# Description graduation plan P2

## Graduation Plan: Architecture

<table>
<thead>
<tr>
<th><strong>Personal information</strong></th>
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<tbody>
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<thead>
<tr>
<th><strong>Studio</strong></th>
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<tbody>
<tr>
<td><strong>Theme</strong></td>
<td>Delta Interventions</td>
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<tr>
<td><strong>Teachers</strong></td>
<td>Anne Loes Nillesen, Frits Palmboom, Han Meyer, Fransje Hooimeijer</td>
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</tbody>
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| **Argumentation of choice of the studio** | My hometown Shanghai is also located on a delta land, like New York and many cities in Netherlands. I would like to learn more about how to protect my city and how to make water issue relate to architecture in a good way. As an architecture student, this studio is also a good chance for me to learn more about urban design and think about the design questions in a broader perspective with comprehensive considerations. |

| **Subtheme** | Rebuild by Design – A Resilient New York |
| **Mentors** | Frits Palmboom, Maarten Meijs, Jan van de Voort |

<table>
<thead>
<tr>
<th><strong>Title</strong></th>
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<tbody>
<tr>
<td><strong>Title of the graduation project</strong></td>
<td>Living Over The Sea – A Barrier Building Complex</td>
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Product

Problem Statement
The posed problem:
Jamaica Bay in New York City is a relatively poor area, where the flood risks are higher than other areas within the city range due to its location to the sea and the vulnerable natural landforms. -Economy needs to be improved
The current efforts done by the local government and communities, like enhancing the existing boardwalks and building higher sand dunes, are far from enough to prevent the next possible flood risk and hasn’t made big improvement to the damaged environment. -Flood risks need to be prevented
Jamaica Bay is part of the Gateway National Recreational Area. -The biodiversity is also at risk and need to be protected. Water qualities need to be improved.

Research questions:
The project has collaboration with the civil engineering project to solve the problems above. In architect point of view, what is the relationship between civil engineering, architecture and the sea? What qualities can be added by architectural design to a flood-proof civil engineering project? Where are the important integrations? What is the practical procedure to realize the combinations?

Design assignment:
The assignment for the graduation project is to provide one of the possibilities for the Rebuild by Design competition. The civil engineering proposal suggests a new inlet on the Rockaway Peninsula in Jamaica Bay. Thus my building is going to be across the new inlet and has various functions to compensate the missing qualities in that area.

Goal
The goal of the assignment is to design a dwelling complex, in combination of a bridge and surge barrier as part of a bigger flood-defense system. It will situate over the new inlet on the Rockaway peninsula in Jamaica Bay. It will protect the inlet when the storms come, while the whole system which it belongs to will protect the whole Jamaica Bay watershed.
It will serve as the vital connections over the inlet for driving, biking as well as walking after the inlet is dredged out.
It will also serve as part of the recreational center for the Gateway National Park, aiming to become a landmark and stimulate the economy for the local people in tourism aspect.
The program of dwelling is also a potential of economic growth and the improvement for the local living conditions. Lifestyles with water will be renewed and rethought. Good views and spaces should be provided for all users.
The building has multi-level relationships with the sea as it is facing the inner bay areas and the outer dike beaches. Various possibilities of human activities will occur as the dwelling complex generates different interface with the water.
From civil engineering, architecture to landscape, it is a combinative thought from rational to poetic.
# Process

## Method description

**Methods:**
- Literature study: Literature reviews, Literature derivations, Photos chronology
- Case study: Typology studies, Comparative studies, Technique studies
- Site analysis: Layering approach, GIS data evaluations
- Interviews: Problems surveys, Demand surveys

**Techniques:**
- Sketches: Hand drawings, Tracing, Layering
- Modeling: 3D digital models, Physical models, Comparative studies
- Drawings: AutoCAD, Illustrator
- Diagrams: Illustrator, Photoshop
- Renderings: Space simulations

## Literature and general practical preference

American Institute of Architects New York, May 2013, *Post-Sandy initiative*
Arroyo, V., Sep 2012, *Let’s prepare for our new climate*
Barr, M., 2013, *Little is rebuilt at New York beach burned during Sandy,*
Bentley, C., May 24, 2013, *A Dutch Approach to Flood and Drought Management Takes Root in St. Louis*
Burden. A., Mar 2011, *Vision 2020 – New York City comprehensive waterfront plan*
Burden. A., Jun 2013, *Urban waterfront adaptive strategies – Coastal climate resilience*
Goodyear. S., Jan 09, 2013, *We're In This Together: What the Dutch Know About Flooding That We Don't*
Keenan, J., Dec 2012, *The community recovery playbook – A guide for using community development block grants for disaster recovery*
Nordenson, G., 2009, *On the water – Palisade Bay*
Prominski, M., 2012, *River, Space, Design*
Rodin, J., 2012, *NYS 2100 COMMISSION*
Royal Institute of British Architects, 2009, *Designing for flood risk – A climate change toolkit*
Shepard, J., 2011, *The Netherlands live with water*
Sivered, C., Dec 2013, *Short Problem Description-Flood Risk Reduction System-Jamaica Bay-New York City*
Vroom, M., 1989, *Learning from Rotterdam – Investigating the process of urban park design*
Watson, D. and Adams, Michele., 2010, *Design for Flooding: Architecture, Landscape, and Urban Design for Resilience to Climate Change*
http://www.rebuildbydesign.org/, 2013
http://www.dutchwatersector.com/, 2013
Reflection

Relevance
A Prototype:
The whole New Jersey waterfront and the south edge of Long Island have a similar system in combination of a barrier island in front of an inner bay area, and the solid inner land behind the inner bay. Jamaica Bay is part of the system. And the Rockaway Peninsula is at the front line of the storm and flood risk, so the solutions can be a prototype for the adjacent areas.

American and Dutch:
In American point of view, the added value of the whole project is reflected by the integration of the civil engineering, the governmental efforts, the regional solution rather than a local one, and an artistic architectural perspective to improve the environment. On the other hand, the Dutch layering approach is refined by the Americans with rational calculation of the cost analysis and a democratic process to make the project fall into place, with everyone’s interests approved.

Relevant aspects in icons:

Time planning

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<tr>
<th>Research</th>
<th>Design</th>
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<tbody>
<tr>
<td>Literature Study</td>
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<td>Case Study</td>
<td>Master Plan Design</td>
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<td>Civil Engineering Discussion</td>
<td>Architecture Design</td>
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<td>Site Analysis</td>
<td>Building Technology</td>
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<td>Review</td>
<td>Expression</td>
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