

Thesis Reflection

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Studio:

Complex Projects

Borders – The Architecture of Violence

Teachers:

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Title of graduation project:

Vocational College Nogales

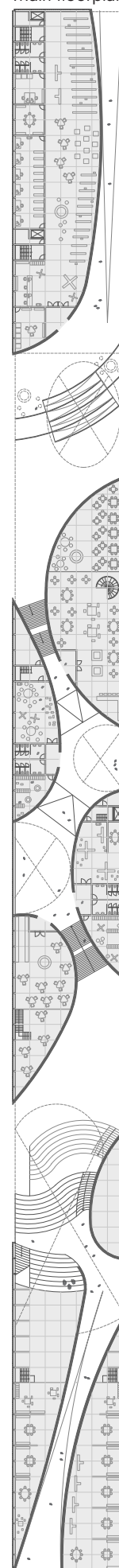


The relationship between the theme of the graduation lab and the subject chosen by the student

The graduation studio of Borders – The violence of architecture concentrates on the border conditions of the border between the United States of America and Mexico. A region with high potentials, but unfortunately known mostly for its negative perceptions, so a hard place for architecture to take its position in this complexity of layers. The problematic situation is visible in all scales, from (lacking) regional government to divided twin-cities on the border.

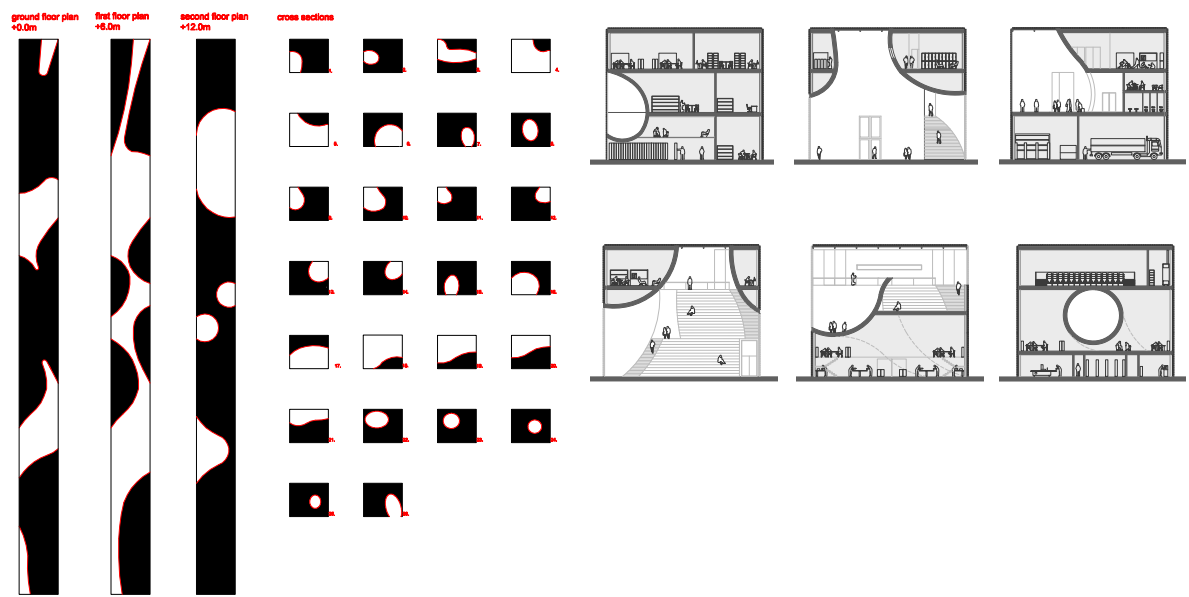
This graduation project focusses on an intervention in the city of Nogales, a twin-city on the border approximately halfway the border line. Nogales has a morphology that shows the city has a strong will to function as one city, but the border fence brutally splits the city in two parts. The project proposes a vocational college that will provide well-educated employees for the many industries Nogales has. This vocational college will be situated on a north-south orientated strip connecting the commercial centre of the city with the industrial part of the city (and symbolically connects the American part with the Mexican part of the city). The vocational college contains education buildings, faculties for the various studies and a principal building which functions as a combined library and workshop. This building is meant to be the spine of the masterplan, which is expressed in function and form. Knowledge and collaboration between different crafts/studies are located in this building; it is supposed to be a place to learn, share and meet. The building has a linear form from the outside, as it accentuates the north-south connection and makes a statement where the rest of the masterplan can lean on. The inside of the building is characterised by the circulation path, which also is north-south orientated and designed as a double-curved volume creating spaces and cut off by the façade. These curved concrete walls lead the visitor from space to space, going up and down through the building, giving the route a democratic character without any hierarchy. It lets corridors melt into open spaces without notion.

Main floorplan



Diagrammatic plans with spaces created by circulation route

Cross sections with spaces created by circulation route

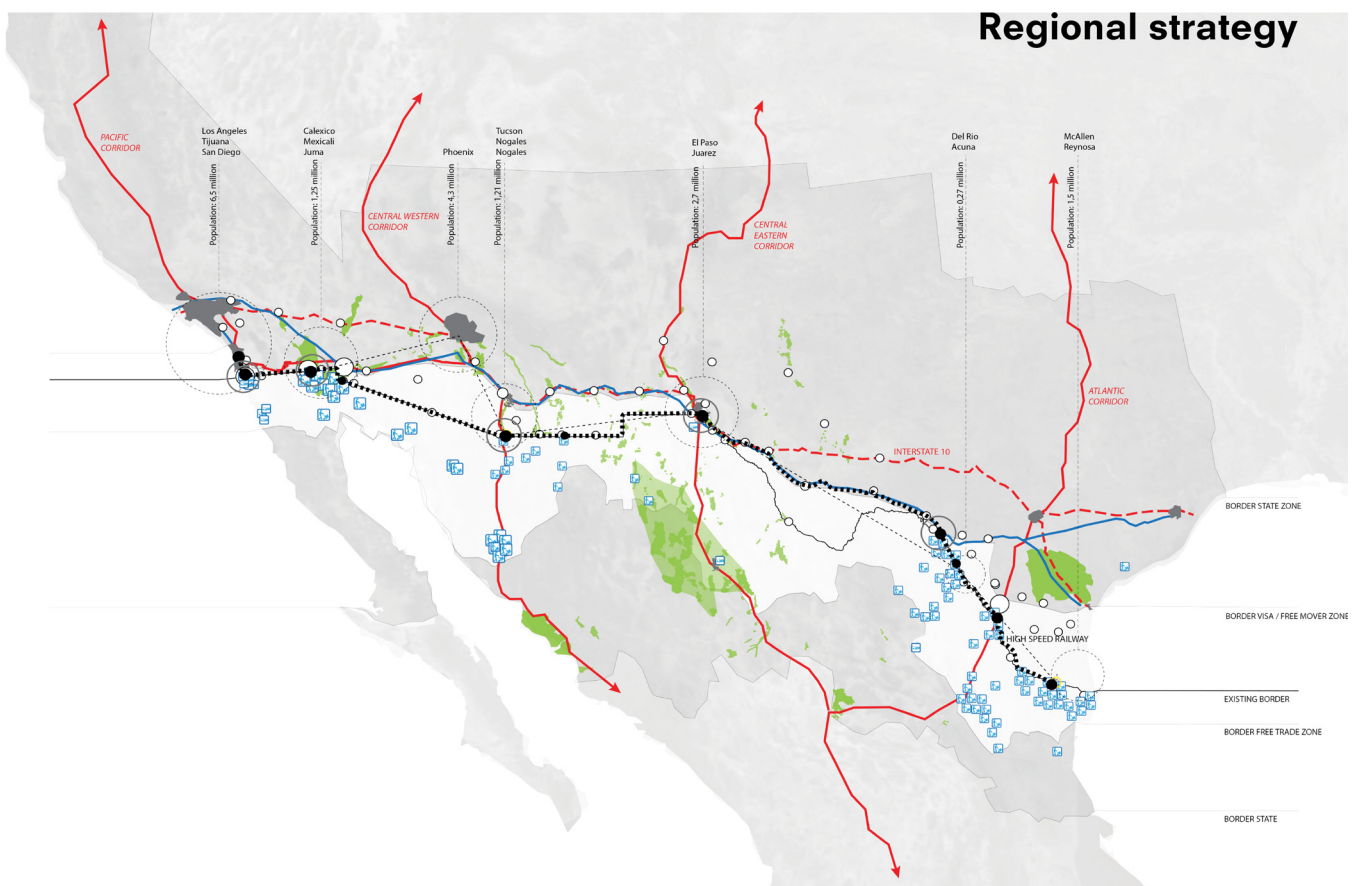


The relationship between research and design

This graduation project can be divided in different levels of scale. The region around the border of the United States of America and Mexico was the scale where we started (as a group), and therefore the largest scale. This region was researched by the division of ecoregions, not political regions, as the basic thought of the project was to do the research without any distorted perceptions. This analytical research included a lot of unpacking of the area with a large variation of themes (infrastructure, economics, ecologies, morphologies, social issues etc.). The next scale of the project was the urban scale of twin-cities located of the border. Five twin cities were analyzed with the same themes as the region scale, and deeper research was done on the local context. These two scales of research resulted in a new strategy for the region that enforces the potential opportunities to make it a prosperous region for the North American continent.

The individual graduation project started by picking a location. The research continued on the urban scale but got more detailed on the site scale. In this process the design started to develop from concept of urban intervention to building concept. Case studies on building typologies and references on city interventions and building types (vocational colleges, university campus, libraries, etc.) were used for the base of the masterplan and the design of the building. The smallest scale of the research investigated the materialization and circulation of the building. There was a dynamic interaction between research and design in this stage of the process. The research answered to the needs of the design concept and brought the design to a higher level.

Scheme of the characters of the twin-cities



The relationship between the methodical line of approach of the graduation lab and the method chosen by the student

The approach of the graduation lab was to start with creating an Atlas with all the research of the region mapped, hard data (maps on geography, morphology etc.) and soft data (maps on education level, mortality rates etc.). This Atlas became our theoretical database of knowledge, and a two week field trip along the border gave us the practical experience.

This process of research followed by experience was leading for the rest of the project. All parts of the design were researched with case studies, mass and proportion studies, materialization studies and through several kinds of design languages to find the right direction for the design. This method worked well as the dynamic interaction between research and design (as mentioned before) was very effective to make decisions with the experience of the research.

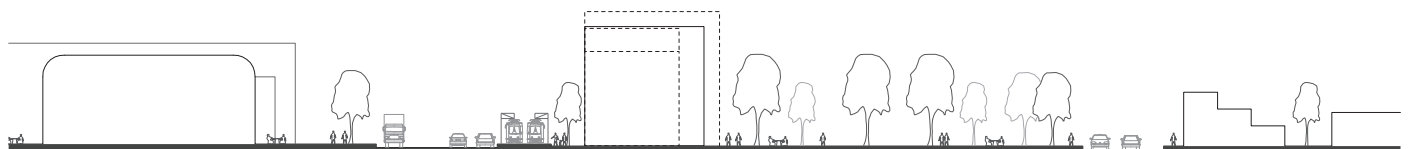
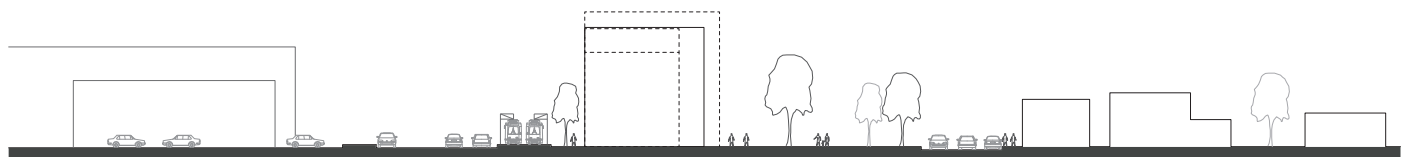
Besides the interaction between research and design, the graduation lab had a broad focus from extra-large scale (XL, border region) to extra-small scale (XS, building detailing). This approach seems hard to work with in the beginning, but very effective in the end, as the entire project is placed in the context and the concept of the project is expressed in every scale.

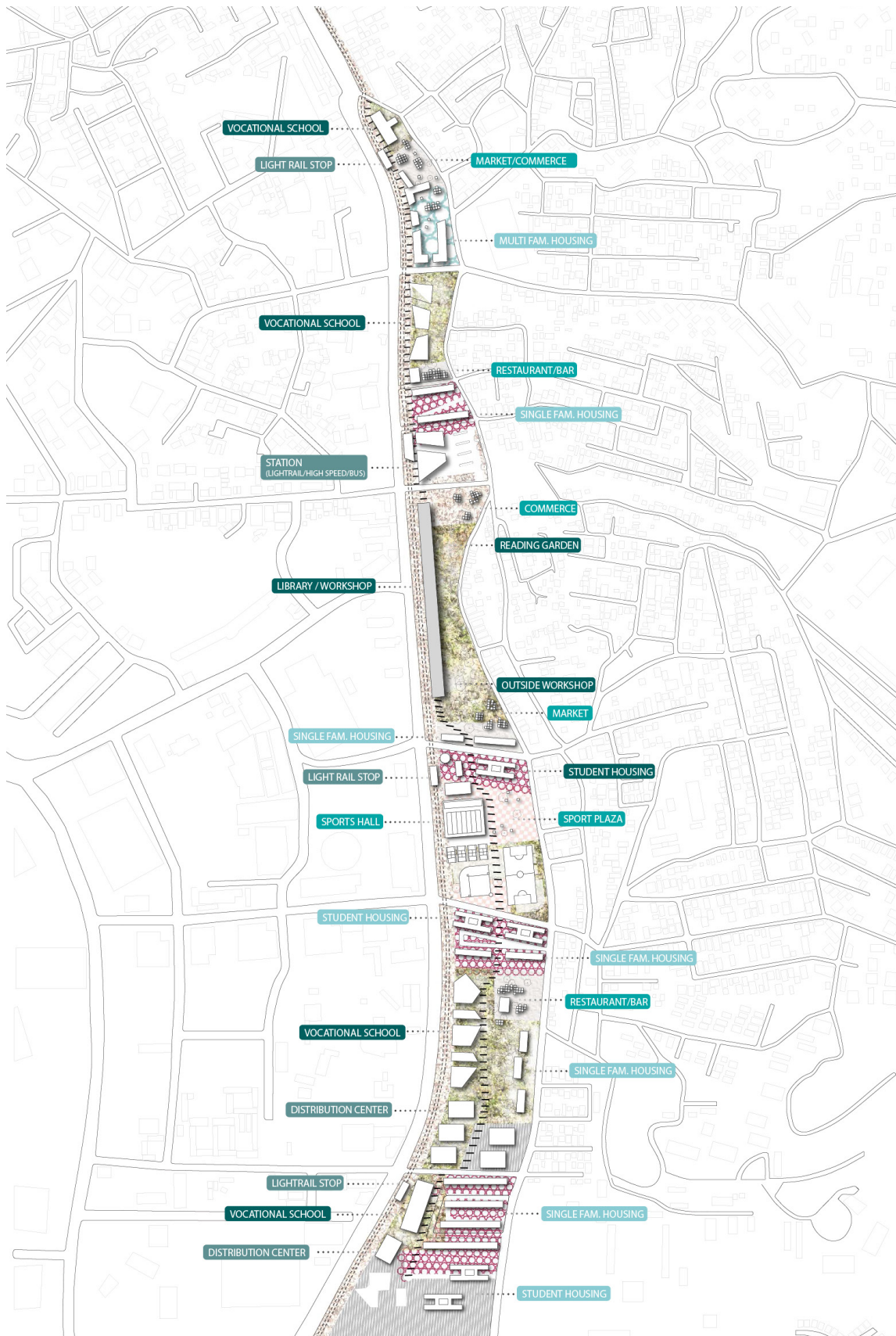
Case study on (building) typologies for the masterplan

Walking promenade
Library Walk

- Architect: PWP Landscape Architecture
- Status: build
- Location: University of California, San Diego
- Year: 1995
- Area: 8000m²
- Program: The walk provides much needed structure as well as a key pedestrian link to a loosely planned and sprawling campus.
- The walk is multi-functional, a location for campus gatherings and fairs throughout the year. Precast concrete plinths run the length of the walk and accent the linear variations.
- During the day, students use these elements for sitting, reading, and lying in the sun, while at night they function as lights. During campus fairs and gatherings, the pre-cast elements are used as different stations or tables allowing quick and easy transformation of the space.

Proportion study





The relationship between the project and the wider social context

The current situation on the border between the United States of America and Mexican demands a change. The implementation of the reinforced fence from 1991 until now had the aim of making the border region more secure and controlled, but the reality is that illegal immigrants and the transportation of drugs, weapons and illegal cash flows aren't restrained by the ten feet tall steel fence on the border. The research of this project brought a new strategy for the region along the border and the twin-city of Nogales. A regional government covering the parts of the two countries on the region will supervise on regulations regarding local issues such as (illegal) immigration, since the current situation with separate governments is not matching the demand in this region. This approach will help the border region to use its full potential.

On a city scale, this graduation project is related to the regional strategy by the character that was given to the city Nogales. All the five twin cities we did research on are described as unique characters which form the needed cooperation of the twin cities to enforce the border region. The character of Nogales was determined to be a unified city (no border splitting the city but a border around the city) where the industry and transport of the industry are the main themes. The vocational college this project proposes is fulfilling the lack of education in Nogales to provide employees for this industry. This will bring the industry to a higher level, giving Nogales the chance to a prospect of becoming an important character in the region.

The project elaborates on this urban context as the masterplan, as well as the building itself, are clearly north-south orientated to symbolize the unification of Nogales. The 300 meter long, thin building tries to connect the commercial center of the city (where the current border is situated) with the industrial hart of the city in the south of Nogales. At the same time, east-west incisions connect the local neighborhoods which are separated by a railroad yard in the current situation.

Scheme of the characters of the twin-cities

city	city diagrams	growth by 2050	growth by 2050	identity	21 mile city radius potential	new regional identity	border strategy	
San Diego-Tijuana		50 %	2 018 000	✓		international sea port		the new international sea port is the in-between zone and shared economic interest of San Diego and Tijuana
		50 %	1 950 000					
Calexico-Mexicali		50 %	58 500	—		agriculture center		the city limits are defined by the edge of Mexicali and the 21 mile agriculture zone on the north which becomes and essential part of the city
		50 %	1 035 000					
Nogales-Nogales		50 %	31 500	—		industrial city / transportation hub		the city of Nogales becomes "trapped" inside the border and becomes a longitudinal in-between zone attached to the interstate highway
		50 %	330 000					
El Paso - Juarez		100 %	1 350 000	✓		center of the region		the existing in-between space is turned into a buffer zone between 2 countries that is filled with social and cultural content which transcends the gap
		100 %	2 640 000					
Del Rio-Acuna		50 %	53 000	—		national park city		the national park and watershed becomes an important part of city's functioning. Nature is what connects Del Rio and Acuna
		50 %	218 000					