Process + Reflection

the common perspective

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method

- precedents
- toolbox of elements
- storyboards of characters

process

- prior research
- p2 strategy
- p3 precedent workshop
- pre-P4 element toolbox
- pre-P4 character storyboard

reflection

process
location

The fieldwork done in Bogotá as well as the analysis conducted on return both led to a strategy, presented at P2. This P2 strategy was a city-wide approach to create a (green) infrastructure which serves both the people as well as the automobile on a local scale. Looking at the specific location of the Autopista Norte and Parque Alcala it became clear that a strong zoning was taking place in the city (see figure 1). In this case the Autopista Norte, a freeway running from the center of Bogotá to the North, creates it´s own zone (see photos 1 and 2) which adheres to the same rules on both sides of the freeway, whilst the neighbourhoods lying to each side are extremely different (see photos 3 and 4). Parque Alcala (see photo 5), which lies in Usaquen, to the East of the Autopista Norte, splits the Usaquen neighbourhood in two.

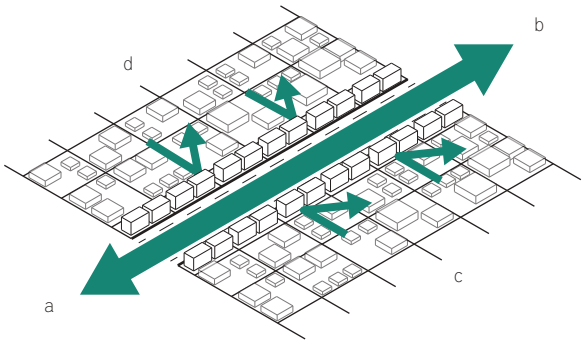
image 1 : map of the area : Autopista Norte + Parque Alcala

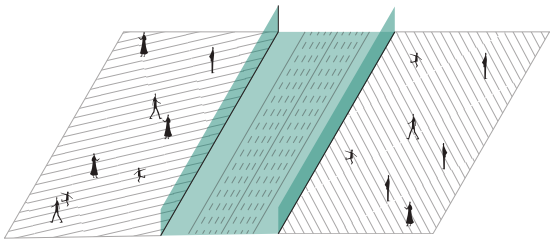
photo 1 - 5 : (from top left to bottom right) freeway zone on the Suba side; free-way with transmilenio bridge; Usaquen; Suba; Parque Alcala

process
problems/potentials

Before the proposed strategy could be created we analyzed the large infrastructural arteries in the city. From this we concluded four points, both problems and potentials. These problems and potentials are displayed in the image to the right (image 2), and are respectively (from top left to bottom right):

- the logistical conncectivty of the freeway which connects a to b, but disconnects c and d, as a result neighbourhoods turn their back to one another
- urban development occurs along infrastructural axis
- the zone of the freeway is dominated by the car and becomes a no-mans land
- a monotone streetscape is created along the large infrastructural axis, leaving the city without points of recognition.





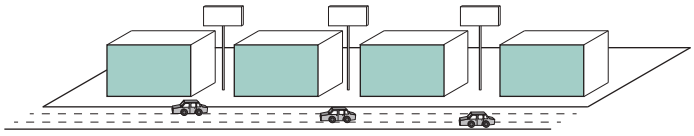


image 2 : conclusion of analysis of the Autopista Norte

process
precedents

The proposed strategy for the city was created after the analysis of many precedents, some are displayed to the right. The precedents we used were all ones that we felt dealt with the same problems and potentials which we concluded from the analysis. The projects ranged from large city-wide restructuring of freeways (f.e. Madrid Rio and Ringland), special landscaping along freeways to keep motorist alert (f.e. Vienna´s outer ring) to the re-emphasizing of riverscapes and lost infrastructures within the city (f.e. Cheonggyecheon and the Bloomingdale trail). Per project we extracted the used methods and tools to create a basis for a toolbox which we could apply to the city of Bogotá.

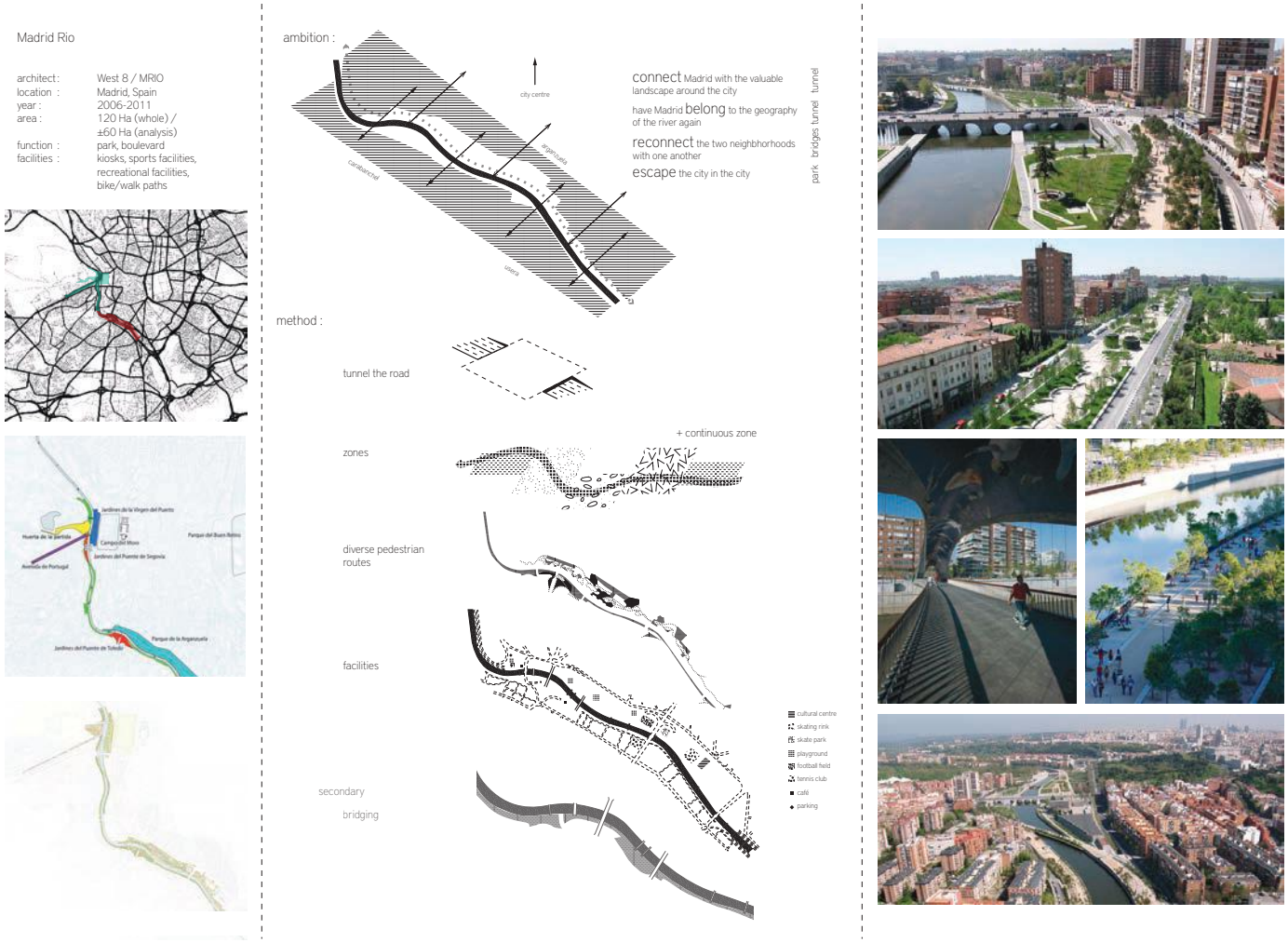


image 3 : analysis of madrid rio

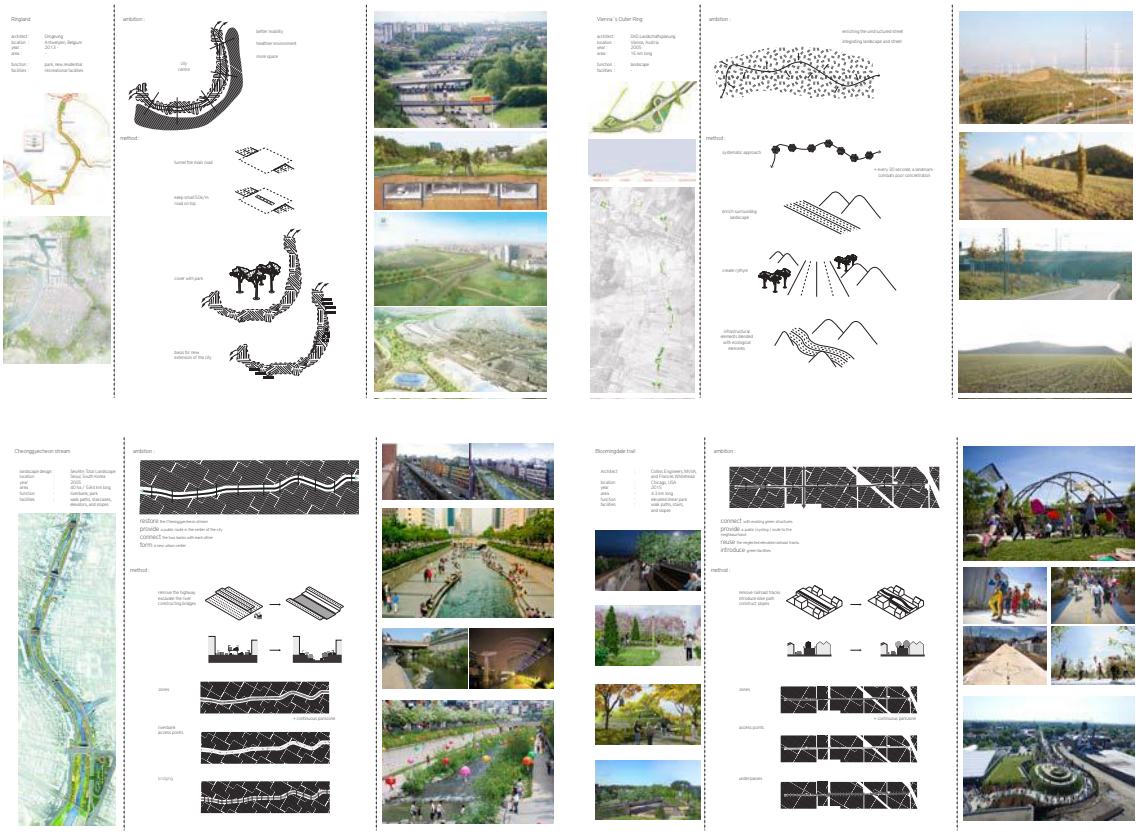


image 4-7 : (from top left to bottom right) analysis of Ringland; analysis of Vienna's outer ring; analysis of Cheonggyecheon; analysis of Bloomingdale trail

process
ambition and method

The analysis of the city´s freeway system led to the strategy´s ambition (see image 8), namely to 1) create a better sense of direction within the city, 2) stitch the city together and 3) bring back the human scale to the freeway zone. This together with the precedent analysis lead to the proposal of a concept we believed would achieve these ambitions (see image 9). By integrating the ecological and infrastructural systems of the city we hope to redefine the city, and achieve the prior mentioned ambitions (see image 10).

In order to further define the strategy and be able to define more specificly the solutions to the proposed method a toolbox was created. In order to do so we picked five locations, each with different circumstances, and implemented the strategy concept. The alterations to each site became ´rules´ in our toolbox (see image 11). These rules deal with aspects spanning from the division of lanes on the freeway and the placement of bridges to how to deal with landmarks and other structures within the freeway zone.

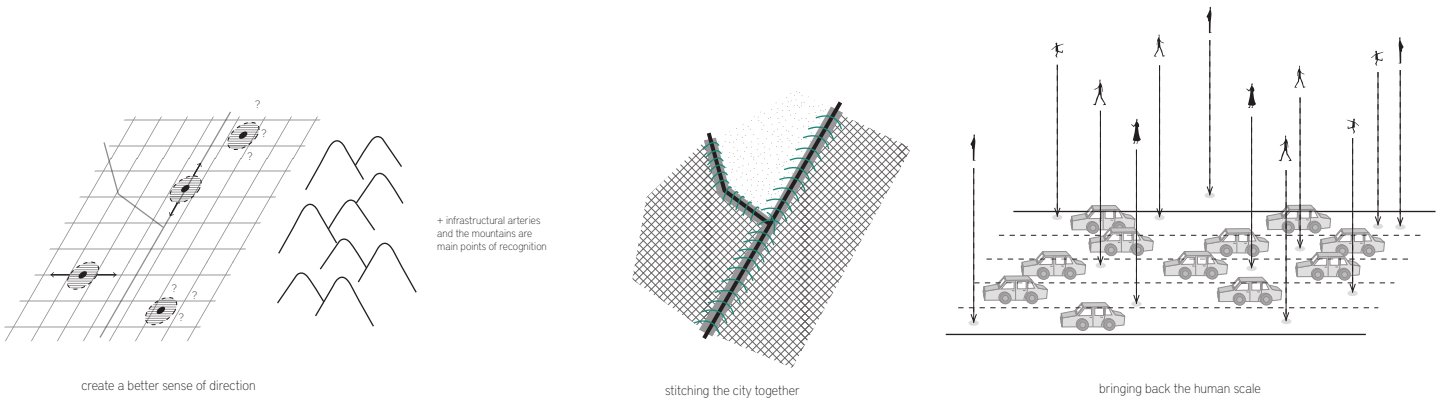


image 8 : ambition for proposed strategy

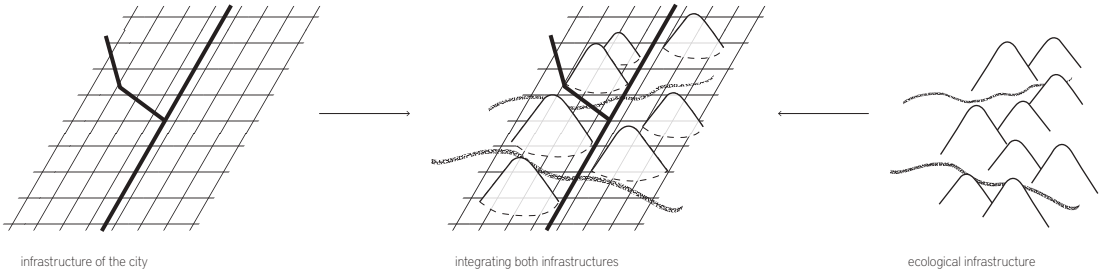


image 9 : concept

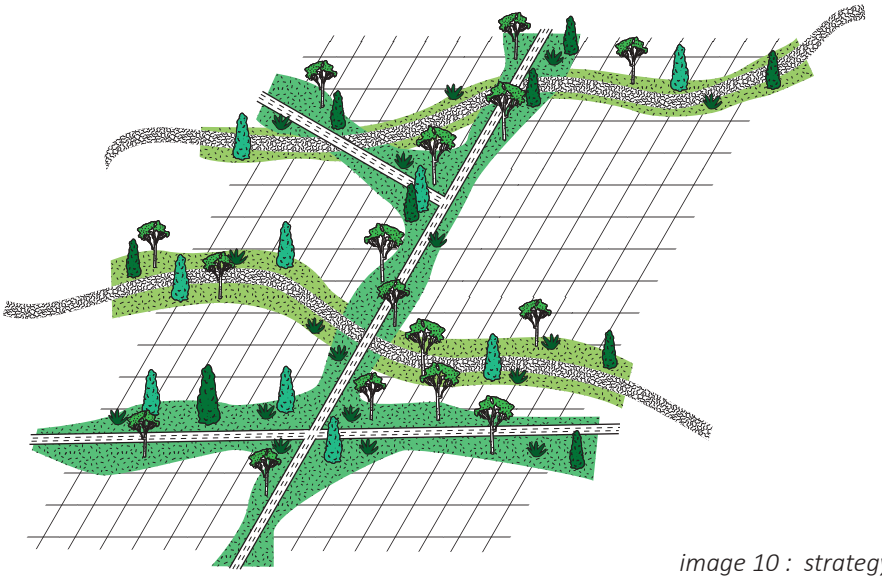
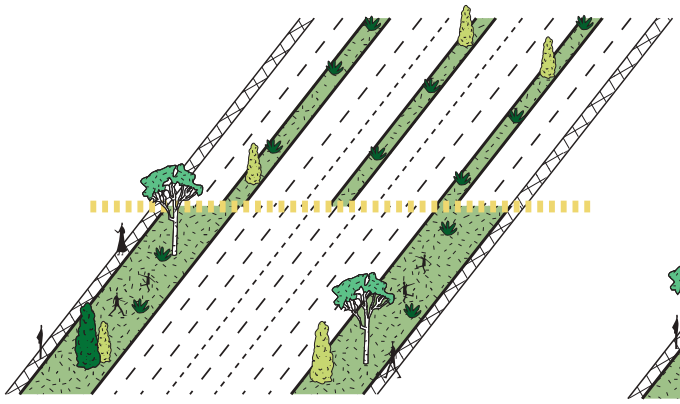
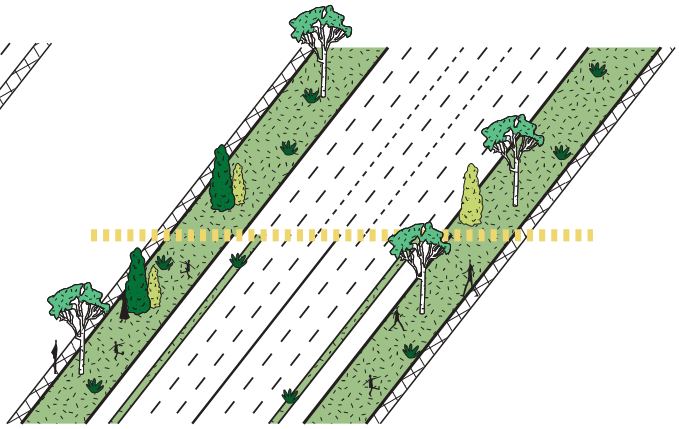
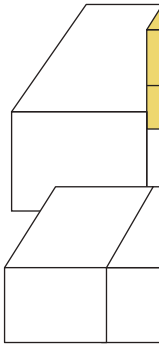
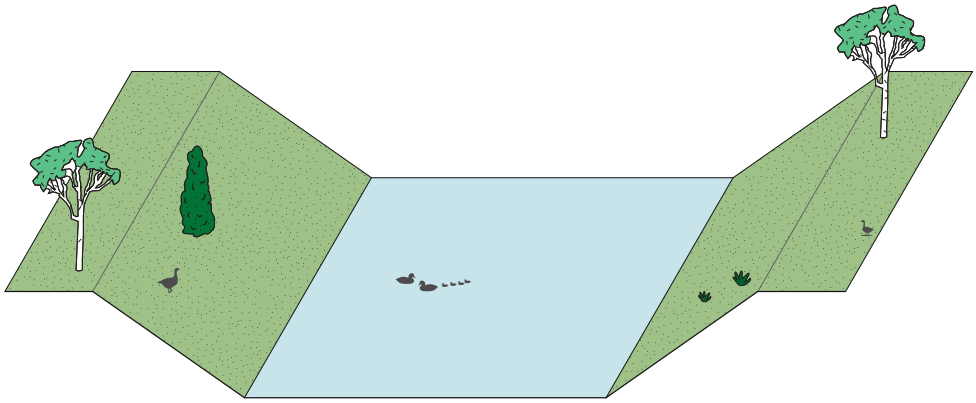


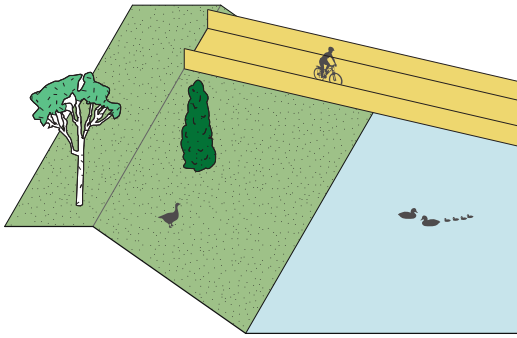
image 10 : strategy concept

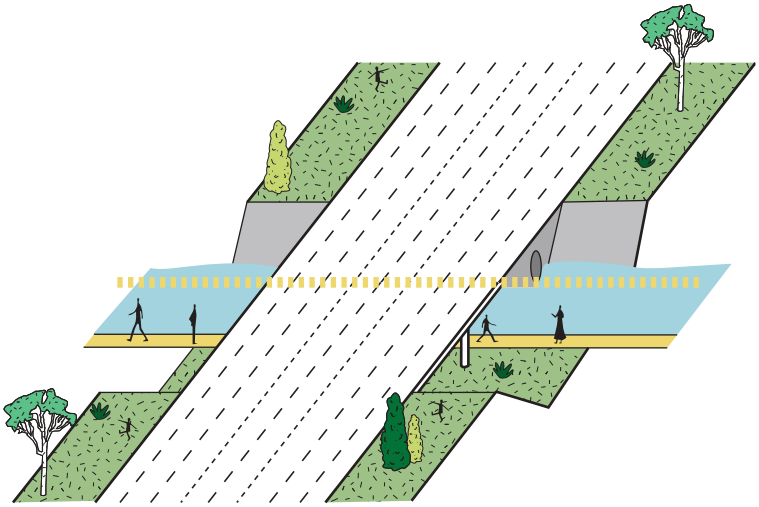












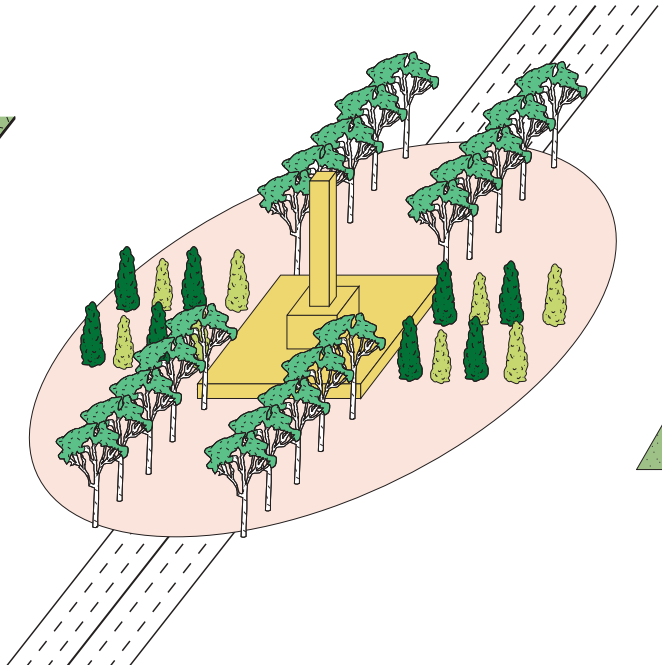


image 11 : strategy toolbox

process
design

After applying these rules to the first chosen location (which eventually became the location for the final design) the site transforms (see image 12). The transmilenio stations have been moved to the sides of the Autopista Norte and the car-oriented buildings have been taken away making room for an expansion of the park along both sides of the freeway. This first design proposal was implemented on the the location indicated in the bottom image and was the starting point for the final design. From this a more specific design framework and ambition was formulated. The design was to weave together three layers: architecture, infrastructure and landscape architecture.

Design brief :
Stimulate the common between the four previously mentioned zones (Suba, Usaquen, Autopista Norte and Parque Alcala) using tools and techniques from infrastructure, architecture and landscape architecture.

´Stimulate the common´
Creating instances of interaction whilst preserving the existing activities of each zone.

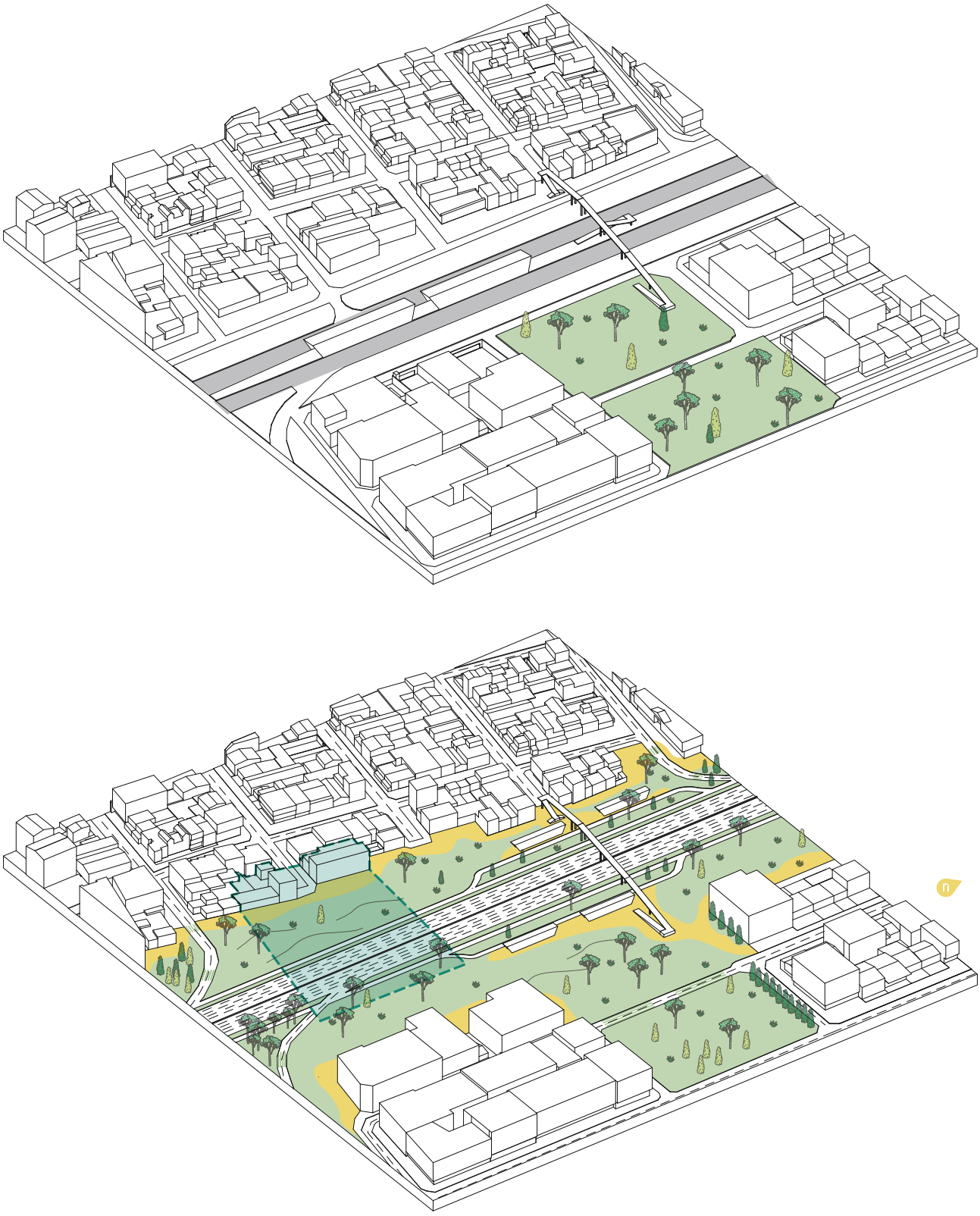


image 12 : before (top) and after (bottom) situation of the chosen location

process
precedent projection

In order to get a better sense of the possibilities of the location three existing designs were projected onto the site. All three had a combination of the three layers mentioned in the design proposal. The three projects were Parc de La Villette by Bernard Tschumi, Parque do Flamengo by Burle Marx and Stowe Gardens by (among others) Capability Brown. The projections were documented by means of plans, elevations and storyboards of different modes of transport (bus, car, pedestrian) (see image 13). The storyboard images offered a new viewpoint on the area, one based on the experience and movement of the different users rather than a top-down representation. The three designs all had certain aspects (infrastructural, architectural or landscape) which performed logistically as well as experience wise in the area. For example the Parque do Flamengo version created a large stroke of green public space in the middle, splitting up the freeway and added two pedestrian bridges forcing the pedestrian to stop over on this newly founded public space.

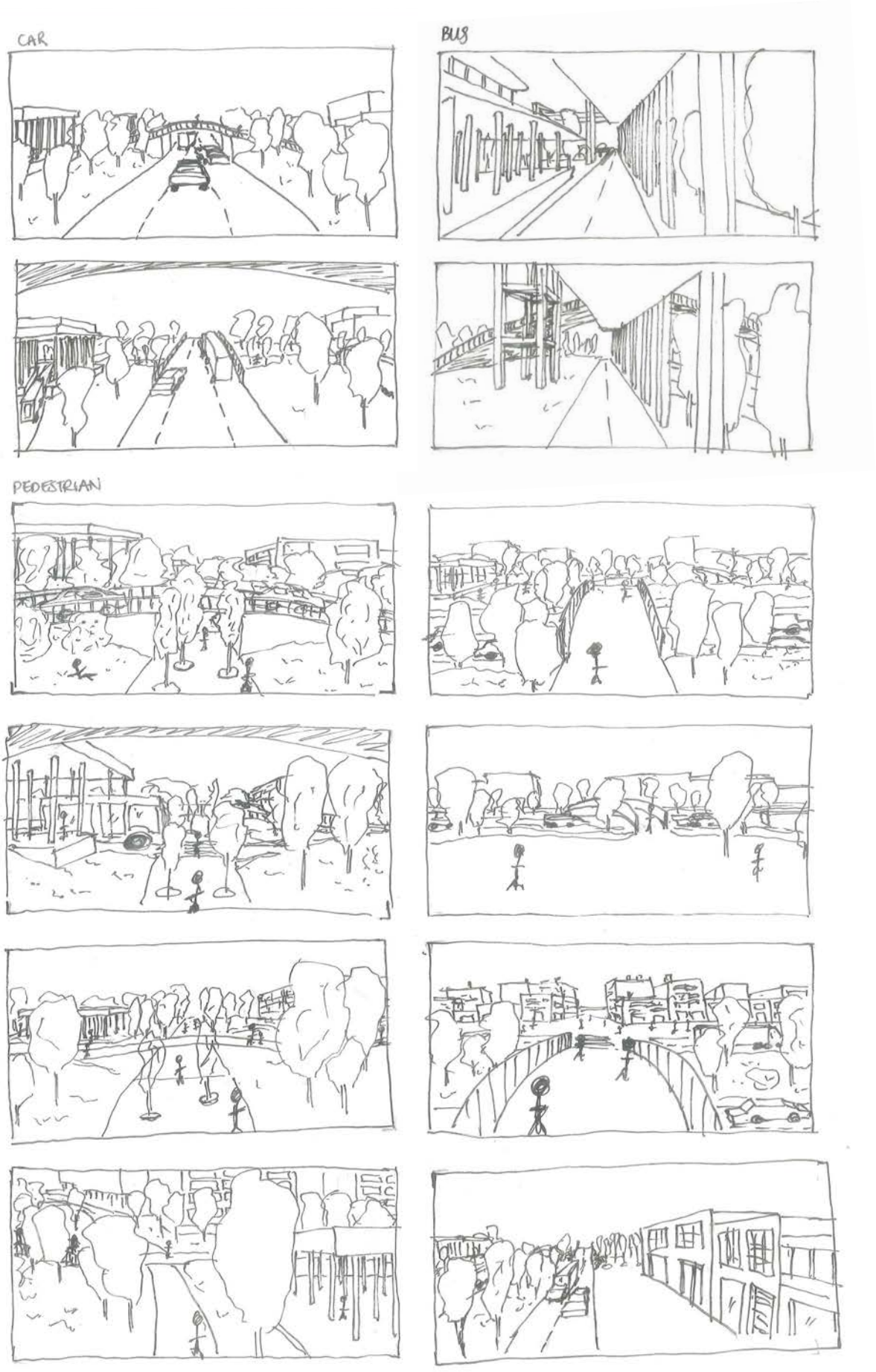


image 13 : (from top left to bottom right) the car route through the Stowe Gardens verision; the bus route through the Parc de La Villette version; the pedestrian route through the Parque do Flamengo version

process
precedent routing

The previously mentioned example from the Parque do Flamengo version is one of many of the examples how the pedestrian crossing can be arranged logistically. The Parc de la Villette and the Stowe gardens interpretations include (risen) axis´ accompanied by scenic routes. Whilst the Stowe garden axis runs through the middle of the park the Parc de la Villette axis runs asymmetrically and connects a grid of follies placed over the site. Using this grid as a basis and adding direct travel lines between all roads that lead to the site, a circulation is generated. The bridges try to avoid the direct lines of movement someone would like to take. And if they do follow these, the bridge is split into two parts. This prolongs the crossing experience. Eventually a network of bridges was formed (see images 13 + 14).

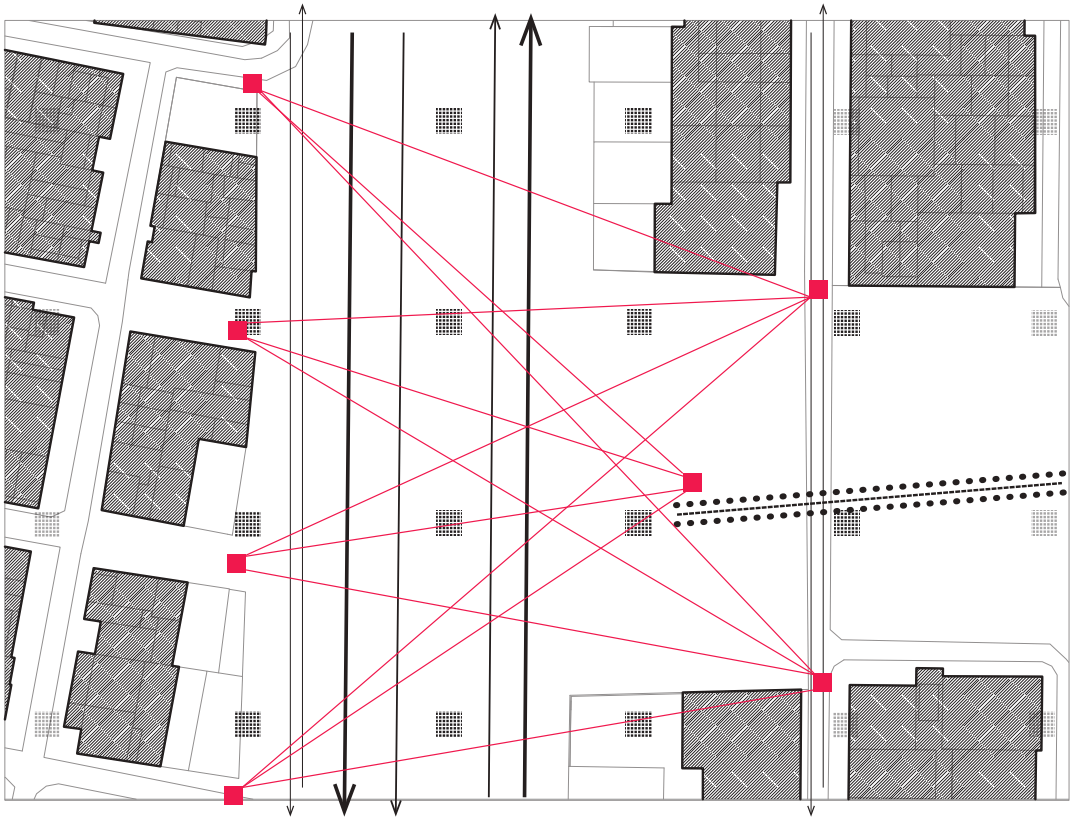


image 14 : direct lines crossing the freeway

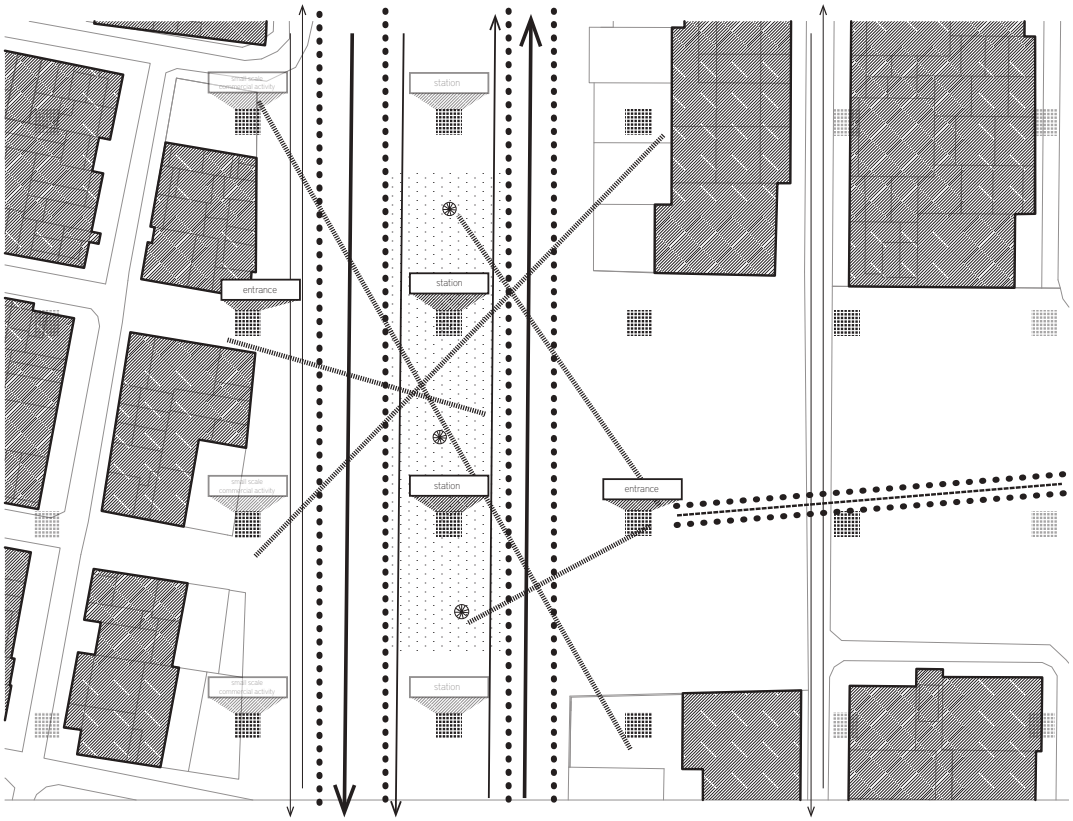
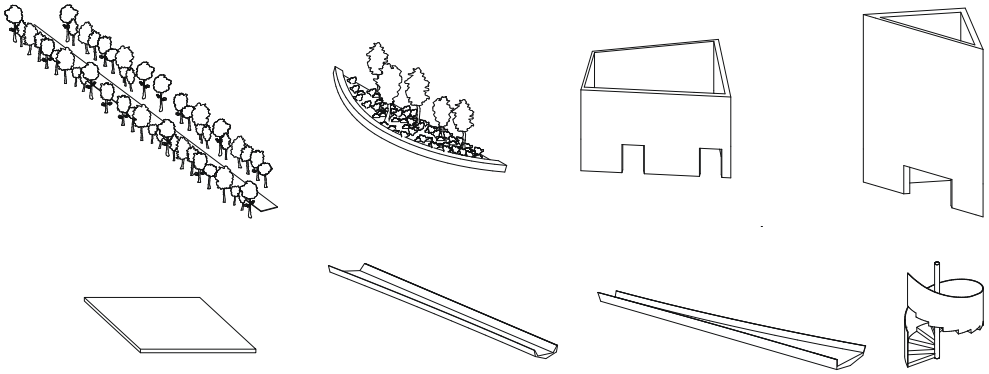


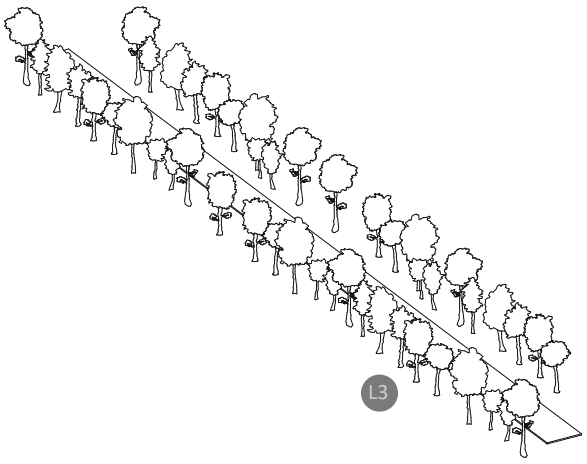
image 14 : circulation

process
precedent toolbox

After the routes for the pedestrian, the car and the bus had been determined a toolbox of elements was created in order to fill in and design the large site. The elements were extracted from architectural, landscape architectural and infrastructural precedents and sources. They were then given ´rules´ of use to narrow down the application and placement of each element. At the beginning the toolbox was made up of few and basic tools and elements.

The utilization and placement of these design elements was done in collaberation with a tool of representation, namely the perspective storyboard. This will be explained further on.





description : *axis of trees along a pedestrian route*

use : *in a free movement pedestrian area (f.e. a park)*

purpose : *to concentrate pedestrian movement*

precedents : *Stowe Gardens / Parc de La Villette*

image 15 : toolbox elements

process
attractive architecture

The elements of architecture deserve a bit more explanation, particularly because of their interaction with the network of bridges. The buildings are added to the area to house functions. Functions which will trigger, attract and compel pedestrians to make use of the new network of pedestrian bridges. More importantly however is their visual interaction with the pedestrian bridges. Using the perspective view as a tool in combination with the rule of thirds taken from film and photography the placement of these buildings was decided (see image 16). The rule of thirds indicates which locations of a certain view should hold a ´subject´. Placing the buildings on these spots makes the route more appealing for people to cross. Using views from the new bridges the building locations were decided. This defined the location and height of the buildings.

The shape of the buildings was influenced by the Torres de Satélite by Luis Barragán. Instead of placing them all in the same direction, the wasy Barragán did, the buildings have different orientations and add a dynamic effect to the area and the movement through the site.

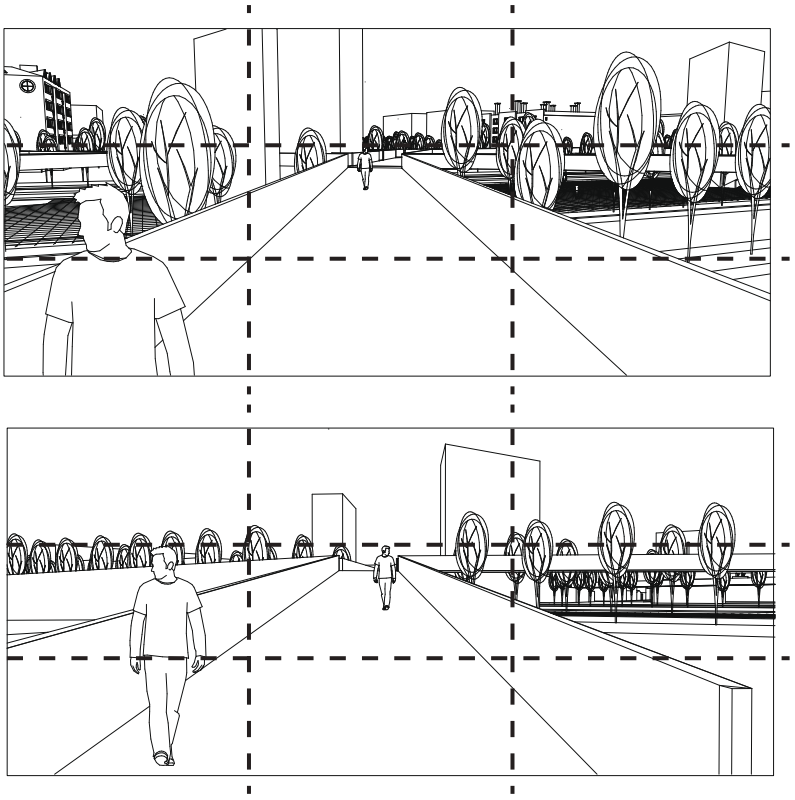


image 16 : rule of thirds placed on top of perspective (top) from Usaquen; (bottom) from Suba

process
characters

The use of perspective storyboards proved a succesful design tool when projecting precedents onto the site and determining the location of the buildings. To be able to design and fill in the entire site with the tools taken from the precedents six characters were created: Andres, Camila, Maria, Diego, David and Paula. All characters either live, work or move through the area on a somewhat daily basis. The route of each character takes place on different times during the day and different days in the year to get a feel of the site under different circumstances. Here you can see the profile of Andres and the route he takes through the area (see image 17). Image 18 displays the routes the other characters take. The modes of transport used differ per character. For example Paula bikes through the area, whilst David takes the car and Maria the bus.

NAME :	Andres
AGE :	36
HEIGHT :	169 cm
PROFESSION :	mechanic in Suba (Cra. 45a #135-25, Bogotá, Colombia)
ADDRESS :	Calle 135, Cl. 135 #45-16, Bogotá, Colombia
PARTNER :	wife Alejandra (32)
CHILDREN :	two boys; Julian (age 11) and Ivan (age 15)
HOBBIES :	cars, basketball, reading, family, socializing

DATE :	25th of may
TEMPERATURE :	low 14 °C; high 19 °C
WEATHER :	sunny
PRECIPITATION :	0 mm
HUMIDITY :	72%
SUNRISE :	5:42 am
SUNSET :	6:03 pm

8:33 am	walk to convenient store to buy the newspaper and a coffee
8:42 am	socialize on the steps
9:01 am	walk to work

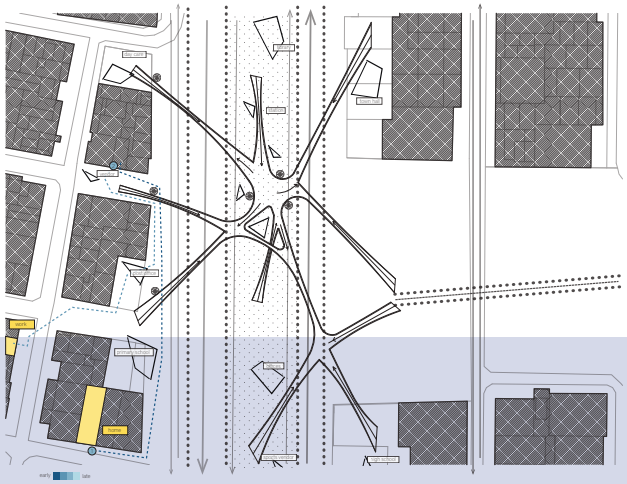


image 17 : Character profile and route - Andres

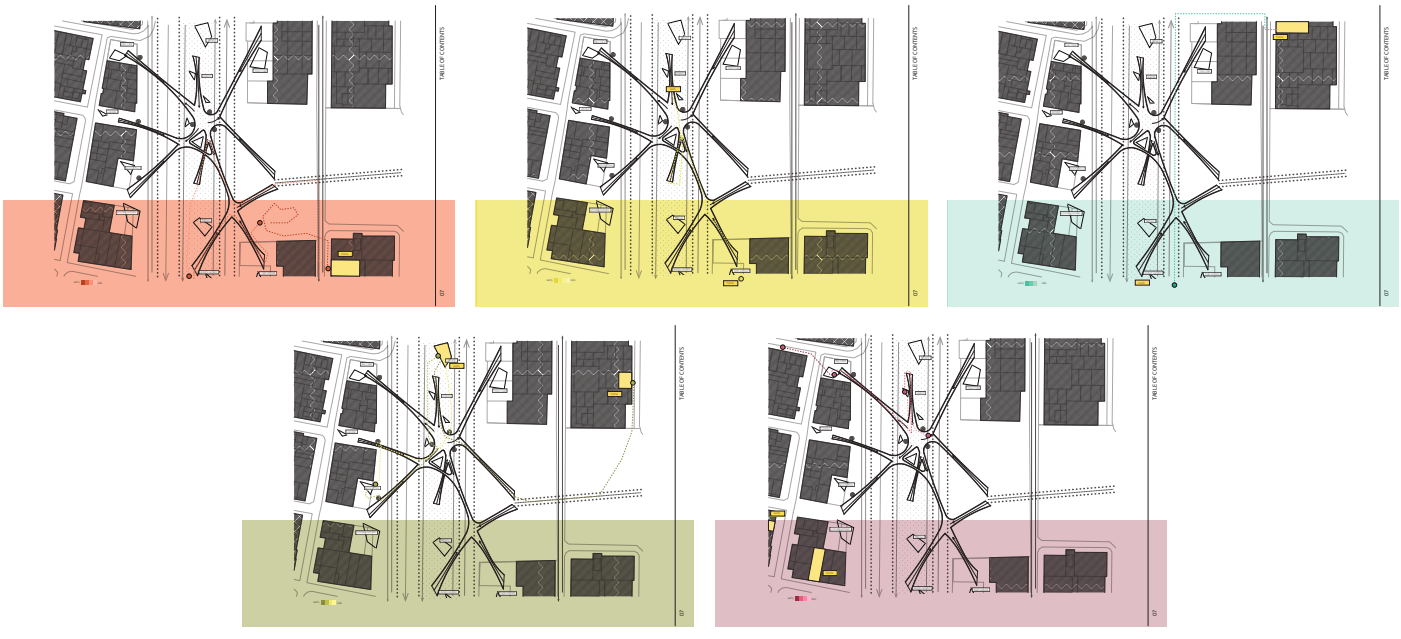


image 18 : Character routes (from top left to bottom right) Paula, Diego, David, Camila and Maria

process
phases/design

The designing of the site through the eyes of each character is done in phases. The first phase is that of the elements, adding the elements whilst walking through the routes of the characters and when needed adding new elements to the toolbox. After this begins the second phase which delves into the materiality of the project, in relation to that of the existing. Again each route is taken to further define the elements and their materiality. And finally during the last phase (image 20) zooms in on the elements, the usability is tested and more detail is added to the design. People are also added in the third phase. During the course of these phases the toolbox of elements grows. During the second and third phase elements start to differentiate themselves from their initial ´type´. The amount of elements also grows with the amounts of routes taken. In the image to the right (image 19) you can see the elements which have been used during the storyboard routes of David and Andres.

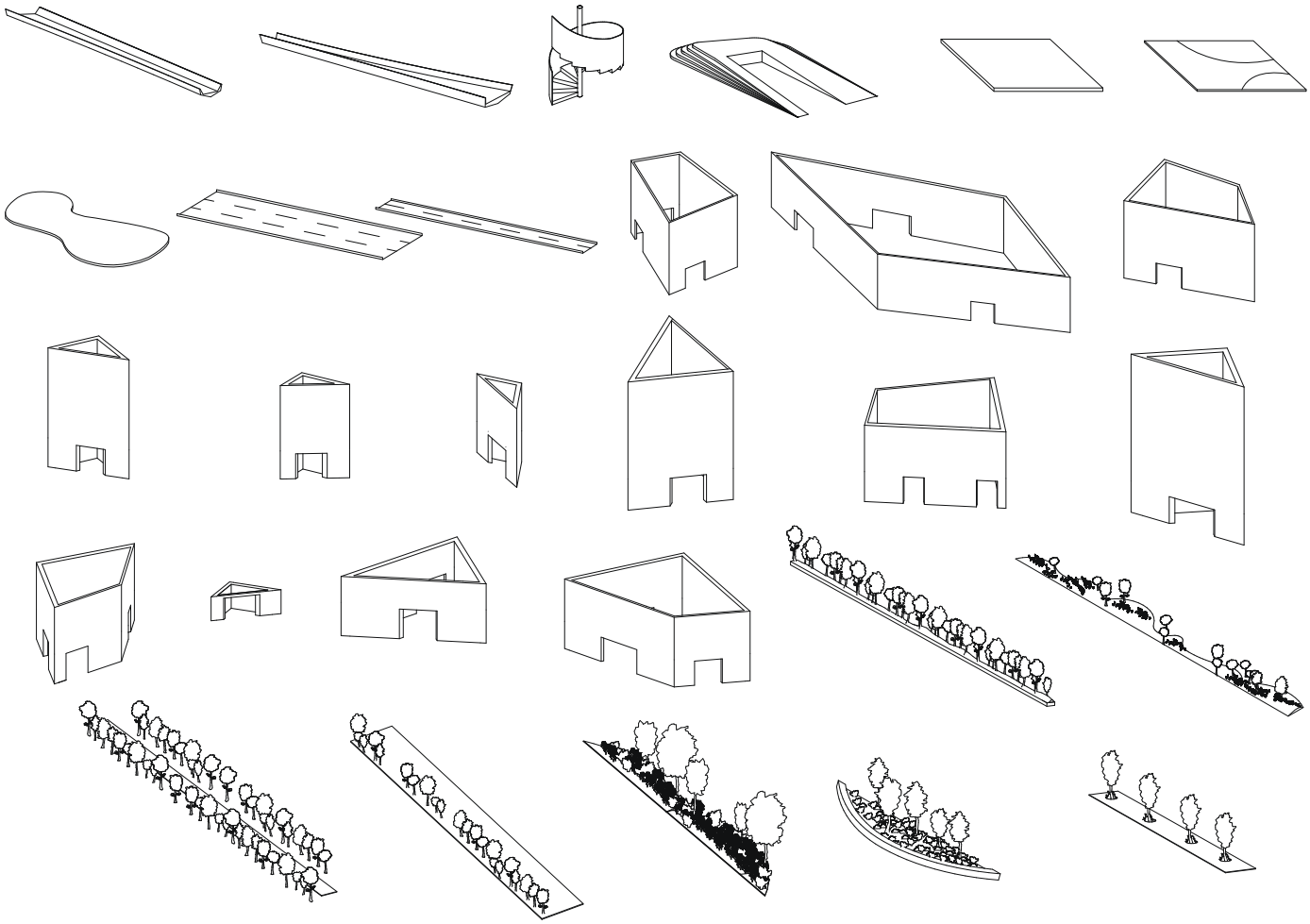
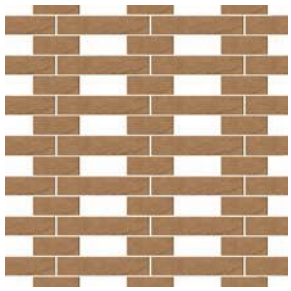
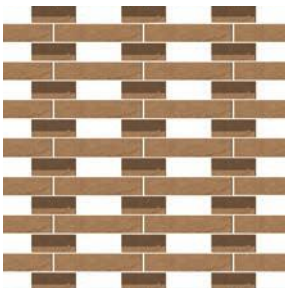


image 19 : overview of elements (Andres/David)



_1 *perforated brick facade*



_2 *perforated brick facade_shifted*

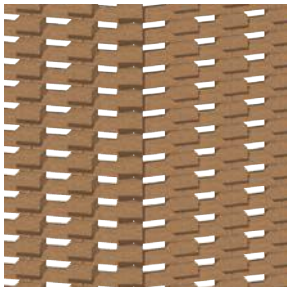
_7 *perforated brick corner*

_8 *closed brick corner*

_3 *closed brick facade*

_4 *closed brick facade_shifted*

_9 *closed brick corner_shifted*



_10 *perforated brick corner_shifted*

_5 *perforated brick opening*

_6 *closed brick opening*

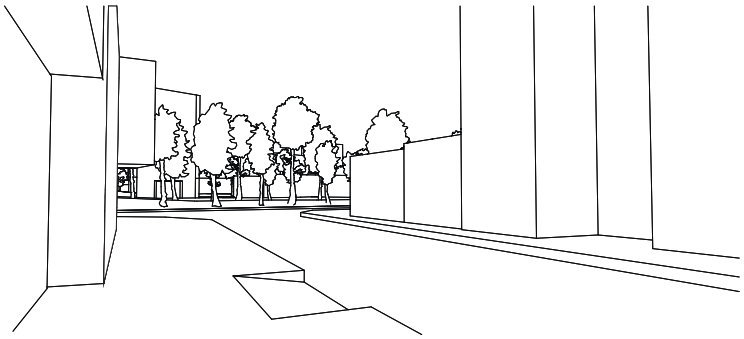
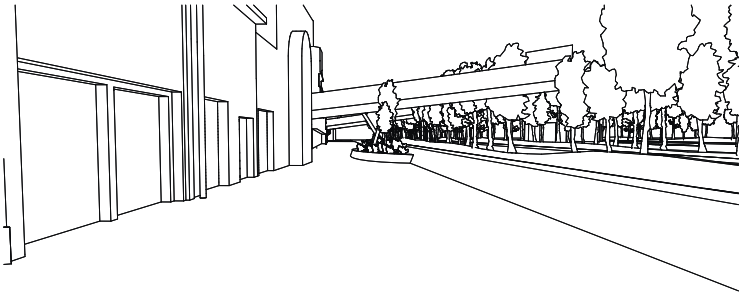
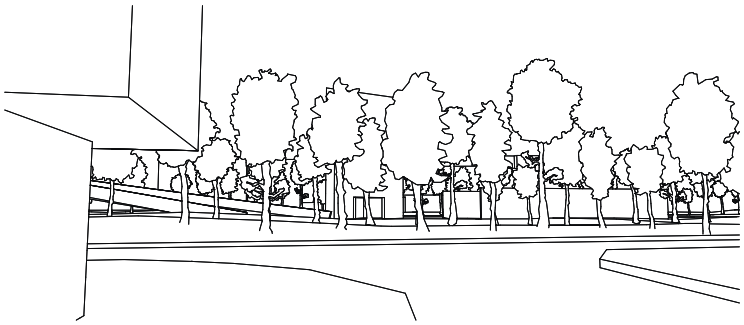
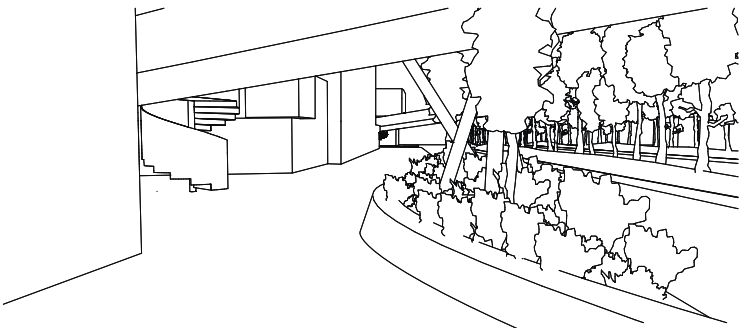
_11 *perforated/closed brick corner*

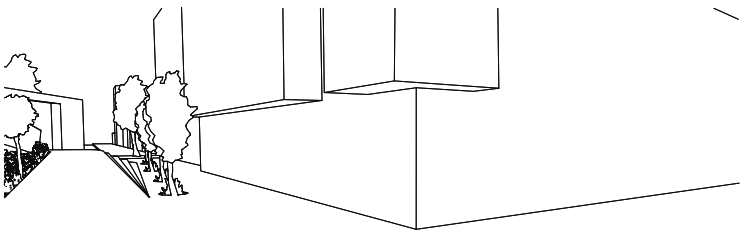
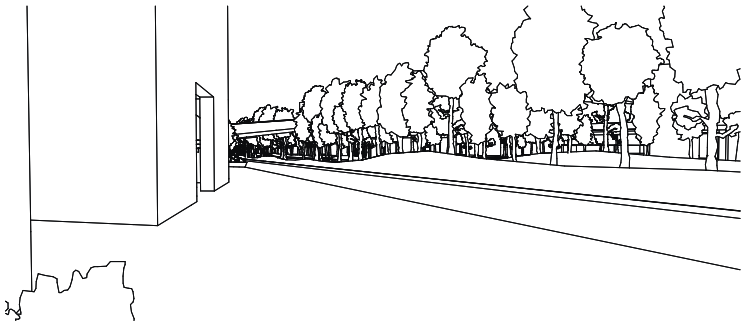
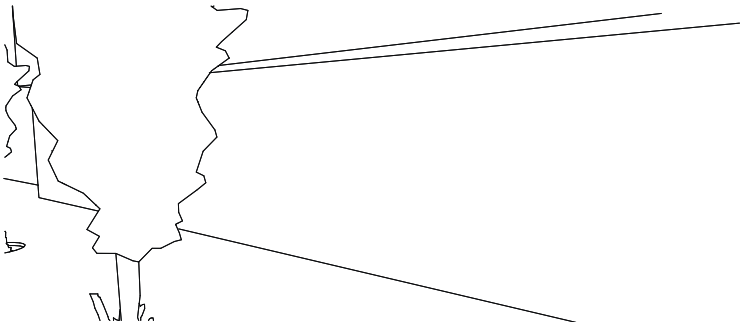
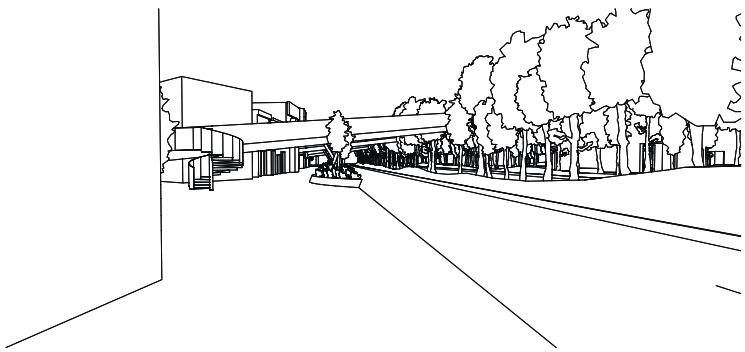
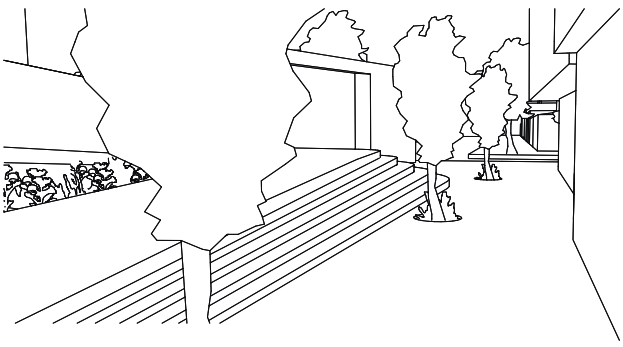
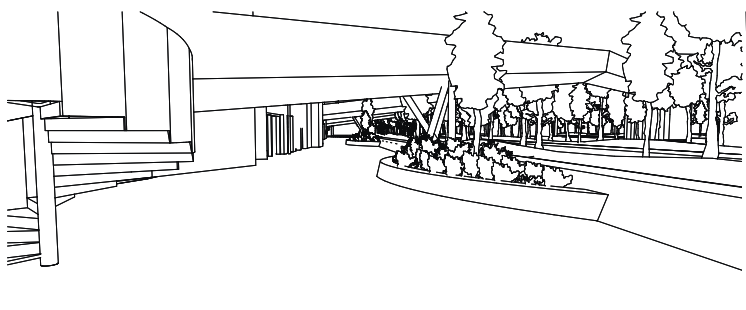
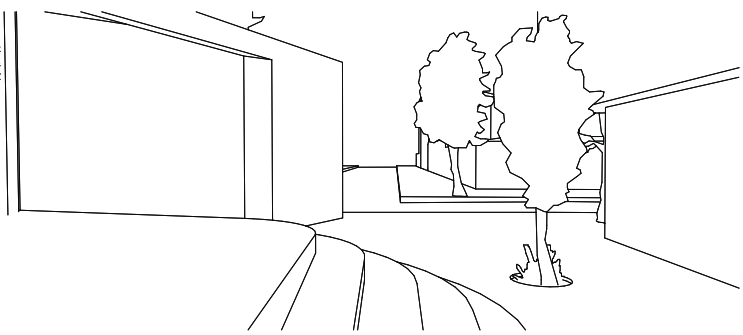
_12 *perforated/closed brick corner_shifted*

image 20 : overview of brickwork applied to the architecture elements

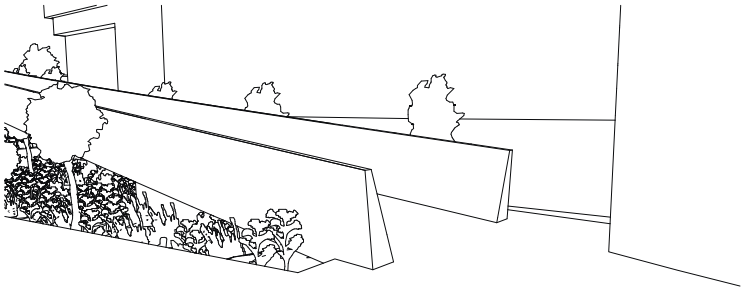
process
Andres

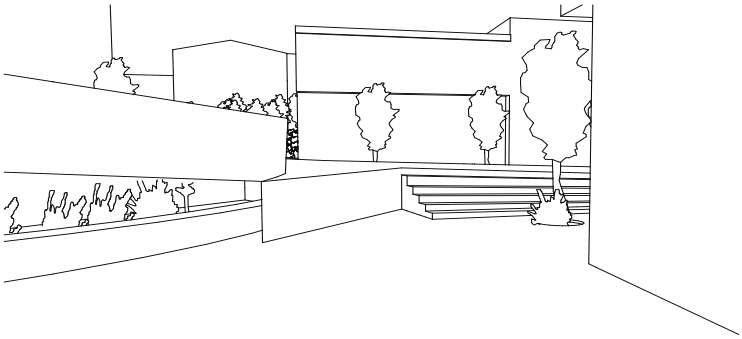
Displayed is the first part of the route Andres takes through Suba every morning, phase 1.

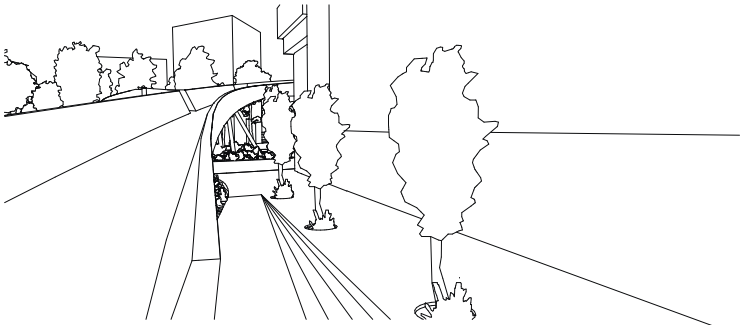





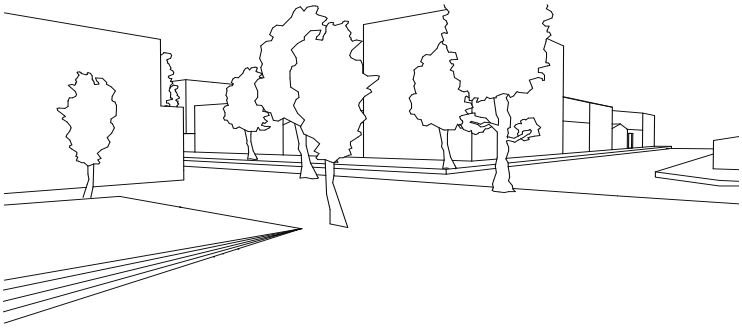








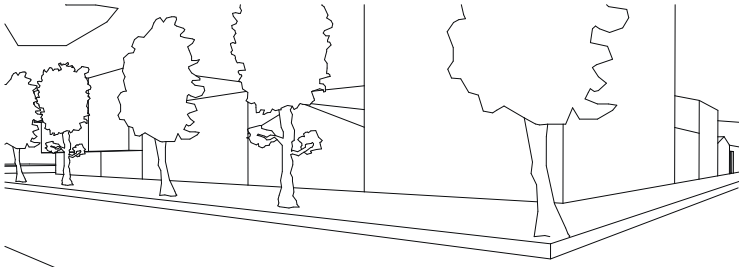
Displayed is the second part of the route Andres takes through Suba every morning, phase 1.

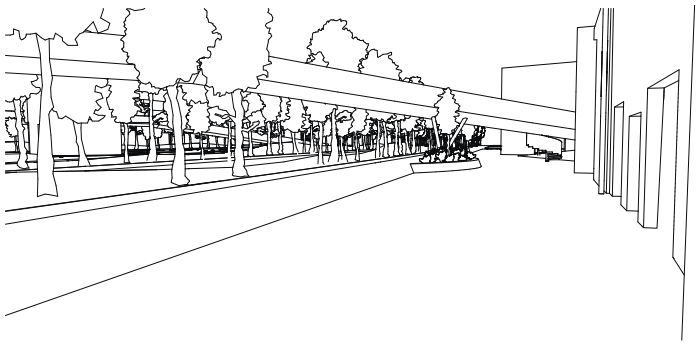


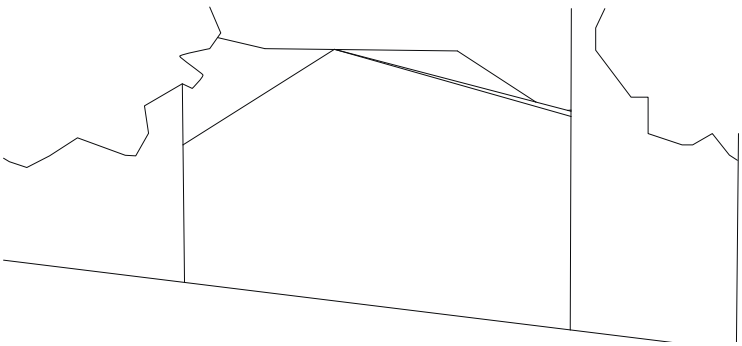


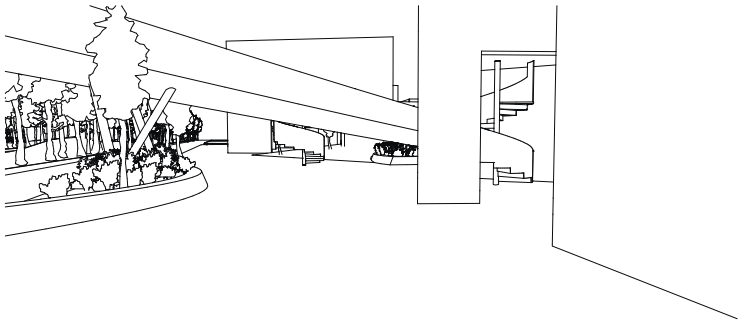


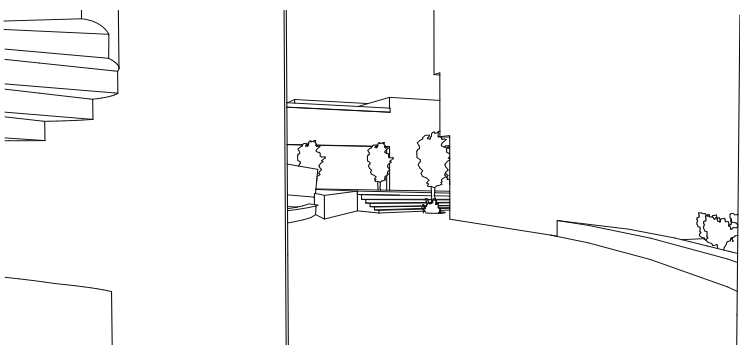






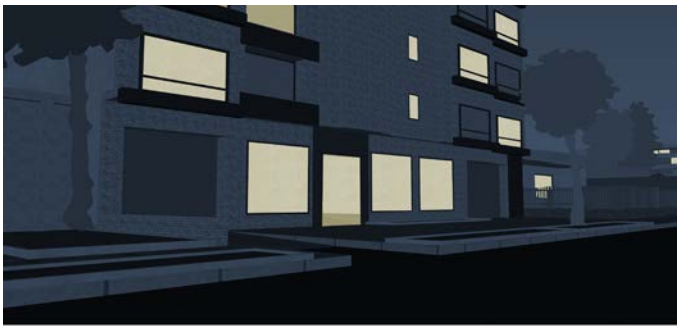


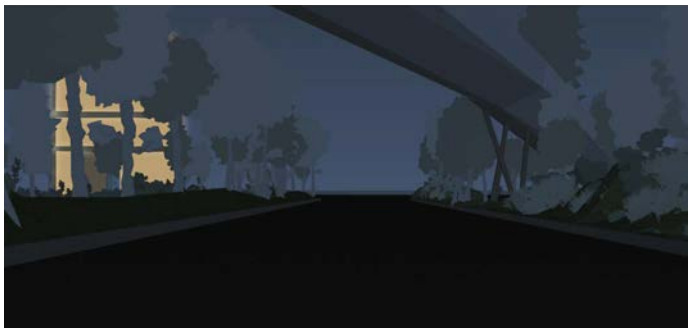




process
David

Displayed is the route David takes with his car on his way home from work, phase 2.

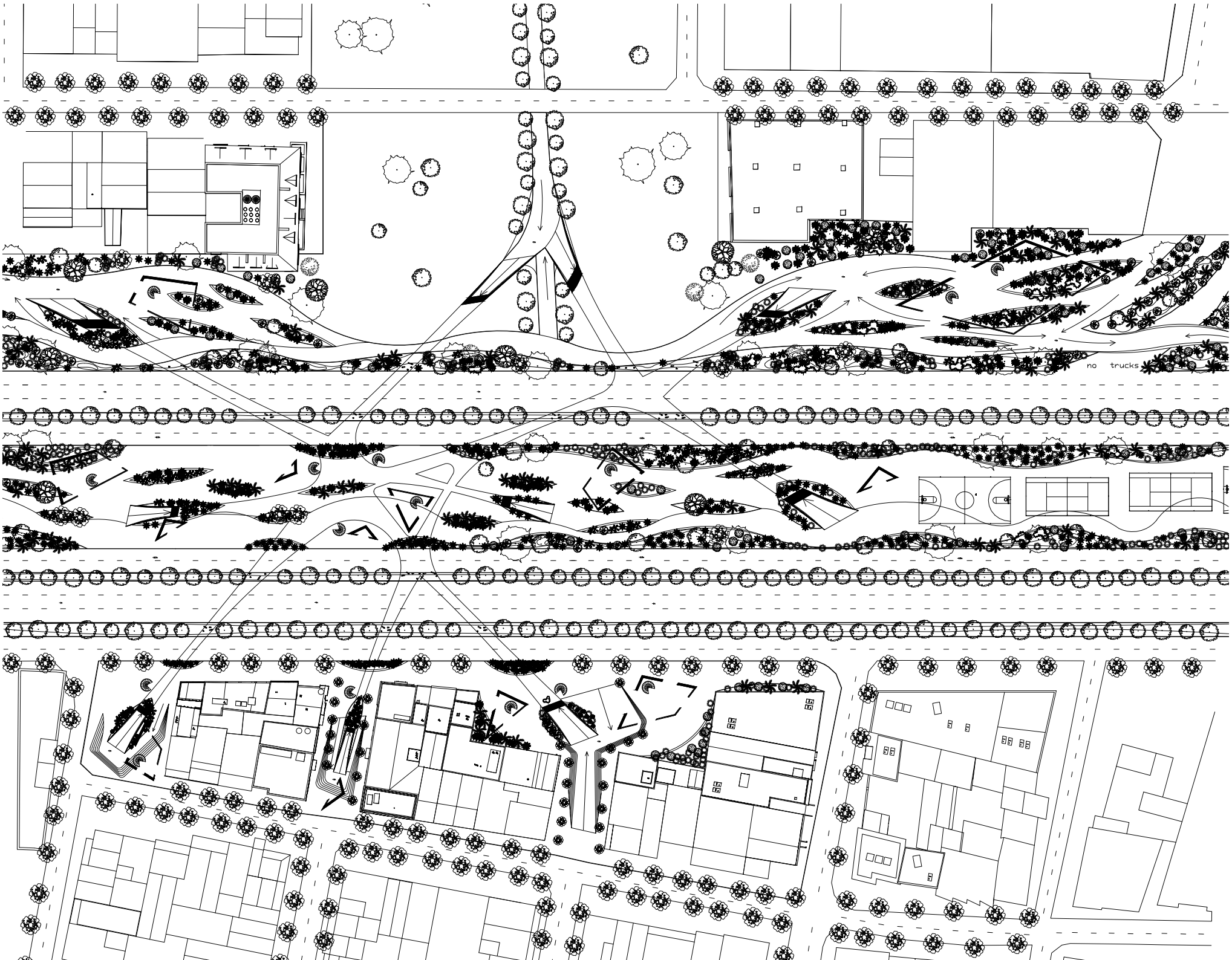




process
final design

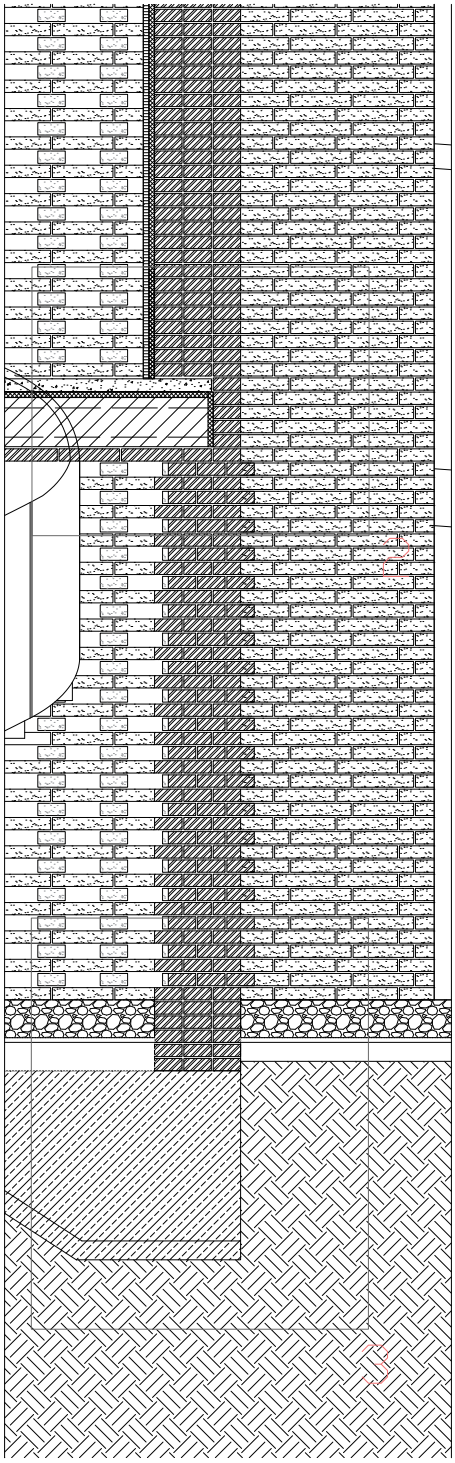
After finishing all the phases of all six of the characters the final design has been created, a new urban landscape, which blends architecture, infrastructure and landscape architecture. The network of bridges has been molded into a fluid, gum-like object which connects all three zones. The layers work together to create a dynamic experience while moving through the area and reacts to the existing conditions of the neighbourhoods. The bridge lands on urban squares in Suba and on green gravel pathways in Usaquen and Parque Alcala. The station square in the middle combines both of these. The slopes of all the ramps are usable for wheel chairs as well as bikes which may want to cross.

The interior of the buildings has not been designed as this is free for the user to develop and fill in as they please. The exterior of the building is the important part and created to last, this interacts with the landscape and the movement of the bridge to form dynamic landmarks along and between the Autopista Norte.


no trucks

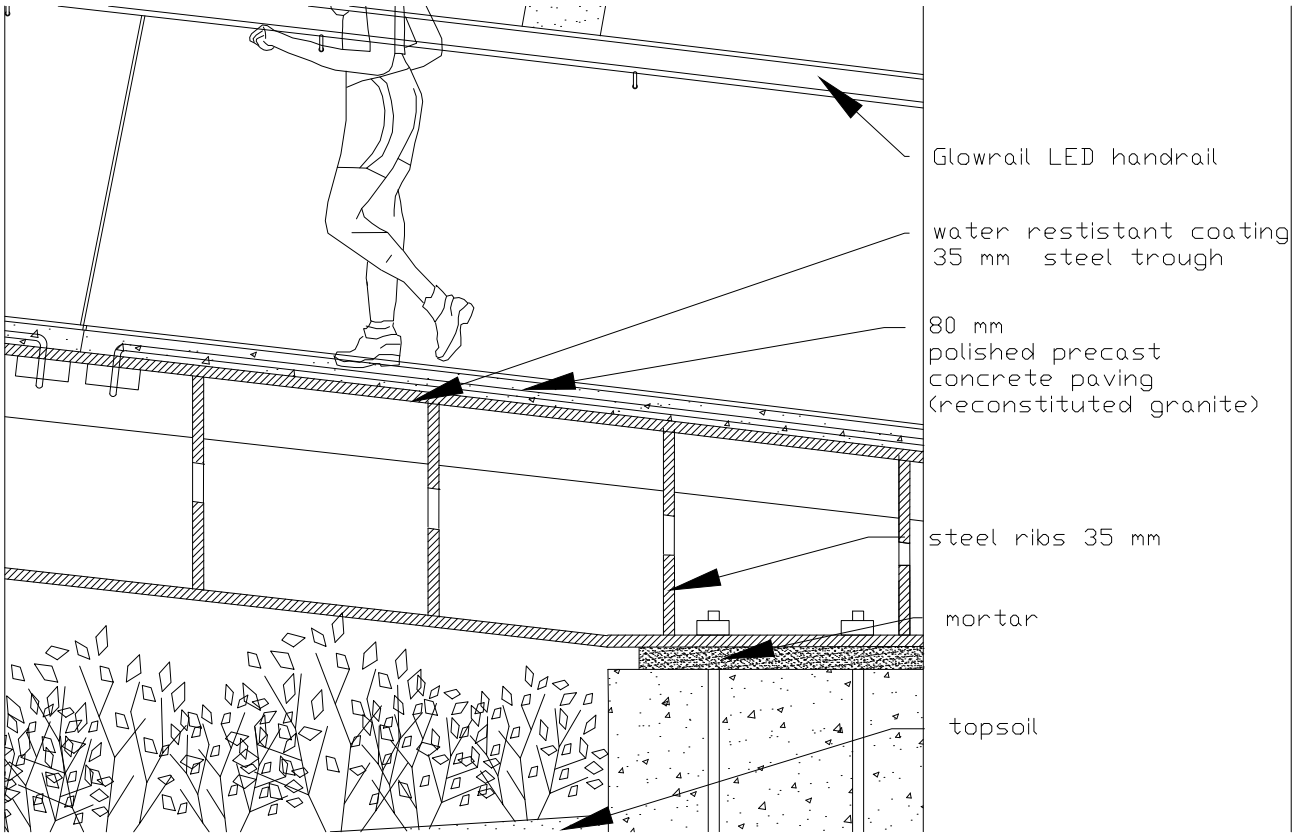
process
buildings (zoom)

However different in height and shape the buildings all share the same ´DNA´. Each building has either one or two perforated brick walls (see image 20), allowing daylight to enter the shell, and light to emit from it in the night. On the ground floor each building is cut open to allow movement to flow through the structure. These openings in the facade are 3 meters in height. Up till this point the facades of the buildings are shifted, creating a higher level of detail, to address the human-scale.



process
bridge (zoom)

The bridge is built up of prefabricated steel fragments. These fragments are built up in the same manner as a ship, with steel ribs to strengthen the structure. The deck of the bridge is finished with a polished precast concrete paving, which slopes off to the sides to drain the rainwater. Excess water which cannot be drained by the slope of the ramps of the bridge can be guided through the drain-pipes. The bridges are accommodated with double lighting, under the handrails as well as along the pathway along the ground.


Glowrail LED handrail
water restistant coating
35 mm steel trough
80 mm
polished precast
concrete paving
(reconstituted granite)
steel ribs 35 mm
mortar
topsoil

reflection

The aforementioned process did not occur without hiccups. The steps seem to subsequent each other naturally but between some steps it took me longer to find a proper next step, new method, or solution. Many detours were taken. Now it seems that a lot of the steps that seemed counterproductive fit in line with the process and method described of precedents, perspectives and routing. Looking back at the field work and research, the location and design all seem to have fallen into place. The first location visited in Bogotá became the location of the site. The walks we had mapped out beforehand, taking pictures on route, in a way became my method. The extra research done on return added to these two aspects. The research of the Autopista Norte as infrastructural canyon in the city, the experience and perspectives of the car in a ´view from the road´ and the creation of the parkway helped to guide my design towards an interlacing of the three fields which I tried to combine. The extra precedent research added the architectural aspect to this. It was by chance that I stumbled upon the method of the rules of thirds, used in film and photography, and the Torres de Satélite by Luis Barrágan, which became important shaping elements for the final design.

How the entire process, method and product correlate to the theme of the studio Methods and Analysis, the commons, has possibly received insufficient attention. Therefore I dedicate part of my reflection to this matter, the commons and how I interpreted it.

Whilst stating the design brief for this location the commons was mentioned. The final design was to stimulate the commons in the area. This was further elaborated to mean ´creating instances of interaction whilst preserving the existing activities of each zone´. Suba and Usaquen, two very different neighbourhoods, were joint by the Transmilenio in the early 2000s. To access the bus platforms, placed in the middle of the freeway, pedestrian bridges were built. I think that the case of these bridges and how they react to them displays the particular characteristics of each neighbourhood, in terms of commons. The entrance to the bridge in Suba consists of a staircase and an elevator. The area surrounding the entrance is quite compact, and the area is flocked with vendors and small shops and restaurants (see image 21). Whilst in a further street these typologies and activities do not take place in the manner they do around the transmilenio bridge. The neighbourhood reacts to the flow of traffic produced by the transmilenio. As the pedestrians descend into the street in Suba, there seems to be a liveliness on the street, be it mainly commercially oriented.

In Usaquen the entrance is treated in a more formal manner. The transmilenio bridge slopes down into a square in Parque Alcala at a distance from the housing blocks in Usaquen. The square houses a pavilion for toilets, a bike depot, a security kiosk, and three formal vendor booths. The movement of people descending into the park isn’t halted, and most move straight onto the kiss and ride or walk through the park to catch a public bus. However in the weekend the square is used for a temporary market.

Both sides of the transmilenio are the commons, but the most common common remains the transmilenio, which resides in the middle. However in this case this is only built up of a long platform, built just narrow enough that an interaction is not desirable and agitation more likely.

From the get go this aspect has been a priority, to create a more pleasant interaction between the two, whilst allowing both forms of activity to be preserved. With the design I hope to achieve a more porous border allowing the formality of the one side and the informality of the other to transgress the border. Create a new area that doesn't have the label of a certain ´strata´, or neighbourhood ´Usaquen´ or ´Suba´. The outcome however is uncertain, instead othe two sides merging it could be like adding water to olive oil.

As to the relationship of this design project to the wider social context, I don't believe that this precise solution can be replicated elsewhere, but there are elements of the process and method which can be used to tackle the same problem of the freeway in an urban setting elsewhere, especially where there are large public functions (f.e. a park/bus station) involved. The main themes of the project was connecting neighbourhoods in movement, an important aspect of this was the pedestrian, and the space created to accommodate this mode of transport, whilst upholding the function of the freeway. These flows had to intertwine. The level of visibility between the two is essential for the project. The existing transmilenio bridge, built of an open steel structure does nothing to make the pedestrian feel secure as he crosses. Whilst other options, such as tunneling the freeway, do nothing to have the two flows interact, and rather hides the one from the other. The final design supplies the pedestrian with a level on which it hopefully feels secure and where there is a visual relationship with the freeway but it is not the focal point. Instead the eyes of the pedestrian are drawn to the towers in the area. The shape of the bridge gives form to the crossing movement. Above the freeway the bridge is narrow, whilst in the middle and on each side it widens to allow for slower movement and interaction. Hereby allowing the movements of the automobile and that of the pedestrian to coexist, without threatening one another. I believe these principles can be replicated to solve the pedestrian problem when infrastructural arteries are involved in an urban setting.