

2021

JORGE D. CASIQUE

SOCIAL MEDIA:
CATALYST FOR PEDAGOGICAL
ARCHITECTURE

**Social Media
Catalyst for Pedagogical Architecture**

Social Media

Catalyst for Pedagogical Architecture

Agradecimientos Acknowledgments

A mis padres, gracias por creer en mi, apoyarme y guiarme siempre. Es por ustedes que soy la persona que soy.

A mi futura esposa, Andrea, gracias por el apoyo, la confianza, el amor y la inspiración para siempre mejorar y seguir adelante. Por ti he llegado mas lejos de lo que nunca me imagine

To my friends, thank you for your support and for accomplishing our Masters together.

To my professors and mentors, especially my committee thank you for the guidance, the support and encouragement. Personally, architecturally and professionally, thank you.

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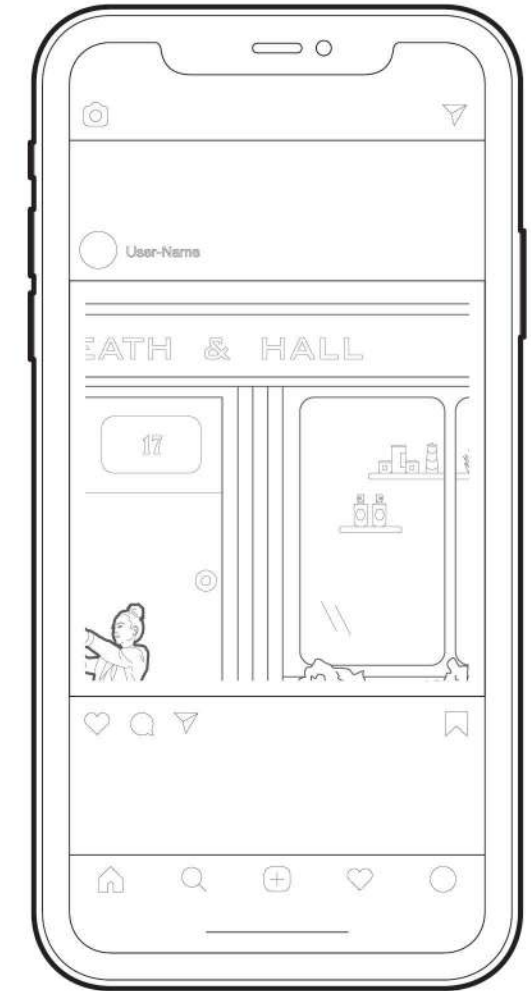
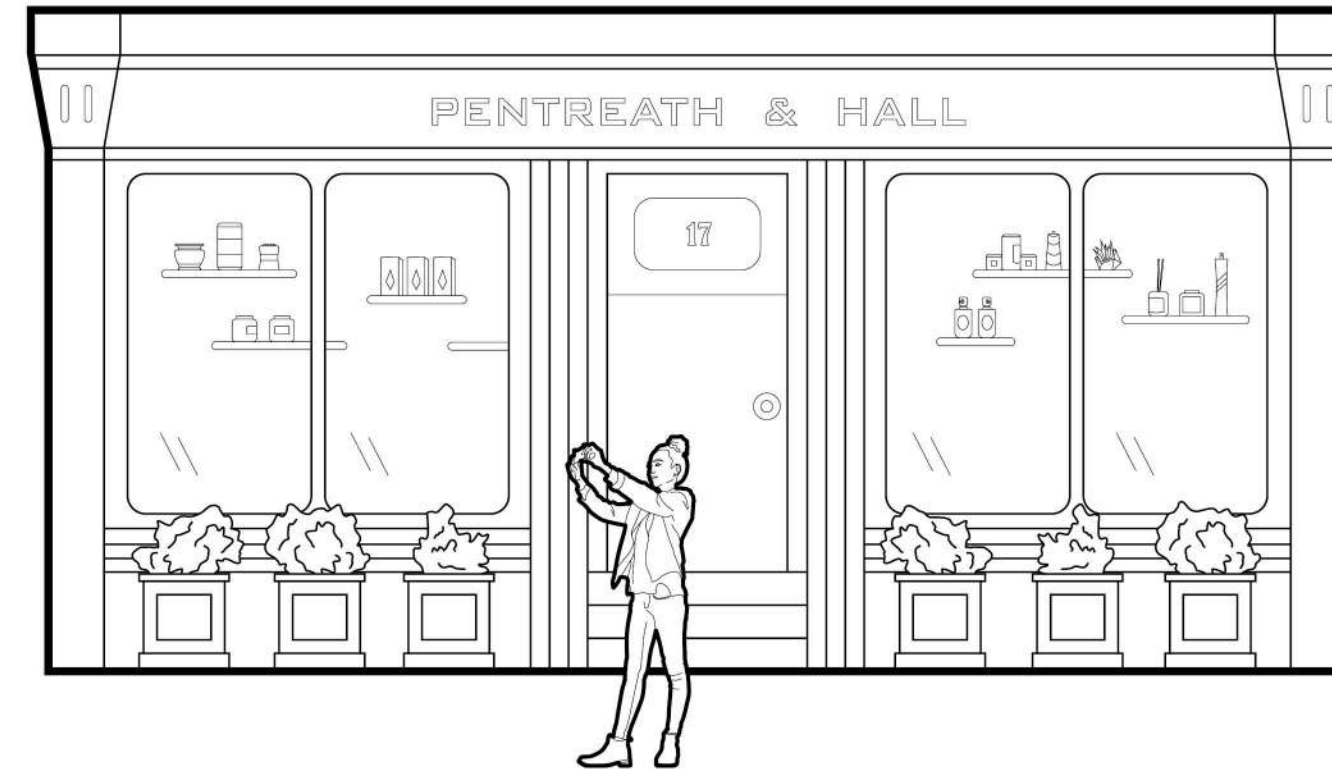
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**The
Idea**

Social Media In Architecture

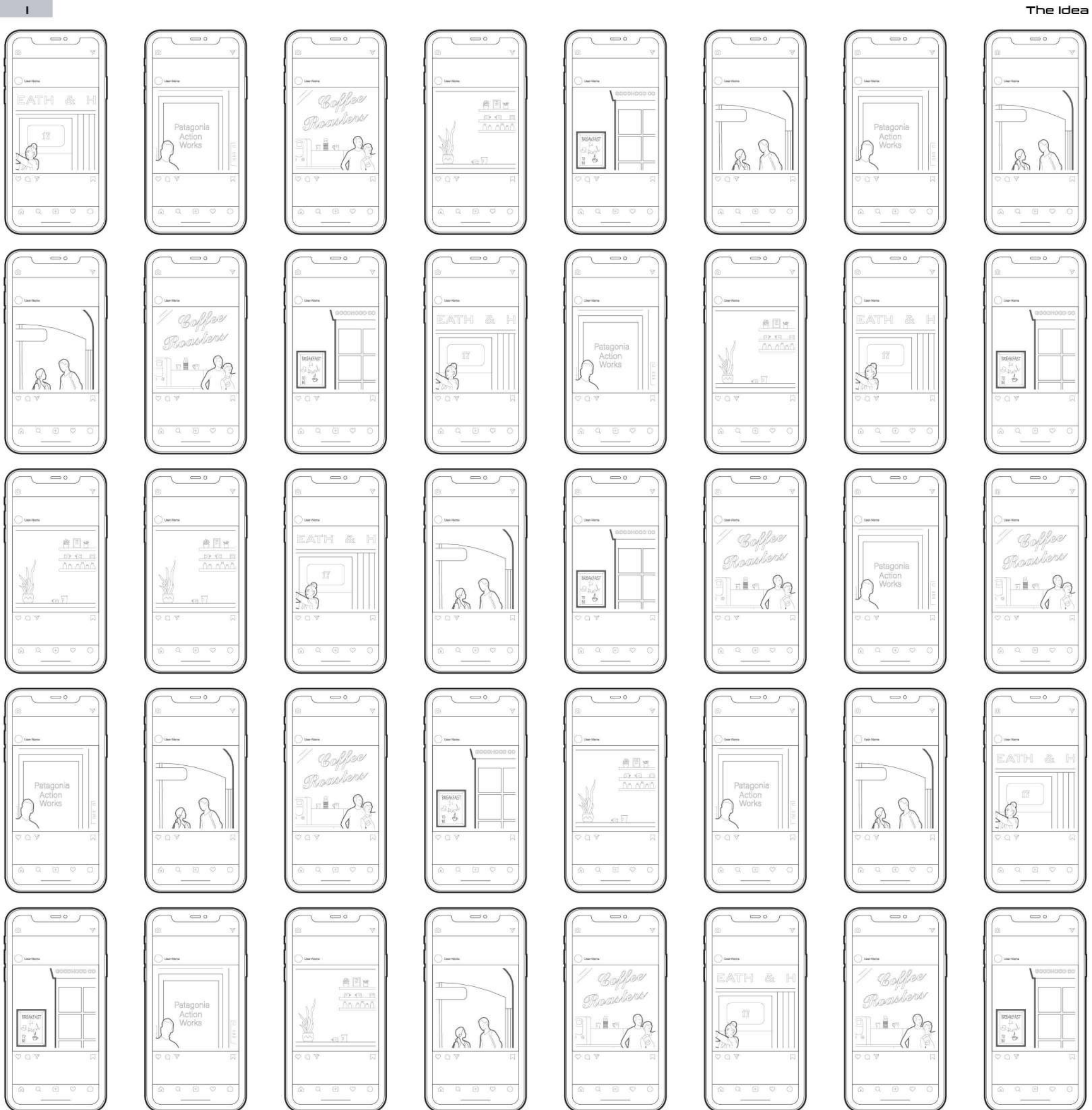
Placeness has always been a debated subject in architecture, especially to which extent site influences- or not- the final result of architecture. Despite the concept being long-discussed, from the Genius Loci of the roman treaties to the modernist movement that erased the concept-- placeness is ever-changing, and now with social media, places take on different meanings for everyone. The difference is that now our culture of images as a record of experiences has made placeness a larger, much more diverse concept that is available for architects to consider when making decisions about a project. After many decades of positivism, Aldo Rossi reintroduced the idea of place -- or locus-- into the discourse of architecture in his manifesto The Architecture of the city. Rossi defines locus as: "a relationship between a certain specific location and the buildings that are in it. It is at once singular and universal." It's not uncommon for practitioners to focus on the physical aspect of a place, while sometimes missing on opportunities for culture and identity to feed a project. This studio proposal seeks to amplify the idea of the locus in architecture and what it means today. It is possible to create meaningful, engaging architecture that is rooted in understanding the identity of communities. The methodology proposed implicates finding this unique sense of placeness by utilizing the Theory of Image and visual studies of relevant imagery from social media in order to generate an architecture that's responsive to how communities see themselves. The study presents an innovative alternative to traditional site analysis that is often focused on only the physical variables subjected to (only) the designer's interpretations. Architecture that is born through the lens of a community's expressive means will be effectively more conceptually engaging.

The Idea

The Idea

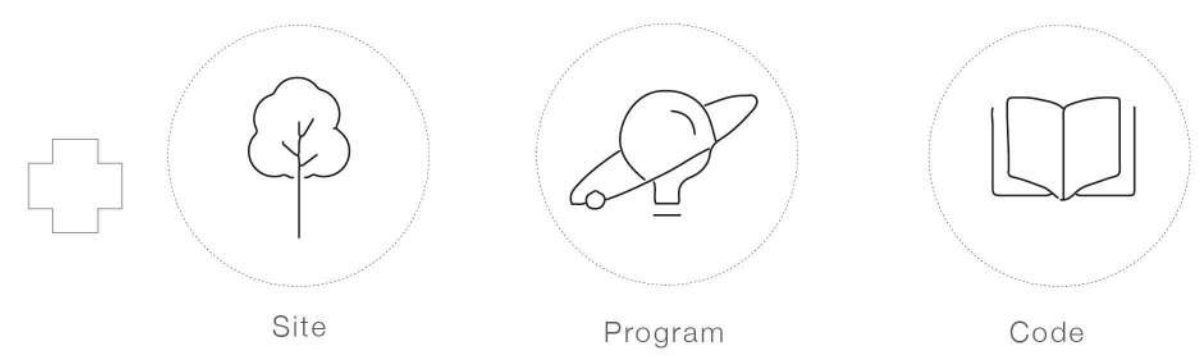


With the development of new technologies the way that people interact with their environment also evolves. Social media and the photograph have become the main modes from which people interact and involves themselves in their communities. This images that can be found showcase the parts of an environment that people connect the most so they are encourage to share them.

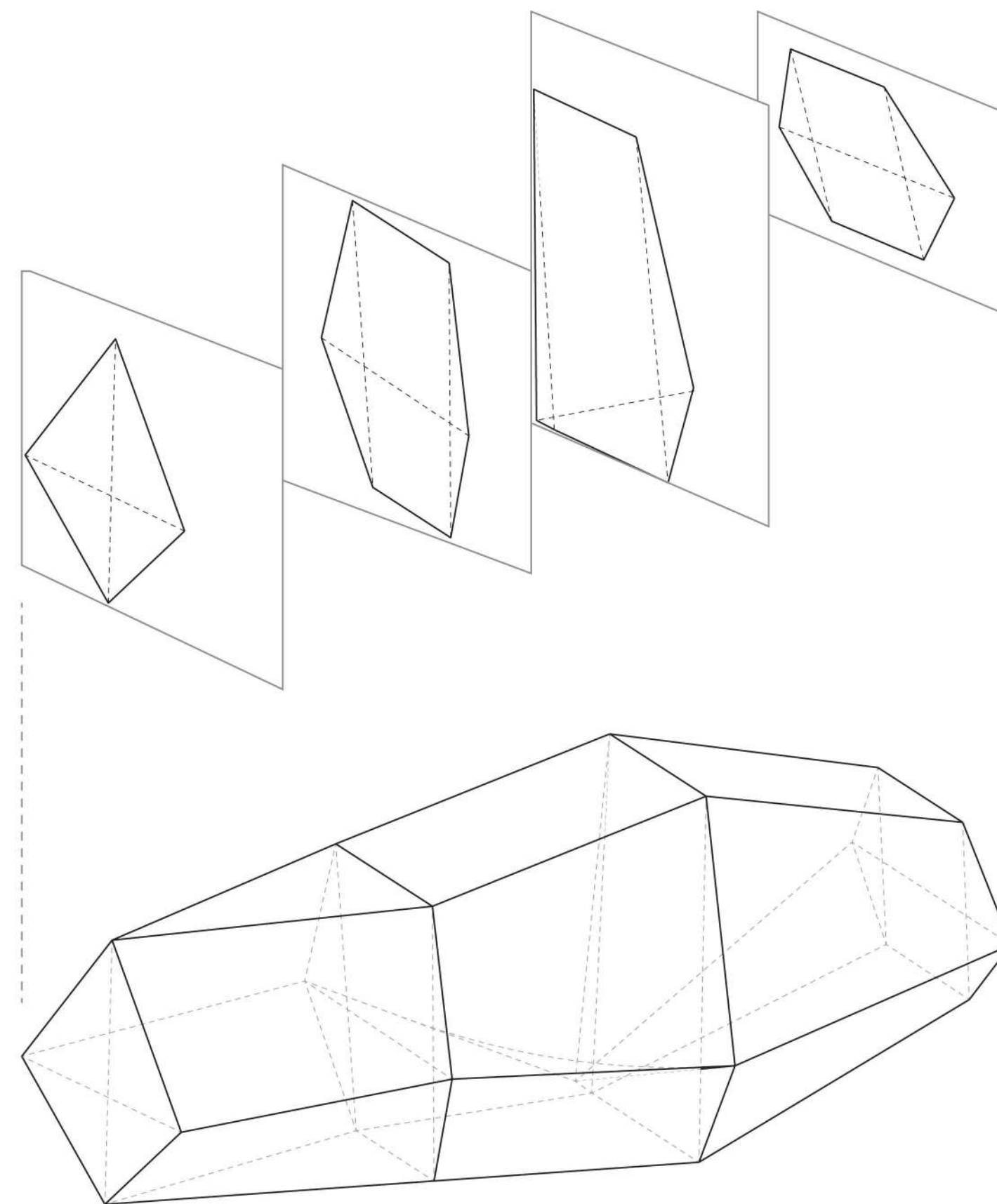
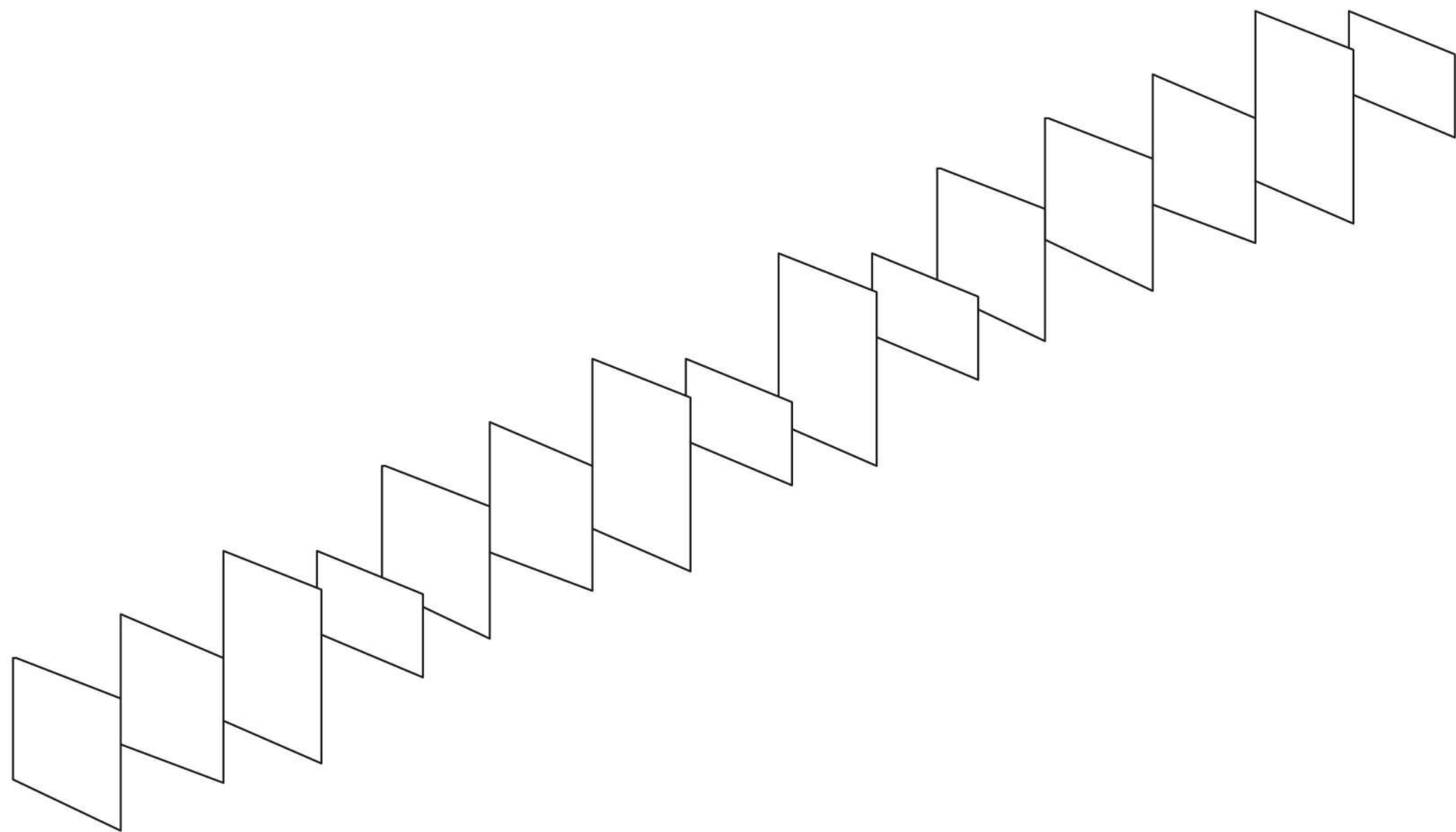


The Idea

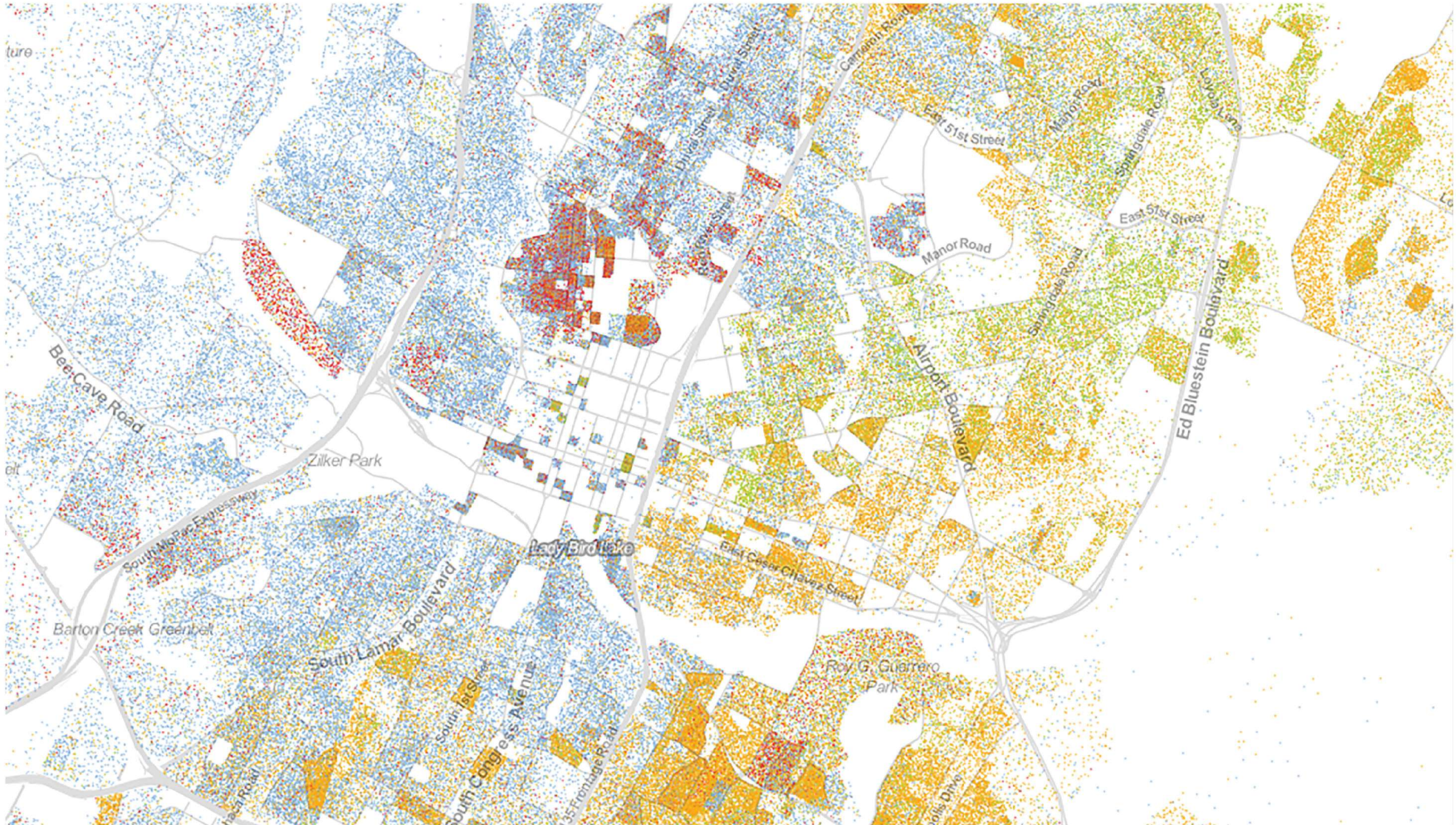
The Idea



This images are no more than snips of the whole reality looked through the eyes of their inhabitants. All this images can be collected and studied in an effort to better understand the project's site with a direct input from the people that lives there. This analysis combined with technical knowledge from more traditional studies of the site and the program, as well as the requirements given by the building code will result in a more engaging and better conceptualized design.



The studied images are to be arranged in sequence on a 3D digital environment. This images will make frames marked by the highlighted axis in the images, and this frames and then connected to generate a polygonal shape from which the rest of the design is originated.

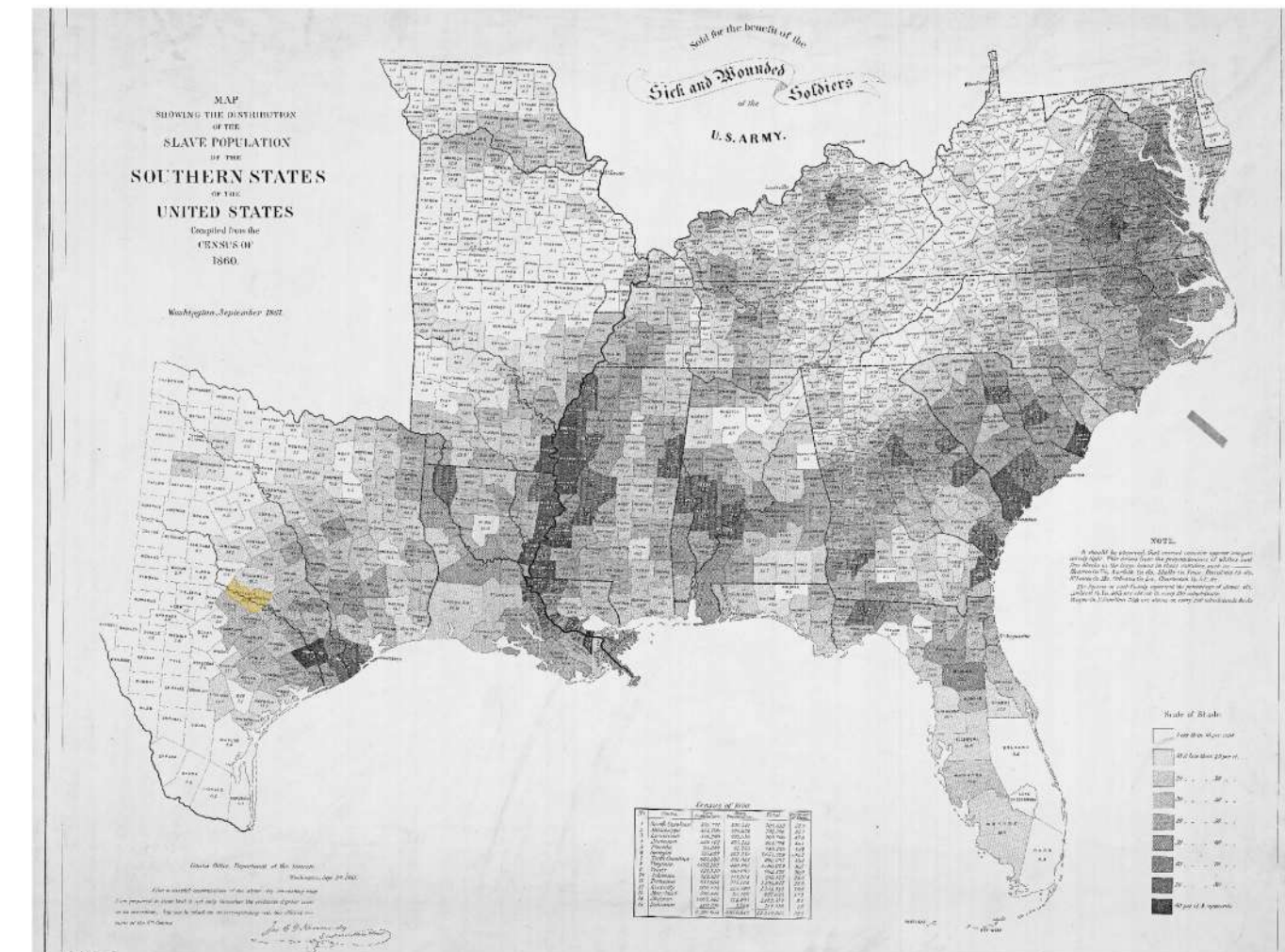


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The Site

History of East Austin

The chosen site for this project is a 18.8 acres lot in Govalle neighborhood, located in East Austin on the corner of Goodwin Avenue and Tillery Street, adjacent to the busy Airport Boulevard. Surrounded by primarily residential areas, East Austin has only two middle schools that are at capacity. Given Austin's growth trends, with more and more families relocating from Colorado and California, this sector of the city needs to expand education infrastructure. Given Govalle's history as a traditionally marginalized and minority area, the proposal seeks to connect students to the unique culture of the place while exalting aspects of community identity. The district of East Austin will be the location for this development, for which it is imperative that the history, the people, and culture of this place be present in the design proposal. At the same time, a middle school houses a younger crowd, which typically are the ones recording their experiences and thoughts in images, and are particularly susceptible to having their personalities and behaviors shaped by the rapid production of social imagery. Students spend a quarter of their lives in school spaces, where they develop academically and socially. The educational design needs to consider the ever-changing nature of social media and image production in order to meaningfully engage the students and improve the way we design for learning spaces. The architecture of the Govalle Middle School embraces social media and its ability to share emotional experiences through imagery as a method for formal genesis.

During the Jim Crow Era with the segregation laws, the Koch and Fowler city plan proposed the creation of a "negro district" to the East of the city. Separated from the Downtown area by, what at the time was known as East Avenue, now the I-35. This was the only part of the city where African-Americans had access to public services and education. While at the same time had almost no zoning restriction allowing the development of industries and other questionable uses, further violating the quality of life of the black community. Further practices such as redlining only reinforced the divide, solidifying the disadvantage and hampering the socio-economic growth of the inhabitants of the district. In recent times the population of the place, while now mostly of Latino descent, remains predominantly low-income minority families. Furthermore, Austin's booming technology industry has made east Austin highly susceptible to gentrification. The conceptual design proposal is engraved into the community identity. These identity ties are the foundation for the school to become an epicenter of social interactions and education for the community. The process of understanding a community through the values exalted in social imagery translates into a statement against the gentrification process and an argument for exalting the vernacular and local culture.



Digitalized Map Showing the Distribution of the Slave Population of the Southern States



Dotted Map Created with Racial Data from the US Census

The racial divided that existed in the city of Austin since the Antebellum is still present. It still can be easily appreciated the strong separation of minority communities concentrated in the East District of the city

Site Study



Land Use Map of the Govalle Neighborhood

The site is mostly surrounded by single-family residential use and some multi-family residential. Some highlights is the proximity to Airport Boulevard where a lot of commercial and office uses are concentrated, and in the same block as in the site there are other educational buildings like a public library and an elementary school.



Street Type Map of the Govalle Neighborhood

All the surrounding roads on the site are single-lane two-way streets. Oak Spring Dr, and Tillery St both have bike lanes to the sides. As a highlight the site is very close to Airport Boulevard an important corridor in the city that combines and promotes alternatives modes of transportation like buses, bikes and electrical scooters.



Public Transportation Routes Map of the Govalle Neighborhood

There are several public transportation routes near the site. As an important element, there are several bus stops in the site and all of them are part of the Route 2 of the Metro-bus system in the city.



School Location Map of the Govalle Neighborhood

In the area there are several schools, most of them are elementary schools, and there are four high schools, while there is a lack of Middle Schools existing only two near the site.



Bodies of Water Map of the Govalle Neighborhood

There are some bodies of water near locality like the Ladybird Lake. From these the most relevant is a pond of almost 100.000 sq-ft of area located in the site.

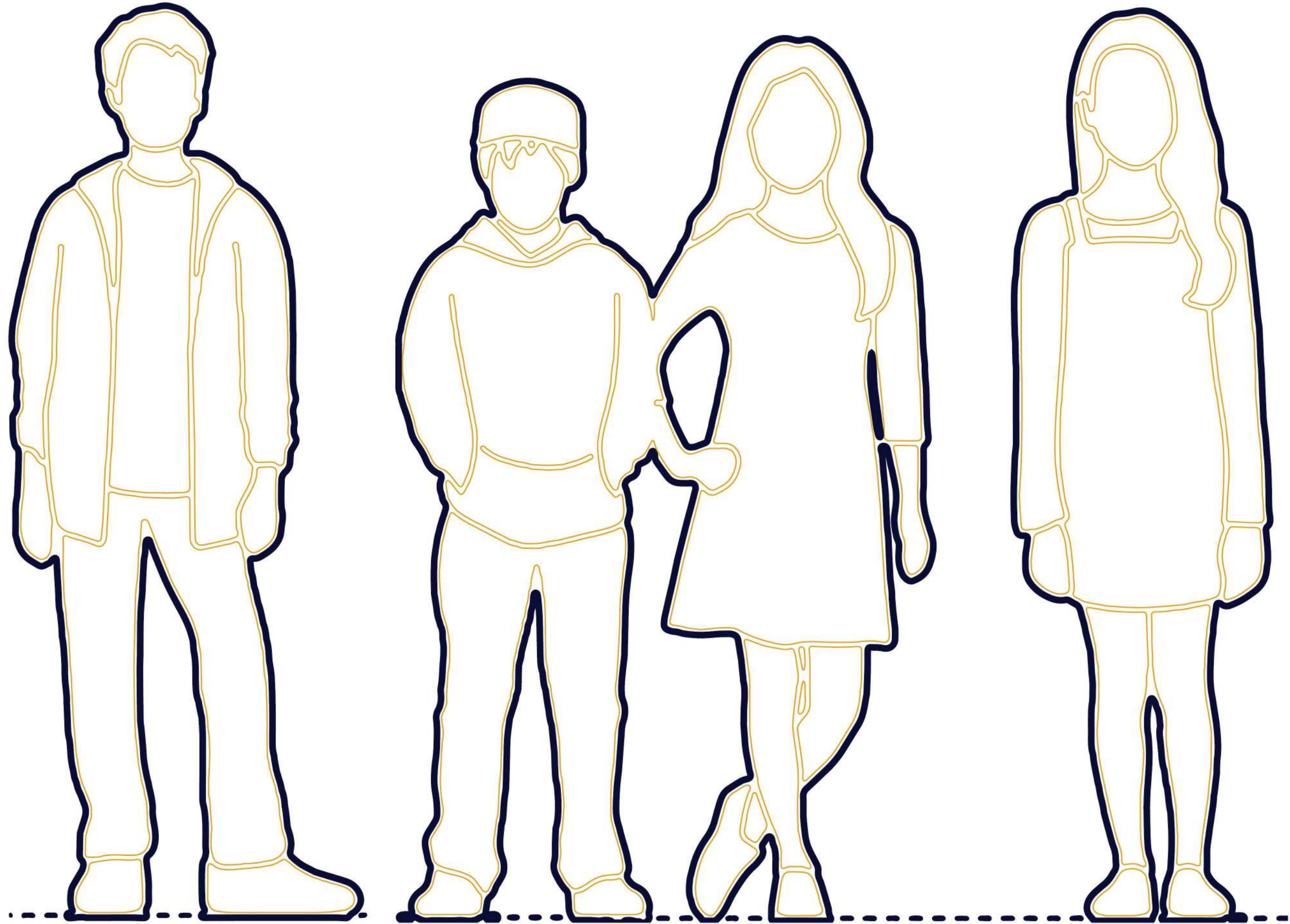


Parks and Public Spaces Map of the Govalle Neighborhood

There is an important network of green spaces in the surrounding of the site. The most relevant for the design is the green area to the west of the site.



Close-Up Site Plan for the Govalle Middle School, Highlighting all Relevant Elements Previously Specified.



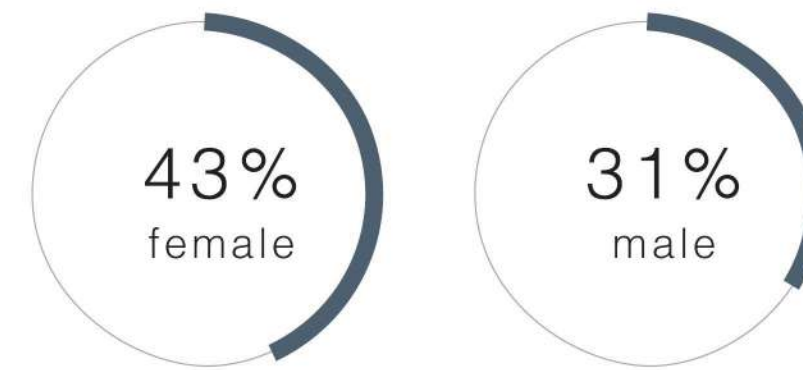
III

**The
Program**

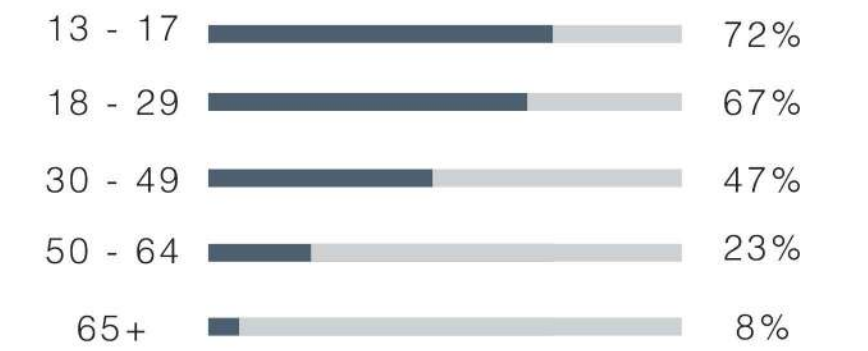
Pedagogical Design

The Govalle Middle School will be a student-centered learning environment. Designed for digital natives between the ages of 10 to 14 years old -- who have never known a world without smartphones and computers -- the Govalle Middle school has a demand for pedagogies and teaching tools for effective learning. According to Richard Riley, former US Secretary of Education, the "jobs in greatest demand in the future don't exist yet and will require workers to use technologies that have not yet been invented to solve problems that we don't yet even know are problems". In light of these facts, architects should create dynamic learning facilities where students can engage with course material and actively participate in their learning, instead of becoming passive receptors. The author and award-winning futurist and educational consultant, David Thornburg claims that learning institutions should offer a balance of Campfire spaces (home of the lecture), Watering Holes (home to conversations between peers), Caves (places for quiet reflection), and Life (places where students can apply what they've learned). The design proposal utilizes these metaphors to create physical spaces that house a variety of educational programs, learning experiences, instructional approaches, and academic support strategies that address the distinct learning needs, interests, aspirations, or cultural backgrounds of each individual.

Gender



Age



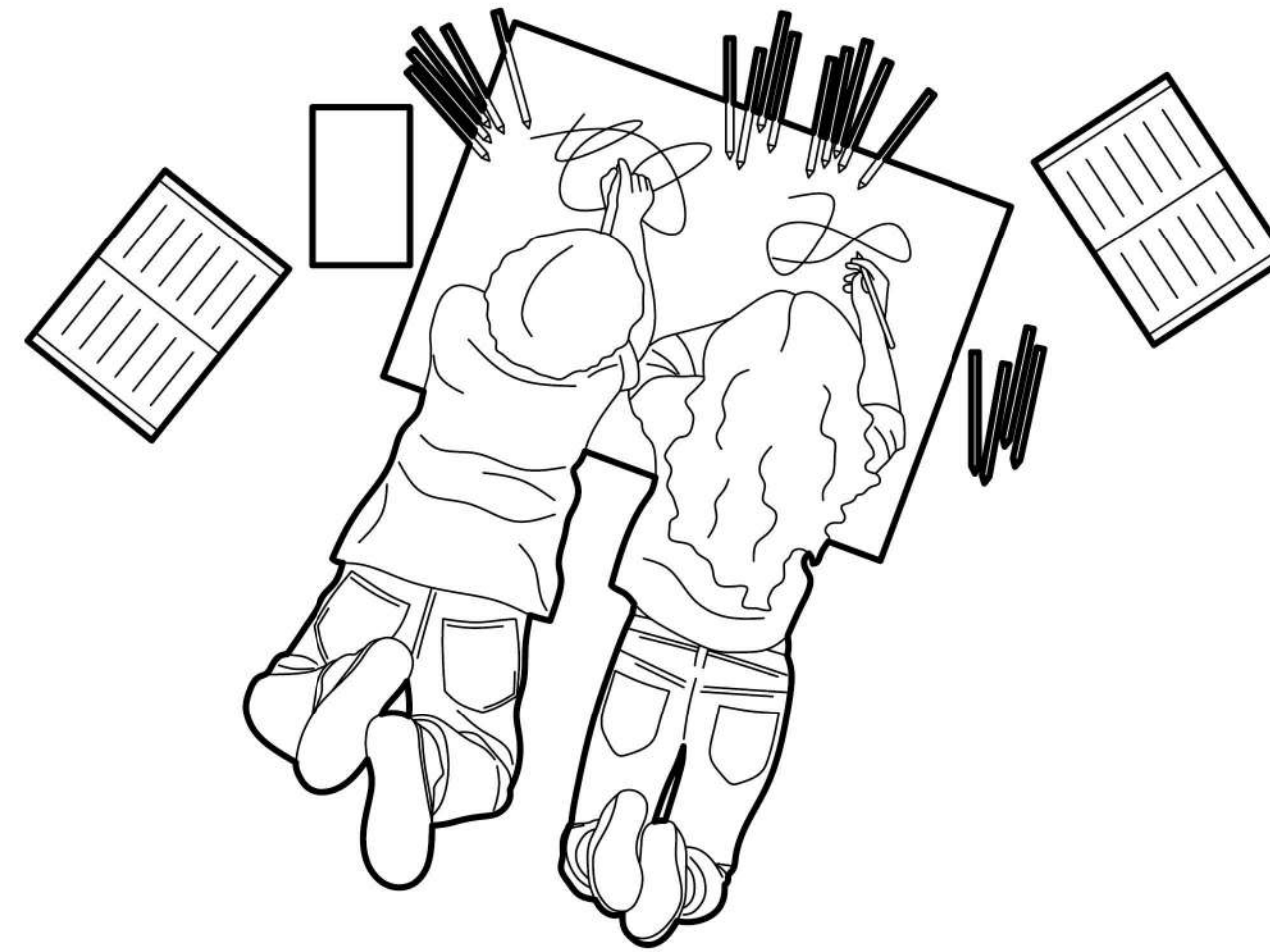
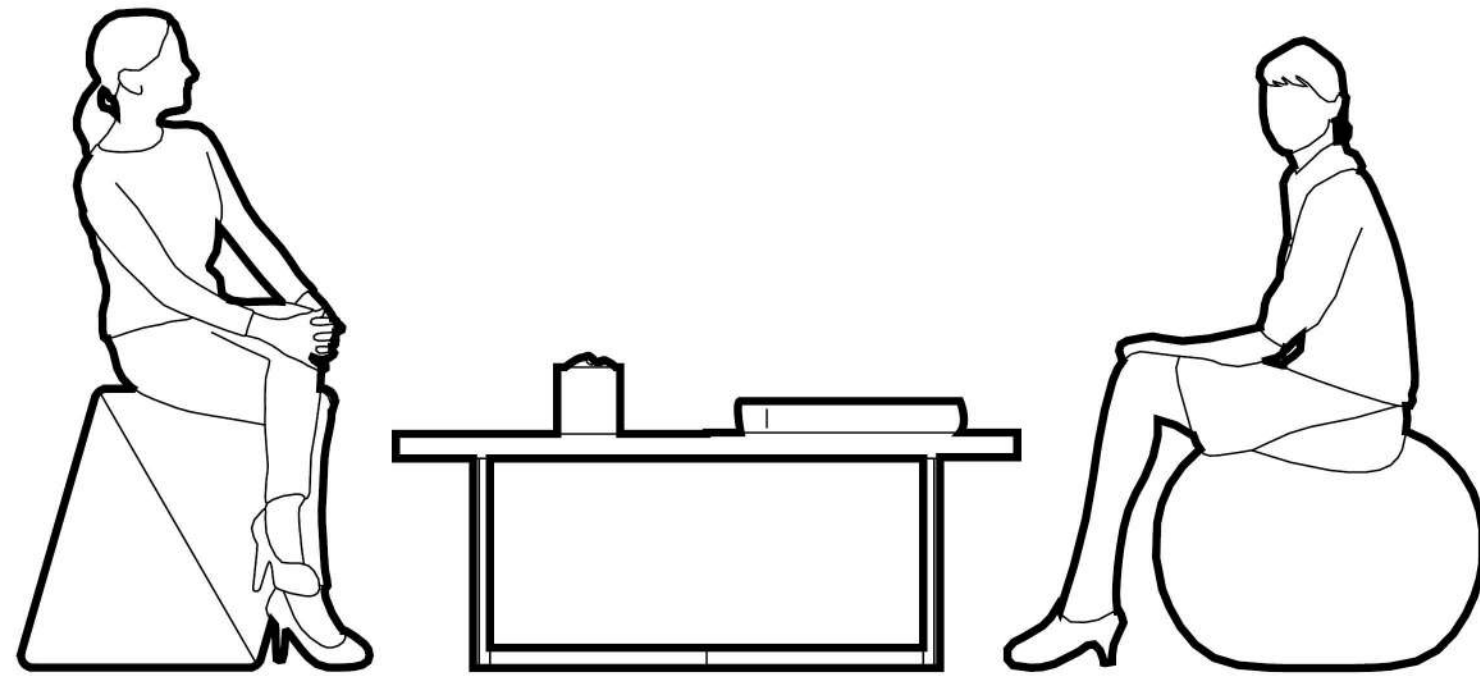
Location



Demographic Data of Social Media Use. Source: statista.com

Most of the population that uses Social Media is between the ages of 13-17, the same age group that attends middle school and high school. It is also notable that most of this population comes from urban areas, and while both female and genders use this apps, females are the predominant gender that gets involve with Social Media.

Student-Centered Learning

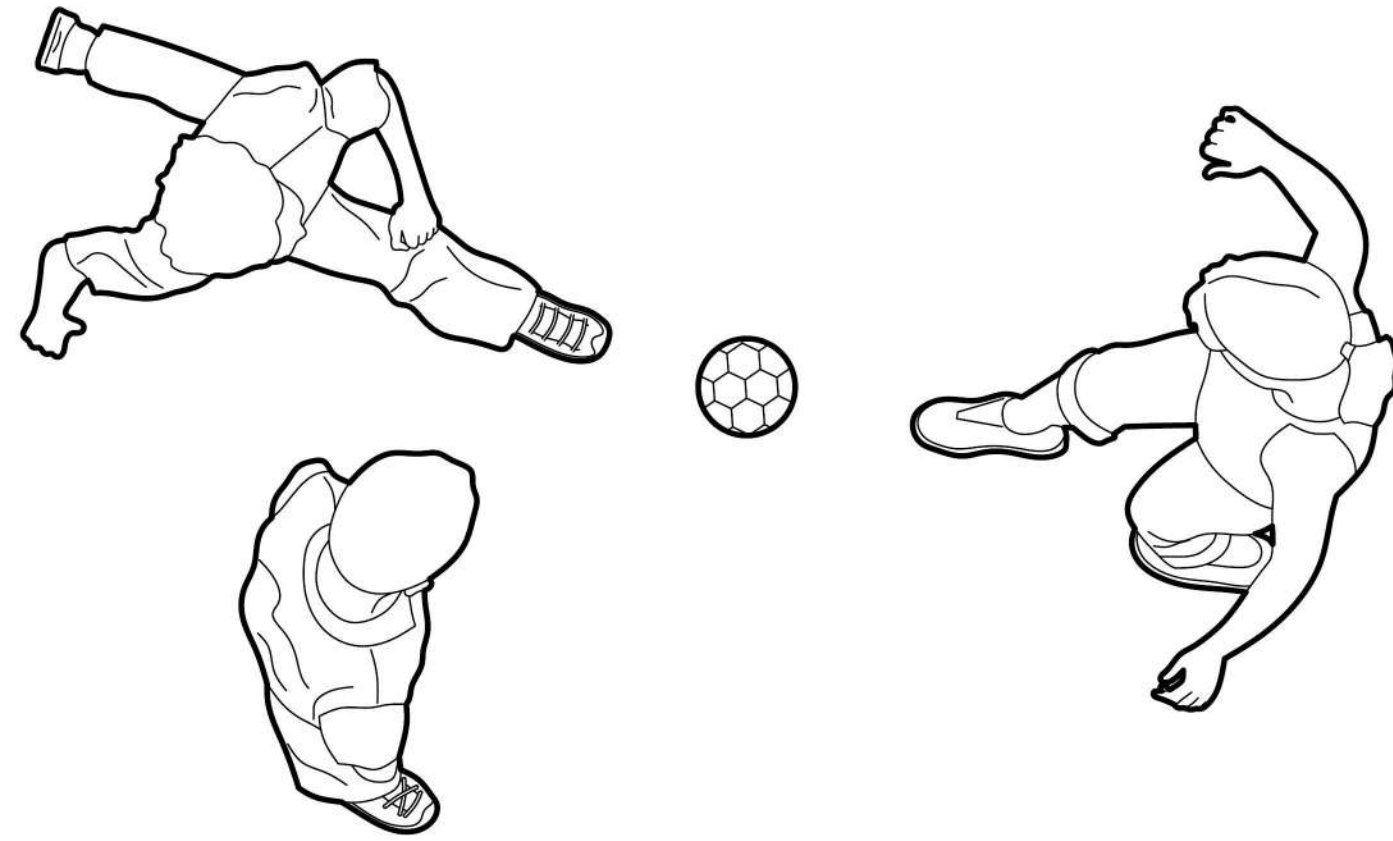
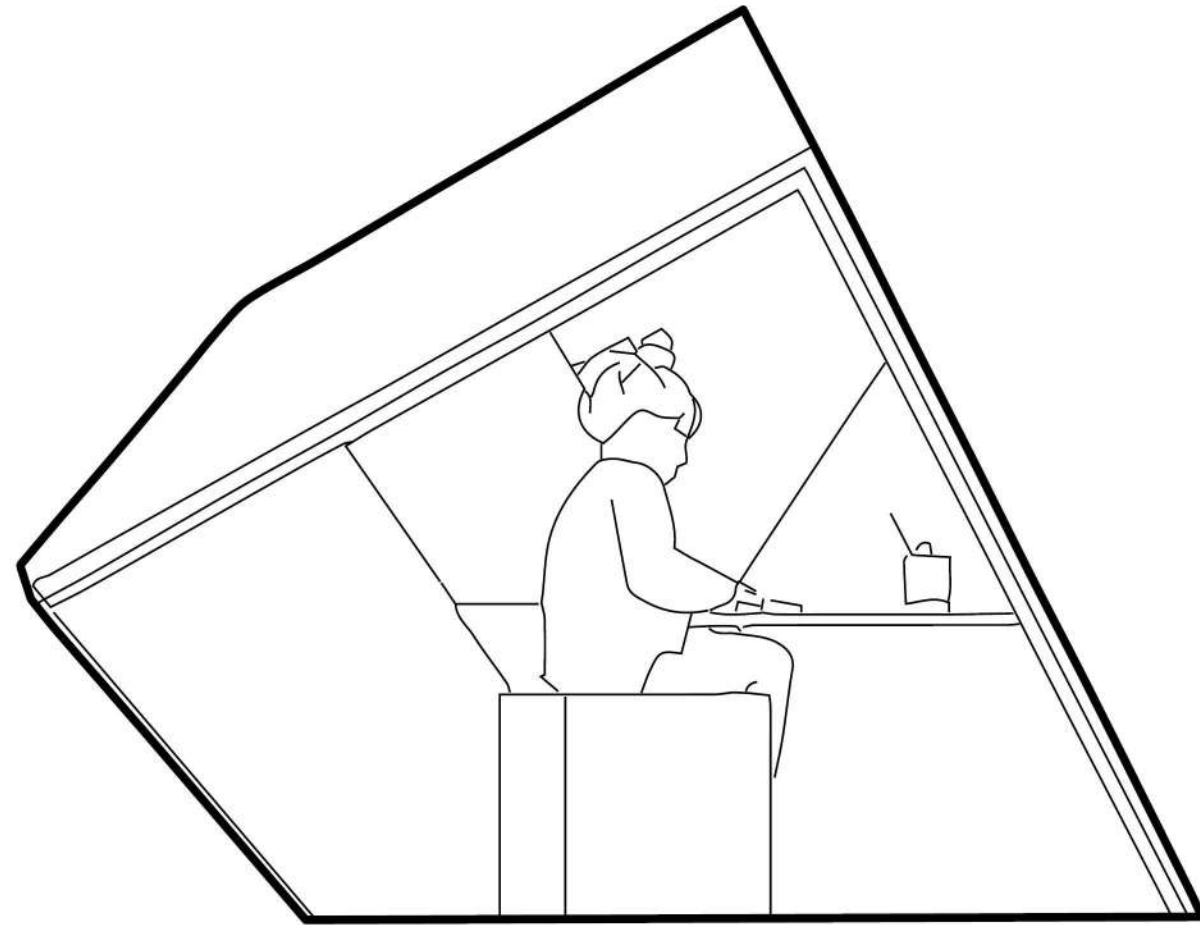


Campfire — Lectures / Presentations / Traditional Classroom —

Watering Hole — Gathering Spaces / Workshop Spaces / Studios —

Refers to spaces where people gather to learn from an expert. In today's schools, the experts are not only teachers and guest speakers, but also students who are empowered to share their learning with peers and other teachers.

An informal space to learn from peers, where to share information and discoveries, acting as both learner and teacher simultaneously. This shared space can serve as an incubator for ideas and can promote a sense of shared culture.



Cave — Quiet Spaces / Reading Rooms / Study Rooms —

Life — Green Spaces / Labs / Workshop Spaces —

A private space to learn from introspection where an individual can think, reflect, and transform learning from external knowledge to internal belief. Schools have both posters and places to encourage this private individual time.

Spaces where people learn by doing. This relates to spaces for experiments, the outdoors, and where peers can work together to solve problems and carry out group projects



IV

**The
Social
Image**

Methodology of Study

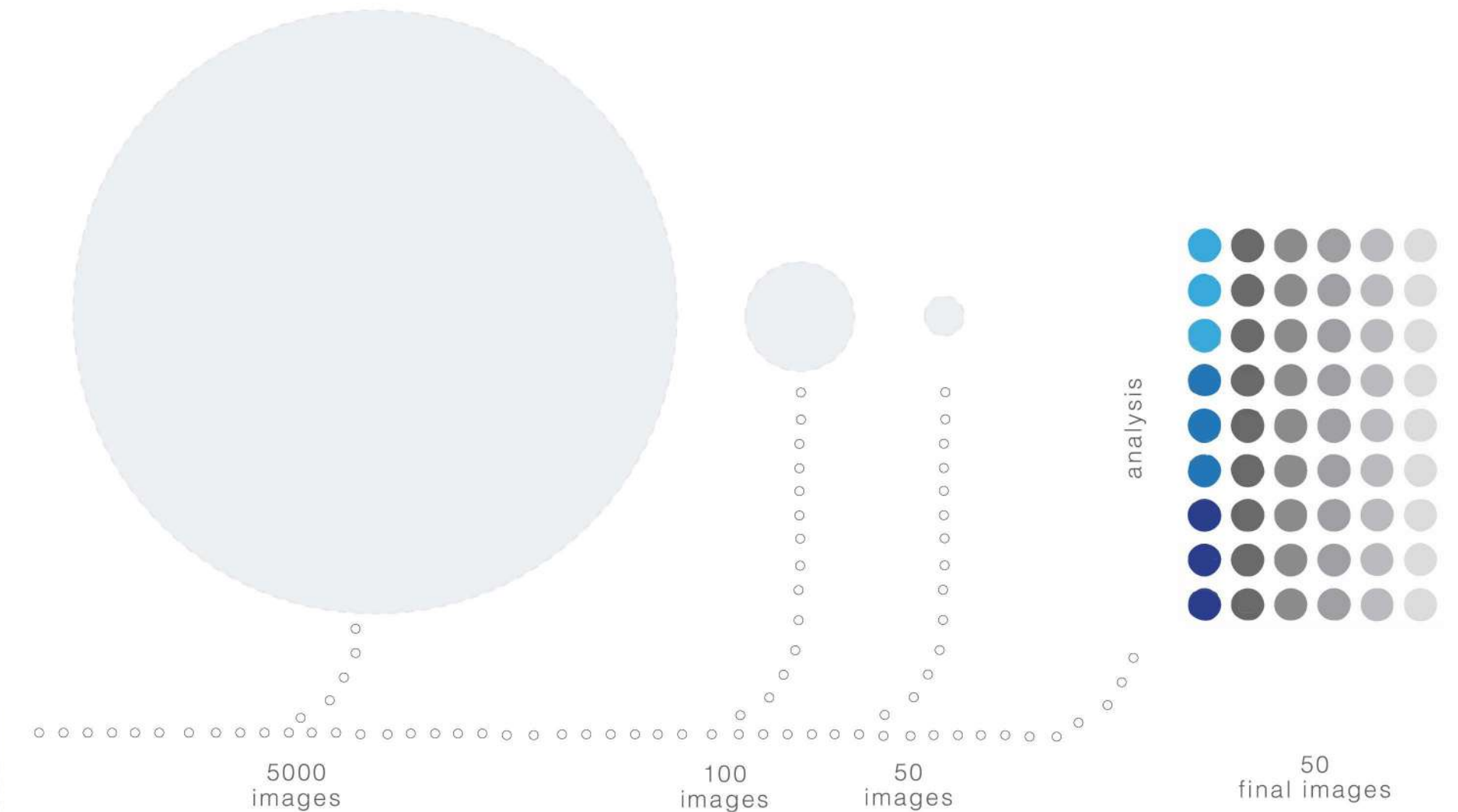
Combining the cultural and identity studies derived from social imagery, along with the conscious choice of deviating from traditional educational architecture towards a student-centered approach, the architectural outcome of this study will be engaging students not just at an academic capacity, but also engaging who they are as part of the social construct of the community. By understanding their individual and social identities the study will allow for a sound methodology to create holistic learning experiences. Creating small learning communities within a larger school setting mirrors the relationship of the school to its larger context in the neighborhood. Small learning communities also allow for higher levels of comfort between students, teachers, and administrators, generating feelings of affiliation and belonging; and a sense of mutual support between community members.

Having exposed the design intent and benchmarks for the study, the methodology developed for the digital site study begins by determining a group of interest, which encompasses all social images posted related to the study site using the geolocation tag on the post. The initial database contained aspects of the posts such as author, date posted, number of comments, number of likes, captions of the images, comments content, and media type (photograph, camera roll, or video). More than 42000 images conformed to the initial database sample for this study. A preliminary process of elimination allowed for 5000 images to be randomly selected from the available social media posts distributed in the last five years (2015-2020). A second selection filtered the top most engaging social media posts. The most engaging posts were determined as the ones that generated the most interaction on part of the public (quantity of likes and comments). Finally, a third selective process yields fifty images determined to be the most relevant for the purposes of this study based on a predominant ratio of contextual information,

either indoors or outdoors, as this study is to focus on place and how the Govalle community looks at it or represents it. It is important to note that the third selection process was ultimately subjective based on the logic and criteria of the designer. The final image study is a comprehensive analysis that categorizes and deconstructs selected images in order to define patterns and behaviors that will ultimately drive design decisions. The deconstructive processes for the final sample selected were accomplished using two comparative techniques: Analysis A - the manual approach and Analysis B- parametric approach. Analysis A consisted of using Adobe Photoshop to highlight relevant parameters that are universally present throughout all social media imagery. The parameters to compare include: color, form, texture, lighting, shadows, axis, and highlight element or focus of the image. On the other hand, Analysis B was a computer-based parametric process that utilized visual scripting that highlighted important shapes, contrasts, dominant colors. Both approaches yield several common conclusions such as:

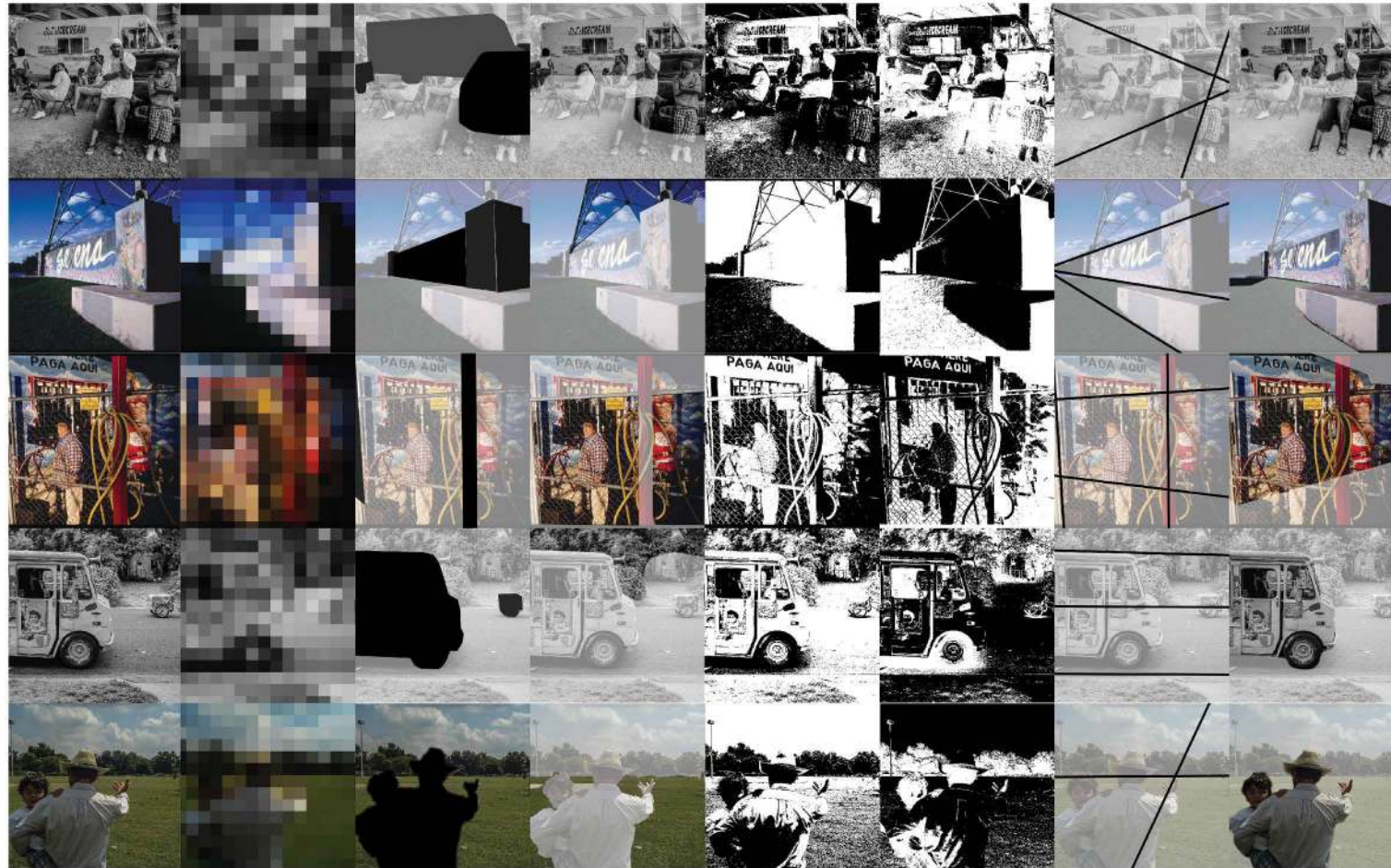
- The focal point is almost always in the geometric center of the image
- Elements on the images implicitly form a frame to the focus
- Distinctive color and patterns are present
- Outdoor spaces and vegetation are constantly represented on the background
- Elements of urban culture are consistently present throughout the sample (graffiti, streets, cars, urban art etc.)

42000
images



50
final images

Study on Community Social Images



Photographic Analysis — A

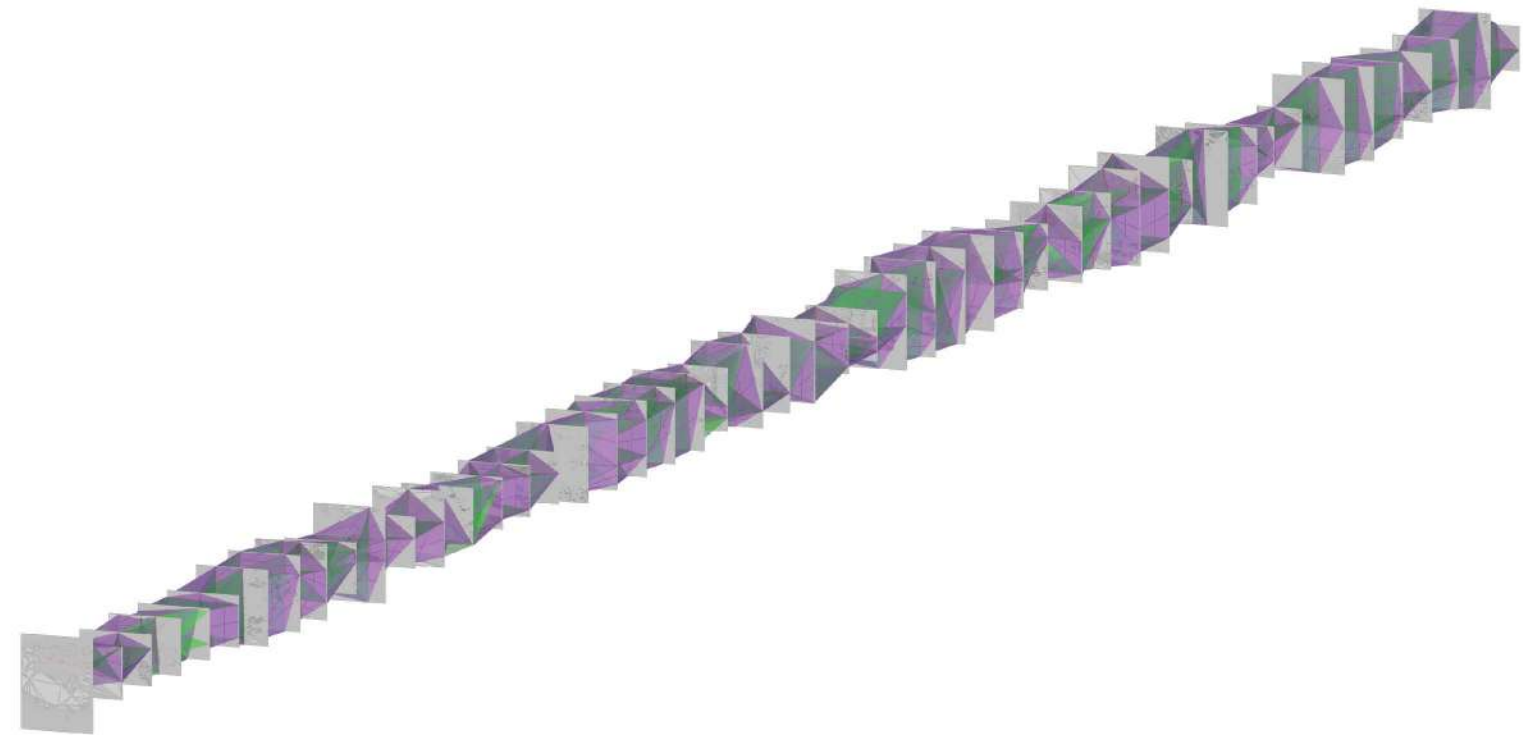
Each row shows one of the studied images and its manual manipulation and deconstruction in their basic component. From left to right each row contains the original image; color analysis; main shapes; textures and patterns; shadows; lights; axes and directional lines; and the highlight or focus element of the image.



Photographic Analysis — B

Each cluster shows one of the studied images and its parametric manipulation and deconstruction in their basic component. From left to right and top to bottom each cluster contains the original image; textures and patterns; color analysis based on saturation; color analysis based on hues; essential shapes based on sharpness; shadows; and lights.



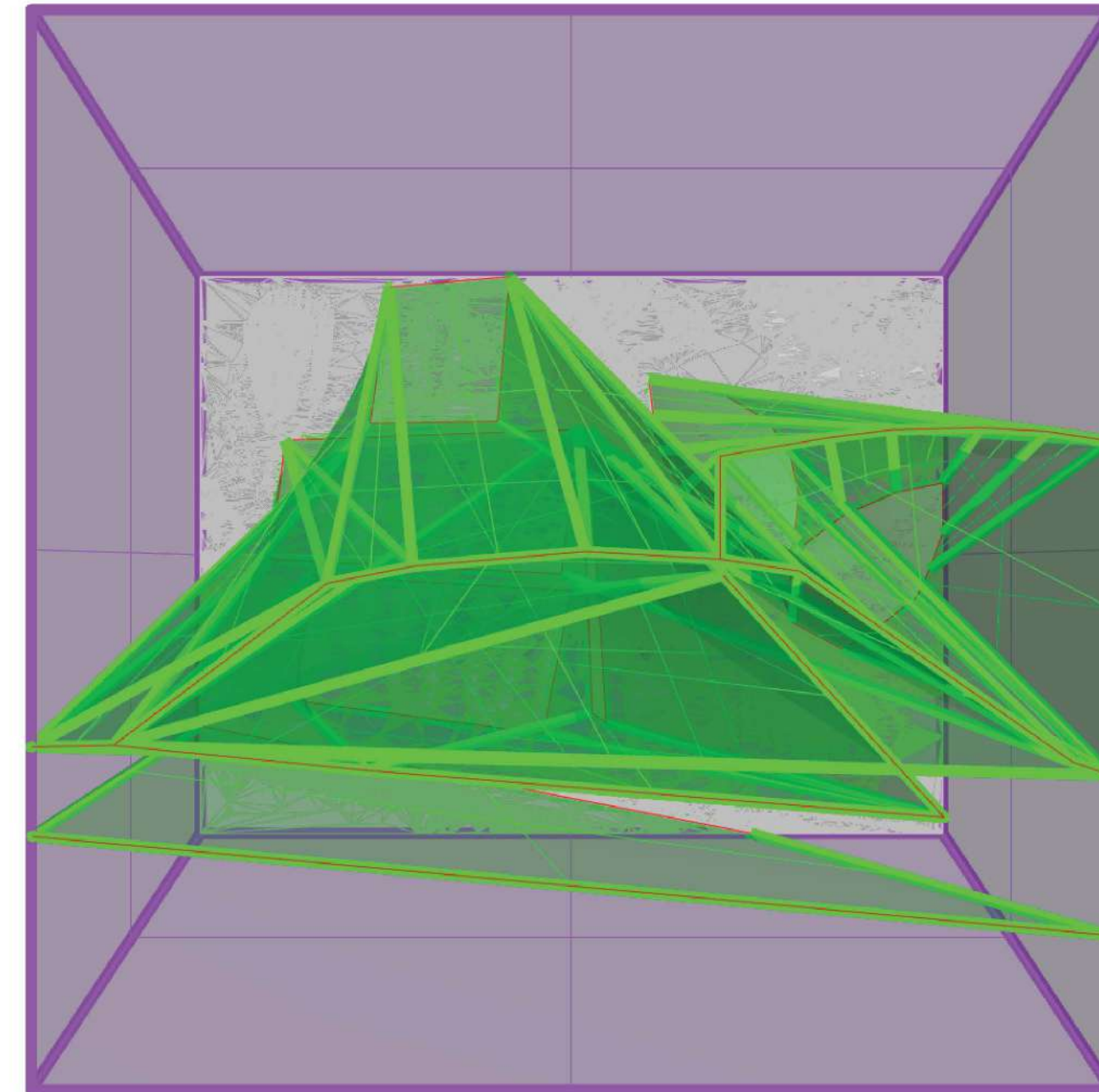
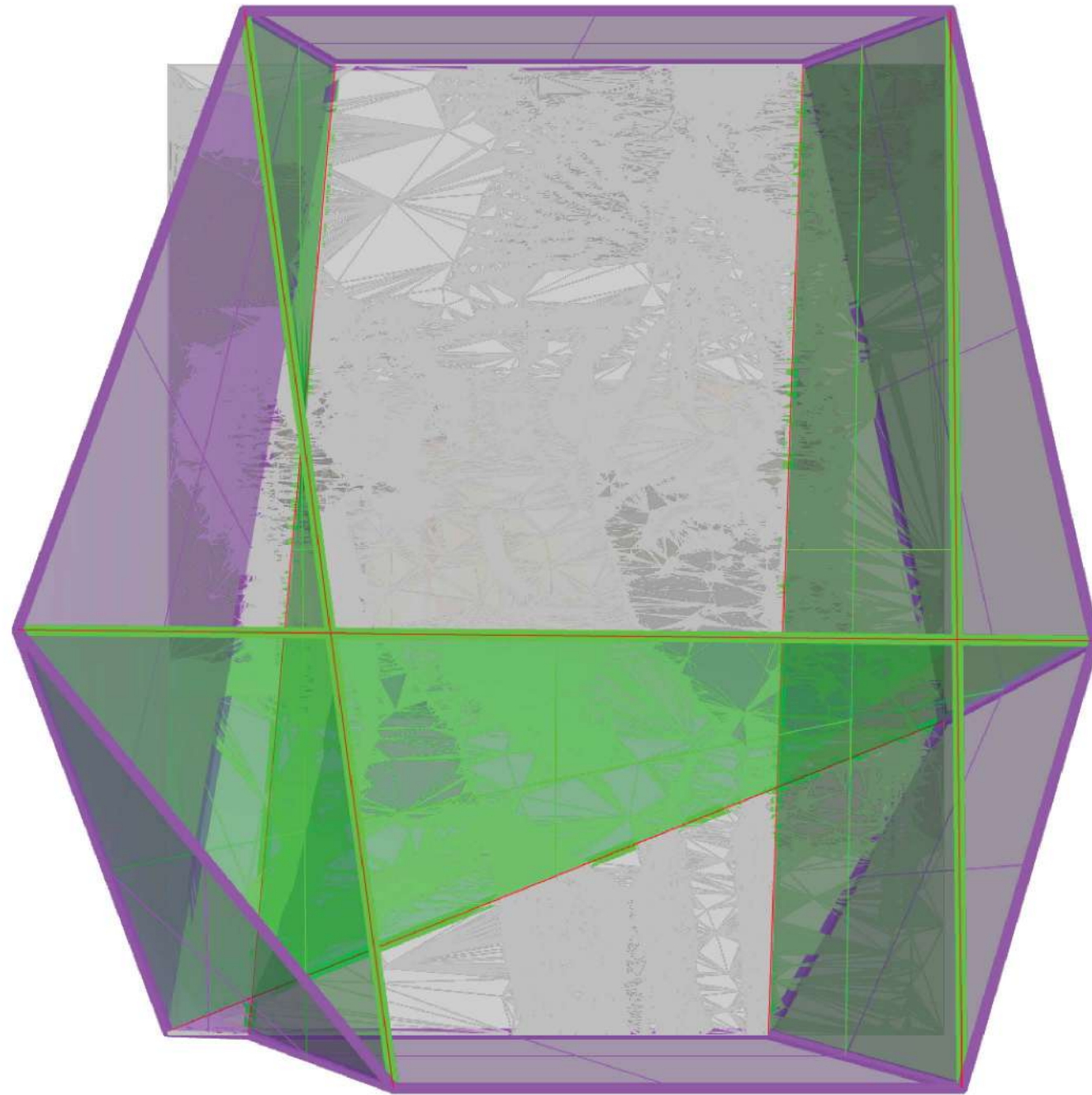
*Polygonal Transition — A*

From the deconstructive process the images were organized in a conceptual walk through of the site and neighborhood. Following the axes and directional lines of each image the transitional planes between the images were generated resulting in an abstract polygonal shape.

*Polygonal Transition — B*

From the deconstructive process the images were organized in a conceptual walk through of the site and neighborhood. Following the fundamental shapes and highlighted components of each image the transitional planes between the images were generated resulting in an abstract polygonal shape.





Virtual Walkthrough — A

Walkthrough sequence of Polygonal Shape A highlighting transitional planes and fundamental elements of composition. This geometry will partially serve as formal genesis of the design.



Virtual Walkthrough — B

Walkthrough sequence of Polygonal Shape B highlighting transitional planes and fundamental elements of composition. This geometry will partially serve as formal genesis of the design.

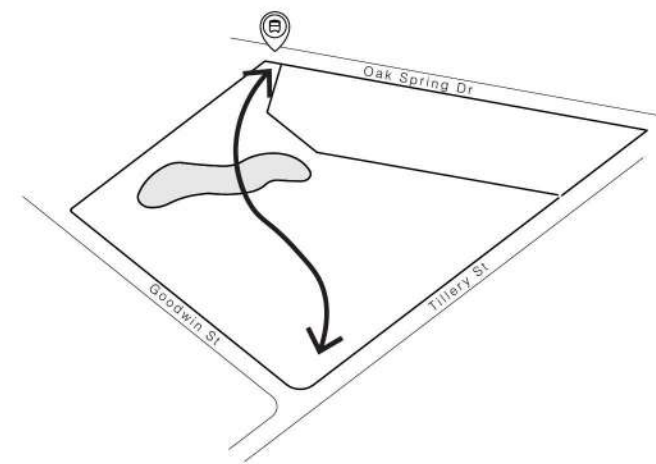




V
The
Design

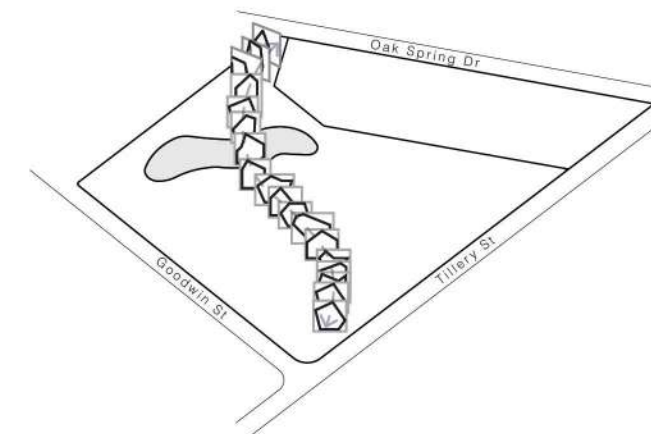
Site Design

The imagery study produced a series of frames, extracted from the main axis and compositional lines of every single photograph. These frames were organized in a logical linear series, and later placed in strategic sequence along the site to highlight the desired circulation across the building. The site strategy aims to connect opposite sides of the parcel in order to generate a connection to the public transport stops. All the frames become connected - or lofted- by a series of inclined surfaces that make these two-dimensional frames into inhabitable space. This results in a polygonal corridor device that becomes the spinal cord and anchor element of the design, by connecting all programmatic elements to a single large double height social space. Such space was conceived as more than a circulation path, but rather a flexible environment where students can explore and seek new learning opportunities and challenges with their peers. The classrooms and other programmatic requirements are organized in a radiating scheme, having student-centered spaces placed towards the interior of the site, while having community-shared programmatic elements (library, auditorium, dining hall etc) located towards the outside.



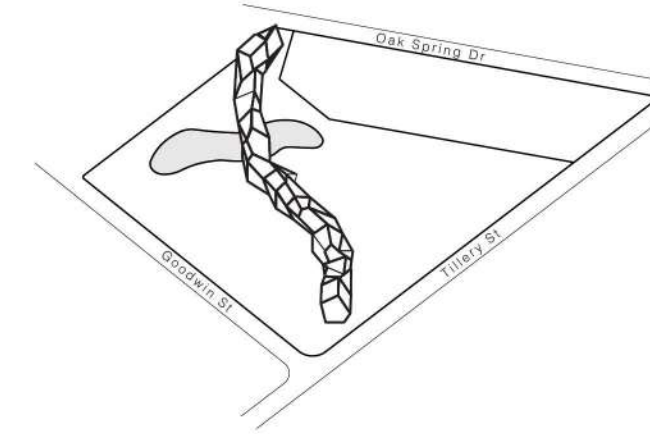
Connecting

connecting to main artery



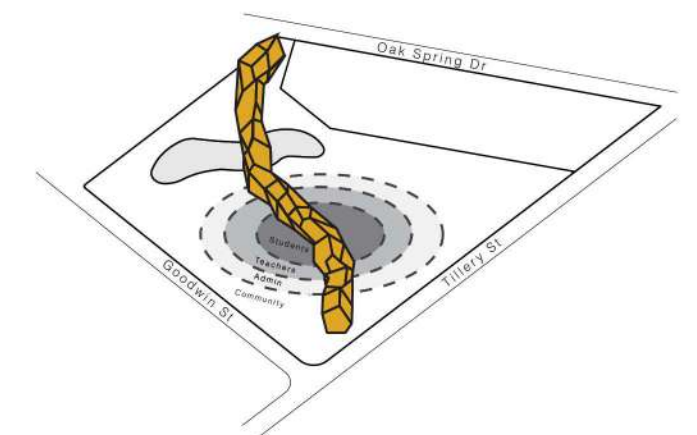
Framing

setting a path of photographic frames



Lofting

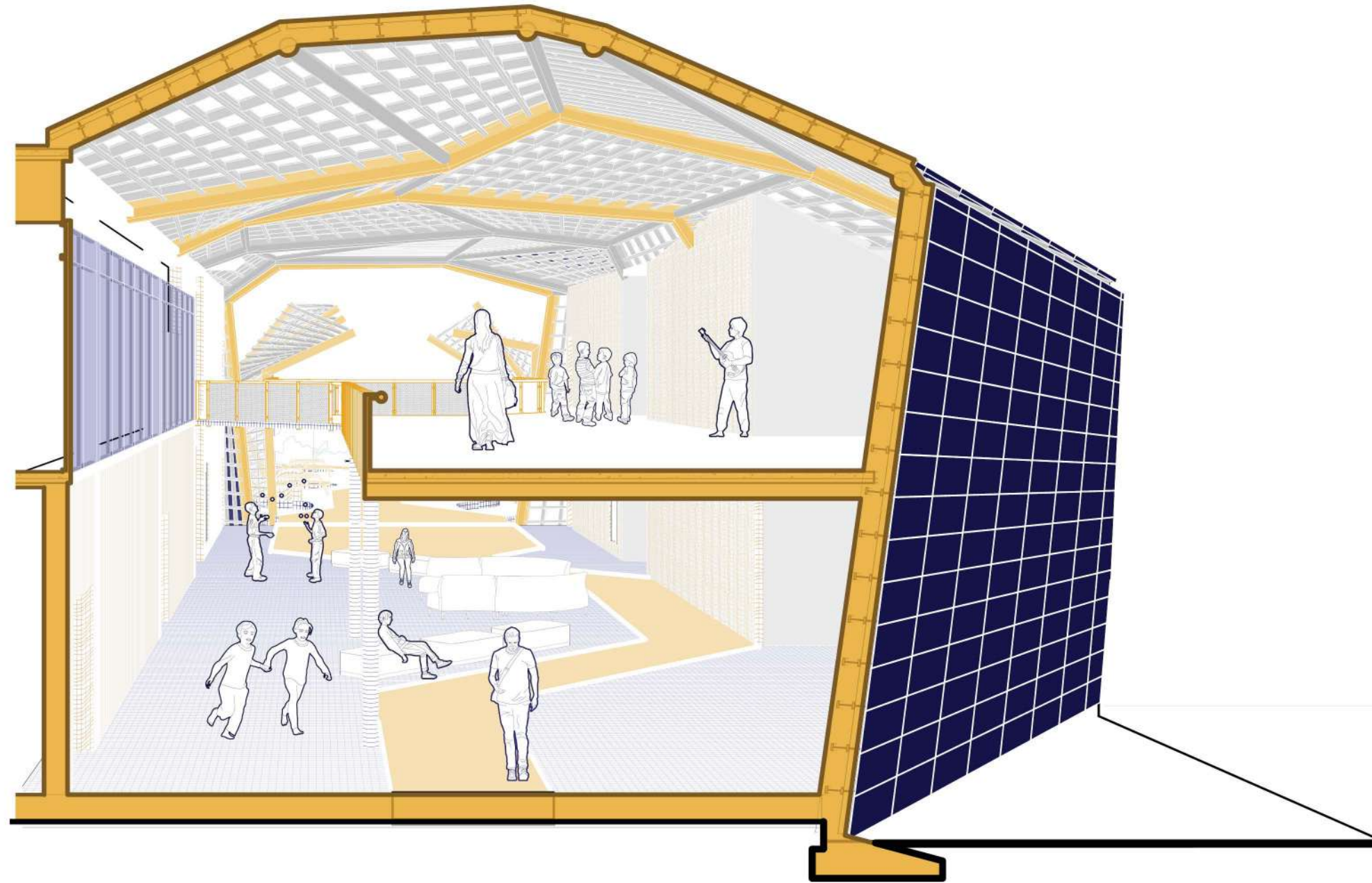
connecting frames smooth transitions



Radiating

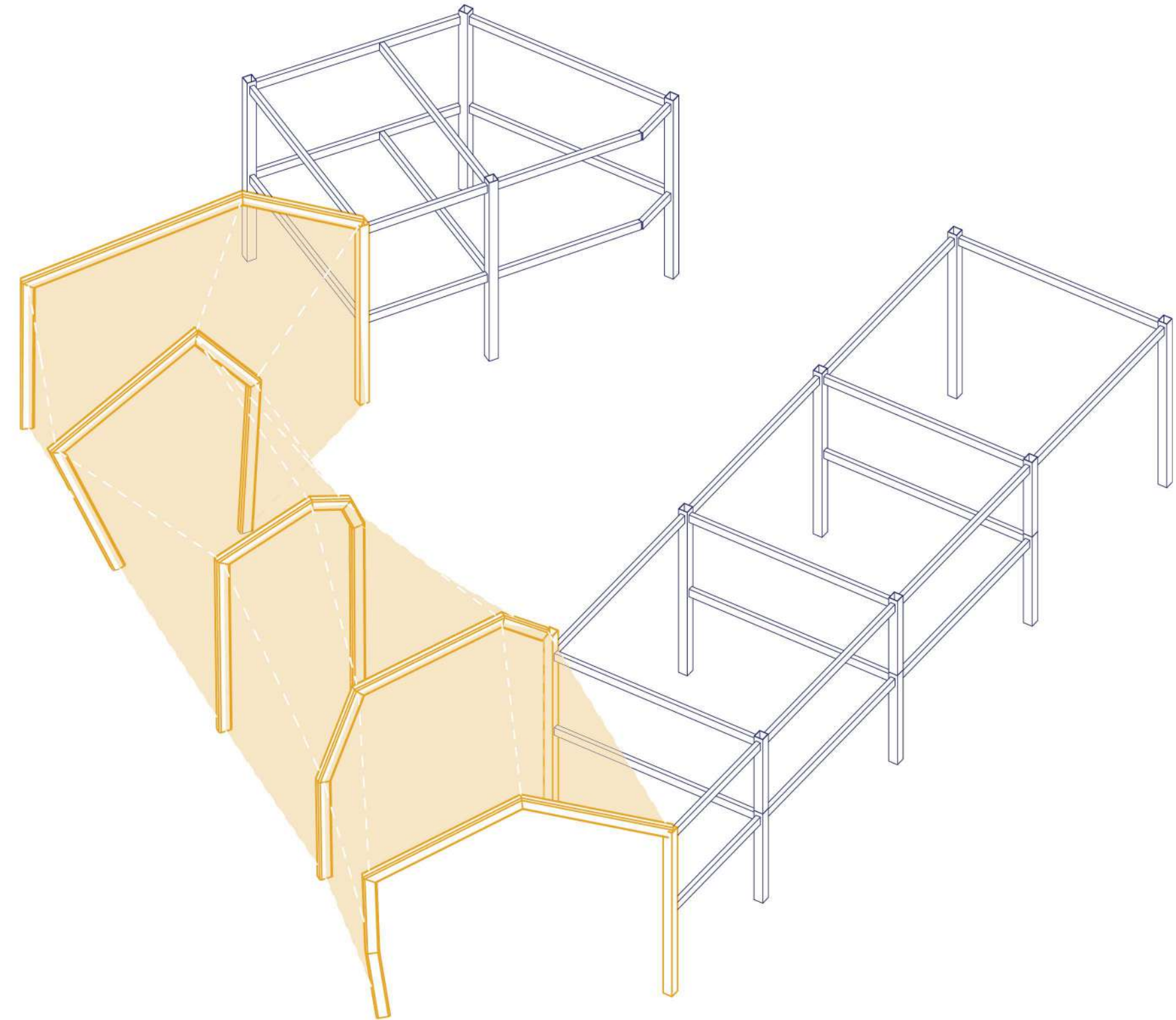
organizing program from the center out

Experiential Concept



The polygonal corridor not only contains the main circulation path through the building and site, but will also house dynamic spaces suitable for interaction and promoting the social aspect of learning. The irregular dynamic shape promotes the spontaneous interaction between the student population, encouraging the sense of community between them and facilitating the group learning (watering hole) process.

Structural Concept

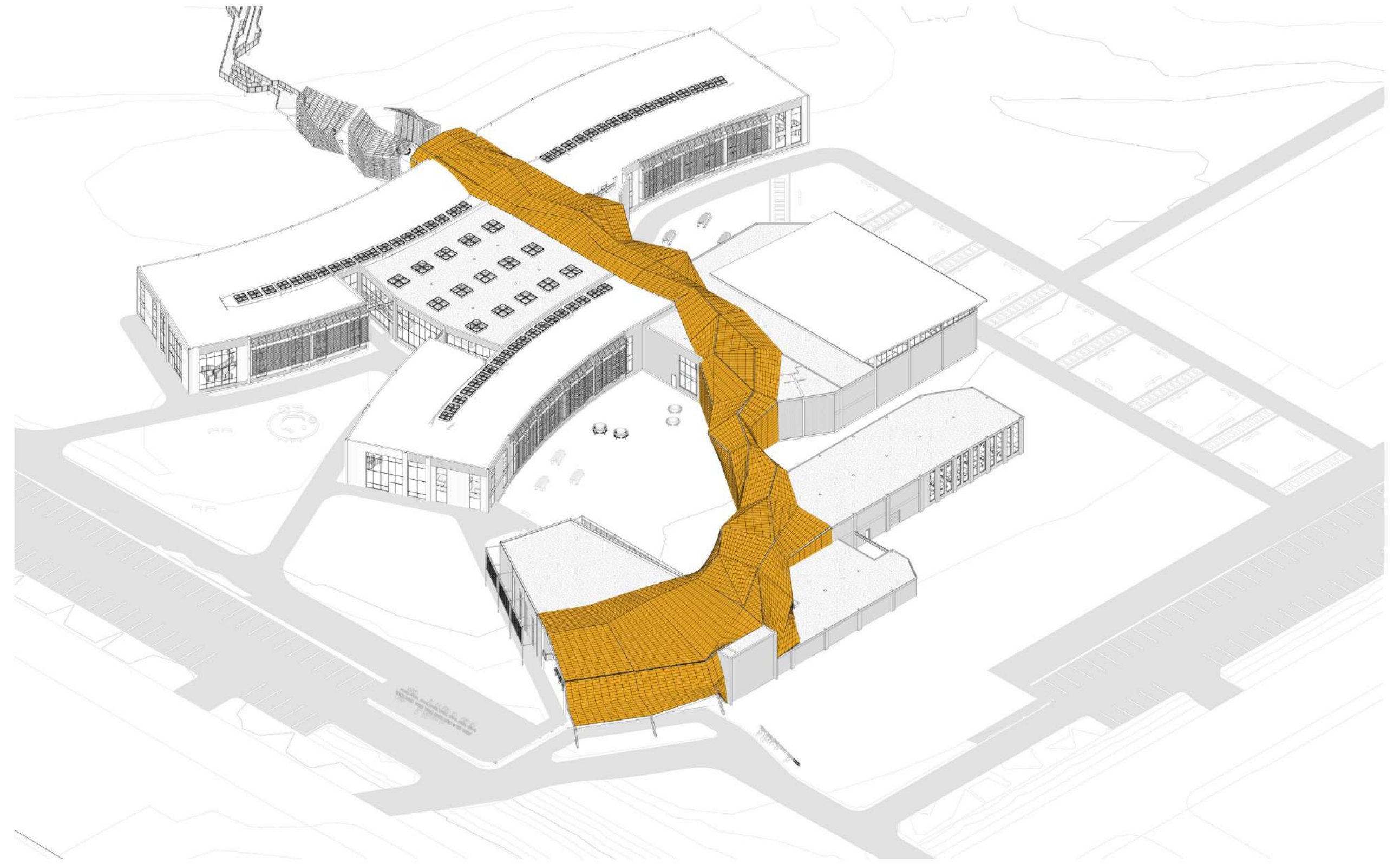


The polygonal corridor is meant to house a soft program, while the attached structures are the hard program. This programmatic differentiation translates into two different structural systems that reinforce the character of each category: on one hand the polygonal corridor is supported by a series of custom steel rigid frames, while the attached program is supported by a reinforced post and beam system.

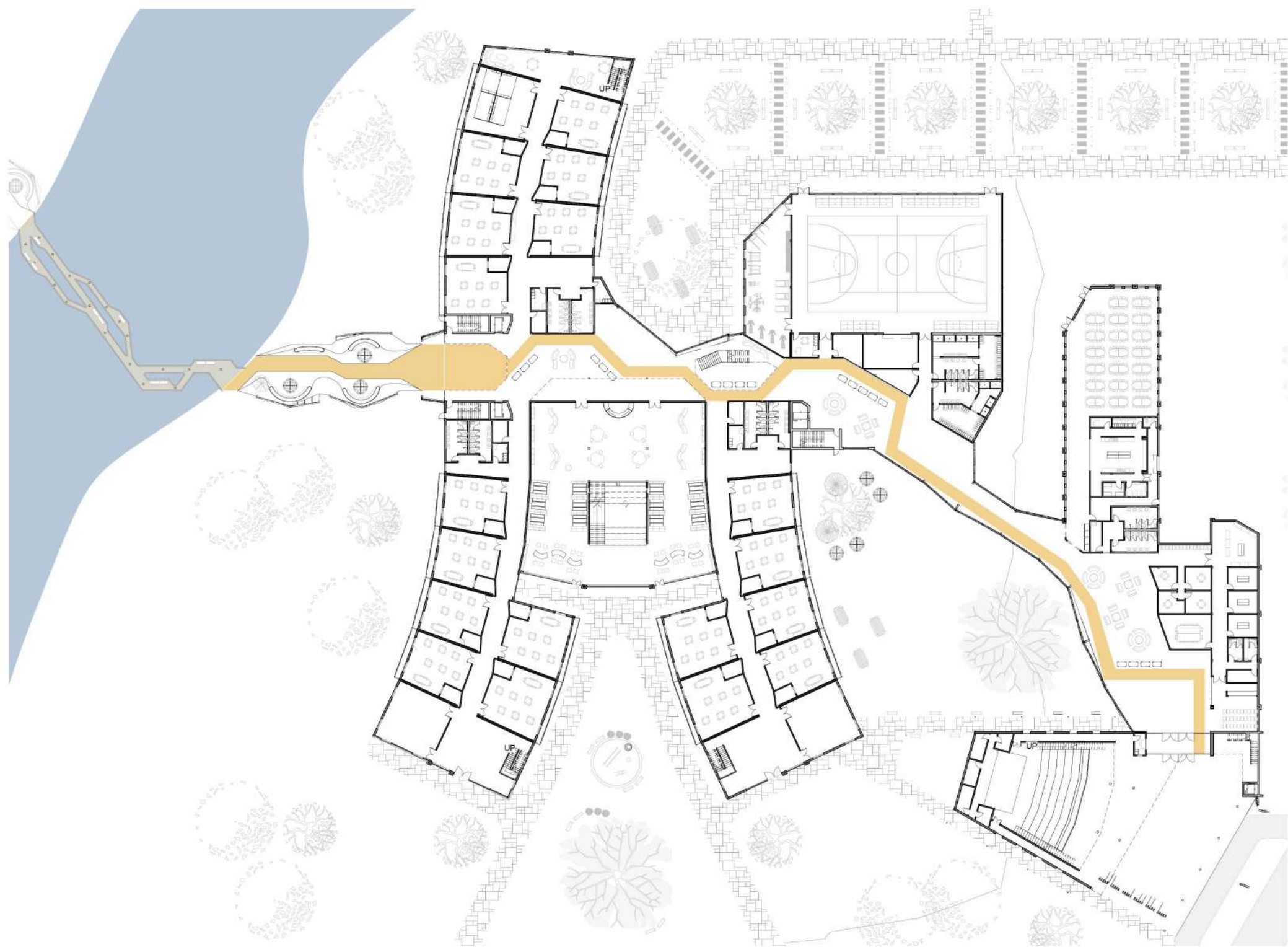
Architectural Project

The site is a polygonal-shaped parcel with a body of water towards the north east corner. The entrance to Govalle Middle School is located in the south-east corner of the parcel, at the intersection of Tillery St and Goodwin St. The corner condition of the site suggests that there are two pedestrian facades that the design responds to. The façade on Tillery St is met with the administrative wing, because its context suggests this being a more private street. The south facing facade, on the other hand, is met with a vast landscape that welcomes community into the heart of the program which is the library space. The building responds with parallel linear walls to the east and south, whereas the north west facade is curved to mirror the irregular shape of the body of water.

The project is conceived as a linear structure –or polygonal corridor-- that adapts to site restraints and specific programmatic conditions to take users from the south east corner to the north west of the parcel, where most public transport connections exists. The project includes two functional types of programs: on one hand the soft program that encompasses is that houses dynamic spaces suitable for interaction and social aspect of learning, and the hard program that includes spaces for traditional learning and other programmatic needs. The program is organized along the polygonal corridor as four distinct wings: the first wing is dedicated to administrative functions and the rest are classroom wings. Additionally, the Govalle middle school provides hard program spaces such as a library, an auditorium, and gymnasium, which can be shared with the surrounding community for specific events and can be accessed from the outside. The programmatic distribution decisions have been made with multiple design iterations, taking rational needs and functions into consideration

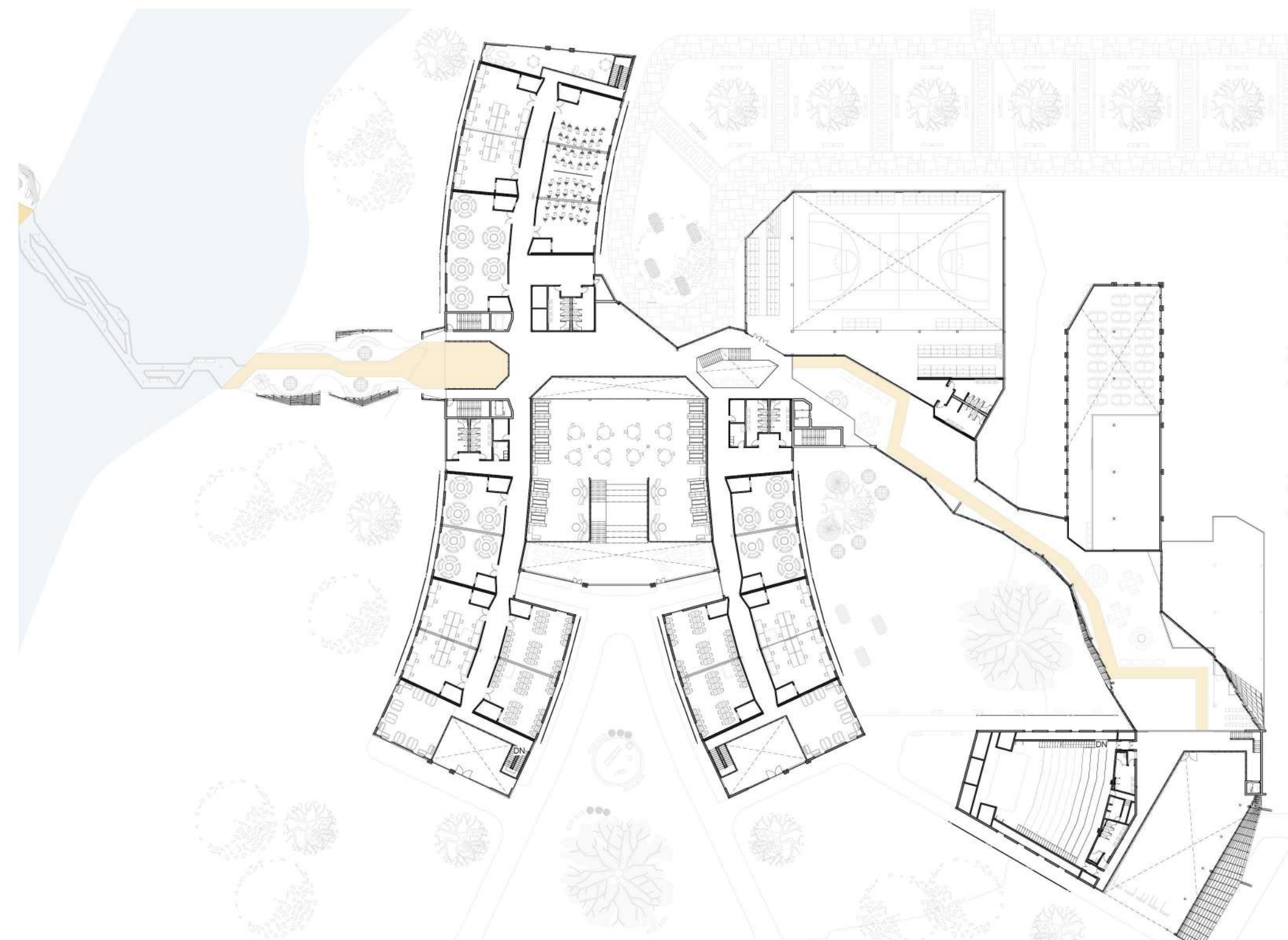


Polygonal corridor that structured the location for all program spaces. While the corridor itself is meant to house the soft program, the attached structures are the hard program.



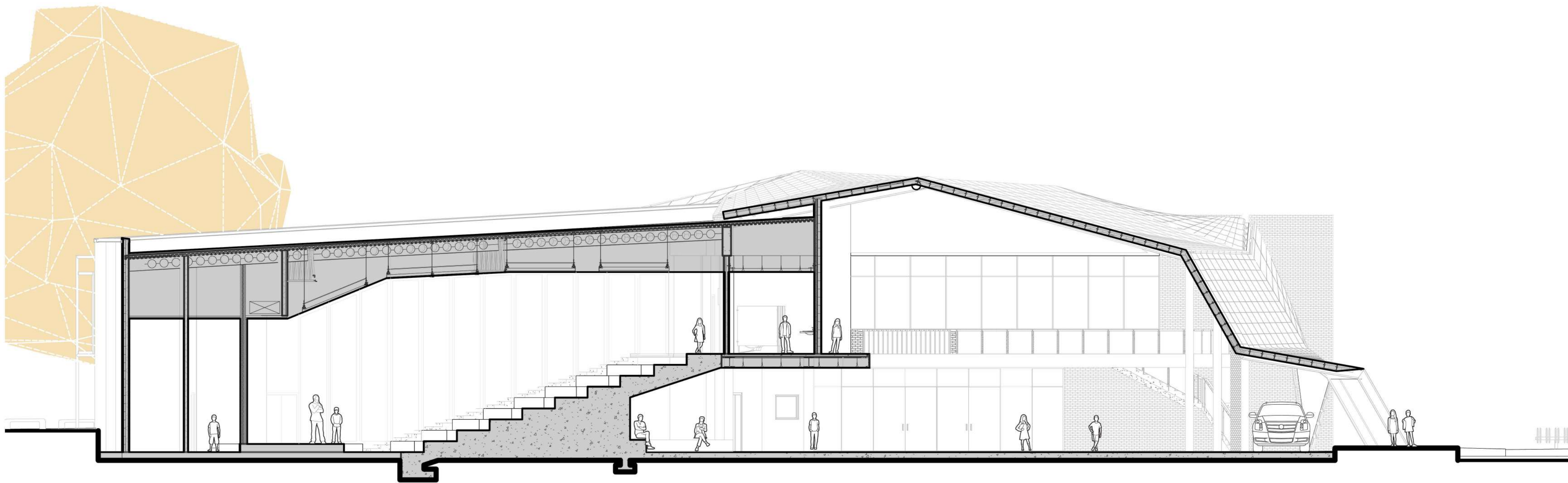
First Floor of the Govalle Middle Project

The corridor mark the main entrance to the building as well as its connection to the outside. The order and positional arrangement of these program spaces not only seek to comply with the functional requirements, but at the same time to relate to the site elements like the body of water. Highlighting the entrances and connection with the surrounding neighborhood and its community through the double-purpose spaces like the library, the auditorium, and the gym.



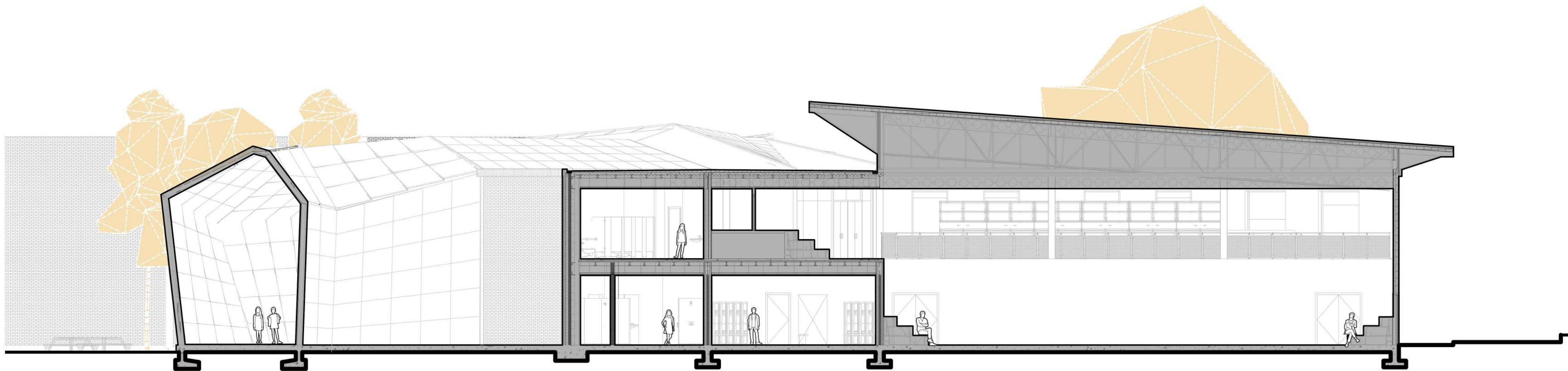
Second Floor of the Govalle Middle Project

On the second floor there are located the complementary spaces such as workshops, art rooms, and music rooms. Only the academic side of the building, located towards the west, contains a programmatic second level, marking with high and functional are the hierarchy of this spaces. The outdoor spaces are also carefully enclosed by the same geometry of the building and these add areas for students to rest and recharge surrounded by nature and designed landscapes.



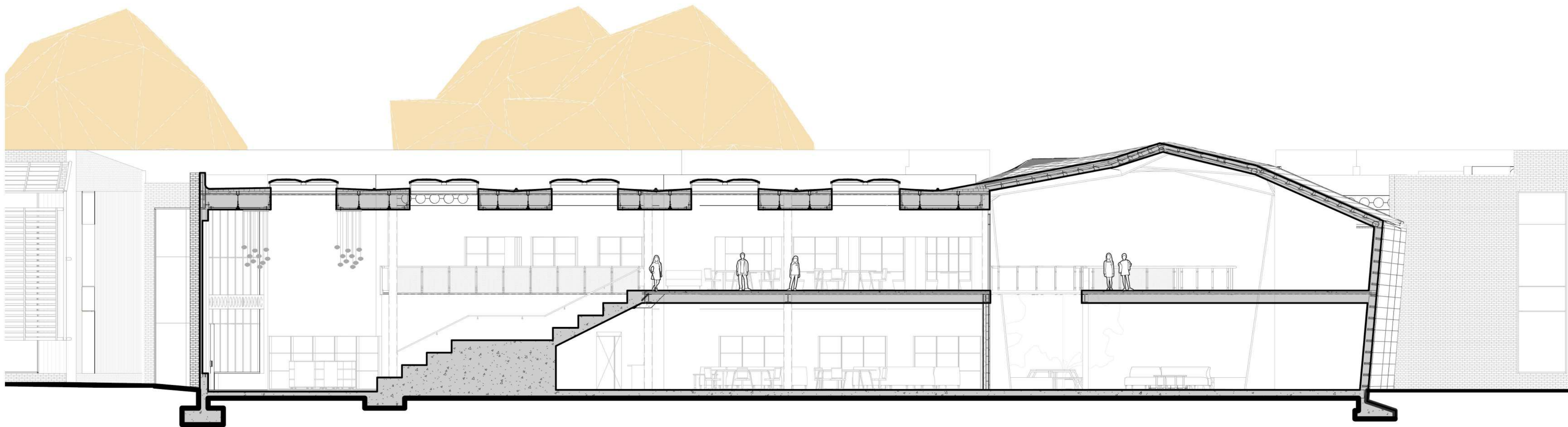
Section 1 — Auditorium

The corner condition of the entrance allows for a welcoming covered patio that serves both as drop off location, as well as an informal gathering spaces for extracurricular activities. In this section to the left, the auditorium is a 3000 square feet double height, acoustically treated space that's supposed to serve both the student population, as well as the community for certain events.



Section 2 — Gymnasium

Passing the administrative wing, the sports wing contains the gym, locker rooms, bathrooms and storage facilities. This section shows the polygonal corridor (left), which is intended to create a funnel experience that evokes movement and dynamic pass through the space in transition to more quiet learning spaces. The corridor has a mix of single and double height spaces that increase visibility and playfulness of this space. On the right, the gym is a double height volume with an area of 3200 square feet.



Section 3 — Library

This section shows (on the left) the library volume and (to the right) the two level polygonal corridor. The rigid frame structure rests upon the post and beam system that carries the loads to foundation. The library features a central space dedicated to open electives or special lectures, but also as a space that students can appropriate for studying.



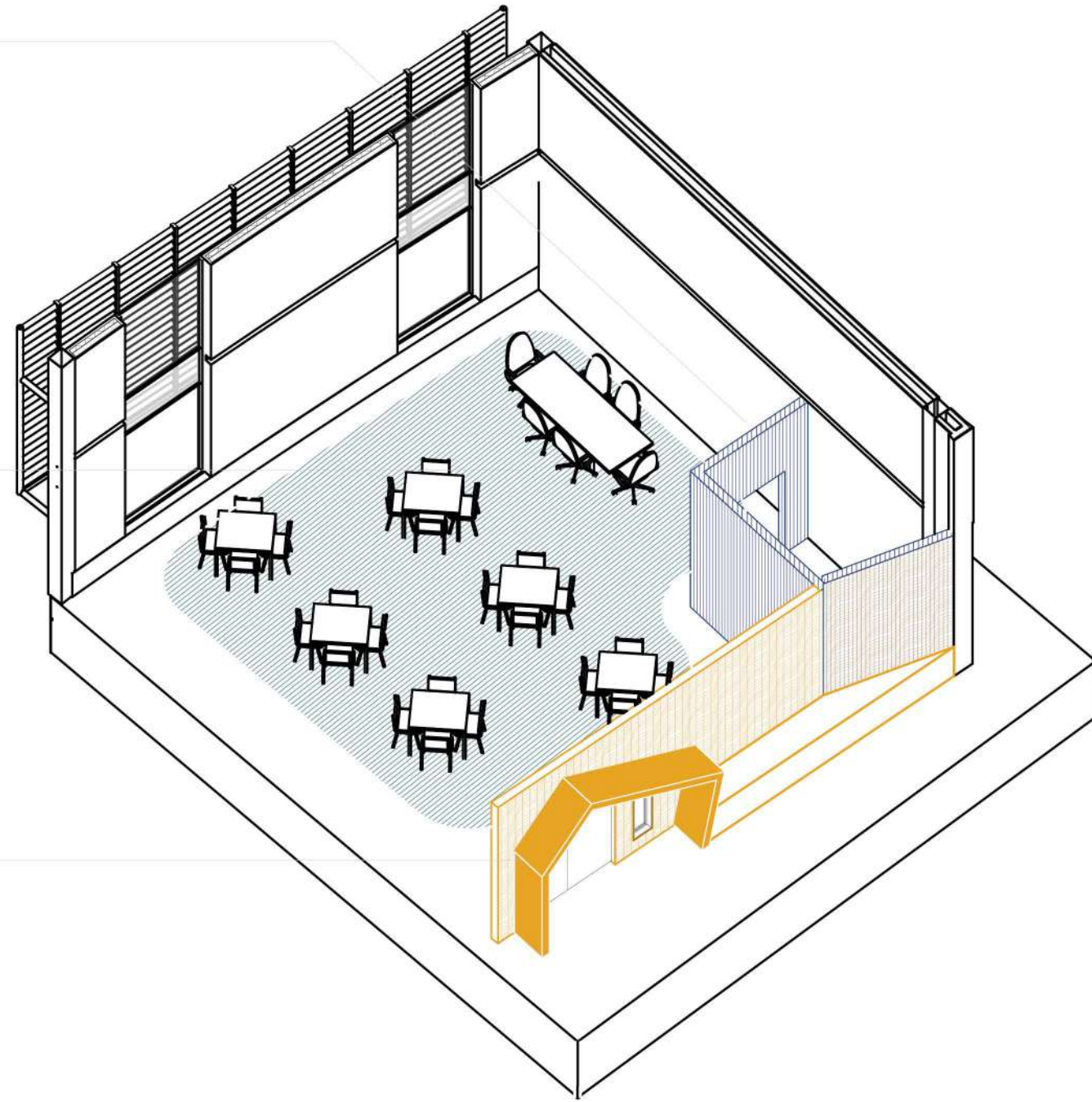
Front Elevation — South

The south elevation shows the main entrance (to the left). The classroom wings open to show the main facade of the library which is a community space. To the right, the vegetation starts to densify, as it transitions to the landscaped boulevard that connects to the bus stop. The material palette includes brick, engineered wood louvering systems, kallwall, all chosen are based on the texture and color analysis from the digital study of photographs.

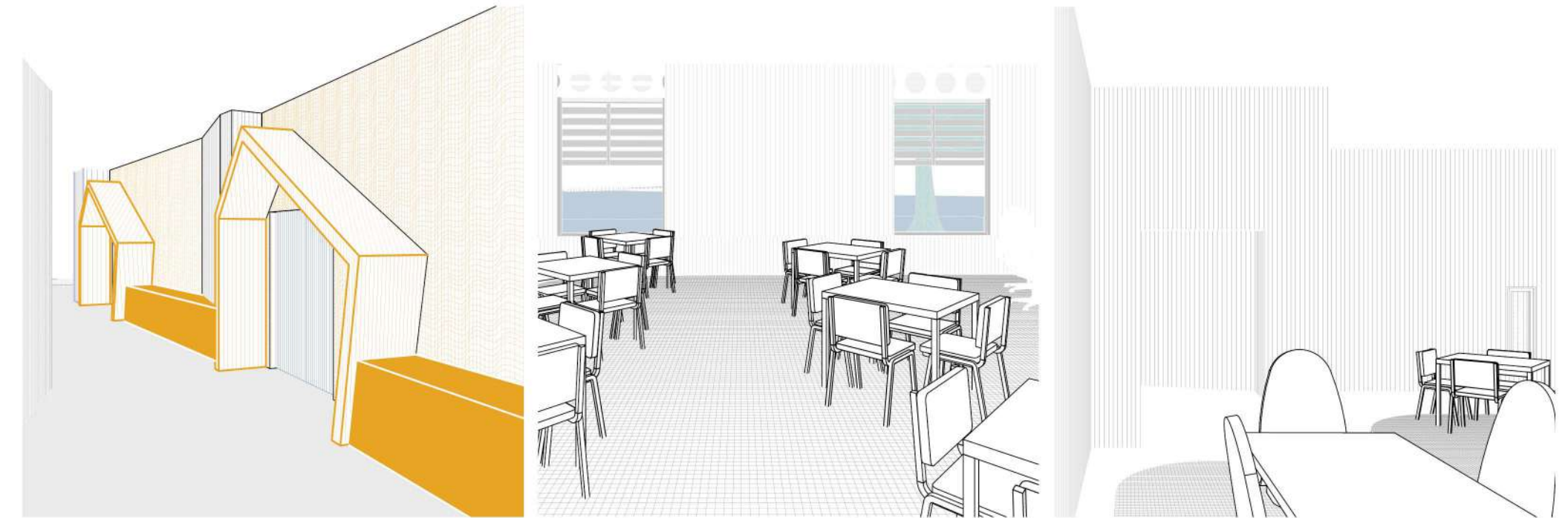
Quiet Spaces — Cave

Main Space — Campfire

Transition Space — Watering Hole



Classroom Components — Axon



Classroom Components — Vignettes

Each classroom is composed of three key elements based on the learning modes for student centered learning. A Transition Space that marks the entrance to the classroom a framing element allusive to the polygonal corridor shape, a window that serve as a soft introduction to the space, and a seating space for spontaneous interaction outside of the classroom. The Main Space contains the student stations arranged in a way in which there is no single focus point on the teacher, but instead group tables spaced apart so the teachers have to move around the class and interact directly with the students, at the same time that the lack of individual tables promotes the social interaction and group work. Finally a Quiet Space that offers a controlled enclosed space while not being isolated, this allows student to retreat there in case they need a privet place to focus for a specific task or a more intimate space if they need a few moments to cope with the main classroom environmental input.



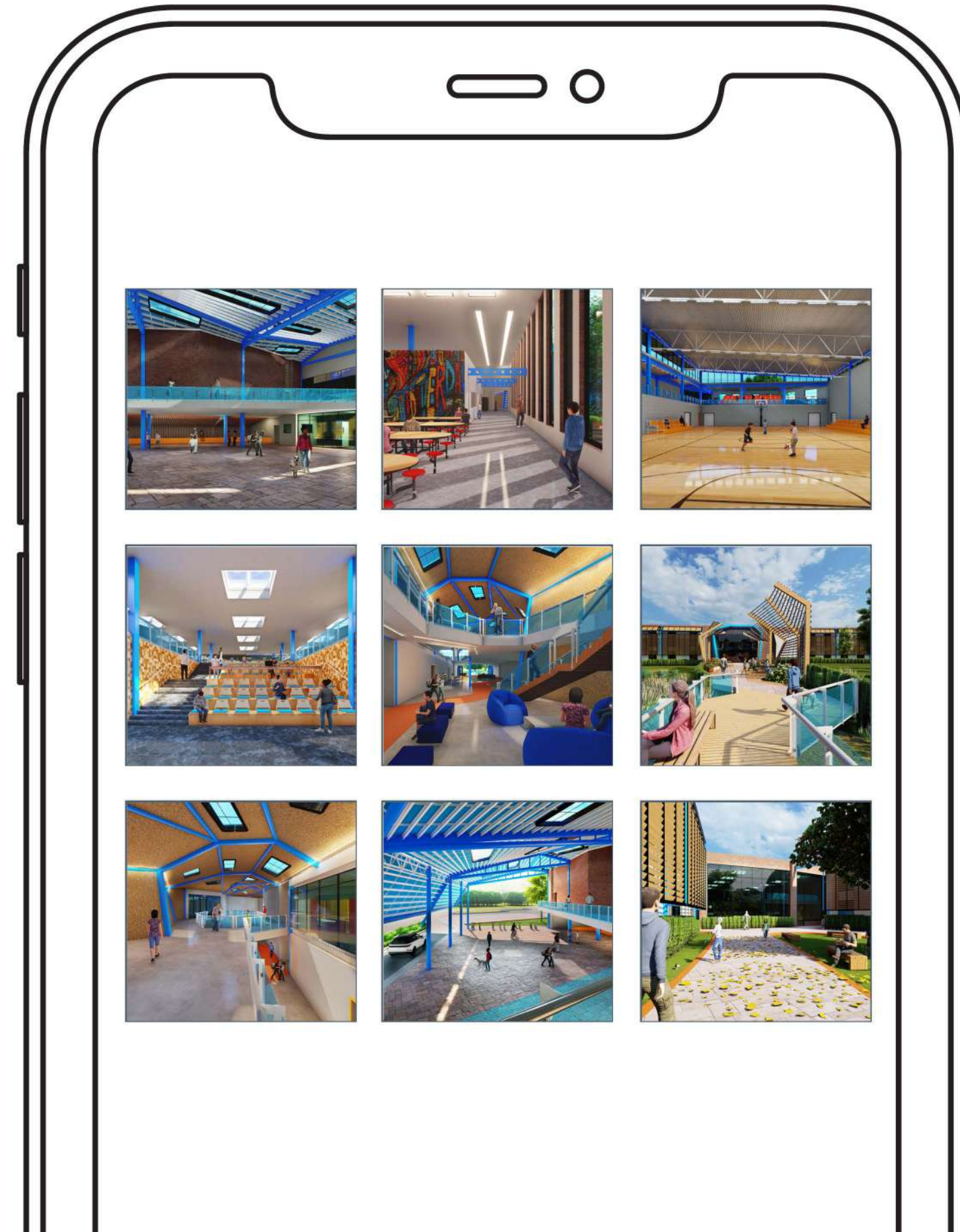
IV

**The
Result**

Conclusion

The developed methodology for this design studio project serves as a design approach that can be implemented in any proposal. With the wide insertion of social media and social imagery in almost every aspect of the daily life this methodology draws a way to involve the population to whom the proposal will serve with a larger and more involve representation than traditional strategies.

In a time when gentrification and disfranchisement are becoming more and more present challenges for the architects of today, it is imperative to find ways that allow for bigger and more efficient involvement of the population in the in the buildings that are being design to serve them. The objective is to find a more engaging architecture that recognizes the identity and needs of a community while at the same time promotes and perpetuates its values and its culture. The Govalle Middle School, following the methodology described in studio project, to succeed in these aspects.



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