MASTER

View-point
design for the Canon school of photography

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VIEW-POINT
DESIGN FOR THE CANON SCHOOL OF PHOTOGRAPHY

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PREFACE

Before you lies the fruit of my graduation year about a school of Photography for the brand ‘Canon’. It has been worked through as my master’s graduation report in the architectural studio ‘brand, sustainability and architecture’.

This report is concentrating on two main topics: 1. Architectural design strategies about directing the view in the works of Diller Scofidio + Renfro and 2. Lowering operation energy consumption through daylighting and natural ventilation. The building design, as a reflection upon the points distilled from the research, seeks to find answers to the posed research questions.

I wish to express my gratitude to prof. ir. Juliette Bekkering, ir. Sjef van Hoof, dr. Dipl.-Ing Torsten Schröder for all the helpful discussions we had.

I would like to thank my boyfriend, Sahand, who has always been there for me and his input in my project has been immense. I would like to thank my parents and my brother that even though they are far away from me, they have always had a strong presence in my life and a high influence on my work.

I would also make a collective acknowledgement of the contribution of all my friends who have been next to me during this project and helped me through my design process.
SUMMARY

Turkey is experiencing an imposed censorship in the press from the government today. Accordingly, the freedom of press is dramatically declining and journalists are being suppressed. In the situation wherein the words are convicted, images can be the voice of people. In today’s political climate of Turkey, Canon, as a driver for change, can empower the people of Istanbul to express themselves through images. The Canon school of photography can be a platform where citizens can see, exhibit and circulate images.

Inspired from the works of Diller Scofidio and Renfro, the design aims to blur the boundary between the civic space and the domain of art. A number of stages hosting different activities around the building put the people through visual experiences and expose them to images, whether it be a city view, performance or video projection. Thanks to two cantilevered boxes, the building chases for the best views; on the lower box, this view is directed towards a closer target: the public square, while in the uppermost box it is directed towards the horizons of the city upon Golden Horn.

Daylighting is an essential inseparable element of photography and natural ventilation also relies highly on how the building is exposed to sun and how it is therefore, heated. Accordingly, the architectural design in this report seeks to give meaning to sustainability through daylighting and ventilation.

The square geometry of the floorplans are bisected along a linear atrium in order to compensate for the long depth of the floor and bring more daylight into the building; while putting the building in east-west orientation.

The building on the square level starts with an atrium and a series of translucent galleries. Above these boxes, the body of the tower
includes the school program. The division in the plans has let for pro-
grammatic separation of creating spaces (Computer labs, workshops
and printing rooms) to the south side and sharing spaces (Lecture
rooms, crit rooms, Multimedia lab, Offices) to the north. A view cor-
ridor is spiralled around the building ending in the viewing spots at
every corner and ultimately leading to the uppermost box. The box of
photo shooting studios hovers above them all over the road.

Façade of the tower is covered in exterior vertical lamellas. Thanks to
photo sensors, they rotate relative to the sun angle in order to prevent
overheating and glare within the floors, while providing them with suffi-
cient daylight. These lamellas are more densely situated in the south
part of the building where sun radiation is more severe, and daylight
is mainly brought to the floor through daylight ceiling. Inspired from
Kunsthaus in Bregenz by Peter Zumthor, the ceiling not only brings
daylight to the floor, but it also gives an impression of daytime and the
weather outside the building and influences the atmosphere there.
Integrating daylight ceiling in the design brings difference in the floor
heights of the north part and south part of the building, and therefore,
the result is the slid floors along the atrium. This slide along the shear
line (Atrium) lets for visual connection and legibility of the building.

Difference in the in and out temperature together with the height of
the building allows for natural stack ventilation through the atrium.
Moreover, wind-driven ventilation helps with washing out the exhaust
air on the northern part and give it a constant flow. In the southern
part, air flows through daylight ceiling and cools the floors.

To sum up, The Canon School of Photography, as a sharing and view-
ing platform, strives to engage the public in its visual activities, absorb
the surrounding views and bring down its energy consumption by
means of daylighting and natural ventilation.
1- INTRODUCTION
1.1- INTRODUCTION

Arose from the issue of suppression of the freedom of the press in Turkey, this report is a proposal for the design of the ‘Canon’ school of photography in Istanbul. In the chapter introduction, the report elaborates on the status quo in Turkey and therefore suitability of the brand ‘Canon’ and the program of the school of photography in the context of Istanbul. In this chapter, the way sustainability finds meaning in this report is discussed and two research questions have been raised: 1. About the architectural design strategies of directing the views in the works of Diller Scofidio & Renfro, and 2. about Lowering operational energy consumption through daylighting and natural ventilation. The second chapter is a research about directing the views in the works of DS+R. Three case-studies are selected in order to have a better understanding of their architectural design strategies about directing the views. The third chapter researches how daylighting and natural ventilation can contribute to lowering energy consumption in a building. Fourth chapter introduces the location and the problems it is dealing with and as a reflection on this existing situation, the fifth chapter, Master plan, gives a proposal addressing those issues. The seventh chapter, building design, proposes an architectural design for the Canon school of photography, by employing the strategies derived out of the research, translating them into the personal design and contextualizing them. Last but not least, the chapter conclusion gives a recap of the previous chapters and seeks to address the research questions based on the research and the process of design. Since there is always a place for further improvements, this chapter also reflects on the report and gives recommendations for the future.
1.2- BRANDING THROUGH ARCHITECTURE

Corporations serve as the lifeblood of the economy. Today’s market is saturated with messages from different brands for which the key to survive and prosper is recognition. Brand is defined as “a combination of attributes that gives a company, organization product, service concept, or even an individual, a distinctive identity, and value relative to its competitors, its advocates, its stakeholders, and its customers. (Doyle, 2011)”

Uusitalo states that a symbol, as a means to embody a brand, can be a visual imagery, brand name, a logo, a slogan, a metaphor, a meaningful heritage story or an architecture (Pusa & Uusitalo, 2014, p. 22) Throughout the history, architecture has provided institutions with demonstration of their supremacy (Bahamón, et al., 2009, p. 6) and can underpin their communication and capitalize their image.

Klingmann in the book ‘Brandscapes: Architecture in experience economy’ states that nowadays ‘emotions’ have surpassed ‘functions’, to an extent that emotions rule on deciding what is functional. About a product or service today, there is no more the question of ‘what it does’, but it is more about “how I feel about it”. This shift in behavior paradigms has shaken the marketing world and relatively the individual brands. In a brandscape, costumers “do not only purchase the product, but also the brand experience as the representative of the lifestyle attached to it” and consequently, brands are identified through a set of experiences (Klingmann, 2007, pp. 45-47)

Architecture as a stimuli influences people’s experience embraced by it. Companies are more tending to present their brand connoting their corporate identity by making headquarters, front offices, flagship stores, shops and alternative forms of showcases.
Zukin asserts that “transformation in marketing world has shifted shopping districts from craft (quiche) to mass production and consumption (Zukin, 1991, p. 43)”. Accordingly, Globally known brands integrate international urban form and internationalized production and consumption, while their shops, flagship stores, and offices are spread all over the world (Zukin, 1991, p. 43). The notion of internationalization behind a global-brand building has made the spatial and visual message of the brand perceivable regardless of its place.

Today’s firms strive to represent themselves in “symbolic, representative structures that differentiate them from the other constructions around them”. They aim at achieving an architecture which acts as “a channel of communication in the process of consolidating a corporate image” (Bahamón, et al., 2009, p. 6). Whatever the function of a brand building would be (museum, headquarter building, shop or etc.), whether accessible by the public or more private for the employees, yet it is a showcase which seeks to communicate the brand.

This spatial translation depends largely on the brand, location, and function of the building. Considering these three aspects, a scenario of experiences in line with lifestyle associated with the brand can be composed and relatively architecture can be designed by integrating branding strategies that match those desired experiences.

Architecture is an opportunity through which the brand seeks manifestation. It attempts to convey the message of a brand and thereby, bridge the gap between consumer and the corporation.
Accordingly, architecture is not only a showcase for the products, but also incorporates the associated lifestyles, emotions, and atmospheres (Krupar & Al, 2012, p. 254). Rather than ‘represented’, it is better to say the brand is ‘communicated’ through architecture. Communication emphasizes on the perception and reflection of the user.

Composing a narrative for user’s experience of a brand within a building is grounded on “psychological, yet the practical theory of customer and his social behavior” and therefore is highly complex (Klingmann, 2007, p. 47). Relatively in this report, the design seeks to engage the public more into the activities of the building and put them through such experiences as representatives of the lifestyle associated with the brand.

![Figure 1: Collage of iconic brand buildings (Author et al., 2015)](Image)
Freedom of the press is referred to as “the freedom to report without being subject to oppressive restrictions such as the licensing of journalists or wholesale censorship (Harcup, 2014)”. This freedom implies that the press is exercised on behalf of society and in the other words, is the voice of the public and representative of the will of the people (Curran and Seaton 2003, 346_347) (Dawes, 2013, p. 21).

Over the years, Turkish media has always been under strong control exerted by the government (Kayaa & Çakmura, 2010, p. 521). Since the late 2000s under the AKP (Justice and development party) government, the freedom of the press is declining dramatically, and as shown in figure 2, this decline is continuing more exponentially in recent years. Censorship is taking over through the media in the framework of legislative constraints. Today Turkey is ranked as 149th amongst 180 countries in World Press Freedom (See figure 3) (Reporters sons frontiers, 2016).

The government imposes different kinds of pressures on the news-makers to keep their voice down from which “conglomerate pressure, judicial suppression, online banishment, surveillance defamation and accreditation discrimination” are some (Akser & Baybars-Hawks, 2012, p. 302). Restrictions on the media are growing vastly since 2007, as highlighted by the judicial trial (and the subsequent murder in January 2007) of the Armenian-Turkish journalist Hrant Dink (Christensen, 2010, p. 177). In recent years, many newspapers have been seized; while a number of television channels were claimed to be slanted and have been gone under state administration.

While the government argues that Turkey is amongst the freest spots for journalists in the world, the lack of tolerance of diversity
in Turkish media has led to conservativeness and public mistrust about the bias and inaccuracy in the news (BBC news, 2016).

Figure 2: Decline in the freedom of press in recent years in Turkey (Freedom-house, 2015)

Figure 3: map of the freedom of the press (Reporters sans frontiers, 2016)
1.4- “CANON” AS A DRIVER FOR CHANGE

“A picture is worth a thousand words” says how effective an image can be and it can convey the message much more strongly than a written or verbal description would do. Images are composed in a global language. Regardless of the nationality and language, all the people can communicate with an image visually.

In the current situation of Turkey wherein the press is suppressed, images can be the voice of people. Expressing oneself through the images can be a point of emancipation for those who are seeking a way to yet speak of existing problems, and it can even be a way to dodge the current censorship imposed on the media. Figure 4 which is the first prize winner of the Spot News category of World Press Photo Contest 2014, shows a girl wounded in the street protests in Istanbul. This single photo is an example of the multitude of strong images as such which have gone hand to hand throughout the world and touched people all around the world.

Canon is a Japanese multinational corporation specialized in the manufacture of imaging and optical products, including cameras, camcorders, photocopiers, steppers, computer printers and medical equipment. It has been well-known for its innovative launches of technologies through the history of its existence, from which the first SLR cameras, the first camera with an embedded micro-computer are some examples.

Canon is addressing three main business segments and there is a vast range of products manufactured for each of them, meeting their specific needs. For the Office business unit, Canon produces the products of which include copying machines, digital production printers, large format inkjet printers, laser printers and multi-function devices. For the consumer business unit, many products such as broadcasting equipment, calculators, compact digital
cameras, digital SLR cameras, digital video camcorders, image scanners, interchangeable lenses, inkjet multifunction printers and single function inkjet printers are being produced. As the third segment, products such as computers, handy terminals, LCD lithography equipment, magnetic heads, medical imaging equipment, micro-motors, ophthalmic equipment and semiconductor lithography equipment are produced for the industry and other business.

By establishing a school of photography, Canon can give away its years of experience and knowledge with imaging products to the people of Istanbul and empower and educate them to work with images. This school can be a point where people can see, exhibit, study and circulate images, and in the other words, an elucidation platform for the public which takes place through visual experience.

Figure 4:
The first prize winner photo of spot news category in World Press Photo Contest 2014 (World press photo, 2014)

Figure 5 (next page): Moodbar of the brand ‘Canon’ (Author, 2016)
1.5- AMBITION FOR SUSTAINABILITY

Canon takes the initiative in economic, social and environmental activities and thereby, seeks to consolidate its profile of sustainability. Its environmental activities include developments in the product lifecycle, raw materials and manufacturing by suppliers, as well as product usage by customers (Canon Inc., 2015). Beside all the product-related strategies, Canon takes action in regional and community contributions, especially in developing countries.

Canon Europe has been a partner of World Press Photo for sixteen years. World Press Photo seeks to promote professional standards in photography. It holds an annual international contest for photojournalists which is deemed to be the most prestigious photography contest in the world and has created a worldwide platform for press photography (Canon Inc., 2016).

The credible profile of Canon can be a good starting point to build the architectural design upon. As discussed earlier, Turkey is going through censorship and suppression. Therefore, the Canon school of photography can give meaning to sustainability socially by empowering the people of Istanbul to express themselves through the images and circulate them.

Moreover, in terms of environmental issues, the design is going to focus on lowering operational energy consumption which leads to excessive carbon emissions and global warming (Philips, 2004, p. 37). There are multiple components resulting in increasing the operational energy consumption, from which this report focuses on the role of daylighting and natural ventilation. Daylighting is chosen because it is an essential element if photography and natural ventilation is highly influenced by how the building gains the sunlight and is therefore heated. However, it is worth mentioning that these two components are not researched equally and more attention is paid on daylighting rather than natural ventilation.
Canon school of photography is standing for a free-expression spot for the people of Istanbul and also for the brand ‘Canon’. These two points bring new elements to the design such as acceptance and democratic image of the building and also an aesthetical and programmatic expression which would suit Canon. In either way, the sharing point can be the view: How the building is being viewed in the eyes of the public and how inspired from the practice of photography, views are working within the building.

Learning from bigger masters in this field, Diller scofidio & Renfro are a New York-based office specialized in designing educational and art centers. In their architectural practice, the blueprint of emphasizing the view directions is clear. Moreover, through their design they seek to blur the boundary between the civic space and the domain of art, and engage the people in the activities and therefore, take steps closer to democratize the art which earlier was deemed to belong to a specified group of people.

Since the view is a fundamental element in photography, likewise, the focus of the research is on the view in architecture. Acknowledging Diller Scofidio & Renfro as a reliable example of directing the view in architecture, the first part of research is an effort to extract the strategies regarding directing of the views in their works. The report later seeks to find an answer to the following question:

‘What architectural design strategies do Diller Scofidio & Renfro use to direct the view in their works?’

After being built, the buildings during its use phase consumes a lot of energy which is referred to as ‘Operational energy consump-
tion’. Uncontrolled use of this energy results in resource depletion, CO2 emissions, and global warming. Lighting and ventilation in a building are two of a multitude of components included within the operational energy consumption pattern. On the other hand, lighting is an essential inseparable element of photography and a school of photography. Daylighting is an effective way of providing a building with light in the daytime and if well designed, it can decrease operational energy consumption of a building to a great extent. Architectural design can let for both effective daylighting and natural ventilation and therefore give meaning to sustainability through them.

The second research question in this report focuses on daylighting and ventilation and the report seeks to answer the following question:

‘How can daylighting and natural ventilation decrease operational energy consumption in a building?’

In order to address this question, first research is done about directing the views in the works of Diller Scofio+ Renfro, daylighting, and natural ventilation. Location as a fundamental part of the design is analyzed and discussed in the next chapter and a new masterplan is then proposed. Extracted strategies from the research would be the tools employed in design phase which would ultimately seek to answer the posed questions.
To have a stronger grip on the program of a school of photography, I interviewed my friend who is just graduated from School of Visual Arts in New York (SVA), which is allegedly one of the best schools of photography in the world, both in terms of quality of education and facilities.

As the first step, I asked for the description of the atmosphere in a school of photography and all the spaces that it might include. To elaborate more on the program I asked her to fill in a table with questions about quantities and sizes of each space. Figure 6 shows the results.

From this point, I started to compose my own program: a school of photography for 400 students. Out of the interview, I found out gallery space is a crucial part of a school of photography and is where the products are being exhibited. Especially in the case of my building, which would be an exhibition open to the public, importance of gallery space may be doubled.

Another finding was the fact that the products of a school of photography is not only about photographs, but also about videos, installations and perhaps even performances. Therefore, my program got broadened to house spaces for such activities as well and this was when virtual reality room, multimedia room, film hall, auditorium and exterior performance stages emerged.

However the percentage of surface areas of each space took a distance from the one of SVA in New York, it still remained relatively close to that. Figure 7 shows the percentages of programmatic space occupations within the Canon school of Photography.
<table>
<thead>
<tr>
<th>Spaces</th>
<th>Quantity</th>
<th>Size of the spaces (Big, medium, small)</th>
<th>Surface Area for 400 students (in square meters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo shooting Studio</td>
<td>7</td>
<td>4 medium, 2 small</td>
<td>(4<em>150)+(2</em>80)</td>
</tr>
<tr>
<td>Computer lab</td>
<td>6</td>
<td>1 big (1/3 of floor) 5 medium, 1 small</td>
<td>210+(5*80)+50</td>
</tr>
<tr>
<td>Printing room</td>
<td>2</td>
<td>Medium</td>
<td>(2*300)</td>
</tr>
<tr>
<td>Seminar/Crit room</td>
<td>6 [for crits]</td>
<td>1 big, 5 small</td>
<td>625+(5*80)</td>
</tr>
<tr>
<td>Lecture room/Classroom</td>
<td>6 [for theory courses]</td>
<td>Small</td>
<td>(6*80)</td>
</tr>
<tr>
<td>Darkroom</td>
<td>2</td>
<td>Medium</td>
<td>(2*300)</td>
</tr>
<tr>
<td>Gallery</td>
<td>1 room, All hallways</td>
<td>Small</td>
<td>100+ ...</td>
</tr>
<tr>
<td>Offices (Tutors)</td>
<td>1 (chair), 1 shared space</td>
<td>Small</td>
<td>80+625</td>
</tr>
<tr>
<td>Offices (Administrative)</td>
<td>3 offices, 3 hubs (dig, b&amp;w, studio)</td>
<td>Small</td>
<td>(3<em>180)+(3</em>80)</td>
</tr>
</tbody>
</table>

Figure 6: The Table of program of SVA, New York (Author, 2016)

Figure 7: Percentage of programmatic space occupations in the Canon School of Photography (Author, 2016)
Figure 8: Photoshooting Studio (School of Arts Institute of Chicago, 2015)

Figure 9: Crit room (Luisiana State University, 2015)

Figure 10: Computer and printing workshop (School of Arts Institute of Chicago, 2015)

Figure 11: Computer lab (International center for photography, 2015)

Figure 12: Gallery (Penn Design, 2015)

Figure 13: Tutor’s office (Luisiana State University, 2015)

Figure 14: Darkroom (Falmouth University, 2016)

Figure 15: Darkroom (Arts University Bournemouth, 2016)
1.8- METHODS

The building design aims to employ the strategies extracted out of the research and translate them into its own context. In order to find an answer to the research questions, different methods were used.

To address the first research question about directing the view in the works of DS+R, three of their case-studies, as the representatives of their work, are analyzed. In the end of the chapter, through an overview, their strategies in those three buildings are brought together and discussed as a starting point for the design. In order to answer the second research question, an empirical research has been conducted. This research has been done concurrently with the process of designing. Therefore, based on the basics of orientation and section depth, other strategies relative to the needs of design (such as the use of rotating lamellas to prevent glare and overheating and daylight ceiling to bring a more unified light) is discussed. The chapter Natural ventilation also using an empirical research, tries to find a good solution for natural ventilation in the context of Istanbul.

The design in the following chapters is a reflection on the research and contextualizing the strategies and bringing them into the process of building design.
2- DIRECTING THE VIEWS IN THE WORKS OF DS+R
2.1- INTRODUCTION TO DS+R

Diller Scofidio + Renfro is a New York-based design studio “that integrates architecture, the visual arts, and the performing arts” (DS+R, 2016). The office is led by three partners Elizabeth Diller, Ricardo Scofidio, and Charles Renfro. The office is mostly renowned for its architectural design of cultural, educational and art centers.

At the very beginning what drove Diller and Scofidio to work together was their strong craving to explore the public space (Incerti, et al., 2008, p. 50). Even at a time, when famous architects “were turning to paper architects”, they were concerned with embodying their research in the real material world.
DS+R see the space as “scripted, not a tabula rasa”. The energies (whether societal, local, political or ideological) surrounding the building encrypt many codes and insert latent loads on the building within which the building is no more standing a neutral context, but it goes through a lot of filters (Incerti, et al., 2008, p. 51). This point is where the whole story of directing the views start: Building as a proactive entity.

DS+R are also famous for employing new technologies in their design. Towards technology, they position themselves in a more opportunist way, therefore it is not employing “hardware for the sake of hardware or software for the sake of software, but it is the relation between the tools and ideas”. Better stated, it is not using technology for the sake of technology, but it is about technology serving for an ultimate effect. There is no prioritization or valorization of technologies per se as dumb or smart, but they are picked according to the effect needed regardless of their value (Incerti, et al., 2008, p. 53).

Their entering in the world of new media and art centers is about the notion of interactivity that liberates the people. It is about the democratization of art and blurring the boundaries between audience and artist and engaging the audience in the art making process (Incerti, et al., 2008, p. 55).

They place themselves not as a mere service-oriented profession nor as the unrestrained, but as a strive towards an intuition within the building by which the audience understands itself as audience and the contrast between the building and art is clear in the sense that they are never competing (Incerti, et al., 2008, p. 125)! It is about dealing with enormous complexity on site, the city, space, philanthropy, historic preservation, the community...
and etc. It is about eroding the line between civic space and the defined domain of art and to blur them in a way. Their work is not “subversive” within the established institutional networks, but they name it “with suppleness”. They do not circulate the people within the building like marionettes, but they do it through generosity. It is meant to be a “delicate work”.

DS+R believes their work follows rather a conceptual tendency than a formal one. They acknowledge that they have no real passion for material; or construction, but it was more implementing the pure details, the one which defied gravity, orientation and was neutralizing the material (Incerti, et al., 2008, p. 55).

This introduction clarifies why DS+R can be a good case-study for researching on directing the views. They respect the environment that building sits upon, therefore the views are of importance. Moreover, engaging the audience in the domain of art is a goal which socially gives a more democratic image to the building and liberates the space and its content. Their focus on concept rather than aesthetics is also really interesting in this manner that fewer compromises have been made in the process of design in order to produce a mere beautiful image and main focus has been put on realizing their concepts.
2.2- THE CHOICE OF CASE-STUDIES

To research all the projects done by Diller Scofidio and Renfro would take a long time, which in the short period of graduation studio might not be possible. Therefore, a number of case-studies were chosen as representative of DS+R’s perspective to ‘directing the views’. The candidates for case-studies had to be educational centers related to arts, or art centers related to educational complexes so that the findings could be more directly relevant. Moreover, they had to be made in different years, to grasp more of DS+R’s approach over the years, and last but not least, they had to be diverse, so that different proposals can be analyzed and different strategies can be taken out of them.

From the multitude of DS+R projects, Institute of Contemporary Art in Boston was chosen as the first case-study, because of how it is directed towards the harbor and consumes the view over the water. Granoff center for creative arts in Rhode Island, as the second case-study, focuses more on visual connections within the internal spaces and the last case-study, Berkley Museum of Art creates a venue to engage the citizens in its exhibition both outside and inside the building.

In the following chapter, each of these case-studies is going to be analyzed and strategies, as tools for design are going to be extracted out of them.
2.3- ANALYSIS
INSTITUTE OF CONTEMPORARY ART, BOSTON

ICA was the first emerging museum after 100 years in Boston. Comprising out of Galleries, education facilities, theater and a restaurant, ICA creates a civic space for viewing art.

A long timber-clad walkway along the harbor leads to the platform in front of the building, while it turns as a wrapper over this space and separates public space from the gallery box on top.

Figure 17: Visualization of ICA (DS+R, 2004)
Figure 18: Location of ICA within Boston (Author, 2015)

Figure 19: Location of ICA within the harbor (Author, 2015)

Figure 20: Formal differentiation of public space in wood-clad plate and Gallery box in translucent material (DS+R, 2004)
The waterfront as an asset for the building to look upon and as a distraction from its program has gained a great importance in the building design. The building with its clam-like form embraces the water and turns its back to the back-laid buildings.

However the direction of view in this building is led towards the harbor, it has been choreographed masterfully to grasp different experiences of the same view. Upon the entrance, the view in framed under the cantilever, while in the auditorium the view serves as a backdrop. The room-sized glass elevator gets glimpses of the view as it ascends and ending up in the galleries, the view completely vanishes, and in the crossover gallery, it appears again as a panoramic view (DS+R, 2016).

The media room, suspended from the cantilevered gallery, provides a horizon-less view over the water. The effect created by tilting the floor and ceiling gives a totally new experience of the common view.
Figure 22: People sitting on the grandstand in front of the building looking at the view (Boston Magazine, 2014)

Figure 23: Panoramic view from the crossover gallery Francois soulignac, 2016)

Figure 24: Room-sized elevator (MLHKSK, 2016)

Figure 25: Media room from the inside (DS+R, 2004)

Figure 26: ICA glittering over the harbour (Lonely planet, 2016)
Figure 27: Choreographed views in ICA (Author, 2016)

Framed view under the cantilever
Perry and Marty Granoff center for the creative arts (2011) is an interdisciplinary art center which integrates education, research, and innovation in arts, sciences, and humanities. The building comprises of a gallery space, recital hall, outdoor amphitheater, recording studio, multimedia lab, and a large multi-purpose production studio (Diller Scofidio + Renfro, 2016).

Transparent west façade is open to the public and looks at the open public scape in front of the building, while the east side forms the back side of the building and is covered in zinc skin, with gradually growing horizontal blinds.
Figure 29: Front view of the building towards the public open space (Archdaily, 2011)

Figure 30: Back view of the building (Metal Construction, 2011)
Initial three floors of the building have been slid along a shear line (a cleave wall), resulting in the misalignment of floor slabs. This displacement provides views between the levels, and opportunity of witnessing the activities between different program spaces, while keeping acoustical qualities of the rooms.

The shear line leaves its footprint also outside the building. Along this line, the floor is sunken outside, creating an outdoor sitting area for the public. This outdoor amphitheater, as the extension of the civic space, flows into the recital hall inside and lets for outdoor performances, film screenings, and installations as the continuation of the exercise done within the building.
Figure 32: Displacement of the levels on the facade (Architectural Digest, 2011)

Figure 33: Lifted neighboring level as a backdrop of activities (Brown University, 2011)

Figure 34: Outdoor amphitheatre (Core77, 2016)
Film screening in outdoor amphitheatre
Figure 35: Hotpoints for the view in Granoff Center for Creative Arts (Author, 2016)

Views across the glass cleave wall to the adjacent spaces.
BERKLEY ART MUSEUM, BERKLEY

Just finished on 2015, Berkley art museum serves as a bridge institution between the university and community, trying to reach to a synergy between the civic space and established educational institution. Speaking in the language of adaptive reuse, a new structure cuts through the formerly press building. The sleek stainless steel-clad form contrasts with the orthogonal box of the old press building. The old houses a series of galleries, a small theater and art-making lab, while the new incorporates film theater, library, study center and a café (Diller Scofidio + Renfro, 2016).
Figure 37: Transparent facade over the library and the gallery (DS+R, 2015)

Figure 38: View opportunities from the bisection line of the old and new structure (DS+R, 2015)

Figure 39: Events held in the gallery (DS+R, 2015)

Figure 40: Gallery space (DS+R, 2015)

Figure 41: Steel spine cutting through the old building (DS+R, 2015)
As a clash of style and time, the soft body of new structure draws a border between different programs and forms a “public spine”. The spine at the edge of the old building cantilevers upon the road offering a new experience of the view: looking along the road.

The other end of the spine holds a giant screen for the city, exposing people to the activities of the museum. A small lawn before this screen facilitates watching this screen and creates an intimate space to gather and sit. In this manner both two ends of the new structure are showcases of the institution, the cantilevered café showcases the life of the people inside the building, while the screen works as the extension of the exhibition and the film hall. In the other words, this linear structure ends in viewing points, whether it be looking at the view, or viewing a screening to the public.
Figure 42: Facade of the building as a screen for the city (Architectural Digest, 2015)

Figure 43: Viewing cafe hovering over the street (DS+R, 2015)

Figure 44: View opportunities from the cantilevered cafe (DS+R, 2015)
Looking along the street from two opposite sides
Figure 45: Hotpoints for the view in Berkley Museum of Arts (Author, 2016)

Building as the body for projection
2.4- OVERVIEW

The fact that each of three case studies is built in three different years and their different location and discipline has called for a different approach towards their concept of ‘directing the view’. Defining the view as “the ability to see something or to be seen from a particular place”, the view refers not only to how the windows and glass walls are directed, but how screening has helped to engage the public more in the activities of the cultural institution (Oxford Dictionaries, 2016).

In ICA, the building is absorbing the view of the waterfront, but in a choreographed way. A scenario of views starting from the framed view on the entrance gives its place to the backdrop view in the theater. This view turns into short glimpses in the room-sized elevator and at the gallery box, a panoramic view creates a climax to the whole story.

In Granoff center of Arts, thanks to misalignment of the levels along a glass cleave wall, the border between different programs is turned into visual connection to two displaced adjacent floors (above and below). Moreover, the screening facility outside extends the exhibition of the building and runs through the civic space.

Berkley museum of arts, as a new structure being mounted on top of an old building, offers a linear movement with accentuating two ends of the structure: the film screen and the dramatic cantilever. Former meant to be viewed and the later to view the street.

It is worth mentioning that the extracted strategies each serve for the location and program-specific conditions and employing them as design tools would need a new translation.
3- LOWERING OPERATIONAL ENERGY CONSUMPTION
3.1- DAYLIGHTING

FLOORPLAN GEOMETRY

The design of the floor plate of the building and its orientation play key roles in a successful daylighting design. However they cannot be a guarantee per se, yet they can be a basis whereupon every other element can lie.

This geometry is basically relying on the section depth of the floors. Section depth refers to “the overall distance between the perimeter windows and the innermost wall of the occupied space” (Meek & Wymelenberg, 2015, p. 71). This depth provides occupants with daylight and view for a solely side-lit building. Normally, buildings with narrow floor plans perform better in terms of bringing light effectively through the building.

The common rule of thumb to calculate this section depth is that the light penetration in a building is twice the head height of the window. Considering a normal building with a ceiling height of 3 meters and assuming that the side is fully glazed, useful daylight penetrates to 6 meters. The higher the head of the window, the deeper daylight would penetrate. This simple rule still needs more information about the window types and configurations, the nature of glazing and obstruction by surrounding buildings (Philips, 2004, p. 45).

While typical illuminance value for a workstation is between 250 to 500 lux (Meek & Wymelenberg, 2015, p. 24), figure 46 shows how daylight is distributed in a room with a ceiling height of 3 meters and 50% of the glazing area.
Having a narrow floorplan is not always possible with the constraints of the design, therefore an opening through the building, referred to as atrium can provide inner spaces with light. Atrium, not only lets for penetration of daylight, but also contributes to ventilation and reduces the need for air-conditioning (Philips, 2004, p. 24).

methods of daylighting are side-lighting and top-lighting. Side-lighting refers to “delivering light and often views to the outdoors, through vertical glazing (windows) at the perimeter of a building”, while top-lighting is usually referred to “diffusing skylights or rooftop monitors” (Meek & Wymelenberg, 2015, p. 30). Each of these methods creates a different quality of light for the users. Side-lighting is usually dynamic in terms of intensity and distribution of daylight, while top-lighting usually provides more uniformity and tempered daylighting (Meek & Wymelenberg, 2015, p. 30).
Since the illumination fluctuations due to the rotation of sun during a day can be severe, space around the perimeter of the building (other than north) is subject to direct sunlight penetration and glare problems. Considering an aisle in the perimeter and pulling the workstation away from the sides (glare storage) can help with reducing such effects (Meek & Wymelenberg, 2015, p. 72).

Figure 47: Atrium in Frøsilo by MVRDV (MVRDV, 2005)

Figure 48: Providing glare storage in workstations (3d energy Ltd., 2016)
ORGANIZATION OF SPACES

Different programmatic organization of spaces with the very geometry of floorplan can result differently. To sort out the program and organize it in the most efficient way, first a number of questions have to be asked, from which the following ones are important for this report (Meek & Wymelenberg, 2015, p. 19):

- Is daylight important for this space?
- Are views to the exterior important?
- How often is this space occupied?
- What are the ambient and task illumination requirement?

For space were the daylight is important, questions to answer include:

- What is an appropriate distribution of light?
- How crucial is direct sun and glare control?
- What is the minimum design illumination?
- Are there maximum light levels allowable?
- Is space darkening required?
- What might be a good strategy for providing daylight (or not) at each particular space? Side-lighting? Top-lighting? Other strategies?

Answers to these questions would clarify how the program can be organized in an efficient way within the floorplan. Therefore, where the daylight is desired the most in a building has to be located within 6m from the side windows or under the top-lit area. However the answers to the questions may cause a bit of complexity, but usually as a result areas such as corridors, break rooms, lobbies and gathering spaces are tolerant of direct daylight, heat gain, and glare, while working spaces would need more precise decisions based on the qualities needed (Meek & Wymelenberg, 2015, p. 19).
However its diversity offers different possibilities, generally speaking, solar shading reduces the effect of heat gain from the sun, it cuts down the glare and it also brings about privacy to the building.

Solar shading can be mainly divided into three types of external shading, Internal shading, and alternative glazing. External shading as the most effective of all for preventing from overheating can be applied by means of overhangs and canopies, light shelves, fixed and moveable louvers, shutters and etc.

Figure 49-51 show Swiss railway main office building (SEFAR), in which the facades consist colored, moveable glass slats. The external shading is not merely functional in this building, but as an aesthetical object which gives a playful appearance to the building relative to sun rotation and being opaque and transparent is also valuable.

While internal shading may not work as efficiently as external ones, yet it gives much more freedom for the users to adjust it. Venetian blinds (figure 52) are the most common type of internal blinds. Alternative glazing includes windows with types of glasses which react differently in the presence of sunlight and they dim when they receive direct light (Philips, 2004, p. 30).

Where in the building that diffuse light is required, translucent glazing can provide a more uniform daylight, while preventing sun beams to penetrate and cause glare problems. However translucent material cannot be so effective in preventing from the heat that enters the building, it can definitely reduce the glare problems, buy more privacy for the building and give an atmospheric value to space.
Figure 49: Moveable vertical lamellas of Swiss railway buildings (Architonic, 2016)

Figure 50: Moveable vertical lamellas of Swiss railway buildings (Architonic, 2016)

Figure 51: Swiss railway buildings (Boh Online, 2016)

Figure 52: Venetian blind (Classic window finishings)

Figure 53: Translucent material in The Nelson-Atkins Museum of Art (Ryan, A.)
DAYLIGHT CEILING

While the windows and side-lights restrict the depth of sun penetration, top-lights can let daylight in as wide as the surface. Having said that, the question raised here is how that can be possible in regards to the stacking of the floors. Every floor in the interior space has a ceiling but is not necessarily holding the roof of the building over it. If the ceiling can act as a roof in bringing skylight in, the floor is provided with defused light all over its depth. Daylight ceiling comprised of two opposite reflector surfaces carries light deep in the floor, while passes it through its lower surface along its length.

Kunsthaus in Bregenz designed by the architect Peter Zumthor is designed based on daylight ceiling. Kunsthaus is a series of stacked sky-lit galleries. The building standing in the light of Lake Constance tries to blend with its glittering surrounding and bring the glimmers of lake inwards. The upper area of each floor acts as the collector of the light open to the sky. Modulation of the light on the ceiling makes the users aware of the position of the sun and sky to a degree that even though the sides are closed, one standing in the building would still be able to guess the daytime and perhaps weather conditions (Zumthor, 1997, p. 14).

The light is brought inwards to the depth of the building through the ceiling by means of further reflectors. The result is scattered light which is tempered through a layer of space. Thanks to this ceiling, only areas of light come into being and shadows do not (Zumthor, 1997, p. 53).

where direct light is not appreciated and top-lighting with skylights upon the roof is not possible, daylight ceiling can be a solution to bring more tempered and diffused light into the depth of a building.
Figure 54: Kunsthaus, View from the lake side (Panoramio)

Figure 55: The effect of daylight ceiling on the interior space of Kunsthaus (M2C Blogspot, 2012)
Figure 56: First floorplan of Kunsthaus (Zumthor, 1997)

Figure 57: Section of Kunsthaus (Zumthor, 1997)
Figure 58: Detail of the daylight ceiling (Zumthor, 1997)
DAYLIGHTING STRATEGIES FOR ISTANBUL

Istanbul is located in Latitude: +41.1 and according to that experiences a relatively stronger solar radiation. Therefore, the building design in Istanbul and in general in Turkey has to take the aspects of overheating and glare into consideration, next to regular measurements.

West-east orientation in Istanbul, like in other cities helps with maximizing receiving a good sunlight. Moreover, as a common rule, section depth has to be not too deep so that light cannot permeate through the building.

What has to be emphasized more in Istanbul and differentiates it from many other cities, is the problem of overheating and glare that a building may experience if it would have a lot of glazed surfaces. Using rotating lamellas with photo sensor can be a good solution, since it is an exterior blind system and would not conduct the heat to the interior space. Photo sensor at every moment receives the position of the sun and relatively rotates the lamellas to prevent direct radiation.

In case these lamellas may block sun penetration, daylight ceiling can compensate for the decreased amount of daylight entering the building and also provide the floor with a more uniform quality of daylighting.
Natural ventilation refers to the process of supplying and removing air from the interior space without using mechanical systems. Thanks to the air flow from outdoor to indoor due to the pressure difference, it washes away the exhaust air and supplies fresh air into the building. Driving forces for natural ventilation which are wind or buoyancy can be used in different strategies: wind variation-induced single-sided ventilation, wind pressure-driven cross-ventilation, and buoyancy pressure-driven stack ventilation (Santamouris & Wouters, 2006, p. 6).

While the first strategy suits ventilating individual rooms, cross-ventilation system serves for ventilating the floors of a building and stack-ventilation provides ventilation for the building as a whole (Santamouris & Wouters, 2006, p. 6).

Practically speaking, wind variation-induced single-sided ventilation is opening a window in a room to let in the air flow. The air entering the room creates a pumping effect through which cold air enters the lower part and warm air exits from the top part of the opening (Santamouris & Wouters, 2006, p. 7).

Wind-driven cross-ventilation is airflow from one side to the opposite side of the floor due to different wind pressures on outer building surfaces. In this method, air enters the building from one side, sweeps the floor and exits from the other side (Santamouris & Wouters, 2006, p. 7).

Buoyancy-driven stack-ventilation is based on the simple buoyancy principle that warm air moves up towards the upper level and exhaust and cold air replaces it. This strategy basically depends on the difference between indoor and outdoor temperature and the height. The higher a building is, the more effective this system
would work; however, in winters regarding more considerable temperature differences between inside and outside, this system would perform better (Santamouris & Wouters, 2006, pp. 9-10).

Since wind-driven systems may come to fail in the times with lower wind pressure and so do buoyancy-driven ones in warmer seasons, a combined wind and buoyancy-driven ventilation system would give a more effective result. This system has a stack tunnel for buoyancy system, while responds to the prevailing wind direction (Santamouris & Wouters, 2006, p. 11).
Figure 59: Wind variation-driven single-sided ventilation (Author, 2016)

Figure 60: Wind pressure-driven cross-ventilation (Author, 2016)

Figure 61: Buoyancy-driven stack ventilation (Author, 2016)

Figure 62: Combination of wind and buoyancy-driven ventilation (Author, 2016)
Istanbul, surrounded by water from sides has a lot of fluctuations in wind direction throughout a year, but generally speaking, two third of a year, the prevailing wind is blowing from the north-east side and for the rest, it is blowing from the southwest (Windfinder, 2016). Considering this fact, a wind driven system can be designed for reducing the need for mechanical systems.

The average temperature is spring is 18º C, in summer 27º C, in fall 21º C, and in winter 9º C (Weather and Climate, 2016). Assuming the fact that common indoor temperature in summer is 25 º C and in winter is 18 º C, the buoyancy-driven system works better in the winter time rather than summer time considering that the building is high enough. Therefore, having a wind-driven system as a complementary component would compensate for the shortages.
4- LOCATION
Located on the European side of Istanbul, Beyoglu area is separated from the old city by Golden Horn. Beyoglu is the cultural hub of Istanbul which houses a lot of cafes and galleries. Encompassing neighborhoods such as Tophane and Tepebasi, Beyoglu, serves as the active art hub of Istanbul. Agglomeration of bigger scale art institutions as Mimar Sinan Universitisi and Istanbul Modern in Sishane and small-scaled museums and academies in Tepebasi and neighborhood of Istiklal Caddesi, have increased the variety and hence occupancy of the art centers in the area.

Istiklal caddesi as the pedestrian spine of the area links Taksim square with Galata neighborhood. Known as the most famous street in Istanbul, apart from its commercial role, Istiklal caddesi has always been an artery for important socio-cultural events. Even though stores may define the social class of the street, yet it hosts all the classes of society and therefore holds a highly tolerant culture.

Parallel to the shopping street before the ridge of Tepebasi valley, a row of 8-storey buildings are standing which mostly function as hotels. Passing across this row, a big plot with a unique view over Golden Horn lies next to the big road. While in every street in Istanbul the view is framed by high buildings on two sides, this plot offers an uninterrupted panoramic view of its surrounding. The dramatic height difference between the plot and adjacent road also helps with such a view, since it makes the plot hover over the rest of the city on the Golden Horn side.

The plot is currently a house to TRT tv station and a big parking space which also continues underneath the road and appears on the stadium side. Kazimpasa stadium on the opposite side of the road is lying where the slope of the valley starts to descend.
Figure 65: Location within the city of Istanbul (Author, 2016)

Figure 66: Location within Beyoğlu area (Author, 2016)

Figure 67: Location within Tepebasi neighborhood (Sehir Haritasi, 2016)
Figure 68: View over the plot towards Golden Horn (Tsanava, T., 2016)
There have been a lot of controversies over the plot throughout the time in Istanbul. Because of its strategic location, it has changed its function multiple times in past decades (from the cemetery on 1870 to theater and park on 1871-1984 to a cultural center on 1985 and tv station currently). Composing a new masterplan for the plot, would not be possible without having a grip on the status quo and its facing problems.

Refik Saydam Caddesi (the main road) is not only a divider in terms of topography but also is a border between the functions on two opposite sides of the road. While on its east, Tepebasi area and Istiklal Caddesi (the shopping street) hold relatively a higher culture, on the opposite side Kasimpasa area (including the stadium) houses lower culture residential units. This border is also physically showing itself when looking at the height differences in the area. Kasimpasa side is mostly comprising lower heights; while on the east side of the road, buildings are higher and even some high-rise buildings are dispersedly visible (See figure 70).

TRT tv station is located in the northernmost part of the pot, while two third is left empty. This empty plot is used now as a parking lot which is extended to four floors under the ground as well. This giant parking space serves the bigger area of Galata, Tophane, and Tepebasi, which are mostly pedestrianized. This parking lot is the point where people come in with their cars, leave it there and enter the area or vice-versa. Having such a big centric parking space also influences its surroundings drastically. Next to this plot a taxi station is located. Taxis usually enter through Mesrutiyet Caddesi, stand in the station, drop their passengers, get some new ones and move down the hill towards Refik Saydam Caddesi. Taxi drivers just like normal drivers use the plot as a shortcut to access the opposite lane of Refik Saydam Caddesi. This traffic loop to-
gether with the multiple traffic lights on the crossings has caused a lot of traffic jam around the plot and made it not pedestrian-friendly. Thereby, the plot is detached from the body of commercial area and has been degraded into a mere parking space. Figure 71 shows the mentioned traffic loop around the plot.

On the other hand, the plot and its surrounding are highly used by the pedestrians because of the neighboring commercial area, but since it is not so inviting for the people, this occupation is mainly for the functional reasons and not to enjoy the unique view over Golden Horn. Figure 72 shows occupation of the area by the pedestrians.

Since the area is mostly pedestrianized, public transportation hubs are places all over to compensate. As visible in figure 73, tramline cuts through Istiklal Caddesi and on its two ends, a metro station is located. As discussed more in details above, taxi station is located in the southeast of the plot and bus stops are accessible on two opposite sides of Refik Saydam Caddesi.
Figure 69: Main roads around the plot (Author, 2016)
Figure 70: Building heights in the area (Author, 2016)
Figure 71: Traffic flow (Author, 2016)
Figure 72: Occupation of space by pedestrians (Author, 2016)
Figure 73: Access to the means of public transportation and parkings (Author, 2016)

Figure 74: East-west section (Author, 2016)
Figure 75:
North-south section
(Author, 2016)
5- MASTER PLAN
As more population is coming to Istanbul each day seeking for prosperity and a better life from the periphery, the city is growing in scale. This unproportionate growth relative to the infrastructure has caused a lot of issues in the city from which heavy traffic is one.

The growing number of cars is not only because of the modernized lifestyle, but also is because of lack of the public transportation. Considering the fact that Beyoglu is one of the most visited areas of Istanbul, public transportation is not well-developed around it. Metro lines stitches different areas around the city from underground and tram line also covers certain areas. The few bus stops on the main streets are not easily accessible by the people and together with the taxi station are adding to the existing traffic problems.

In order to regenerate the plot, one of the main concerns has been to conceive a new transportation hub for the area and redirect the traffic. Establishing well-established infrastructures for transportation in this area would make it more accessible. Current parking space on the plot makes it inviting for the people to bring their cars and leave them there. Instead of housing individual cars, our team proposed to turn the parking into a terminal, so that more people can benefit from it and also traffic load would be reduced. Public transportation would also contribute to less carbon emission and ultimately to a change in the consumerist lifestyle of the people.

TRT tv station is a governmental broadcaster. Nowadays with the rising public discontent, this station along with the other governmental press play a role in lowering the opponent voices and expressing their own. On the other hand, the Canon School of
Photography aims to engage the public in its activities and reflect their voice. This way, by keeping the tv station on the plot, the school can be a counterpart to it and make up for many shortages that such media has brought for the people in Turkey.

The point to consider while turning the plot into a terminal is the fact that the view belongs to the people of Istanbul, so it has to be kept and should not be interrupted. Therefore, the terminal is taken to the lower floors of the plot and empty space is kept in the middle part. The new school of photography has to be located in the southernmost part of the plot so that together with the tv station they will embrace the square in the middle and frame the view. Moreover, high-rise tower of the school reacts on the high neighboring buildings.

Figure 76: Call for a high-rise building on the southernmost part of the plot (Author, 2016)
5.2- PROGRAM AND CIRCULATION IN THE TERMINAL

The terminal on the plot is going to be collecting and dispersing point for the users of the area. It also serves as a hub for interchange between different means of transportation. To make it a terminal, current four floors of parking are going to incorporate bus station and taxi station in them. Taxi station on the corner of the plot, which is already causing traffic problems, is going to be brought under a roof in a more ordered manner and a few number of bus stops around are going to be multiplied and brought into the plot in the form of a bus terminal. For private cars to be parked, there is still going to be a small vacancy; however it is considered that the number of cars, thanks to the facilitation of public transportation is going to be cut down.

As shown in figure 78, for the bus terminal, two floors are removed in order to provide the buses with sufficient ceiling height. This way to floors are bus station are appearing, upper serving for north-going buses and bottom one for south-going buses. Tax station is taken to the uppermost floor of the terminal in order to make it easy to access. A small number of cars can be parked in the southern part of the terminal underneath the school.

In order to remove the traffic loop on the plot, the entrance to the terminal is only from Refik Saydam Caddesi side and the access of cars from Mesrutiyet Caddesi is closed. The cars and taxis enter together and through ramps they are led towards their allocated spaces. Next to the car entrance, bus entrance is standing with a bit of descending from the street level (in order not to have the bus touching the ceiling). The exit of both buses and cars is also on the road side underneath the tv station. Figure 77 shows these circulations on the plan from Refik Saydam Caddesi (main road) level.
Figure 77: Circulation in the terminal on the road level (Author, 2016)

Figure 78: Program in the terminal (Author, 2016)
5.3- ENTRANCES TO THE TERMINAL AND THE SCHOOL

Since the terminal has been taken to underneath Mesrutiyet Cad-desi level in order to keep the upper surface intact for the pedestrians, new squares can appear upon it and the access to terminal can be made relative to them. The difference in the levels of the plot is kept as it is, but in an opportunistic way; its edge is used as a big sitting area which is directed towards the school of photography. This orientation has helped with defining a more vibrant and busy square on the school side and a more quite one but with a wide view on the upper level. The entrance to the bus terminal and car parking is accessed through an escalator on the edge of the lower square (also a staircase and elevator); while taxi station is accessed before the plot from the street side.

Entrances of the school are also placed parallel to the people’s flow on the lower square. The main entrance of the school (for the public) is through a red escalator which leads to a big gallery space, and the secondary one which is more private is accessed next to it leveled with the square.
A school of photography, on its own, may influence the atmosphere of a place, but in order to engage the public in the process of circulating the images and including all the people regardless of their skills, the design has to come one step further. Terminal and strategic location of the plot are bringing a big flow of the people to the plot. The plot also has a perfect view towards the city and Golden Horn, therefore the new design for the public space has to facilitate the act of contemplating the view. Moreover, having seats to view the videos and performances will bring many people together in the process of sharing the images.

Based on this idea, three stages are created on the lower square around the school. As entering the plot from the street side, the first stage is mainly used for performances and shows, while the second one is serving for an outdoor cinema on the façade of gallery box. The last stage on the plot is directed towards Golden Horn and I a moment to sit and contemplate. This space can also house performances with the view as its backdrop. For the people who are crossing the plot on a car, the school is still viewing its images, but in a different way: underneath its cantilevered ceiling.

Figure 80 shows the stages created based on this idea and also the projections underneath the ceiling above the road and upon the gallery box.
6- BUILDING DESIGN
6.1- DESIGN PROCESS

As a starting point, design at our studio began with making conceptual models which would show our impression of the subjects. Accordingly, I started with a cube made out of smaller cubes of different sizes. Translucent, mirror, transparent or solid, the model was supposed to express diverse qualities of the material relative to the quality of the light passing through them. This model as a material study, helped with the later elaboration in the process of the final materialization (figure 81 & 82).

Later on, the models became more contextualized; however, they still kept a level of conceptuality. My next models focused more on the school as a body with many eyes which were looking at different views of the city and some extensions which were housing the public functions in them. The question in this step was also about where to place the new building on the plot in order to have well-defined squares. As a literal translation of being a counterpart to TRT tv station, the school was first placed on top of tv station (figure 83), but since there was no drawings and information available about the existing building and also due to the facing technical issues, this option was soon put aside.

The other option was to have the building on the opposite side of the plot to enclose a square in the middle of the old and new building. The link to the terminal was a serious subject of study and the goal was to make it not only a connecting and dispersing transportation point but a meaningful destination on its own. In several models, I studied carving out the floors and making a giant atrium within the terminal and making the levels more visible from the road as well as for the people who are standing upon the plot (figure 84). Even though this idea seemed to reveal the terminal more and make a visual connection with the events on top, yet is had created a valley and degraded the qualities of the plot. In
the other words, the wide and open view that I was aspiring for was interrupted.

Therefore, I focused more on keeping the open space on top as intact as possible. Moreover, in order to keep the spaciousness of the square and also to make the building more visible from far away as a brand building, I started to stack the functions on top of each other and raise the height of the building. Therefore, I ended up with a tower. The process of transforming from a lump into a tower was about shrinking from the sides and piling up on top, but still, the exhibition space needed to be in bottom levels. All the functions were stacked upon aligned to the walls of tower except for the cantilevered gallery box which was as high as TRT tv station. Being directed towards the tv station and the public activities in the square in the middle, I tried to emphasize democratic gesture of the building in contradiction with the closed box of the tv station. Moreover, a big atrium extended into an outdoor theater were directed towards the Golden Horn next to the cantilever. These stairs were also how the terminal underneath was accessed.

Bringing the rhythm of lamellas into the façade gave a lighter expression to the building which seemed to suit a school of photography. The most important thing that the model in figure 87 brought in the process of design, was the idea of using daylight ceiling because of its expression: double layers of foam.

In the following page in figure 89, a collage of some of my sketches during the design process is shown.
Figure 81 & 82: The very first conceptual model (Author, 2016)

Figure 83 & 84: Following conceptual models (Author, 2016)
Figure 85 & 86: Studying the direction of stages (Author, 2016)

Figure 87 & 88: Studying the facade and volume (Author, 2016)

Figure 89 (next page): Collage of the process of sketching (Author, 2016)
The aim in the design was also to study the strategies that were extracted from the works of DS+R. As a closely relevant case-study, view strategies in ICA has been sought to be developed the most in this design. Cantilevered boxes chasing panoramic views over the Golden Horn and also the square remind of the gallery box in ICA. Three outdoor theaters are looking towards an event whether it be a performance on the square, an outdoor cinema (like in Berkley museum of Arts) or the wide view (like the grandstand of ICA). The latter is also extended through the building and has formed the auditorium of the school with the rest of the city as its backdrop.

The body of the school, thanks to the vertical lamellas, gives the opportunity of having glimpses of the view beneath. Daylight ceiling has brought an inherent unleveling into the design which created a good ground to apply the strategy that DS+R used in...
Levels displaced along the shear line to make visual connection between the floors
Referred to organization of the levels in Granoff center

Building as a body for video projection
Referred to the exterior screen in Berkeley museum

Horizon-less view to the city and Golden horn
Referred to the suspended computer room in Institute of Contemporary Arts

Cantilever directed towards the view
Referred to the cantilevered box in Institute of Contemporary Arts
the Granoff Center of Arts. Accordingly, misalignment of the levels along the atrium let for the visual connections between the floors.

The new structure inserted upon the old building in Berkley Museum of Arts was the inspiration to create a spiraled corridor around the building which at each corner leads to a certain view. This corridor begins with a tilted room which is looking at the common view of the city and Golden horn, but with a different framing. Tilted floor and ceiling have restricted the view in a way that the horizon line is not anymore visible, like the computer room in ICA. This room is basically an informal working space for the students which receives a lot of light in the afternoons.

The corridor then is directed towards the shopping street and its neighborhood to the east, Gezi park and Taksim square to the north, a higher view of Golden Horn to the west and the view of Galata neighborhood marked by its tower to the south. This corridor finally leads to the photo-shooting studio box on top which absorbs the panoramic view of the city.
Figure 91:
View corridor
(Author, 2016)
6.3- DAYLIGHTING

Since different functions in the program were stacked on each other, the geometry of the plan became a simple 32 meters to 32 meters square. A linear atrium cut the floorplan in west-east direction letting for penetration of light through the section depth and the most favorable orientation of the building relative to sunlight. Two opposite parts along the atrium had to be connected to make a consistent flow. Accordingly, on the east side, they became connected together and vertical connection core was also placed there.

Figure 92: Floorplan geometry (Author, 2016)

Figure 93: Contrast between the rhythm of lamellas on south and north part (Author, 2016)
In order to prevent overheating and glare vertical lamellas are installed on both sides which thanks to a photo sensor, rotate relative to sun angle. On the south part of the building they are more densely placed, and when closed, they overlap, while in the north part, they are smaller in size and shade less. The north façade is not covered at all with lamellas.

While densely placed lamellas shade the south part and make it darker inside, daylight ceiling reflect the light through itself and brings it to the depth of the floor and as a result, the floor is showered with light.

In the upper photo shooting studios, two layers of adjustable horizontal louvers make it possible to control the amount and quality of light needed for photography (See figure 95).

Figure 94: Daylighting strategies in section (Author, 2016)
Figure 95: Details regarding daylighting (Author, 2016)

- Adjustable horizontal louvers
- Auto-rotating vertical Lamellas on the north part
- Translucent gallery box
Pattern of the daylight ceiling

auto-rotating vertical on the south part
6.4- NATURAL VENTILATION

In regards to the considerable difference between the indoor and outdoor temperature in Istanbul, and the fact that the school is basically a high tower, buoyancy stack ventilation through the atrium is reliable in this case. This ventilation; however, is never sufficient on its own in the case of Istanbul and therefore a wind-driven ventilation system along with it can be more effective.

The prevailing wind direction in Istanbul is from the north side, and the building is not protected with lamellas on that side, so wind can easily blow through the floors, cross ventilate them and take the exhaust air to the atrium and then towards the outside. On the south part, air can flow in between two layers of daylight ceiling and cool the floors and reach the atrium. The atrium is working as the chimney of the building which exhausts low-quality air.

Figure 96: Diagram of ventilation (Author, 2016)
6.5- PROGRAM

Along the atrium, the north part has a ceiling height of 3 meters and in the south part, it is 4.2 meters. The more open floorplan of the south part together with uniformed light from daylight ceiling is where the creating functions and workshops such as computer labs and printing rooms are located, while the south part houses sharing spaces such as lecture room, crit rooms, VR room and offices.
A vertical core on the east middle of floor plans runs through all of the floors and ties them together. This core also is the elevators, toilets, and emergency staircases are located. It serves as a more functional means of circulation through the building, while a more pleasant and slow routing takes place within the floors and connects them one by one to each other.

On the north side in which the sharing functions of the program is located, the circulation is occurring in a playful manner, while in creating spaces in order to keep space as intact as possible for the workshops, the circulation is more functional.

The view corridor, as a moment of exception, is a circulation spiral which goes around the building and connects the floors it passes from.
Figure 100: Exploded perspective (Author, 2016)

Circulation on the south part
Circulation on the north part

Level 55.00
Level 50.00
Level 47.00
Level 32.80
Level 27.00
Level 21.00
Level 15.00
Level 10.00
Level 0.00
Level -3.00
6.7- FLOORPLANS

In the following pages, the floorplans are shown. Since no typical plan is used and the floors, even subtly, differ from each other, I have included them all. The few colors in floorplans help with a better sense of navigation within the building. Blue stands for the boxes which are also bluish in the facades and visualizations and the red escalator in the entrance is also colored in red outlines within the floorplans.

Figure 101-115: Floorplans
(Author, 2016)
Level -2.00 plan

Darkroom

Parking for the staff

Entrance

Exhibition
Level +7.00 plan

Main Entrance

Camera Obscura

Exhibition

Entrance to the school
Meeting space

Printing room and computer lab

Level +40.00 plan
6.8- SECTIONS

The variety in the spaces of the building, reveals itself more clearly on sections. Figure 116 shows the section of the public square in front of the building where the main entrance is located. An escalator starting from terminal level cuts through the square and ends in the cantilevered gallery box. Here is where the people can stand next to the balcony and contemplate the view. On the left side of the gallery box in this section is a camera obscura which projects the inverted picture of the people entering the building on the wall. This room is a permanent part of the exhibition and is standing symbolically at the very beginning of the gallery since it has been the very first step in inventing the camera.

Figure 117 shows a section perpendicular to the atrium with daylight qualities of the south and north part. Figure 188 and 119 show how the north part and the south part are organized in section.
Figure 116: Section from the public square
Scale 1:300
(Author, 2016)
Figure 117:
Section
Scale 1:300
(Author, 2016)
Indoor photo-shooting studios all provide great opportunities for adjusting daylight, however; yet they do not let for having the view of the city as the background. This is due to the mullions of the curtainwalls and also the dust that sits on the glass over time. In order to realize having the city view as a backdrop, an outdoor studio is placed on the rooftop. Having height difference of 1,2 meters from the roof level makes it possible to have the edge without any disturbing railings, while keeping the safety measurements (Railing exists on the roof level).
Figure 119:
Section
Scale 1:500
(Author, 2016)
Figure 120:
Technical section
(Author, 2016)

Air inlet
Reflective surface
Auto-rotating vertical lamellas
Adjustable horizontal louvers
Artificial light

Auto-rotating vertical lamellas
6.9- STRUCTURE

The structure of the tower is simply concrete columns and concrete floor slabs. This structure has its foundation underneath the terminal. The former columns of the terminal in that part are removed and thicker columns of the school are placed there instead.

In order to bear the load of cantilevers, two big truss beams as high as the floor heights are used in the cantilevered gallery box and cantilevered photo-shooting studio box. Since in the photo shooting studios it is really important to receive the sunlight from the sides, these truss beams are pushed more to the center of the floorplan in order to let for more space on the sides for studios. In the gallery box, they are placed on the sides of the box and are covered later with a layer of the transparent glass wall.

Figure 121: Structural composition (Author, 2016)
6.10- ELEVATIONS

Figure 122:  
South  
Elevation  
(Author, 2016)
Figure 123: West Elevation
(Author, 2016)
Figure 124: East Elevation (Author, 2016)
Figure 125:
North Elevation
(Author, 2016)
6.11- VISUALIZATIONS
Figure 126: Looking at the plot and building from the Kasimpasa neighborhood (Author, 2016)
Figure 127: Looking at the building from the road in the morning (Author, 2016)
Figure 128: Looking at the building from the road at night (Author, 2016)
Figure 129: The entrance from the public square (Author, 2016)
Figure 130: Exhibition on the terminal level
(Author, 2016)
Figure 131: Looking through the atrium (Author, 2016)
Figure 132: The horizon-less view to the city (Author, 2016)
Figure 133: Computerlab with daylight ceiling (Author, 2016)
Figure 133: Photo-shooting studio (Author, 2016)
Figure 134: Approaching the building on Refik Saydem caddesi (Author, 2016)

6.12- MODEL
Figure 135: Model of the site (Author, 2016)
Figure 136: Model of the site (Author, 2016)
Figure 137: Big screen towards the city (Author, 2016)
Figure 138: Outdoor cinema and amphitheater (Author, 2016)
Figure 139: public square
(Author, 2016)
Figure 140:
Main entrance
(Author, 2016)
7- CONCLUSION
7.1- CONCLUSION

The imposed censorship and the press suppression in today’s political climate of Turkey have produced exceeding thirst for a platform to share the ideas freely. Canon as a corporation pioneering in imaging products is a suitable choice to employ its years of experience in establishing a school of photography in Istanbul. The Canon school of photography as a public platform can empower the people of Istanbul to communicate through images and circulate them.

In order to engage the public in the activities of a specialized institution, the boundaries between the civic space and the settled domain of arts have to be blurred. Therefore it was really important how the building is being viewed in the eyes of the public and how inspired from the practice of photography, views are working within the school of photography.

Learning from the past architectural practices, architectural design strategies of directing the view in the works of Diller Scofidio & Renfro was the topic of the first research question. By researching three of their case-studies, I sought to answer this question. Architectural design strategies about the view are context-based and are responses to the call on the specific site. In their works, especially in the case of ICA, DS+R have choreographed the experience with the view. The main direction of view is always towards the harbor but in different manners. In lower floors, close to the water level, it is about having a grandstand to contemplate the view. In programmatic spaces such as theater, the view becomes a backdrop for the activities and it emerges as a panoramic view at the upper box of the building. The tilted media room also gives a new interpretation of the common view by framing it differently. In terms of views between interior spaces, DS+R usually realize it in the separating line of two programmatic spaces. Granoff center is a good example
of this strategy, wherein the floors are displaced along this line and the visual connection is even more emphasized. DS+R’s use of video screening upon the façade and public stages around the building which are mostly the continuation of interior stages is also another strategy which invites the public to approach the building, view the activities and participate.

Other than a social good, the design of the Canon school of photography sought to address environmental aspects of sustainability and give meaning to them by daylighting and natural ventilation. The second research question accordingly was how to lower the operational energy consumption through daylighting and natural ventilation.

In order to do so, daylighting strategies were studies during the process of design. A linear west-east atrium cutting through the building makes it possible for daylight to penetrate the whole depth of the floor. Moreover, auto-rotating vertical lamellas protect the building from overheating and glare. These lamellas on the south part of the atrium are more densely placed and in order not to have a dark interior space, daylight ceiling is installed there to provide a tempered uniformed light. In the photo-shooting studios, two layers of adjustable horizontal louvers let for the desired quality of light for the photography. For natural ventilation, the wind and buoyancy-driven stack ventilation is used. Regarding the difference between in and out temperature, buoyancy force washes out the exhaust air through the atrium and brings fresh air in. Besides, This system lets the privileged wind from the north side in and exhausts it through the atrium. The air also flows through daylight ceiling, cools the floors and brings in the fresh air. The mentioned strategies play a great role in decreasing the use of artificial light and ventilation within the building and thus lowering the operation energy consumption.
7.2- REFLECTION

During the research and design process, I tried my best to keep a good level of care and accuracy. However, just like no research is, this report may not be perfect. Due to the time constraint, I limited my research on my first research question to three case-studies, while analysing more case-studies might result in a better grip on the subject and better understanding. Moreover, my research about daylighting and natural ventilation was not done solely, but during the process of design. Therefore, it was about addressing what I was facing in the very stage of the design process. Since design is an individual experience, the research becomes also relatively personal. It is worth mentioning that a different approach to design may definitely bring about different sub-questions and therefore different strategies to the design.
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