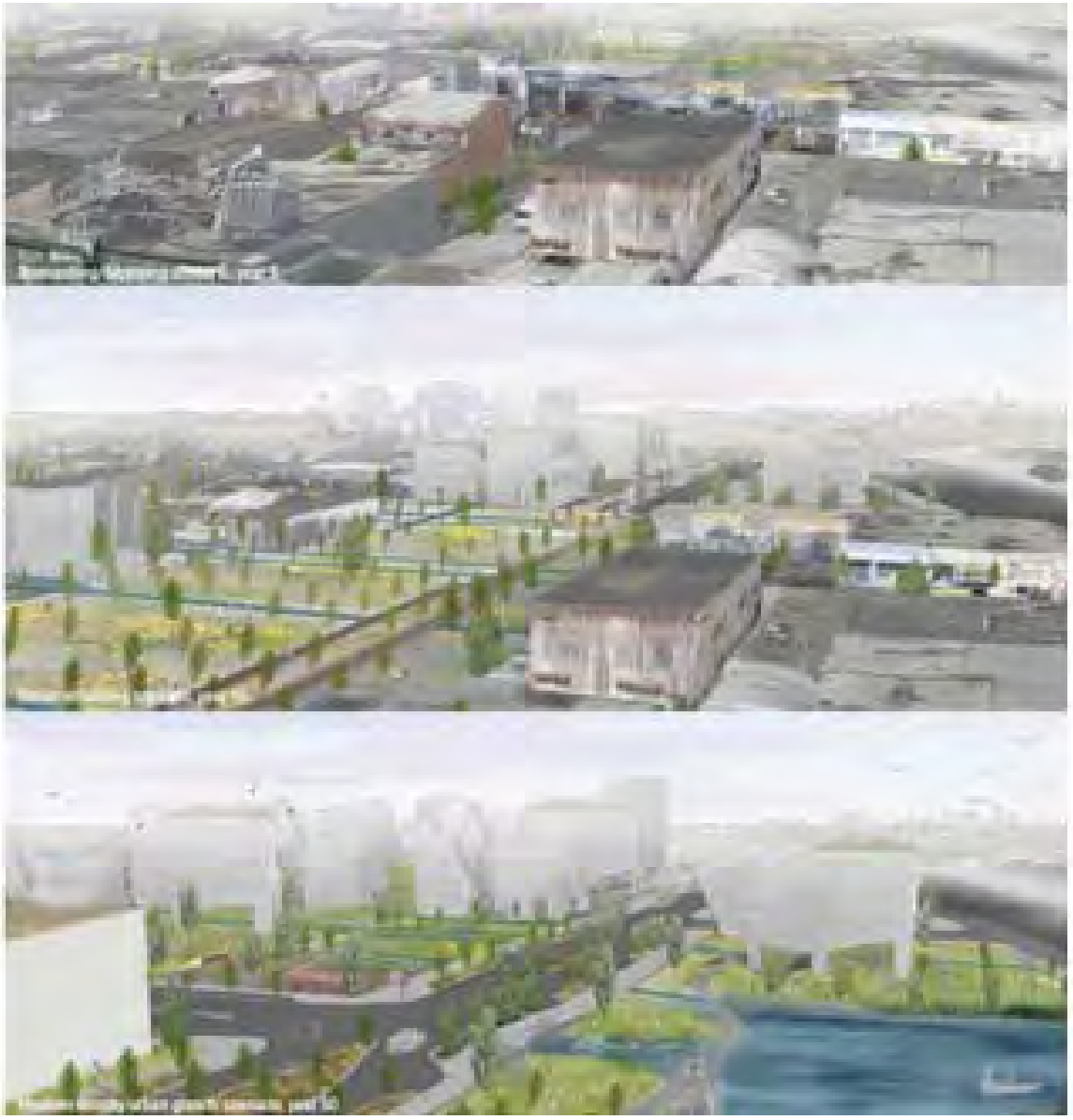
"Focusing on the responsive integration of landscape and urban form, this project proposes a new vision for the highly polluted and politically contested Willets Point peninsula in Queens, New York. Based on land ownership patterns and levels of contamination and flooding as determined by a phytoforensic grid of hybrid poplar trees, existing lots are dismantled and critical infrastructural systems are deployed, spawning new landscape typologies and urban organizations that are uniquely suited to a marginalized urban environment."



History:

Strategic Planning

Conclusion:



{ Sweed Avenue Parking Lot }

Location: Moscow, Id
USA

Project Area: About 3 Arces

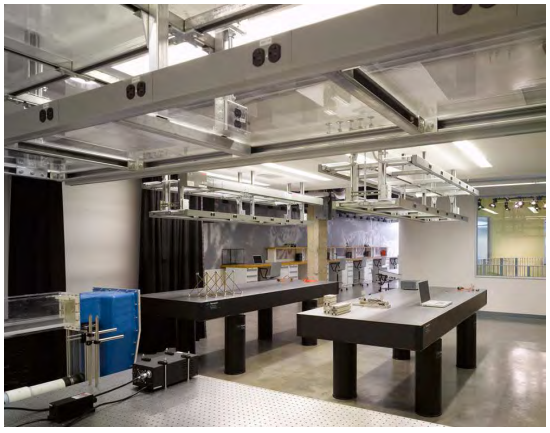
Inlet for Parking Lot Runoff:

BioSwale Retention Area:

TEAM 5

HIGH TECHNOLOGY BUILDING

- Graduate Aerospace Laboratories
- Hemlock Semiconductor Building
- Lead-Lok: Biomedical Innovations
- Program
- Design Concerns



{ GRADUATE AEROSPACE LABORATORIES }

Architect: JOHN FRIEDMAN ALICE KIMM ARCHITECTS

Location: PASADENA, CA
USA

Project Area: 1,672 SQM

Budget: $64 MILLION

Project Year: 2008

FUNCTIONS:

Significant and revolutionary steps have been taken in the history of flight.

Focuses on aerospace and biosystemsengineering.

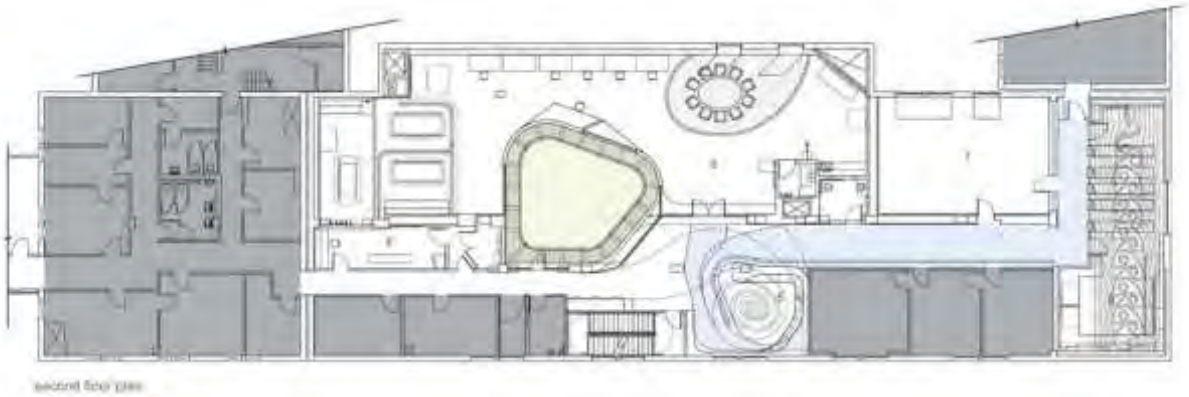
PROGRAM:

Three story structure.

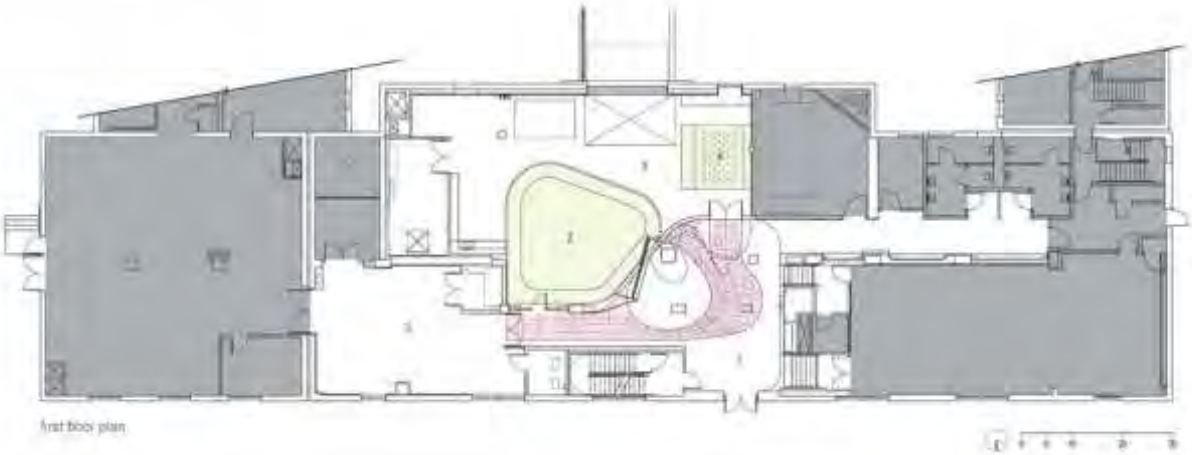
First floor is where the laboratories are situated.

The above floors are where you can find classrooms and offices.

third floor plan



second floor plan



first floor plan

BUILDING:

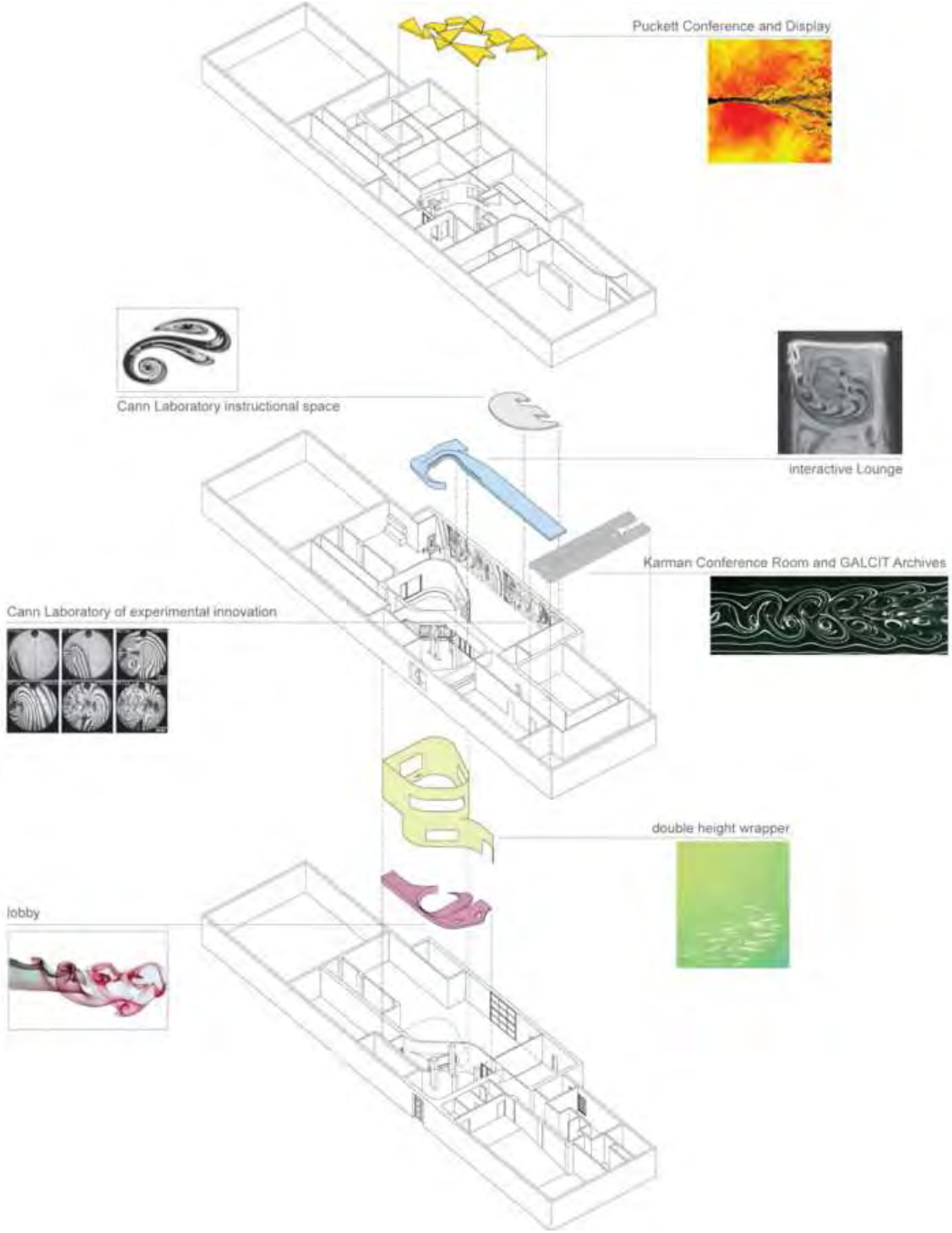
Main entrance is located on the North side of the site.

Rooms situated on the south side of the building have been strategically placed.

AXONOMETRIC:

Flow:

Transparency and Display:



STRENGTHS + WEAKNESSES

Strengths:

Visibility + Day lighting

Weaknesses:

Front is not prominent + Exposed HVAC

{ HEMLOCK SEMICONDUCTOR BUILDING}

Architect: BAUER ASKEW ARCHITECTURE

Location: CLARKSVILLE, TENNESSEE
USA

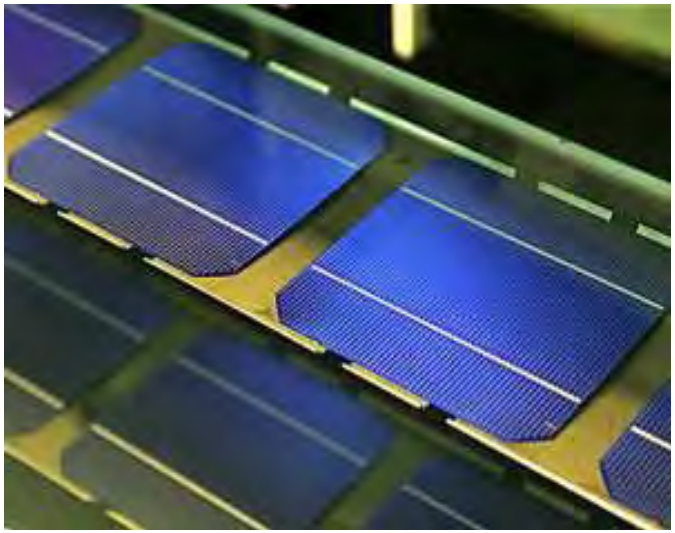
Project Area: 20,000 SQF

Budget: $ 1.2 billion

Project Year: 2010

FUNCTIONS:

Hemlock Semiconductor is a leading provider of polycrystalline silicon and other silicon-based products.



PROGRAM:

Lab

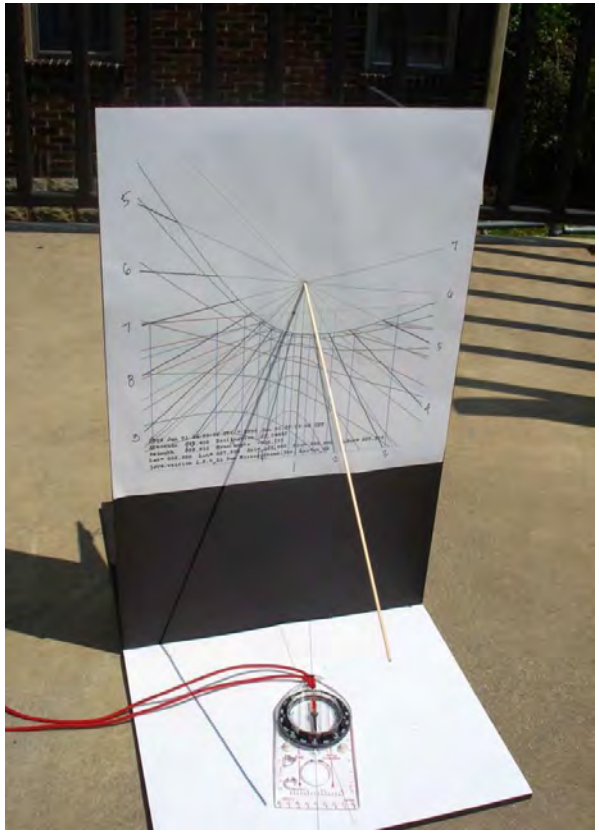
Classrooms

BUILDING:

Southern exposure

Sunscreen

Natural surroundings
- color, scale, proportion, and other Georgian elements
- reflects high technology



STRENGTHS + WEAKNESSES

Strengths:: showcases program and function, sustainable design

Weaknesses: No inclusion of site elements, not very welcoming exterior patio.

{ LEAD-LOK - BIOMEDICAL INNOVATIONS }

Architect: BRUCE EUGENE MILLARD

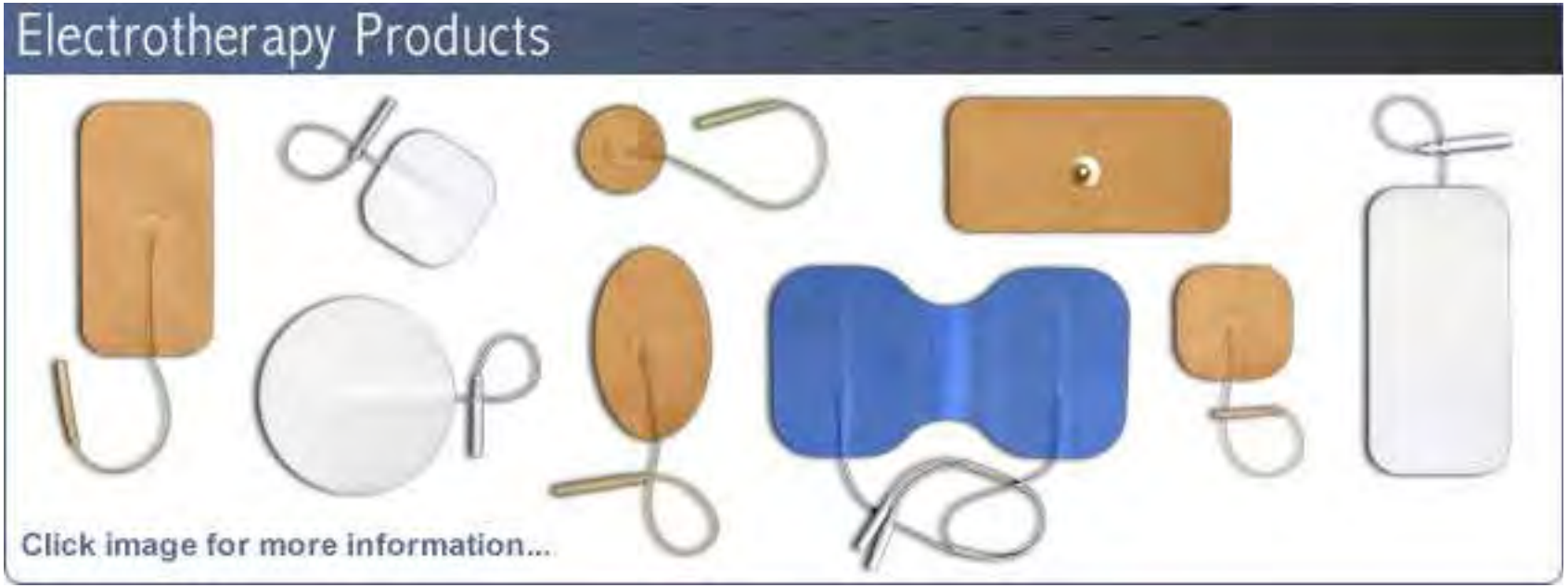
Location: SANDPOINT, ID
USA

Project Area: 14,000 SQF (Main Manufacturing Building)

LEAD-LOK®, INC.
Biomedical Innovations

FUNCTIONS:

- Manufactures a complete line of:
  - ECG/EKG electrodes
  - Wireless medical devices
  - TENS electrodes
  - Electrotherapy devices
  - Iontophoresis products
  - Holter kits
  - Chart paper
  - Snap leads
  - and others...



MACHINERY:

Rooms far too small for such sizeable machinery

{ PROPOSED PROGRAM }

Administration -	4,765SF
Offices:	
Lobby-Office Manager	300sf
Chairman (Jim Healy)	360sf
CEO (Chris Healy)	360sf
VP of US Operations (Shawn Burns)	225sf
Business Development (Shaun Healy)	21 rooms each at 120sf
National Sales Manager (Doug Hadley)	
Regional Sales Manager (Kathy Cooper)	
Senior Program Manager	
Program Manager (2)	
Program Management Assistant	
Purchasing Manager Office	
Purchasing Assistants (2)	
FDA Compliance	
Plant Manager (Toby McNeal)	
Quality Assurance Manager	
Production Supervisor	
- Last 3 offices must be close to production floor	
Additional offices for growth/storage (7)	
Conference Rooms (2, difference in size)	500sf
Bathrooms (1 male, 1 female - 3 stalls in each)	500sf

{ PROPOSED PROGRAM CONT. }

WORKERS AREA:		14,750SF
Break/Lunch Room		700sf
Bath Room		500sf
Engineering Department:		
Quality Engineer (Team Lead)		120sf
Engineering Technicians (4)	One room consisting of 4 desks:	600sf
Machine Shop		500sf
Raw Materials Area:		
Receiving Documentation Office		150sf
Raw Materials Storage		2500sf
- Must have high ceiling		
Manufacturing Area:		
Manufacturing Floor		6500sf
Enclosed Lab		400sf
Mechanical Room		150sf
ESD (Electro-Static-Discharge Room) (2)		1600sf
Delta Room		1000sf
- Combined with a changing/locker room where workers can dress down and sanitize before entering clean room		
TOTAL (with circulation routes considered)		23,682SF

{ PROPOSED PROGRAM CONT. }

SITE:

Vehicular Parking - 60 - 80
Motorcycle - 10
Bicycle - 20

Storm Water Treatment plants
Delivery truck access and exit routes
- 2 docks for raw materials
- 2 docks for exiting materials

DESIGN CONCERNS:

CLIMATE -
- Snow loads
- Cold winters
- Warm/long day summers

GROWTH -
- Plans to double in size

SYSTEMS -
- Regulations in moisture and temperature
- Ventilation

MATERIALS -
- Sound absorbing
- ESD (epoxy tiles)

FUNCTIONAL -
- Streamline + Linear
- Office locations

FORM -
- High technology
- Clean
- Hospital-like
- Reflect Northwest

PSYCHOLOGICAL -
- Colours light
- Plenty of views
- “WOW” clients + visitors

ENERGY -
- Mindful of energy usage

SECURITY
- Thumb pads
- Key swipes