

# Graduation Plan

Master of Science Architecture, Urbanism & Building Sciences



## Graduation Plan: All tracks

Submit your Graduation Plan to the Board of Examiners ([Examencommissie-BK@tudelft.nl](mailto:Examencommissie-BK@tudelft.nl)), Mentors and Delegate of the Board of Examiners one week before P2 at the latest.

The graduation plan consists of at least the following data/segments:

Personal information	
Name	Kevin van Weerdenburg
Student number	4442857
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Studio		
Name / Theme	Complex Projects / Midtown New York	
Main mentor	Ir. H.A. van Bennekom	Architecture (CP)
Second mentor	Ir. H.L. van der Meel	AE + T
Argumentation of choice of the studio	Both of my previous studios (Architectural Engineering; Hyperloop in MSc 1. And The Why Factory in MSc 2.) were both very heavy width future predictions. Although they were very different, AE with a very technical approach and TWF with a very philosophical approach, I feel like it is time for me to do a studio with a very grounded approach. From my perspective, Complex Projects is a studio with a very focused approach on realistic projects, with a broad perspective on social, economical and ecological issues. This studio is probably the best to give me a better understanding on managing complex projects by having us do a project in the highly urban context of Midtown, Manhattan.	

Graduation project	
Title of the graduation project	Affordable housing in Midtown, New York
Goal	
Location:	Midtown New York: 7 Sutton Square, Manhattan, New York
The posed problem,	New York is currently in an affordable housing crisis, There is a lot of demand for affordable housing, but that demand is not being met. As a consequence, many residents of New York are struggling to pay their rent, or have to live in overcrowded apartments. Despite public investment, most developers choose not to build affordable housing because the land and construction prices are super high, therefore, it is hard for them to turn a profit of the

	<p>construction of affordable houses. Instead, most construction in New York is focused on the highly expensive luxury condo market.</p>
research questions and	<p>How can affordable housing be built in Northeast Midtown?</p> <p>Sub questions:</p> <ul style="list-style-type: none"> <li>- How can a new building serve an existing neighborhood?</li> <li>- How can a modern building fit within a historic neighborhood?</li> <li>- How will apartment floorplans change over time? And how can a building adapt to that?</li> </ul>
design assignment in which these result.	<p>The design assignment is to construct a high-rise apartment building with a total of 266 apartments, and neighborhood supporting functions. The apartments need to be focused on 3 different income groups with a split of 25% going to low-income households, 30% going to moderate-income households and the remainder going to middle-income households.</p> <p>66 Units (25%) need to be 3 Bedroom apartments with the a size of roughly 850 sq. ft. (79 m<sup>2</sup>)  A further 80 Units (30%) need to be 3-4 Bedroom apartments with a size of roughly 900 sq. ft. (84 m<sup>2</sup>)  The remaining 120 Units (45%) need to be 3-4 Bedroom apartments with a size of roughly 950 sq. ft. (88 m<sup>2</sup>)</p> <p>Supporting Neighborhood Facilities:  Due to the large increase of families this building will bring, the local preschool will no longer be big enough. The building should also house a new location for a preschool and daycare (roughly 6000-8000 sq. ft). The preschool should have at least 6 classrooms, an indoor and outdoor playground, and offices. Each classroom should be larger than 700 sq. ft. (65 m<sup>2</sup>). And both playgrounds should be larger than 1000 sq. ft. (93 m<sup>2</sup>).</p> <p>The building should also provide co-working spaces that can freely be used by the residents of the building and can be rented by other residents of the neighborhood. This space should have a mix of flexible working spaces, rentable-offices, conference rooms, a kitchen, and a lounge area. This space should be between 7000 – 10000 sq. ft. (650 – 930 m<sup>2</sup>)</p> <p>Ambitions:</p> <ul style="list-style-type: none"> <li>- To create a sustainable building that can stand the test of time, it should last at least 300 years.</li> <li>- To create a building that is welcomed in the neighborhood, one that helps the residents.</li> <li>- To create a new landmark, to set president to other developer on how it can also be done.</li> </ul>



## Process

### Method description

- Presentations: The studio uses frequent presentations as a tool for design, Presenting your work often helps keep the project focused and sharp.
- Case studies: To look into apartment types found in the city and into the 'future' of apartments.
- Model making
- Drawings

### Literature and general practical preference

Apartments:

<http://www.nychdc.com/pages/Termsheets.html>

<https://www.cityrealty.com/nyc/market-insight/features/future-nyc/a-closer-look-apartment-layouts-found-nyc039s-latest-buildings/19261>

<https://streeteasy.com/guides/buyers-guide/types-of-apartments-in-nyc/>

<http://worldfloorplans.com/us-newyork-newyork.shtml?LMCL=WJnhrT>

<http://communitytp.com/>

<https://theurbandeveloper.com/articles/an-architects-view-on-the-future-of-apartment-design>

Co-working space:

<https://www.coworkingresources.org/blog/how-big-should-my-coworking-space-be>

<https://www.6sqft.com/nyc-real-estate-experts-offer-their-2020-predictions/>

Preschool / Daycare:

<https://hoppingin.com/starting-a-daycare-center-part-1-location-and-square-footage/>

<https://www.daycare.com/newyork/>

<https://www.gardenhouseschool.org/>

### Reflection

This project developed a new kind of high-rise, one that is filled with affordable housing. It follows from a necessity of densifying as the result of a changing housing market. This fits well within the topic of the studio (change in Midtown, Manhattan) because it is a clear example of the needed change in building typologies to preserve New York as a city of opportunity for everybody.

The project tries to prove that it is possible to create affordable housing by densifying in an already dense urban area, and it shows the effects this can bring to a neighborhood. It provides a solution to a housing problem that comes with a city of large scale and luxurious status. The project is globally relevant because affordable housing shortage is not only a problem in New York City. In many western(ized) urban cities similar housing shortages can be found with similar causes and effects. Although this solution is made to fit the context and regulations of New York, it can be adapted to fit other cities with high-rises.