Impact limit: Medium Wave action

Broad Channel Community
Improve the resilience of the Broad Channel Community against future storm surge
Strategies
- Retreat
- Adapt
- Protect

Characteristics
- Hardiness
- Adaptability
- Scenario planning
- Bounce back
- Innovation
- Social cohesion
- Creativity

Resilience

Bounce back

Innovation

Social cohesion

Adaptability

Scenario planning

Hardiness
Strategies

Retreat
- Expensive buy out
- Destroying community
- Politically impossible
- Decreases tax base

Adapt
- Water remains quality for living
- Wetland mediates storm surge
- Continuous innovation in resilience
- Ecological values improve

Protect
- Spatial separation
- Prone to failure
- Short term solution
- Degrades wetlands
Engage!

Adapt

Educate!

Retreat

Adaptability

Hardiness

Scenario planning

Bounce back

Innovation

Creativity

Social cohesion

Retreat

Adapt

Protect

Resilience

Engage!

Educate!
1 **Educate** and form consensus for resilient living
Provide knowledge and tools for more resilient and sustainable living.

2 **Strengthen community by adding** social functions
This generates a better organization and cooperation within the community, also during and after a disaster.

3 **Provide relief after a disaster**
Central point from where aid can be provided and organized.
The Science and Resilience Institute at Jamaica Bay, SRI@JB

Community

Broad Channel community, Broad Channel Civic Association

User groups

Visitors

Students, scholars, tourists, estuary residents, daytrippers

Researchers

The Science and Resilience Institute at Jamaica Bay, SRI@JB
Program

MULTIPURPOSE HALL

FOYER

EATERY

EXHIBITION

OFFICE
Location requirements

- Along main road
- Direct connection Jamaica Bay
- On edge of Broad Channel Community
- Minimize impact on ecosystem
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Location requirements

Along main road
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Minimize impact on ecosystem

Sunset cove & American park
Former land use
Current situation
Current situation
Landscape design
Landscape design

- Marshland
- Coastal forest
- Coastal shrub
- Dunes
- Fresh water pond
- Grassland
Building concept

Building part of landscape

In line with heights of ecological zones
Building concept

Provide various viewpoints

Provide one unique panorama

Roof widens with views
Routing roof
Foyer
Restaurant
Restaurant
Various settings multipurpose hall

Sports

Ceremonies

Conferences
Routing to office
Routing exhibition
Exhibition
Water levels

1 IN 500 YEAR STORM

4.79 m

SANDY FLOOD LEVEL

1 IN 100 YEAR STORM

MHHW

MHW

2.35 m

2.26 m

HIGH MARSH

NAVDA

MLLW

MUD FLAT

MTL

LOW MARSH

1.62 m

1.55 m

1.52 m

STATION DATUM

0.02 m

0.60 m

0.00 m
Water levels

Standard level

Increased level (1 in 100 years)

High level (1 in 500 years)
Concrete CIP facade
Detail skylight
Construction - multipurpose hall
Construction - multipurpose hall
Climate concept

- Solar thermal roof
- Rainwater collection
- Rainwater storage
- Geothermal storage
- Drinking water storage
Climate concept - solar thermal roof
Climate concept - solar thermal roof
Conclusion

Improve the resilience of the Broad Channel Community against future storm surge
BROAD CHANNEL - STEPPING UP
Architecture as a connecting element in flood resilience

THANK YOU FOR YOUR ATTENTION!
Roof package

Thermal mass
Mediating extremes

Spacing for installations
Terrace
Construction & zoning
Floor materialization
Materials

Permeable paving for erosion prevention

Concrete with oyster shell granulate
Building on location
Section multipurpose hall
Sections
Elevations
Marsh loss