

YOUTH TRAINING ACADEMY

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Abstract

Saudi Arabia being in the center of the Arab war crisis is under major threat. The population receives no physical education and has no survival skills. One solution for this problem is creating training camps for the country's youth. The camps are highly needed and are lacking. The case studies were conducted based on others similar projects and their program have been analysed in order to formulate the best solution. Since college students are the main target, the proposed project is located in close proximity to many universities. The primary zone that considered in this project are summer residence, physical training, specialized training, intellectual training, administration and recreational. The site selection is based on the criteria in term of climate, topography and immediate surroundings. The selected site is located south of Jeddah, below King Abdulaziz University. This project aims to protect the current and future generations in Saudi Arabia and to provide them with survival skills and prepare them for the unknown as much as possible.

Keywords -- Youth Training Academy, Survival Skills, Training Camps, Physical Education

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INTRODUCTION

In Saudi Arabia, the youth population is not receiving any training and is not given any form of mandatory physical or war training [1]. Considering what's happening in surrounding Arab countries, it seems like a must for the young generation to be able to protect themselves. Building a more intellectual sophisticated camp seems like the right move to do in the current time.

The regular military recruitment camp was the start for this type of activities and it is still a necessary process to be a soldier to this day. One training center was recently rebuilt in Kapooka, Australia. The facility has 360 bed barracks and a vast hall that seats 1200 persons [2]. Jennifer Calzini a writer in Architectureau, was impressed by the monumentality of the place stated "Firstly, these buildings are like oversized houses because, symbolically, they house the collective, not the individual. Secondly, the architecture has a role in the recruits' journeys, and recognition of this role is growing" [2].

In 1983 what is called a correctional boot camp evolved from the idea of military recruitment [3]. These camps targeted convicted adult offenders. Around the same time juvenile boot camps were also present. The juvenile camps were for underage offenders, they are founded on the idea of reforming a child. These camps had outdoor programs, education facilitates, and dormitories like The Louis Gossett, Jr. facility in New York City [4].

Only recently after, boot camps were created. These used the military intense training styles as a workout alternative. Special gyms were being created and the idea spread across America. A trendy example of boot camps would be Barry's boot camp in New York City [5, 6].

This gym opened in 2012 its spread on two building levels. In the entrance it has the top fitness trends, a juice bar, retail space, etc. The main studio is located on the ground floor and next to it a set of "monkey-bars" for resilient training. Lockers and other supports are in the basement floor. Therefore, this study proposes a project provides designed spaces to hosts programs able to train people in fun ways to prepare them for the worst.

CASE STUDIES

The training centers in United States, Kuwait are chosen for the main case studies. Also, there is one training center is chosen for thematic case study. All selected case study has outstanding design and unique facilities that provide the best experience for users. The training centers are:

- Reebok Headquarters, Canton, Massachusetts, US
- Ali Al Sabah Military Academy, Al Raqaay area, Kuwait
- Nakameguro of housing, Meguro-ku, Tokyo Higashiyama Site, Japan(Thematic case study)

Reebok Headquarters, Canton, Massachusetts, US

"Employees and guests are welcomed into the building via an expansive atrium. Supported by pre-cast elements anchored in the ground, the curving spine floats above the site, branching into four sections housing office neighbourhoods. From within the spine, one can see and hear the indoor basketball court activities, look into a glass tunnel that houses the running track that enters the building from outside, or gaze at the landscape to view product testing on sporting fields" [7].

Unique arc-shaped glass circulation spine that connects the four office buildings, creating a 'Main Street' that serves as a backbone of the building (Figure 1) [8]. The glass window wall is supported by a custom tensioned cable curtain wall system. "Smart" building systems to help conserve energy. Fresh air is introduced into the office environment through efficient ventilation systems that replace office air every 10 minutes. Environmentally friendly carpeting, produced in mills energized by solar power, is used throughout the Reebok World Headquarters. Parking is made into two structured garages to retain maximum green space. Reebok also has storm water retention to use the rain water for irrigation.

The Reebok headquarters is located among many schools and children facilities as well as it being near a college. It forms a focal point and a destination for children after school to use the sport fields at the headquarters.

Ali Al Sabah Military Academy, Al Raqaay area, Kuwait

Figure 2 demonstrates the Al Sabah military academy model. "The thoughtfulness of the design can be seen in the building

surfaces, constructed from modules that evoke the Kufic calligraphy of Islamic architecture. Most striking, perhaps, are the light chambers that Turrell designed for the entrances of the dormitory and administrative buildings. Turrell, perhaps just for his own edification, has given them names like Sky-Pond, Void-Circle and Big Open; names worthy of a Zen monastery. Away from a vast courtyard, there are other features that inspire pause, including a boardwalk oasis planted with royal palms and a trapezoidal mosque with water pools and oblique light shafts” [9].

The master plan hosts sustainable urban growth with a combination of vernacular design to withstand the extreme desert climate conditions. Reduces energy consumption required in cooling the space by having solar shading, in which perforated canopies projecting from and spanning between the buildings provide shade for all the buildings. It also protects against powerful wind storms through the vegetation belts.

Nakameguro of housing, Meguro-ku, Tokyo Higashiyama Site, Japan

Nakameguro of housing incorporate the slide as flow line of the building. The building has stairs to climb up to the top floor, and then get down to the lowest floor using the slide (Figure 3) [10]. The entire building has become playground equipment.

Bruce Fowle introduced sunlit staircases to be places where people will gravitate, both to circulate and to socialize. He envisions the stairs inside his buildings functioning the way the front stoop does in an urban neighbourhood [11].

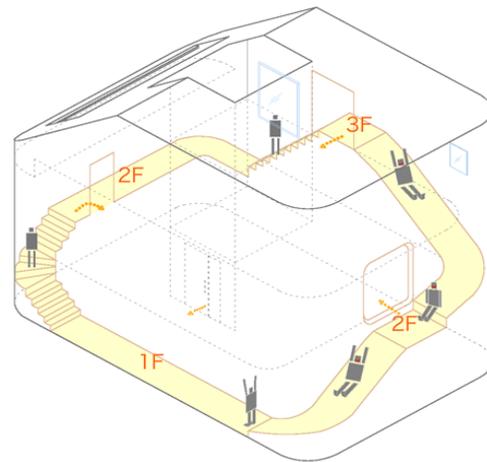


Figure 3. Thematic case study circulation diagram [10]

SPACE PROGRAM

The space program is based on a project capacity of 2000 visitors, 200 employees, and 240 camp program students of both genders. Where, males represent by 50% on an assumption, and females by 50%. Services are assumed to be 25%. The program is divided on the nine different building zones. Table 1 demonstrates the cross area calculation of the project.

Table 1. Gross area calculation

Zone	Net Area (m ²)	Circulation 25% (m ²)	Gross Area (m ²)
Entrance	1008	252	1260
Summer Residence	1500	375	1875
Physical Training	3334	610	3048
Specialized Training	1484	371	1855
Intellectual training	1919	480	2399
Administration	960	240	1200
Recreational	1211	303	1514
Parade ground	2577		2577
Parking	5000		5000
Outdoor	3600		3600
Total	22593	2631	24328



Figure 1. Exterior spinal atrium view of Reebok Headquarters [7]

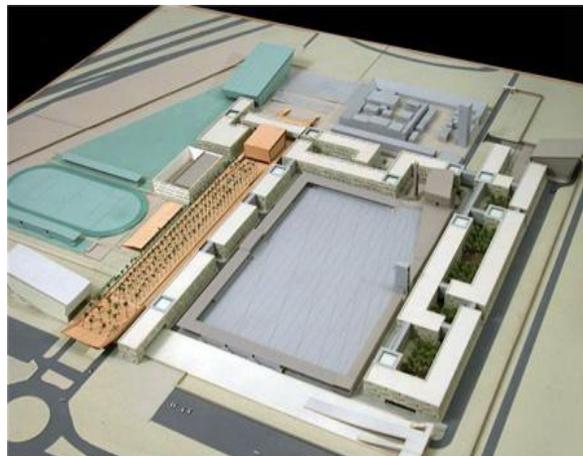


Figure 2. Al Sabah military academy model [9]

SITE SELECTION AND ANALYSIS

The project’s GFA was calculated to be 24,328sqm with building heights ranging from 1 to 3 floors. The buildable area is assumed to be 50% making the required area of the site to be 48,656 sqm. Based on the space program information and analysis the primary site selection must have the criteria:

- a. Located In Jeddah
- b. Near higher educational facilities
- c. Height of floors up to three levels
- d. Area of 48,656 sqm.

This study proposed three sites in Jeddah for site location selection and analysis. Site 1 is located south of Jeddah, below King Abdulaziz University with site are of 59000sqm (Figure 4). The surrounding streets are Prince Majd Street, Abdulla Suleiman Street and Bakhshab Street. Also, the surrounding land is used for education, commercial and residential purpose. Site 2 is located in the middle of Jeddah in Al-Jameah District with the site area of 44000sqm and the surrounding land area is used for residential purpose (Figure 5). The surrounding street is Old Makkah Road and Al-Falah Road. Site 3 is located in the middle of Jeddah in al-Jameah district in King Abdul Aziz Campus

with a total site area of 53000sqm (Figure 6). The surrounding street is Prince Majd Road and the surrounding land use is for education and commercial purpose.



Figure 4. Site 1 [12]



Figure 5. Site 2 [13]



Figure 6. Site 3 [14]

The criteria of site evaluation is divided into three categories namely, climax, topography and immediate surroundings. Under the category of climate, there are the factors which are wind, solar orientation, temperature, and humidity. The topography category is associated with topographic maps, physical features, legal property description, circulation, vegetation, water bodies, drainage, site features, and fire protection. Immediate surroundings mean the neighbourhood structures, shading, noise, and vistas. Each of these factors was evaluated and the site with the highest total number is the most appropriate. Based on the site evaluation result shown in Table 2, site 1 marks the highest score and chosen as the site location for the project.

Table 2. Site evaluation

Evaluation Categories	Evaluation Factors	Site 1	Site 2	Site 3
Climate	Prevailing winds	2	2	2
	Solar orientation	2	1	2
	Temperature	3	1	1
	Humidity	2	2	2
	Precipitation	2	2	2
Topography	Legal property	1	2	2

	description			
	Typographic maps and aerial views	2	1	2
	Physical feature; focal points	3	1	2
	Existing access and circulation	2	3	1
	Vegetation	3	2	1
	Existing water bodies	3	1	2
	Drainage canals	1	2	2
	Water way easement	1	2	2
	Surface drainage	1	3	2
	Unique site features	3	1	2
	Fire protection	1	2	1
Immediate surroundings	Neighbourhood structures	2	3	2
	Shading and solar access	1	2	2
	Noise	3	2	1
	Vistas	3	1	2
Total		41	36	35

Figure 7 demonstrate the site analysis at site 1. The climate chart of Jeddah shows an average of 30 degrees Celsius all year round and the precipitation seems to be concentrated in the month of September only. A wind rose diagram for the city of Jeddah is demonstrated in Figure 8 to show prevailing winds.

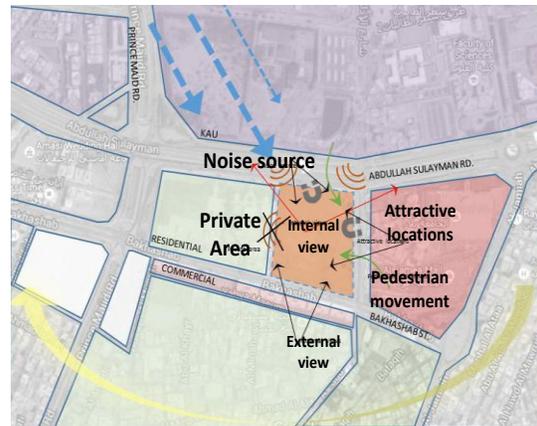


Figure 7. Analysis of surrounding site 1

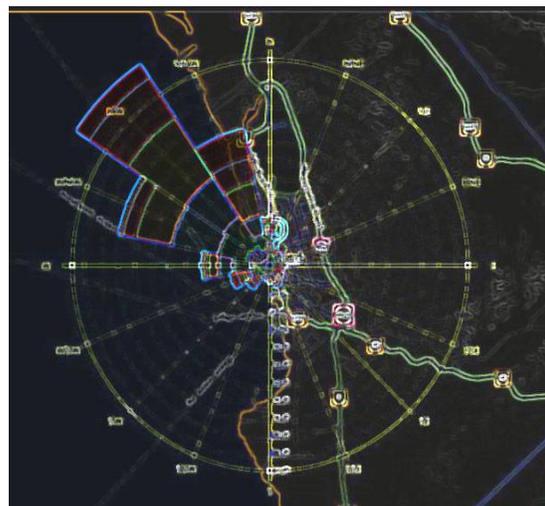


Figure 8. Wind rose diagram of Site 1

SITE ZONING AND PROJECT DESIGN

The site zoning of this project is planned carefully according based on the space program and the area of the selected site. Figure 9 shows the site zoning the administration is located at the ground floor near to the entrance which can provide support effectively. Figure 10 shows site plan where there is a connected to King Abdulaziz University, this allow the University student access conveniently.

Figure 11 and Figure 12 demonstrates the special training zone consist of shooting game room and gun shooting room respectively. Figure 13 shows the physical training zone where the zone equipped with some sport facilities. Figure 14 and Figure 15 show the corridor connected between the site projects to King Abdulaziz University and main perspective view of the project respectively.



Figure 9. Site Zoning

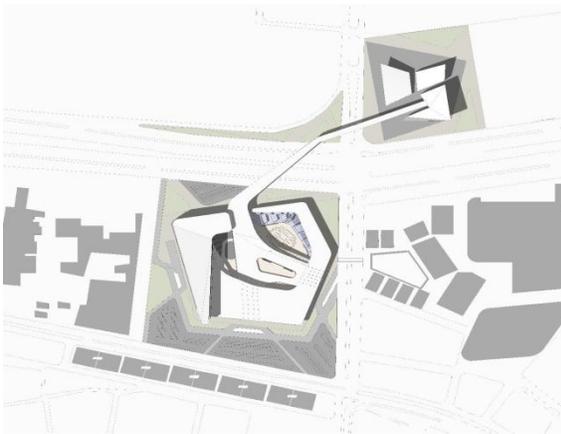


Figure 10. Site plan



Figure 11. Shooting game room

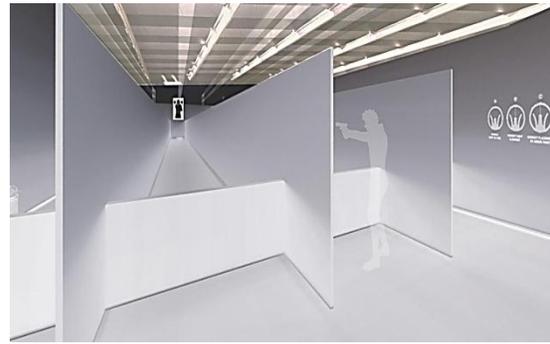


Figure 12. Gun shooting room



Figure 13. Sport zone



Figure 14. Internal view



Figure 15. Main perspective view of the project

CONCLUSION

This project mainly for educational whether, physically or mentally. The site will host conventional and unconventional spaces for different types of physical training. Intellectually training the minds before any application will be provided in workshops. The recreational of the site makes the educational process appealing and becomes a popular destination in the city. The proposed project covered several zones namely entrance,

summer residence, physical training, specialized training, intellectual training, administration, recreational, parade ground, parking and outdoor. Based on the site evaluation result, the selected site for the project is located south of Jeddah, below King Abdulaziz University. Compared to other proposed sites, this site has several advantages in terms of climate, terrain and surrounding environment.

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