

AIRMEN TRAINING INSTITUTE
BAF BASE SERGEANT ZAHURUL HAQUE, PATENGA, CHITTAGONG

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Inspiring Excellence

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ABSTRACT:

Bangladesh Air Force is the ultimate aerial warfare branch of the country. Since the force is the ultimate protector of the sky of the country, their training contains a lot technical, physical and mental exercises and that is why the training institute must be designed with such sensitivity. This training institute basically for the cadets/ students who will become 'Airmen' after completing their one-year training and studies. Now, there is no 'Training Institute'. The basic functions are scattered all over the base. The proposal is to build an Institute to enhance the quality. The existing training unit, which is scattered from the other wings of the institute, is insufficient for modern Air defence training. The unit does not have swimming complex, scientific Laboratory, indoor stadium etc. Computer science laboratory, aero science laboratory and advanced air training is very important to achieve the international quality of Airmen's performance. On the hand the existing aircraft hangars are not up to mark/ appropriate for keeping the aircrafts and helicopters as well as insufficient for the airmen cadets to learn about Aircrafts. This institute must be the best in the physical training and also should be good in the academic part of the training. In this situation a state-of-art and sustainably working building is the most desired. However, I studied the problem and get interviews of the Officer Commanding, Project Commandant, several Airmen. I also get interviews from some retired Airforce Officers and Airmen who were in charge of the unit and also trained from there. The methods I follow are Interviewing the officer who are in charge of the project and interviewing the cadets and new Airmen to find out their problem during the training and what will help them. I did some questionnaire survey among the officers and the airmen to get more appropriate demand of the project. This training will give the Airmen many operational capabilities as well as train them to work with

the civil aviation, DGF (Directorate General of Forces Intelligence) and some civil works of government offices. Airmen of our country have a huge contribution of the Peacekeeping Missions of UN (United Nations) at Congo, Ivory Coast, Sudan and help the country to earn a huge amount of Foreign Currency.

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I would like to begin by thanking Almighty Allah for giving me such a wonderful and eventful life. Without the support of parents, this project will not be done. I would also like to have the opportunity to Thank Professor Dr. Akter Mahmud who has inspired me the most to develop this paper and guided me with every possible support. I also take the opportunity to Thank Dr. Iftekhar Ahmed sir, Fuad H. Mallik sir and Ar. Abul Fazal Mahmudun Nobil sir for guiding me throughout the project. I have never interacted with such an amazing and soulful person before and I am thankful to Allah that He has given me the opportunity to meet him. I would also like to thank Group Captain (Retd.) Kazi Moslehuddin for giving all the interviews and support. Thanks to Air Commodore Awal Hossain who is the project commandant. Thanks to Habibur Rahman, chief engineer of MES for granting me the permission to get into the project. Last but not least I would like to thank Squadron Leader Monjurul Karim for taking the pressure and guide us on the site visits. I would also like to thank Akibur Rahman for the support. I would also like to thank Tamim, Faiza, Afia, Farhan, Mehnaz, Sahiba, Adhora mehzabin, Ifrit Adhora, Tehami, Tyrin, Aisha, Samira, Jeba, Ishrak, Anika, Shudhonkor Das, Md. Adom, Harun, Shahjalal, Nesar and Rumman. I am thankful for their unconditional support.

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Chapter - 01: INRODUCTION

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01. INTRODUCTION

1.1 Background of the Project

Military academy is basically a training school for the cadets/ students who are going to be an officer/soldier by habituating military lifestyle and passing the academic trainings. Since the soldiers are generally prepared for defending the nation, their training includes many ethics and morality related exercises. So, this school is not only a preparatory for physical or weaponry drilling but also a sophisticated training institute for moral development. The soldiers passed from these academies would be willing to give their lives for their nation and country (Webster. Noah,1828)

Airmen Training Institute is basically a training school for the students who are going to be a soldier by learning Air Force law, preparing themselves to assist the pilots, engineers, air traffic controllers, Air defense weapon controllers, admin officers including other officers by passing all the weapon training, parade and graduating by holding the mental preparation of willingness to die for his nation at any situation. (Personal communication, February 21st,2018)

This academy is basically a tertiary educational institute or part of such an institution that teaches basic engineering for technical trades, types of aircraft engines, both jet and propeller, maintenance training, flight engineering, ground combating, assisting pilots and engineers, admin officers, medical officers,

accounts and Provost (Military Police) and award a professional degree for the soldiers. The degree soldiers get is the Diploma in Engineering (GrDip).

Airmen training institute employ cadets all around the country by taking a medical test for physical fitness, written and viva. Selection process commands by a medical officer, an admin officer and a team of airmen. Selected cadets get an order to join the institute on a particular date and from that date the training starts. After a tremendous training of a year they become a soldier by performing a ceremonial parade in the presence of chief of Air Staff or assistant chief of Air Staff. On that passing out ceremony they take oath of protecting the sky of Bangladesh and take care of the nation at any cost “বাংলার আকাশ রাখিব মুক্ত”

This institute and Bangladesh Air Force awards the soldiers a Diploma degree of technical trades and medal of honors for outstanding performances. They get the free medical service for them and their families of lifetime by CMH, free accommodation for whole long period of the service, almost free ration for lifetime. They receive training certificates of flight safety, basic commando, aircraft overhauling services, paratrooping in the country and also in other countries. They get the opportunity to go to UN Mission in Congo, Sierra Leone, Uganda and serve the nation internationally. Bangladeshi soldiers are renowned all over the world for serving and protecting these countries from civil war and solve their problems. They have always the priorities of any government and military services. In any soldier die during any war or during any official training, his family would get all the lifetime financial, educational support from Bangladesh Air Force.

Bangladesh Air Force always had huge contribution in UN Mission. The soldiers of BAF always showed the best participation in UN Mission. BAF have provided Best training of airmen and that is why now it is possible to overhaul PT-6 Aircraft and L-39 aircraft in our country. Technicians of other country like Malaysia, Pakistan come to attend training program of Aircraft overhauling.

This is the first time 'Airmen Training Institute' is proposed by ministry of defense. Before that the 'Training center' 'Trainees' Mess' and 'Recruitment Training School' were located in different positions in that Base. This all will be together in this project and will be a 'Airmen Training Institute'.

1.2 Project Brief

Airmen Training institute is a Air Force-run institute that is at present conducting its academic and military affairs in its temporary center at the same Air Force base at Patenga, Chittagong adjacent to the proposed site. The institute is affiliated with the Administration wing of the Base and the Commandant of the wing is an Officer Commanding (OC). It has a proposal for establishing its permanent institute on the eastern side of Chittagong Air Base. Air Officer Commanding (AOC) of 9th General duties pilots, Air Commodore Morshed Hasan Siddique, psc. is the Supreme Commander of the institute of Chittagong base. Bangladesh Air Force has an ambitious plan to build a state-of-art campus with all facilities. Since the training is restricted and unauthorized people are or allowed in the campus the facilities of recreation will be there.

Name of the project: **Airmen Training Institute**

Client: **Department of Works, MES, Bangladesh Air Force, Ministry Of Defense.**

Site Location: **Bangladesh Air Force Base Sergeant Zahurul Haque, Patenga, Chittagong.**

Site Area: **16 Acers**

1.3 Aims and Objective of the Project

Main objective and motive of the institute is to provide world-class Air Training, best training of different engines of aircrafts and produce best quality Airmen. And thus, aims and objectives of the project is to design a state-of-the-art training institute that will be able to accommodate all the functions of the military training and will act as a comfortable, driving, inspiring and positive catalyst in the process of training and education future Airmen/Soldiers.

As it is an Air Force run institute, the training institute will have an expression that will uphold both the standards of Technical science and Bangladesh Air Force.

1.4 Program Given

Dormitory

-Lobby

-Meeting hall

-House Master's Room

-

- Double Bedded Rooms (First,
Second, Third and Fourth Termer

Cadets)

-Toilets

Cook House- Service Area

- Receiving Area

- Sitting

- Docks

- Toilets

Recruitment Training School

- Class Rooms

- Teacher's Room

-Seminar Hall

-Library

-Toilets

Common Rooms

- Lounge

- Toilets

Indoor Games Area

- Games Area

- Toilets

Dinning

- Pantry

- Service Area

- Receiving Area

- Sitting

- Toilets

Multipurpose Hall

- Service Area

- Green Room

- Open Area

- Toilets

Auditorium

- Gallery
- Stage
- Toilets

Assembly Hall

- Assembly Area
- Stage
- Toilets

Parade Ground

- Assembly
 - Commandant/ Chief Guest's
- Stage
- Audience Sitting

Basketball Ground

- Court
- Audience Sitting

Training Fields

- Training Tracks
- Audience Sitting

1.5 Problem Statement

Cadet Soldiers of Bangladesh Air force were previously got their physical and psychological training at the 'Training Center', got their theoretical education at 'Recruitment Training School (RTS)' and had their accommodation in the 'Trainees' Mess'. Now, all these functions are scattered in different location at the same base. Even one or courses training had arranged at the BAF base Squadron Leader Matiur Rahman, Jessore. There was no specific academic campus for these cadets. I think a major and drastic improvement will come if the Training institute, RTS and Messes are designed all together have another Aircraft hangar is installed of any fighter aircraft.

BAF has now very expert technicians and other soldiers. If the technical education somehow can have proper nourishment, the result will be outstanding. Soldiers of Bangladesh Air Force can overhaul two types of propeller aircraft. If the training system and technical educations are improved, someday so soon we can overhaul every other aircrafts of our country and soldiers from other country will come to get trained by our soldier technicians.

1.6 Project Rationale

Soldiers of Bangladesh Air Force are already contributing a lot in the international platform. Every year thousands of Bangladeshi soldiers are participating in the peacekeeping mission by United Nation. They hire soldiers from our country for the quality of exercises they are showing there. If the training of our soldiers can be improved this demand will get higher and it will give a big impact on our economy and Bangladesh will be well-known for them as well.

Two types of propeller aircrafts are overhauled in our country all by the soldier technicians. There are more likely 20 types of fixed wing aircrafts and helicopters in our country. If the technical education can be improved and proper comfort and training is provided then all the aircrafts can be overhauled by our own technicians and Soldiers.

My dream is to design a state of the art Institute that will ensure the best training, best technical education and most importantly best environment and spaces to enhance soldiers' productivity.

Chapter - 02: LITERATURE REVIEW

2.1 Denotations and Connotations of Airmen Training Academy

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2.9 Importance of an 'Airmen Training Institute'

02: LITERATURE REVIEW

2.1 Denotations and Connotations of Airmen Training Academy

2.1.1 Definition

Military Training Academy is a preparatory school for boys where the students habitually wear uniforms and follow military routine (Webster. Noah.1828)

Military academy is basically a training school for the cadets/ students who are going to be an officer/soldier by habituating military lifestyle and passing the academic trainings. Since the soldiers are generally prepared for defending the nation, their training includes many Ethics and Morality related exercises. So, this school is not only a preparatory for physical or weaponry drilling but also a sophisticated training institute for Moral development. The soldiers passed from these academies would be willing to give their lives for their nation and country.

2.1.2 Explanation based on understanding

Soldiers are upholders of collective consciousness of our society, they are also addressed as the 'Moral Compass'. They are employed as the last resort by the country when all options get exhausted. They epitomize honor and the code of conduct for all of us to follow.

By the statement of Major General Sunil Kumar the soldiers are considered as the 'Moral Compass' of the society. That means the psychological development of those soldiers must be very delicate and sensitive (Kumar, TEDxChristUniversity, "Transforming body, souls and minds", 2017).

They both can be used interchangeably and is often used as such, but to be precise Army is part of military and military comprises of everything in Tri-Service which are Army, Navy and Air Force (Mishra,Anuj.7th November,2014)

Army refers specifically to a particular branch of the military. Military is a generic term used for soldiering or a discipline connected to it. Army, Navy and Air Force all form part of the military (DalalTej,17th December,2017)

According to the interview with ' Group Captain Kazi Moslehuddin, psc (Rtd.)' who was the Director of 'Works and Plans', Air Headquarters, Bangladesh Air Force,

The word 'Military' defines all the armed forces of any country such as Army, Navy and Air Force. Army is the land protector, Navy is the protector of any water ways like rivers and Oceans and Air Force is the ultimate protector of Sky of a country.

The academies of these 3 military forces are similar but not same. The trainings of the forces are different and that is why there are differences between the training academies of different Forces.

In the first chapter there is a description on the two basic classifications of Military Services.

A) Commissioned Officers

B) Soldiers

The training academy for Officers is different from the training center for Soldiers.

The qualifications and training procedure are also different from one another.

However, My Project is the academy for Non-commissioned officers (NCO) whom are also addressed as the 'Airmen'.

Airmen Training Academy is basically a training school for the students who are

going to be a soldier by learning Air Force law, preparing themselves to assist the pilots, engineers, air traffic controllers, air defense weapon controllers, admin officer including other officers by passing all the weapon training, parade and graduating by holding the mental preparation of willingness to die for his nation at any situation.(Personal communication, February 21st,2018)

2.2 History of Military Training Academies in Bangladesh

Bangladesh Military Academy was introduced by the initiatives of the father of our nation, Bangabandhu Sheikh Mujibur Rahman in 29th November,1973 at the Comilla Cantonment. It was previously a training institute of Army officers, established in Chittagong Bhatiari in October 1972. Bangladesh military academy, basically follows the curriculum of Pakistan Military Academy which is founded by British rule of Military. Cadet Uniforms, patches, entitlements and marching traditions are also maintained according to the British rule. This military academy provides the training of 'officer cadets' of Bangladesh Army. Infant cadets of Bangladesh Air Force and Bangladesh Navy also get the initial training from BMA. Regular long courses commenced from 1978. The first batch of officers of Bangladesh Army graduated from the academy in 1975.

Bangladesh Naval Academy was established in 1976 at the premises of the Marine Academy at Juludia, Chittagong. It was shifted BNS ISSA KHAN in Chittagong in order to train the cadets of Bangladesh Navy.in 1988 it shifted to the current location. In 2014 the Academy has introduced 04 years BSc(Hons) in Maritime Science and

BBA in Logistics and Management under Bangladesh University of Professionals.
Bangladesh Naval academy also follows the curriculum of Royal Navy (British Navy).

After the liberation war, in the year of 1973 'Cadet Training Unit' of Bangladesh formed. After 4 years in 1977 the academy shifted to Bangladesh Air Force Base Birshreshtha Matiur Rahman, Jessore and renamed 'Cadet Training Wing'. Finally on April in 1982, it was made a full-fledged academy and renamed 'Bangladesh Air Force Academy' (BAFA)

2.2.1 Overview

Airmen training institute is not actually an academy where cadets are trained to become an officer, in here cadets are trained to become a soldier. So, there is a basic difference between training and studies from the officer cadet's academy. Since the history of 'Soldier academies' of our country's armed forces are not very carefully documented, that is why I feel it is important to come up with something following the history of officer's training academy. All the academies share more-likely the similar features.

2.3 History of Airmen Training Institute in Bangladesh

After the liberation war it was actually divided in two parts. One is the “Training Center” which was the physical training unit and another was “RTS” which means ‘Recruitment Training School’ and these are situated in the Air Force Base of Kurmitola, Dhaka, which is known as “BAF Base Bangabandhu Sheikh Mujibur Rahman’. In the year of 1975, these two parts are shifted to BAF Base Zahurul Haque, Patenga Chittagong. In March 2017, there submitted a proposal of a new Airmen Training Institute by Air HQ, department of works with MES to the ministry of Defense {Group Captain Kazi Moslehuddin, psc (Rtd.), personal communication, February 24th,2018}.

2.4 System of the training

Master Warrant Officer Rejaul Karim made the following point:

The qualifications need to join as an Airman-cadet, needs to pass SSC examination with grade point 3.5 or above. After getting into the academy recruits are sent to the ‘Airmen Academy’. In their 9 months of training and RTS studies they are divided into different trades by their merit. There are 4 basic trades in Airmen Services. They are given below:

Trades in Airmen Service

Technical	Engineering	Administration	Supply
a) Engine b) Air frame c) Electric d) Instruments e) Radio f) Radar g) Airborne Armaments h) Life Saving Equipment Worker	a) General Engineering b) Welder c) Wood Worker d) Metal Worker e) Maintenance Training fitter f) Maintenance Training Operator g) Telephone Operator	a) Admin Assistant b) Provost c) Load Master d) Accounts Assistant e) Medical Assistant f) Flight Engineer g) Air Gunner h) Ground Combatant i) Clack GD j) ATC Assistant k) Radar Assistant l) Met Assistant m) Met Assistant n) Musicians o) General Service	a) Supply Assistant

After 9 months of training they have a ceremony through a parade, air show and passes out with the honor of being a successfully ready soldier. In this ceremony Chief of Air Staff or Assistant Chief of Air Staff attends as a chief guest and give them medals for their performances in the academy and batches of AC= Air Craft Man on their arms.

After getting the rank AC, they were posted to other bases of Bangladesh Air Force to get practical training with fighter aircraft, transport aircrafts and helicopters. After that they will be promoted to LAC= Leading Aircraft Man training will be going on.

After 10 years of passing out they will be promoted to Corporal and send back to the training academy for farther training to get the rank Sergeant. During this training Airmen are restricted in the academy. The training procedure includes so many punishment and physical labor and that is why the Training area is strictly kept restricted even for the non-assigned Airmen or officers. But the Parade and other field athletic training is not that restricted to the civilians. During the previous training of the recruitment the cadets stay in the Trainee's mess which is basically a dormitory, have their lunch in the central dining hall, attend classes in recruitment training school, swim in their swimming complex and have other training. On the other hand, the Corporals also stay in the trainees' mess and get more facilities than the recruit cadets.

After passing out from the academy they promoted by their performances and those ranks are given below:

1. AC= Air Craft Man
2. LAC= Leading Aircraft Man
3. Corporal
4. Sergeant
5. Warrant Officer
6. Senior Warrant Officer
7. Master Warrant Officer

(Personal Communication, January 23rd,2018)

2.5 How this academy affects the society

2.5.1 Ethical Development of young generation

Soldiers are upholders of collective consciousness of our society, they are also addressed as the 'Moral Compass'. They are employed as the last resort by the country when all options get exhausted. They epitomize honor and the code of conduct for all of us to follow (Kumar, TEDxChristUniversity, "Transforming body, souls and minds", 2017).

By the statement of Major General Sunil Kumar the soldiers are considered as the 'Moral Compass' of the society. That means the psychological development of those soldiers must be very delicate and sensitive.

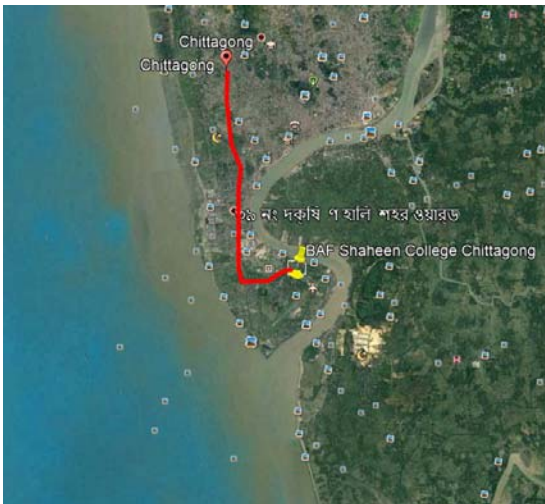
Young people of our society who have passion towards aircraft or want to develop a defense service carrier this would help them as a guideline. It helps them to learn how ethically rich you need to be for being an Airmen. By this they will be passionate and it makes them think how principals are important to develop a patriotic mind. It helps them to realize how people of military services ready to give their live for the country and for this how strong you have to be. So, I think it will be affecting a big part of young generation of our society to develop their mindset and construct their Values.

2.5.2 Exposer for the context

Since the 'Airmen Training Institute' will be situating in Patenga, Chittagong, It will be a great exposer for the people of Chittagong. They will know about the service and how the carrier will be in this service. BAF Shaheen College is just beside the academy, so the students of the school will know about it and may grow interest about the training and pursue the carrier. Training academy in another district will be a great exposer to the people of that area.

2.6 Positioning of the site

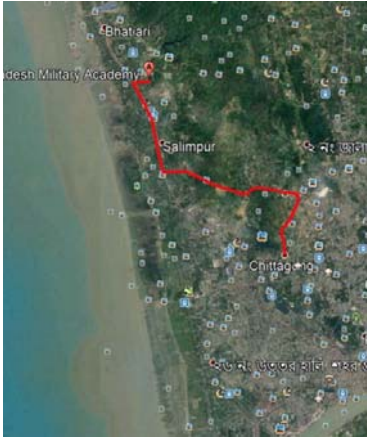
2.6.1 Far from the city center



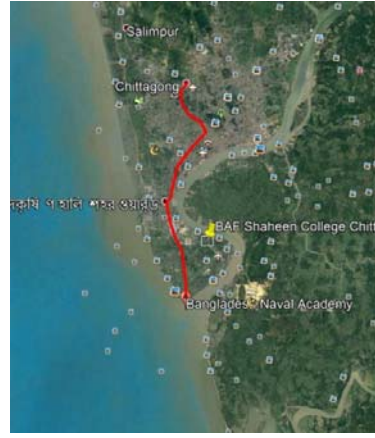
The site is at the edge of Bangladesh Air Force Base, Patenga, Chittagong. The positioning of the site is far away from the city center.

'Cantonment', the word came from the French word 'Canton', which means 'Corner' or 'District'.

It also explains 'The place during a military campaign, where unit of an Army, Navy or Air Force maybe encamped for longer periods than they are advances and retreats (Webster. Noah.1828)



Bangladesh Military Academy's distance from the city center



Bangladesh Naval Academy's distance from the city center

2.6.2 Adjacent to the Runway



The academy is very close to the runway having a vital link (Taxi) with the runway attached with an aircraft hangar. These hangers work a laboratory of their aircraft instruments works. The hangar and runway help movements. them to develop their mind set to work with aircrafts and air

2.6.3 Military Bases Merges Civil society through a Bazar

Most of the restricted entry military bases merges with the civil society with a bazar. Beside the site of the project there is also a bazar called 'Guardroom Bazar'. The site is at the edge of the Air Force Base and the Guardroom bazar is used by Airmen and Officers. This bazar should have a big impact over the site. Military academies are one of the restricted and strict areas of any countries. These restrictions are for the 'Training Process' and also for the armament related activities and staff. There is always a bold line between the military people and civilians. People of the civil society always have a communication gap with the military people. I think this gap create a discrimination with these two streams. Maximum civilians don't know much about militaries so that they assume and there is a lack of exposure for the military carrier. Although now-a-days Bangladesh Army is getting popular and young people are getting curious and interested to join Bangladesh Army but Bangladesh Air Force and Bangladesh Navy is still underrated to the civil society. They and their works were more likely a mystery to the civilians. As an Air Force brat I experience so much peculiar staff like these. But when people of Military and Civil society go to a bazar they merge very quickly. My intention is to provide the maximum possible public access and the Bazar located beside the site will work as a gateway through these two societies. To sum up my point is to create an exposure to the civilians by creating an interesting exhibition-like space for Parade and other trainings and flying and connect the two streams and also keep the academic activities restricted.



Figure: Meeting point of 'Guardroom Bazar

2.7 How Military bases merge with the civil society

My experience as an Air Force brat I have been 3 Air Force bases of our country. Since my father is in Bangladesh Air Force I had the opportunity to have the experience living in a military base. When I started growing up I realize there is such differences between Military and civil societies. In military bases there are strict classifications in Officers and Airmen. They have different territory of housing and other activities. Every classes stay together. The Officer Brats are not appreciated playing with the children of Airmen. There were different fields allocated for different classes. Although The BAF Shaheen College allow me to develop friendship with the children of so called other classes. However, there was a Bazar in Jessore BAF

base. The Bazar was named 'Monoharpur Bazar'. That was the only place where Officers, Airmen and even clerks were allowed for shopping. That place was my favorite place and I didn't realize that until today. I realize that bazar is the place where people don't discriminate for some reason, it's may be the business purpose.

Military activities may have differences with the Civil society but a market can always merges these two society. For an Example 'Rojonigandha super market' which is also known as 'Kochukhet Bazar'. This is a vital meeting point of a Civil Society (Kafur, Ibrahimpur, Mirpur-14) and Dhaka Cantonment. People of these two stream merges here with business. This bazar has all the necessary things of any regular use product and also have Army Stores. After all military people have a civil life.



Figure:Kachukhet Bazar: Transformation of Cantonment to Civil area (Merging)
(Source : Google earth and Author)



Figure: Kochukhet bazar entry from cantonment. (Source: Author)

2.8 Literature of the Proposed Project

The existing training unit, which is scattered from the other wings of the institute, is insufficient for modern Air defense training. The unit does not have Swimming Complex, Scientific Laboratory, indoor stadium etc. Computer Science Laboratory, Aero Science Laboratory and Advanced Air Training is very important to achieve the international quality of Airmen's performance. On the hand the existing Aircraft hangars are not up to mark/ appropriate for keeping the Aircrafts and helicopters as well as insufficient for the airmen cadets to learn about Aircrafts. This institute must be the best in the physical training and also should be good in the academic part of the training. In this situation a state-of-art and sustainably working building is the most desired.

The prime minister of the government of republic of Bangladesh, Sheikh Hasina mentioned the importance of modernizing the training institute and also the training process. This will be the only institute where the future Airmen of the country, will trained. So, developing this project is a demand of time. Airmen who will be trained from this institute, will be achieving their capability to perform and participate in the 'Civil Aviation', DGFI and also in the Secretariat beside their operational works in Bangladesh Air Force. Also, they will prove their services in UN Mission at Congo, Ivory Coast, Sudan and help the help the country to earn foreign currency and will be changing the national economy.

In order to develop the project Commandant Office, Library, Cafeteria, Swimming pool complex, Auditorium, Dormitory, academic building is necessary (MES, Dhaka Cantonment, A. M. (march, 2017).

2.9 Importance of an 'Airmen Training Institute'

According to the Prime Minister Sheikh Hasina, Bangladesh Air-Force's training system should be developed. She added this is the only institute where Airmen get the professional training. She said it essential to develop the institute and training to cope up with the training of other Air-Forces of Asia. She also mentioned, in order to digitalize Bangladesh this development will perform a great role.

This training will give the Airmen many operational capabilities as well as train them to work with the civil aviation, DGFI (Directorate General of Forces Intelligence) and some civil works of government offices. Airmen of our country have a huge

contribution of the Peacekeeping Missions of UN (United Nations) at Congo, Ivory Coast, Sudan and help the country to earn a huge amount of Foreign Currency.

According to the description of proposed programs the required functions are:

Admin Offices, Commandant's Office, Library, Cafeteria, Swimming pool, Modern Auditorium, Dormitory, RTS and other Sports and Swimming complex for the future competition of the cadets. It is also described if the project is implemented the Nation Security including the security of our Armed Forces will be increased.

Chapter 03: SITE AND CONTEXT ANALYSIS

3.1 Background of Chittagong

3.1.1 Geographical

3.1.2 Historical

3.1.3 Climatic

3.1.4 Socio-Cultural

3.2 Location of the Site: Patenga.

3.3 Site Details

3.3.1 Positioning of the site

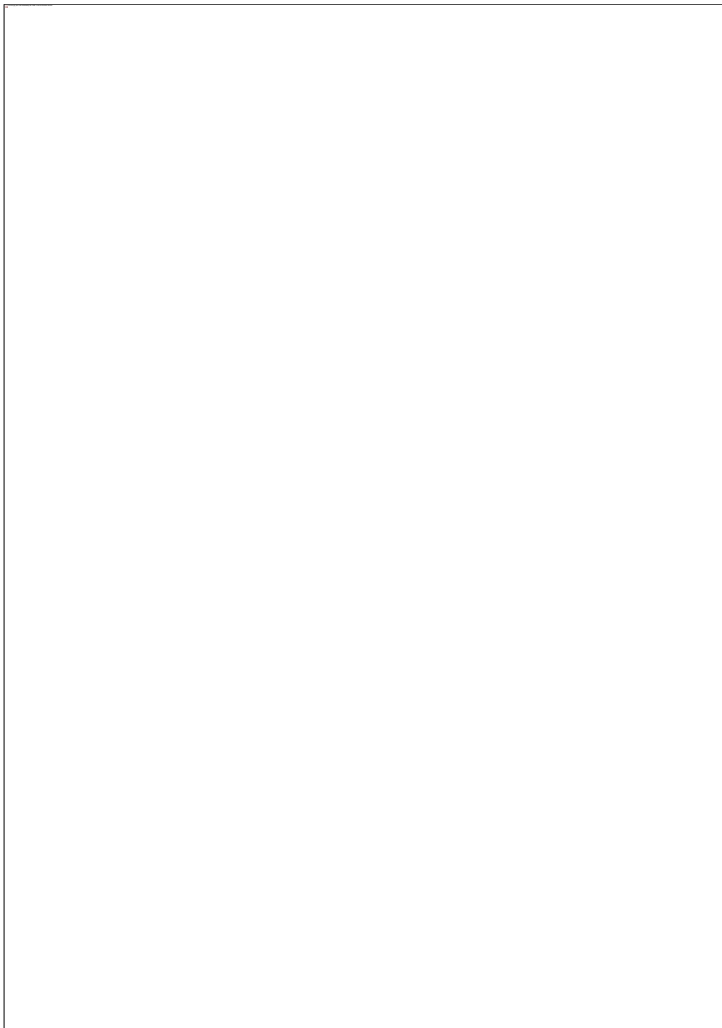
3.3.2 Site surroundings and land use

3.3.3 Connectivity and road networks

3.3.4 SWOT analysis

3.4 Urban Evolution of the Site

03: SITE AND CONTEXT ANALYSIS



3.1 Background of Chittagong

3.1.1 Geographical

Chittagong District is sort of completely different from other districts for its distinctive natural beauty characterized by hills, rivers, sea, forests and valleys. This Port City of Bangladesh which lies at 22°22'0"N 91°48'0"E and it straddles the coastal foothills of the Chittagong Hill Tracts in south-eastern Bangladesh. Chittagong District is quite different from other districts for its own natural beauty signified by hills, rivers, sea, forests and valleys. The Karnaphuliriver runs on the southern banks of town, which

has the central city district. The river enters the Bay of Bengal in Associate in nursing body of water settled twelve kilometers west of downtown Chittagong.

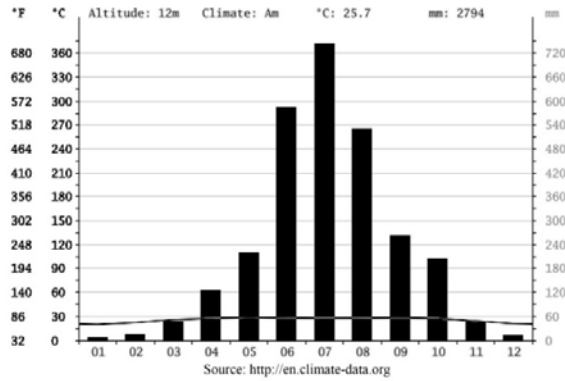
3.1.2 Historic

Arab and Persian merchants established trading posts in Chittagong during the 9th century. Arab historians named the port as Shetgang and described it as the gateway of Bengal. The settlement of Muslim merchants, bureaucrats and soldiers led the historic Port of Chittagong to flourish in trade. The region was an important trading center of pearls, rice, silk, muslin, spices and ivory.

In 1971, during the Bangladesh Liberation War, Chittagong was under sector 1, which suffered massive losses in people and buildings given that they denied the occupation army access to the port. On behalf of Bangabandhu Sheikh Mujibur Rahman, the Declaration of the Independence of Bangladesh was announced by Shahid Ziaur Rahman on 27 March 1971 from the Swadhin Bangla Betar Kendra located at Kalurghat. Much guerrilla warfare took place in this city where the Pakistani soldiers were defeated (Ahmed, S. and Chowdhury, B,2004)

3.1.3 Climatic

The average temperature of Chittagong is approximately 25.7 °C. About 2794 mm of precipitation falls annually and the driest month is January. The driest month is January and about 2794 mm of precipitation falls annually of Chittagong. Chittagong is basically tropical which has significant rainfall most months, with a short dry season.

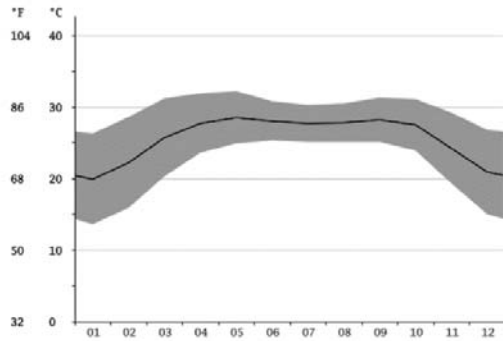


The driest month is January. There is 6 mm of precipitation in January.
In July, the precipitation reaches its peak, with an average of 743 mm.

month	1	2	3	4	5	6	7	8	9	10	11	12
mm	6	15	48	126	219	583	743	530	261	203	48	12
°C	19.9	22.2	25.7	27.7	28.5	28.0	27.7	27.8	28.2	27.5	24.2	20.9
°C (min)	13.6	15.9	20.3	23.6	24.9	25.3	25.1	25.1	25.1	23.9	19.3	15.0
°C (max)	26.3	28.6	31.2	31.9	32.2	30.8	30.3	30.5	31.3	31.1	29.2	26.8
°F	67.8	72.0	78.3	81.9	83.3	82.4	81.9	82.0	82.8	81.5	75.6	69.6
°F (min)	56.5	60.6	68.5	74.5	76.8	77.5	77.2	77.2	77.2	75.0	66.7	59.0
°F (max)	79.3	83.5	88.2	89.4	90.0	87.4	86.5	86.9	88.3	88.0	84.6	80.2

Source: <http://en.climate-data.org>

With an average of 28.5 °C, May is the warmest month.
At 19.9 °C on average, January is the coldest month of the year.



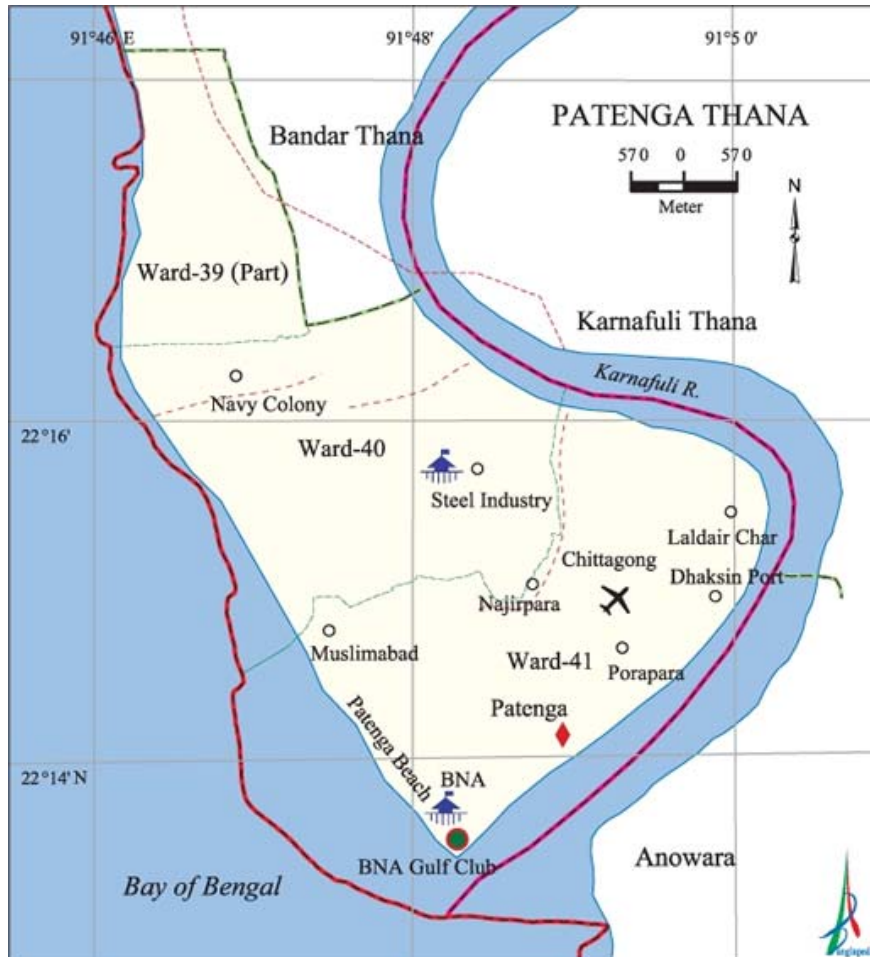
The precipitation varies 737 mm between the driest month and the wettest month.
The variation in annual temperature is around 8.6 °C.

Ashraf, M. A. (1995)

3.1.4 Socio-Cultural

Chittagong district has the population of 6.5 million and the Metropolitan area have the population of 40,09,423. Among them 54.36% is male and 45.64% is female. The literacy rate in the city is 60%. Chittagong is the most specialized and varied industrial center in Bangladesh, being its largest international harbor, center of serious business and residential to several of its oldest and largest firms. An inhabitant of Chittagong is called Chittagonian in English. For centuries, the port city has been a melting pot of people from across Bengal and parts of Burma and the Middle East. Various special types of folk culture and festivals such as —Mejbani of the Muslim community, Mahadeshwari Puja of the Hindu community, Baisabi festival, Buddha Purnima, Durga Puja are performed in the district. There also many folk festivities are performed on the occasion of Chaitra Samkranti, New Year's Day, Halkhata, Punnah, Nabanna, PoushParvana, Anna Prashana etc. The indigenous communities of the district perform various kinds of folk dances including Mayur (peacock) dance, Jele (fishermen) dance, Sapure (snake charmer) dance, Bhaiya dance, Bottle dance, Plate dance, etc (Ahmed, S. and Chowdhury, B. 2004)

3.2 Location of the Site: Patenga.



Patenga is one of the famous beaches of our country. Many tourists across the country come to visit Patenga all along the year. This place is not only famous for the beach but also for the road along the sea shore. This is a tourist spot for the locals and the outsiders. Chittagong's best street foods are from here. For watching sunset, Patenga is a beautiful sea beach close to Chittagong city. It is near the beginning of the Karnaphuli River. Nature lovers come here to enjoy the beautiful scenario of the Bay of Bengal and get away from busy city life. Patenga is a popular tourist spot. The beach is very close to Bangladesh Naval Academy of Bangladesh Navy, and Shah Amanat International Airport. The width of the beach is narrow and swimming is not recommended in the seas here.

As part of the sea shore a concrete wall can be seen along the shore .Also large blocks of stones have been laid out to prevent erosion. During 1990s lots of restaurants and kiosks have been developed around the beach area. Lighting of the beach area has enhanced the security aspect of night visit. People visiting this beautiful place usually wake up early to witness the stunning sunrise. Patenga includes some special places of the Chittagong city:

- a) Shah-Amanat International Airport
- b) Bangladesh Naval Academy and Bangladesh Navy Base
- c) BAF Shaheen College, Chittagong.
- d) BAF Base Sergeant Zahurul Haque.
- e) Boat Club Bangladesh
- f) Oil Industry

3.3 Site Details

3.3.1 Positioning of the site

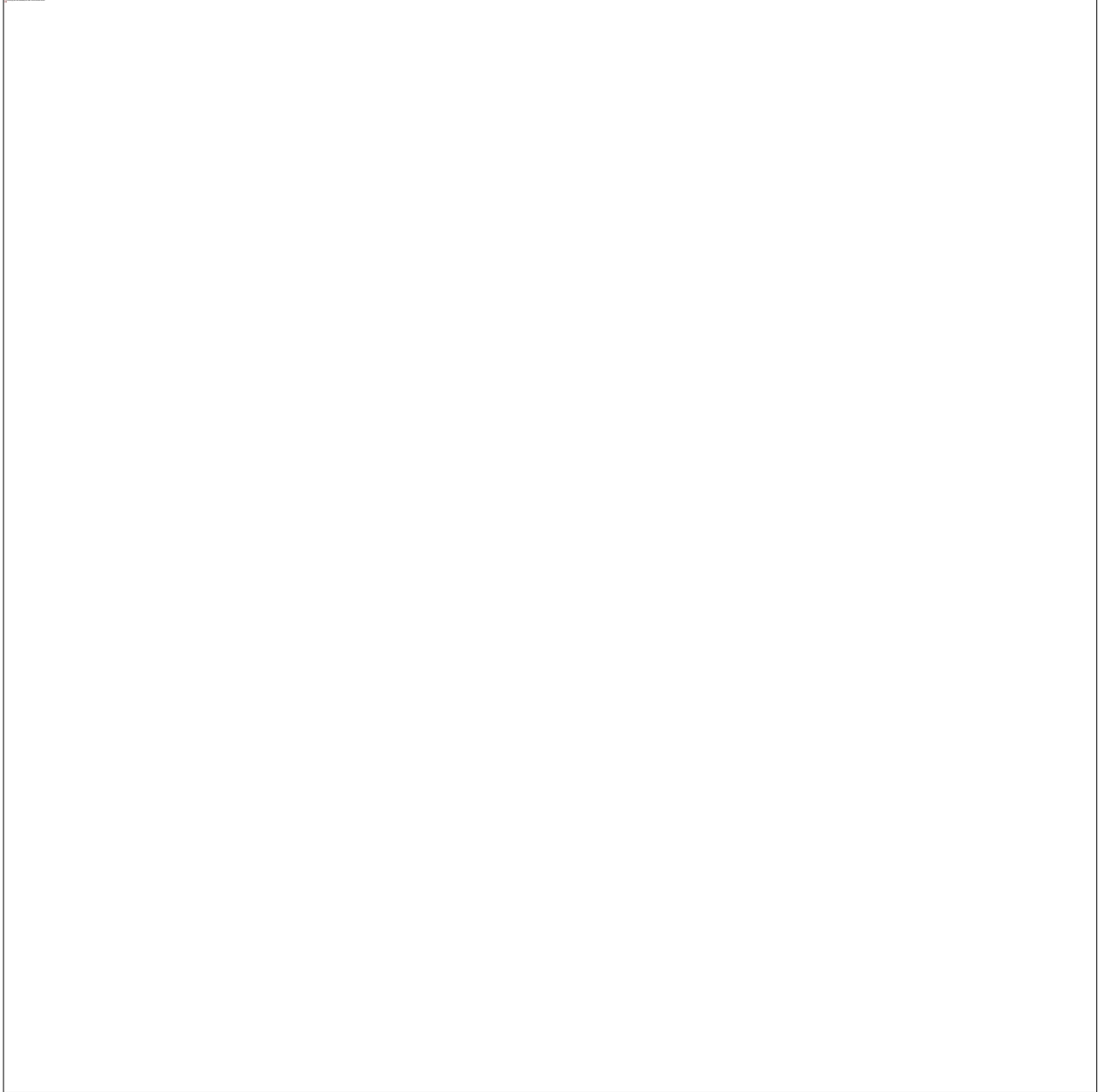


Figure: Connectivity (Source: Google earth and Author)

The site of 'Airmen Training Academy' is located at the edge of BAF Base Sergeant Zahurul Haque. The positioning of the site is far away from the city center. The site is approximately 12.44 Kilometer from the main city of Chittagong.

Most of the military academies are generally situated far from the main city because the restricted training and mental preparation is important for the development for the enormous mental strength. Besides, 'Cantonment', the word came from the French word 'Canton', which means 'Corner' or 'District'.

It also explains 'The place during a military campaign, where unit of an Army, Navy or Air Force maybe encamped for longer periods than they are advances and retreats.



Figure: Existing scattered functions around the site. (Source: Google earth and Author)

There are four major functions which are scattered at the existing site. The proposal is to keep them together to build an institute. These four functions are existing at different places of the site. The 'Training Wing' is the only form existing on the site. The other functions like trainee's mess, parade ground, RTS etc will be together and make this as an institute.

3.3.2 Site Surroundings and Land use



Figure: Land use map of the site surrounding (Source: Google earth and Author)

The site of the project 'Airmen Training Institute' is a part of Bangladesh Airforce Base, Patenga, Chittagong. The north west of the site is under industrial zone. Southern part of the site is under a residential area named Miaz para. The whole North, West and South-East part of the site is sounded by Air Base. Runway is one of the essential parts of the site since the Hangar (01) will be the Aircraft overhaling laboratory for the soldier cadets. Patenga ward is mostly surrounds by residential and industrial zones. Naval academy is situated at the south edge. There are many green spaces (paddy field and vegetation) around Patenga. Naval port is situated on the North-West side of the site. Naval Port is adjacent to the Naval base.



Figure: Layout of Chittagong Airfield (Source: Squadron Leader Monjurul Karim, GATCO)

Airfield is one of the essential studies for the project. These air field will be connecting the Runway and taxi areas of the aircraft which will lead them to the Hangar. The hangar will be the place where the cadets will be learning the Aircraft Overhauling process.

3.3.3 Connectivity and Road Networks



Figure: Connectivity and Road Networks (Source: Google earth and Author)

3.3.4 SWOT Analysis

Strength of the Site:

The site is situated just beside the Runway and a vital Taxi-connection walks through the site and ended up with hangar. The Aircraft hangars will be the Aero-Technical Laboratory of the Cadets. This is one of the strengths which will be helping during the design phase. It will be easy to accommodate the Air Craft access to the Hangar.

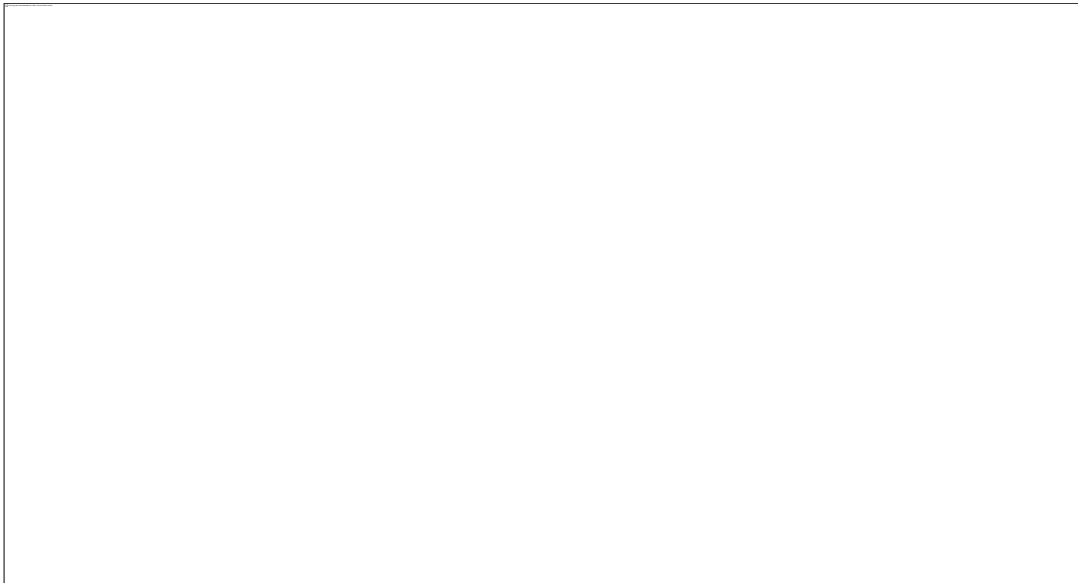


Figure: Site (Source: Google earth and Author)

The longer part of the site is North-South oriented. According to basic principles of climatic consideration for design is very much friendly for the site.

At the north approximately 1.28 kilometer from the site, the Karnaphuly River is located. This natural watercourse is one of the biggest strengths of the site.

Weakness of the Site:

The site is approximately 12.44 kilometers from the Main city of Chittagong. So, All the Transport hub except the Airport are far away from the site. Another weakness of the site is, there is an oil industry just beside the site, it will produce heat and noise.

Opportunities:

There is a Bazar beside the site and every year twice there is a National Ceremony will be held on the premises of the site. Although the Graining center is restricted there will be a opportunity of create a public access to a restricted area.

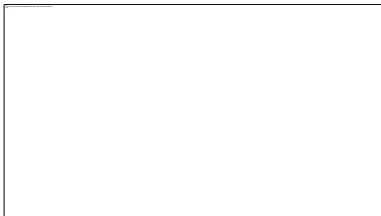
Threats:

At North west of the site there is a steel industry, enormous noise and heat can be a threat during the design process.

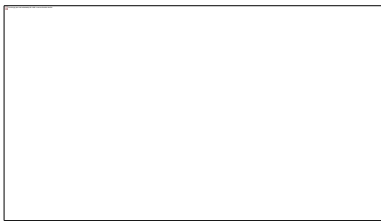
3.4 Urban Evolution of the Site



2001



2004



2008



2010



2017 (Source: Google earth and Author)

From the timeline of 2001-2017 there has no major changes in urban fabric can signifies in Patenga thana except for some tertiary road networks among the civil settlements. But the surrounding of the project is defined. The territory of the Project-site was defined by a Property-wall which can identified by the situation image of 2008 and a secondary road network started running along the property wall. Since the Site is a Project of Bangladesh Air Force and the project will be an 'Airmen Training Academy', the restriction of the site is needed. After 2010, the Hangar was renovated. The road network with the main city is developed by the time but there is no other road network developed with the city expect from the one.

At the north side of the site there is a main road of entering the site and the base as well. At the edge of the site there is a Bazar named 'Guard-room Bazar'. This bazar developed by the

time and got bigger and popular. North Side of the site BAF Shaheen College is located and the northern road along the site is actually used as the main connection of the College for the students of civil society.

Chapter – 04: PROGRAM

ANALYSIS

4.1 Proposed Program

4.1.2 Description of Proposed Program

4.2 Measurement Analysis of Major Program

4.2 Rationale of the Program

4.2.1 How programs are functionally different from the other Civil Projects.

(Two)

4.2.1 Flow Diagram of Airmen

Academy

04: Program Analysis

4.1 Proposed Program

(2,26,000 sqft)

Dormitory (70,300 sqft)

-Lobby

-Meeting hall

-House Master's Room

- Single Bedded Rooms (Fourth
Termer Cadets)

- Double Bedded Rooms (First,
Second and Third Termer Cadets)

-Toilets

Recruitment Training School

(29,800 sqft)

- Class Rooms (8,800 sqft)

- Teacher's Rooms (2000 sqft)

-Seminar Halls (6000 sqft)

-Laboratories (4000 sqft)

-Library (6000 sqft)

-Toilets

Dinning (5000 sqft)

- Pantry

- Service Area

- Receiving Area

- Sitting

- Toilets

Cook House- Service Area (3000 sqft)

- Receiving Area

- Sitting

- Docks

- Toilets

Common Rooms

- Lounge

- Toilets

Indoor Games Room

- Games Area

- Toilets

Multipurpose Hall (20,000 sqft)

- Service Area

- Green Room

- Open Area

- Toilets

Auditorium (12,000 sqft)

- Gallery

- Stage

- Toilets

Assembly Hall (8,000 sqft)

- Assembly Area

- Stage

- Toilets

Parade Ground

- Assembly

- Commandant/ Chief Guest's Stage

- Audience Sitting

Swimming Complex

- Swimming Pools

- Diving Pools

- Audience Sitting

- Changing Rooms

- Toilets

Basketball Ground

- Court

- Audience Sitting

Training Fields

- Training Tracks
- Audience Sitting

Car Parking (During the Ceremonies)

Mosque

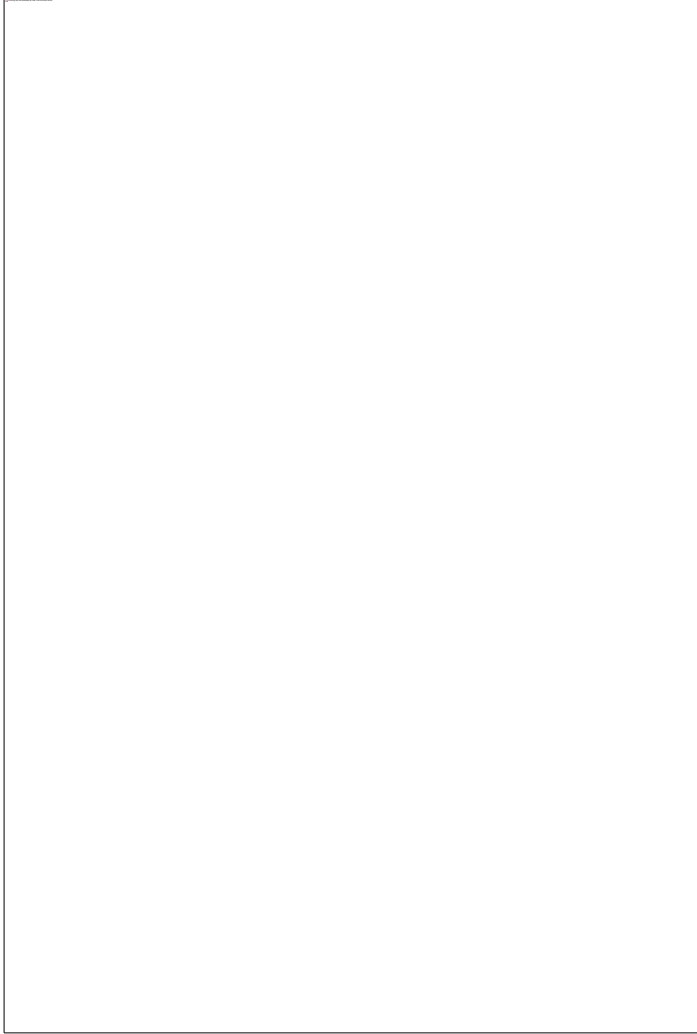
Laboratory (Air Craft Hanger)

(10,000 sqft)

Commandant's Office

(2000 sqft)

4.1.2 Description of Proposed Program



The existing training unit, which is scattered from the other wings of the institute, is insufficient for modern Air defense training. The unit does not have Swimming Complex, Scientific Laboratory, indoor stadium etc. Computer Science Laboratory, Aero Science Laboratory and Advanced Air Training is very important to achieve the international quality of Airmen's performance. On the hand the existing Aircraft

hangars are not up to mark/ appropriate for keeping the Aircrafts and helicopters as well as insufficient for the airmen cadets to learn about Aircrafts. This institute must be the best in the physical training and also should be good in the academic part of the training. In this situation a state-of-art and sustainably working building is the most desired.

The prime minister of the government of republic of Bangladesh, Sheikh Hasina mentioned the importance of modernizing the training institute and also the training process. This will be the only institute where the future Airmen of the country, will be trained. So, developing this project is a demand of time. Airmen, who will be trained from this institute, will be achieving their capability to perform and participate in the 'Civil Aviation', DGFI and also in the Secretariat beside their operational works in Bangladesh Air Force. Also, they will prove their services in UN Mission at Congo, Ivory Coast, Sudan and help the help the country to earn foreign currency and will be changing the national economy.

In order to develop the project Commandant Office, Library, Cafeteria, Swimming pool complex, Auditorium, Dormitory, academic building is necessary (MES, Dhaka Cantonment, A. M. march, 2017).

According to the Prime Minister Sheikh Hasina, Bangladesh Air-Force's training system should be developed. She added this is the only institute where Airmen get the professional training. She said it essential to develop the institute and training to cope up with the training of other Air-Forces of Asia. She also mentioned, in order to digitalize Bangladesh this development will perform a great role.

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some civil works of government offices. Airmen of our country have a huge contribution of the Peacekeeping Missions of UN (United Nations) at Congo, Ivory Coast, Sudan and help the country to earn a huge amount of foreign Currency.

According to the description of proposed programs the required functions are:

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4.2 Measurement Analysis of Major Programs

Dormitory:

According to the book, BASE CAMP FACILITIES STANDARDS For CONTINGENCY OPERATIONS by Department of Army, UNITED STATES ARMY, EUROPE, AND SEVENTH ARMY, THE DEPUTY COMMANDING GENERAL, UNIT 29351, APO AE 09014,

Housing Standards for long-term Soldiers

Category	SEAhut/GP Medium Tent (or equivalent) (16' X 32')	Number Per Standard Container (8' X 20')
E7-E8, WO1/2, CW3/4, O1-	1 Personnel/Room (8' X 16')	1

O4	with 4 Rooms/SEAhut	
E-9, CW5, O5-O6	1 Personnel/Room (16' X 16') with 2 Rooms/SEAhut	1

(Base camp facilities standards for contingency operations. 2004, February 1).

This is a standard for US Army Long term Campaign. On the table, there is a description of space requirement of a WO (Warrant Officer), who is a soldier. Generally during the time of training cadets are trained to be tough, that is why their living situation will be tighter than this.

E-1/E-4 get 90 square foot of net living area and not more than four per room. Note 1 states: The net living area of a private room or suite is measured from the inside face of the peripheral wall and includes all such enclosed, unshared spaces and partitions. The net living area in a shared room comprises the clear area in the sleeping room allocated for an individual's bed, locker, and circulation; it excludes lounges, bathrooms, hallways, door swing areas, and storage areas designated for military mobility and/or field gear or equipment. In open bay, net living area is one equal share per person. The open bay comprises all within the peripheral walls (What is the minimum space I am authorized in the barracks march 2018).

From my understanding and study, cadets of first and second term need 66 square feet for living area. On the other hand third and fourth term cadets need 72 square feet area per person for living. My academy will have 400 cadets staying at the same

time. So:

66 sqft X 250 cadets of 1st and 2nd Term = 16500 sqft

72 sqft X 150 cadets of 3rd and 4th Term = 10800 sqft

Lobby = 2000 sqft

Meeting hall = 4000 sqft.

Total = (33,300 sqft)

Dining:

In military dining are generally called 'Mess' and there are whole lot of dining formation for them. Since in the academy is a place for trainees that is why they were taught for all the dinning formation and type. Generally the dining hall where they will be eating their regular meal that will be a banquet sitting and every table will be occupied by 6 persons and every table must have 2 cadets from each term. So, every cadet should have 12.5 sqft inches for dining.

12.5 sqft X 400 Cadets = 5000 sqft.

Recruitment Training School:

RTS is actually a military school where cadets will be doing regular classes and study about Air Force law, aeronautical theory, flight safety etc. So it will be designed by following the standard of a University class rooms and other facilities like laboratories and library.

An arrangement of time savor standard said it will require about 22 square feet of space per student for a corridor and Stair halls. Lecture halls whose seats have folding tables arms may allow 15 square feet. Class rooms will be for 40 students , with 10 side seats available.

$22+15 = 37$ sqft , $37\text{sqft} \times 400$ cadets= 14800 sqft (class rooms and corridors)

- Teacher's Rooms (2000 sqft)

-Seminar Halls (6000 sqft)

-Laboratories (4000 sqft)

-Library (3000 sqft)

Multipurpose Hall:

The Multipurpose Hall of Airmen Training academy will be using for the Ceremonial dinner which includes a special kind of sitting arrangement, Buffet Lunches of any Ceremony with the Officers or Airmen, Any speech giving ceremony from Chief of Air Staff or Assistant Chief of Air Staff or any high officials, Indoor Game Competitions, Boxing Competition etc. 14 sqft per person will be needed in that kind of multipurpose

hall, So,

14 sqft X (400 cadets + 200 Officers and Airmen) = 8400 sqft

Toilets= 200 sqft

4.2 Rationale of the Program

Airmen Training Institute was actually divided in two parts. One was the “Training Center” which was the physical training unit and another was “RTS” which means ‘Recruitment Training School’ and these were situated in the Air Force Base of Kurmitola, Dhaka, which is now known as “BAF Base Bangabandhu Sheikh Mujibur Rahman’. In the year of 1975, these two parts were shifted to BAF Base Zahurul Haque, Patenga Chittagong. In March 2017, there was a submission of a proposal of a new Airmen Training Center by Air HQ, department of works with MES to the ministry of Defense.

Total Built Area will be 1,76000 square feet excluded the outdoor activity area like parade ground, training field, running tracks, Aircraft hangar etc.

From my understanding:

Since this will be a Military training academy and national ceremonies will be held on it's premises that is why this place demands a grand entry. After the entry there will be a central space which directed to two dedicated zones,

i) Restricted Zone: This zone includes all the outdoor training and Punishment grounds. This part is called restricted zone because the training must be have a minimum privacy. This zone includes Airborne Armaments and firing range.

Programs which are included in this zones are given below:

a) Dormitory b) Training fields c) Aircraft Hangers d) Assembly Hall e) Dinning

ii) Non-restricted Zone: This zone includes all other ceremonials and other complexes. Programs which are included in this zones are given below:

a) Recruitment training school b) Multipurpose hall c) Auditorium d) Parade ground
e) Swimming Complex f) Gymnasium g) Squash room h) Basketball ground i)
Mosque etc.

4.2.1 How programs are functionally different from the other Civil Projects.

Since the project is an academy for airmen, some programs will be functionally different from other projects. Some of these must influenced by the Military Curriculum. For an example Dormitory or Dinning, A dormitory of a university won't follow the rule of military, So the Architecture of the Dormitories of a Military academy would be considered the Military aspects. On the other hand Dinning, A dinning of a training a resource center will not be similar to a Military dinning. The following discussion is related to this from my understanding.

Dining:

In military curriculum the dinning is generally called 'Mess' and for entering the mess a dress code is followed. The dress is called Mess-kit. There are two types of dinning in military system.

i) Ceremonial Dining

ii) General Dining

The ceremonial Dining includes the other officer's and spouses, that is why this kind of dining generally held in the Multipurpose hall. The general dining is more likely a Banquet sitting system. The rule of the sitting is: Every Table includes 6 persons and each must have a final term cadet (Senior most) and a fourth term cadet (Junior most).

There are types of Dining system in military. They are:

Dining-in. The dining-in is a formal dining for the cadets of a wing/trade. Although a dining-in is a traditional function, which includes a specific trade. So, This dining must be held on the Dining-hall.

Dining-out. The dining-out is generally includes Officers, Trainers and their spouses. It is similar in all other respects to a dining-in. This dining system is also called Ceremonial Dining.

Combat dining-in. The combat dining-in is actually for the senior trainees who are generally a Corporal and under a Combat-unit. This dining also arranged in the General Dining hall (Air Force Dining-in-Dining Out Planning Guide.2017).

Dormitory:

In military curriculum the dining is generally called Houses. In Bangladesh Military academy there are four houses and these houses includes the dormitory. Every dormitory have 100 cadets and they have different uniform and flags. These divided dorm system is actually have a purposes. The completion of athletics, studies and Parade is based of the houses. Every house has a Housemaster, House captain, floor supervisor and they are selected among the cadets.

4.2.1 Flow Diagram of Airmen Training Academy

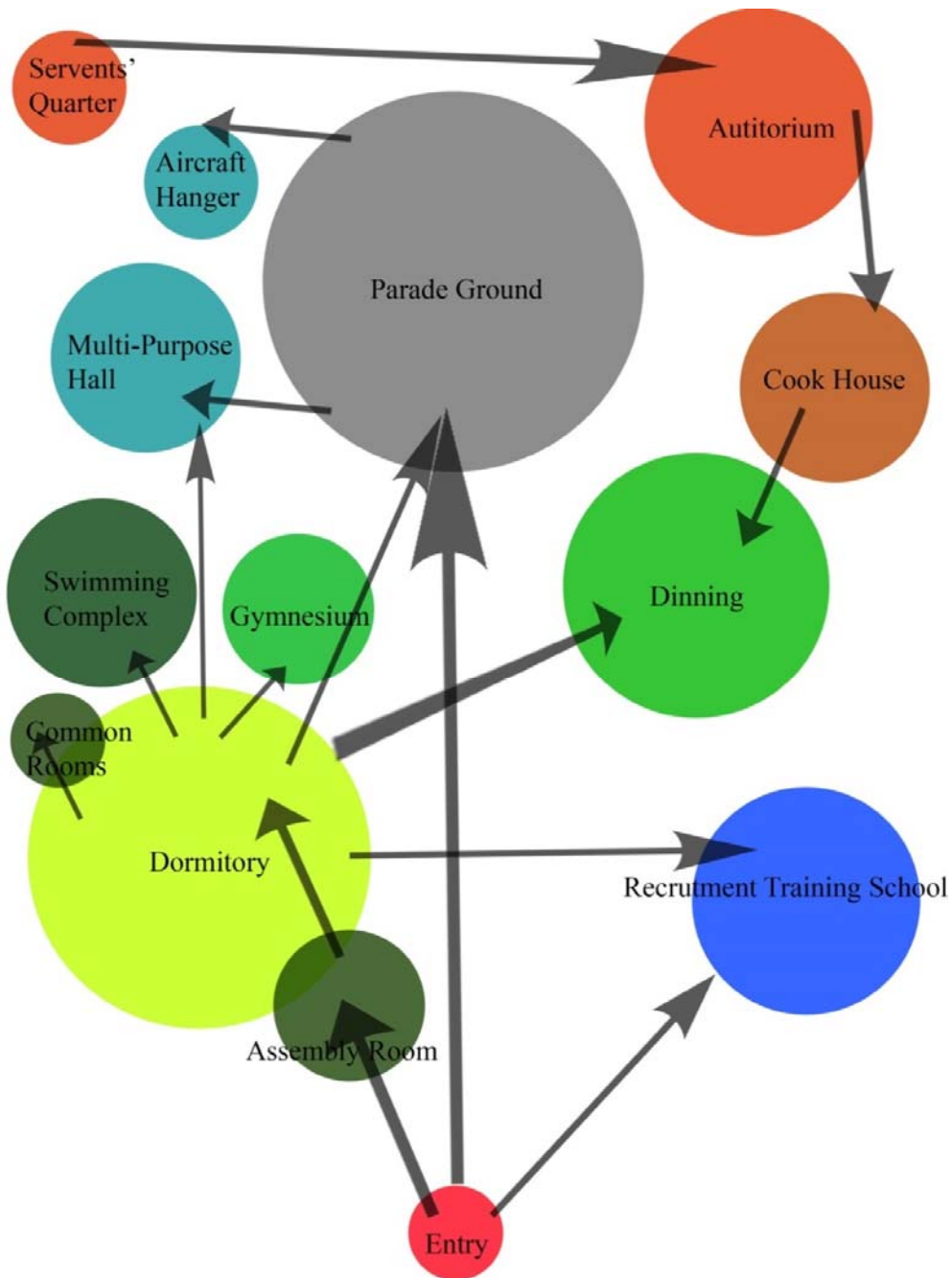


Figure: Program distribution of Airmen Training Academy (Source: Author)

Chapter – 05: CASE STUDY

5.1 International Project

5.1.1 What inspired me?

5.1.2 How can we contextualize?

5.2 Local Project

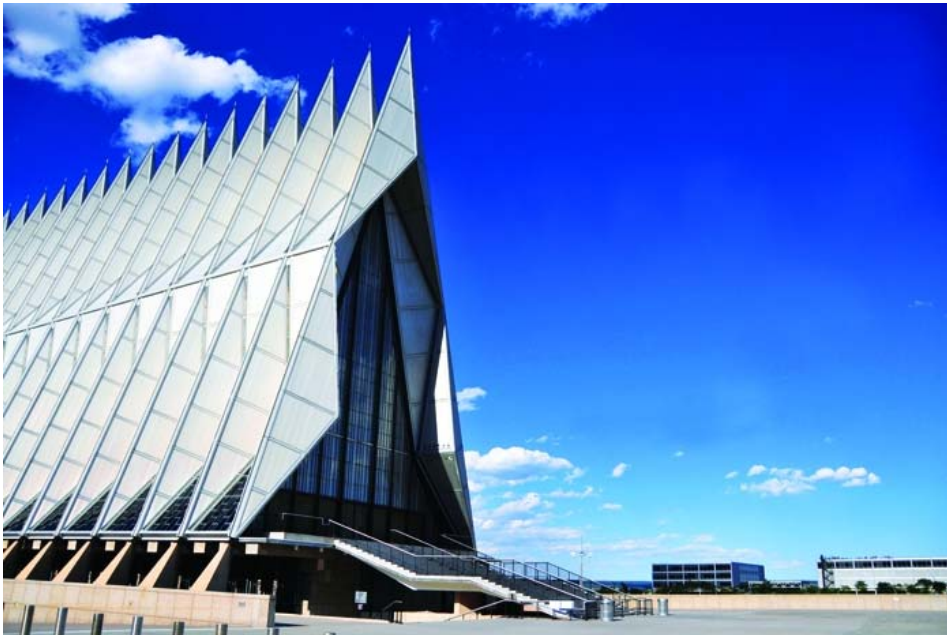
5.2.1 What inspired me?

5.1 International Project

United State Air Force academy

This academy was found in April 1, 1954. The academy currently enrolls 4,000 cadets as undergraduates, employs 723 faculty members, and serves a community of about 25,000. One of the significant part of the academy is cadet chapel. The chapel is being Appreciated for it's architecture.

Only one Colorado building has been awarded the American Institute of Architects' prestigious Twenty-Five Year Award, which recognizes architectural works of "enduring significance." It's the Cadet Chapel at the U.S. Air Force Academy in Colorado Springs.



Designed by the late Walter Netsch, of the renowned architecture firm Skidmore, Owings & Merrill (SOM), the chapel is a masterpiece of glass, steel, and aluminum, a

brehtaking place of worship dominated by 17 identical spires that pierce the Colorado sky. Inside, massive tetrahedrons are separated by colorful ribbons of stained glass.

“I made an enclosure that embodies the concept of light and glass endowed with lofty grandeur,” Netsch once said. No wonder the chapel has long been one of Colorado’s top tourist attractions.



Completed in 1963, the chapel has been justifiably celebrated for its architectural splendor, but the academy’s core buildings in what is officially known as the Cadet Area form one of the most striking collections of midcentury-modern architecture in

the country. Netsch, who died in 2008 at the age of 88, designed what Architectural Forum called an “Air Age Acropolis” (Ambriz, C. 2015, November 19).



5.1.2 What inspired me?

a) The contrasting architecture of the chapel which is more likely a gothic architecture and the cadet wing which is an example of the most striking collections of midcentury-modern architecture in the country inspires me a lot. It can be possible to merge two different kind of architecture and create an amazing contrast between them.

b) Since the Cadet area is holding more functions this should be closer to the other primary functions like gym, dining, school etc

c) The exhibition of Air crafts is designed just beside the Parade ground and the chapel, It means all the exhibition n elements are located at the same zone, In my project, since I want to open the Parade Ground and Air Craft exhibition, this inspired me a lot.

d)This inspires me to design a Prayer center for 400 cadets of my 'Airmen Training Academy'. Like this Chapel is a trademark for it's architecture and famous for it's design. By this it defines an architecture excellence can give an exposor.

5.1.1 How can we contextualize?

The academy's parade ground designed with a very good perception of ceremonial perspective. The green space is a very good place for sitting and enjoying the fly past and parade. The iconic church can be a inspiration for the prayer hall to design in my site. I think the learning to open an axis all through for the public. Like the parade ground should be in the axis. So that people can come around and see the regular routine parade and also controlled and restricted from the training part. That is what I want to incorporate in my design.

5.2 Local Project

After the liberation war, in the year of 1973 'Cadet Training Unit' of Bangladesh formed. After 4 years in 1977 the academy shifted to Bangladesh Air Force Base Birshreshtha Matiur Rahman, Jessore and renamed 'Cadet Training Wing'. Finally on April in 1982, its ws made a full-fledged academy and renamed 'Bangladesh Air Force Academy' (BAFA)



This is the Dormitory part of the academy. Opposite side of the dormitory is Parade ground.



This is the Cadet's Mess



5.2.1 What inspired me?

I was lucky to attend 7 numbers of Passing out ceremonies of the commissioned officer cadets. Actually my dream is to become a fighter pilot that is why I had interest In Bangladesh Air Force Academy from childhood.

- a) The positioning of the functions are so properly distributed that the time of the ceremonies there is no Chaos. The audiences can enjoy the parade and fly-past at the same time.
- b) The Entry inspired me lot, It contains a great impression of the grandness which make people feel to be an officer for some time.
- c) The restricted zone designed so beautifully that no one can ever understand from the audience and a heavy punishment of the cadets are going on inside the restricted zone

d) The Auditoriums and Multipurpose hall have the best views of the Runway.

It's nice to see Fighter Aircraft landing in front of you when you're having a meal.

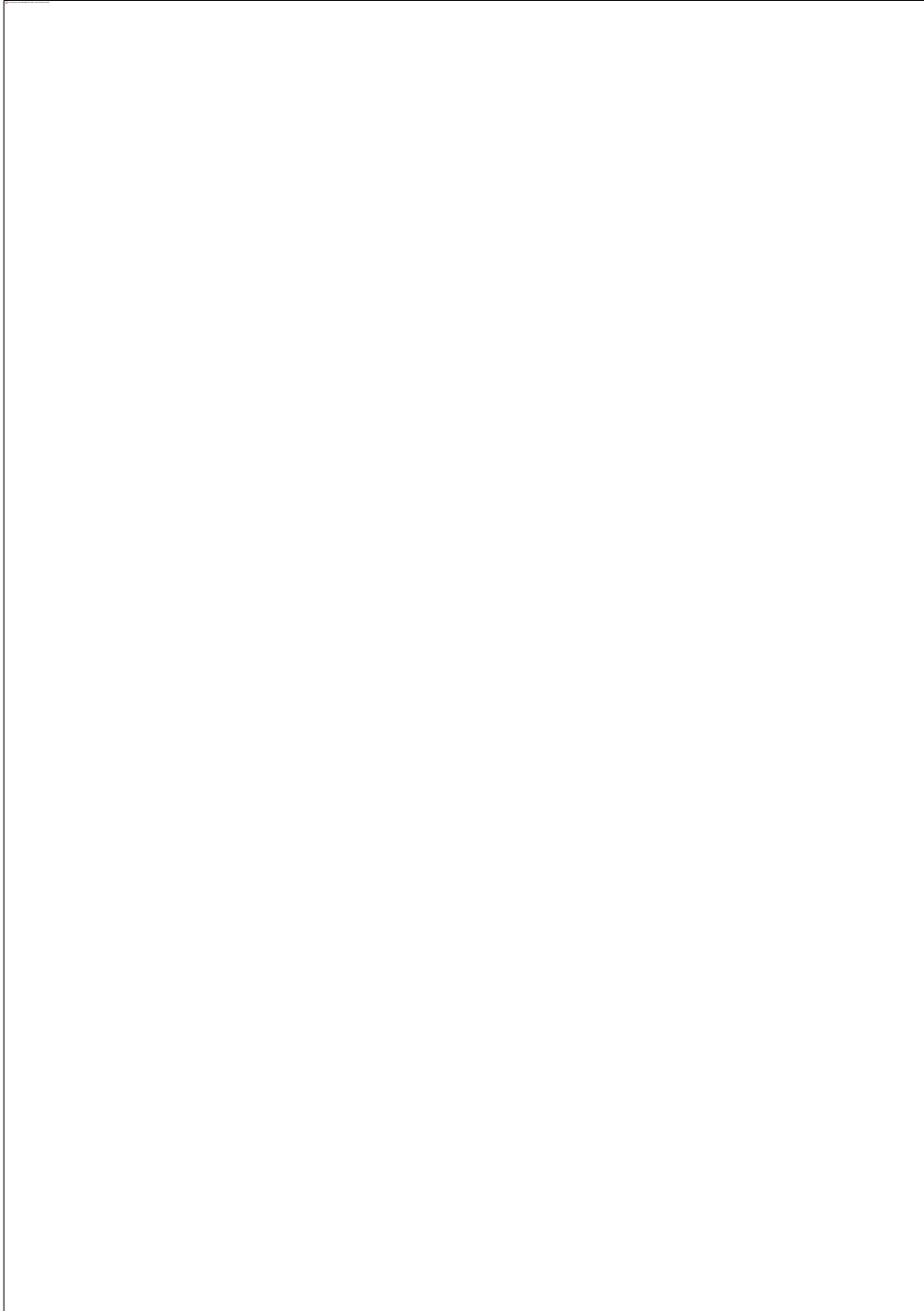


Figure: Flow Diagram of Bangladesh Air Force academy (Source: Author)

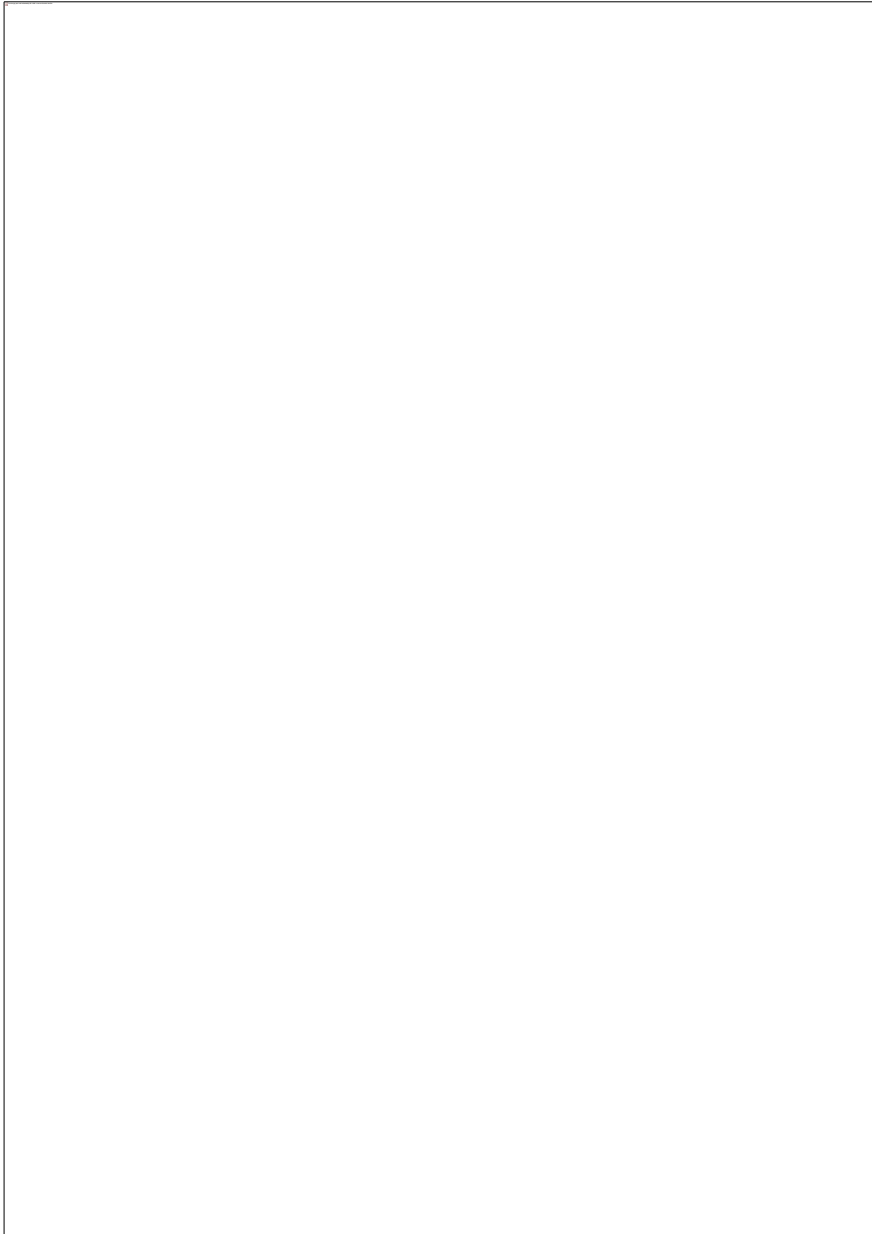


Figure: initial flow diagram of 'Airmen Training Institute' (Source: Author)

Chapter – 06: Design Development

6.1 Design Considerations

6.1.1 Users of the project

6.1.2 Recruitment of the cadets

6.1.3 Daily and yearly activities of the institute and cadets

6.1.4 Introduce visual interaction in spaces

6.1.5 Chain of command of the institute

6.1 Design Considerations

During the development of the design phase of the project, studies and researches lead me to some design considerations regarding to the requirements.

6.1.1 Users of the project

Users of 'Airmen training institute' is basically the 'Airmen-cadets' and the Instructors. The administration, armament and the recruitment training school (RTS) run by a number of Airmen, Officers and other authorized officials. These officials generally stay at the institute in office hours. The 'F-7 BG Fighter Aircraft Hangar' also includes some experts, technicians, Officers. They also stay there at the flying and overhauling hours. The institute have two annual graduation and passing out ceremonies which include Higher rank officers of Bangladesh Air Force, Army and navy, Prime ministers of the country and the Chief of Air Staff.

USERS OF THE PROJECT:

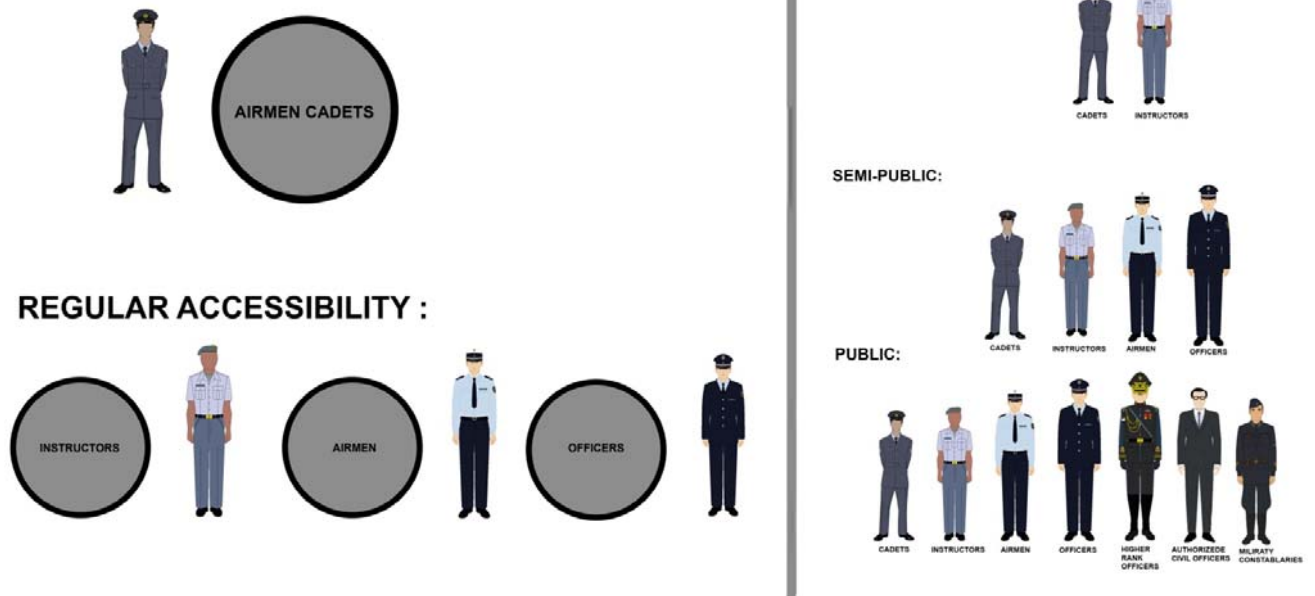


Figure: Diagram of the users of the project (Source: Author)

6.1.2 Recruitment of the cadets

The recruitment is being done by admin, medical and other officers of different trades of the Force. After all the selection procedures 400 cadets are recruit in every six months. So, basically the recruitment and the graduation take part 2 times in a year. 800 cadets will be trained at the same time in that institute.

6.1.3 Daily and yearly activities of the institute and cadets

To understand their lifestyle and to understand the involvement between the activities and the functions, I studied their daily, weekly and yearly routine. The training is a typical military training which includes intense mental and physical pressure. The training of Airmen training institute is more like likely a typical military training with intense physical and mental conditions and levels. The restrictions and the daily routine is so strictly followed that they have very small time for entertainment. They have only 2 hours of book-out in a weekend if they can pass the saluting test.

Daily Activity Program			
Weekdays (Sun- Sat)		Weekend (Fri)	
Wake Up	4:30 am	7:00 am	Wake Up
Assembly	5:00 am	7:30 am	Assembly
Physical Training	5:30 - 6:30 am	7:30 - 8:00 am	Breakfast
Breakfast	7:00 - 7:30 am	8:00 - 9:00 am	Saluting Test
Tradewise Training*	7:30 - 10:30 am	9:00 am	Book Out
Ground Combatant Training	10:45 - 12:00 pm	12:00 pm	Book In
Snacks	12:15 - 12:30 pm	12:00 - 2:00 pm	Prayer Time
Swimming Training	12:30 - 1:30 pm	2:00 - 2:30 pm	Lunch
Lunch	1:30 - 2:00 pm	2:30 - 3:00 pm	Recreation
RTS Classes	2:15 - 4:15 pm	3:00 - 4:00 pm	Gymnasium
Parade	4:15 - 7:15 pm	4:00 - 6:00 pm	Parade
Snacks	7:15 - 7:30 pm	6:30 - 7:00 pm	Snacks
Study	7:30 - 8:30 pm	7:00 - 8:00 pm	Squash
Dorm Commander's Meeting	8:30 - 9:00 pm	8:30 - 9:30 pm	Study
Dinner	9:30 - 10:00 pm	10:00 - 10:30 pm	Dinner
Recreation Time	10:00 - 10:30 pm	11:00 pm	Bed Time
Bed Time	11:00 pm		

Yearly Activity Program			
Recruitment	January	July	Parade Based Courses
Physical and Psychological Training	February	August	Ground Combatant Training
Trade Based Training	March	September	Swimming and Sports Month
Flight Safety Training	April	October	Trade Based Training Exams
Air- Overhauling Training	May	November	Preparing for Ceremonial Parade
New Recruitments	June	December	Ceremonial Parade and Passout Batch

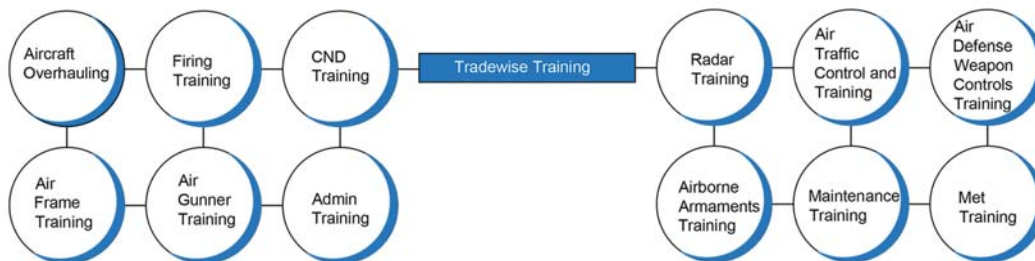


Figure: Diagram of daily activities of the users (Source: Author)

6.1.4 Introduce visual interaction in spaces

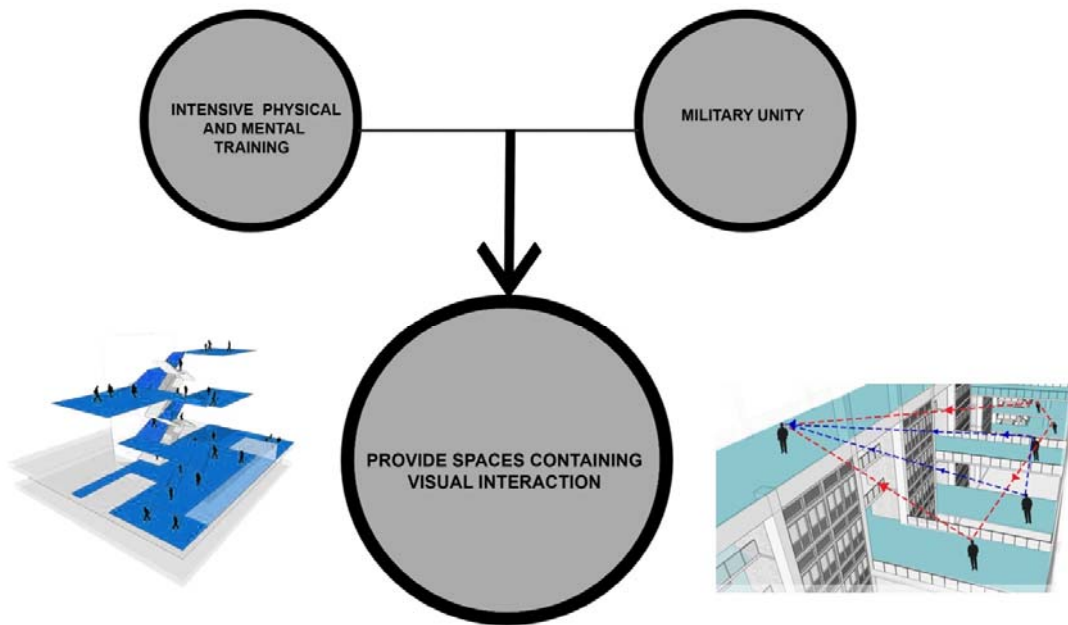


Figure: Diagram of achieving visual interactions in spaces (Source: Author)

Since the training process of the institute is intensive mentally and physically and since the military people work is a group, I wanted to give spaces in the institute where the visual interaction will be there. My try is to reduce as much as the mental pressure and introduce interactive spaces.

6.1.4 Introduce visual interaction in spaces

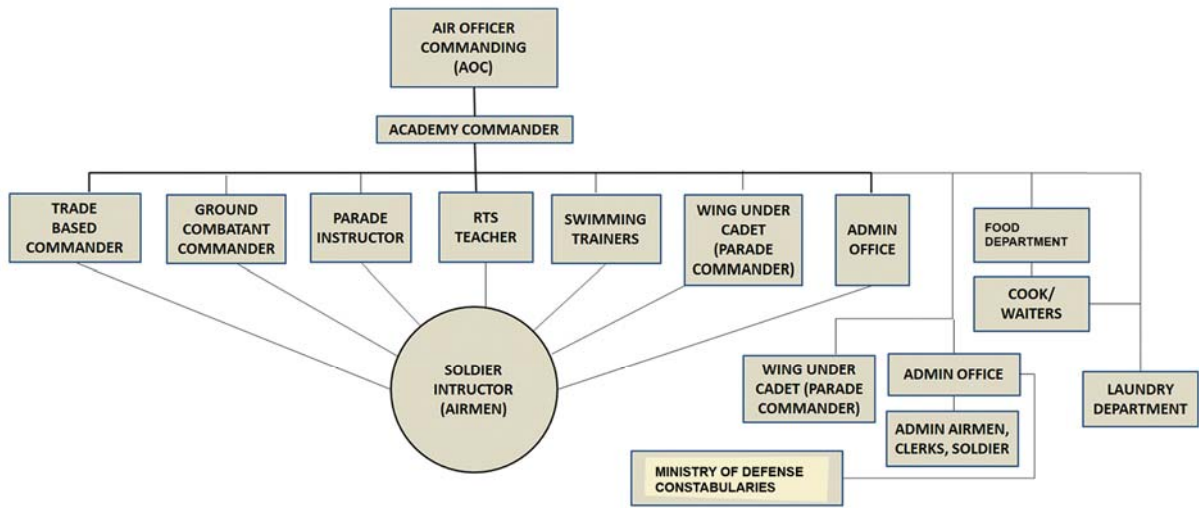


Figure: Diagram of chain of command of 'Airmen Training Institute' (Source: Author)

6.2 Zoning and Functional flow

6.2.1 Functional flow

6.2.2 Zoning and derivations

6.2.3 Circulations

6.2 Zoning and Functional flow

6.2.1 Functional flow

From the program and other studies I came to a functional flow diagram where I can set the zoning of the project. The zoning is one of the most vital part of the project.

Since the annual program is a military-public function of the project, on the other hand private zone is a very important part for the type of the training as well the semi-public function where the Airmen and Officers work.

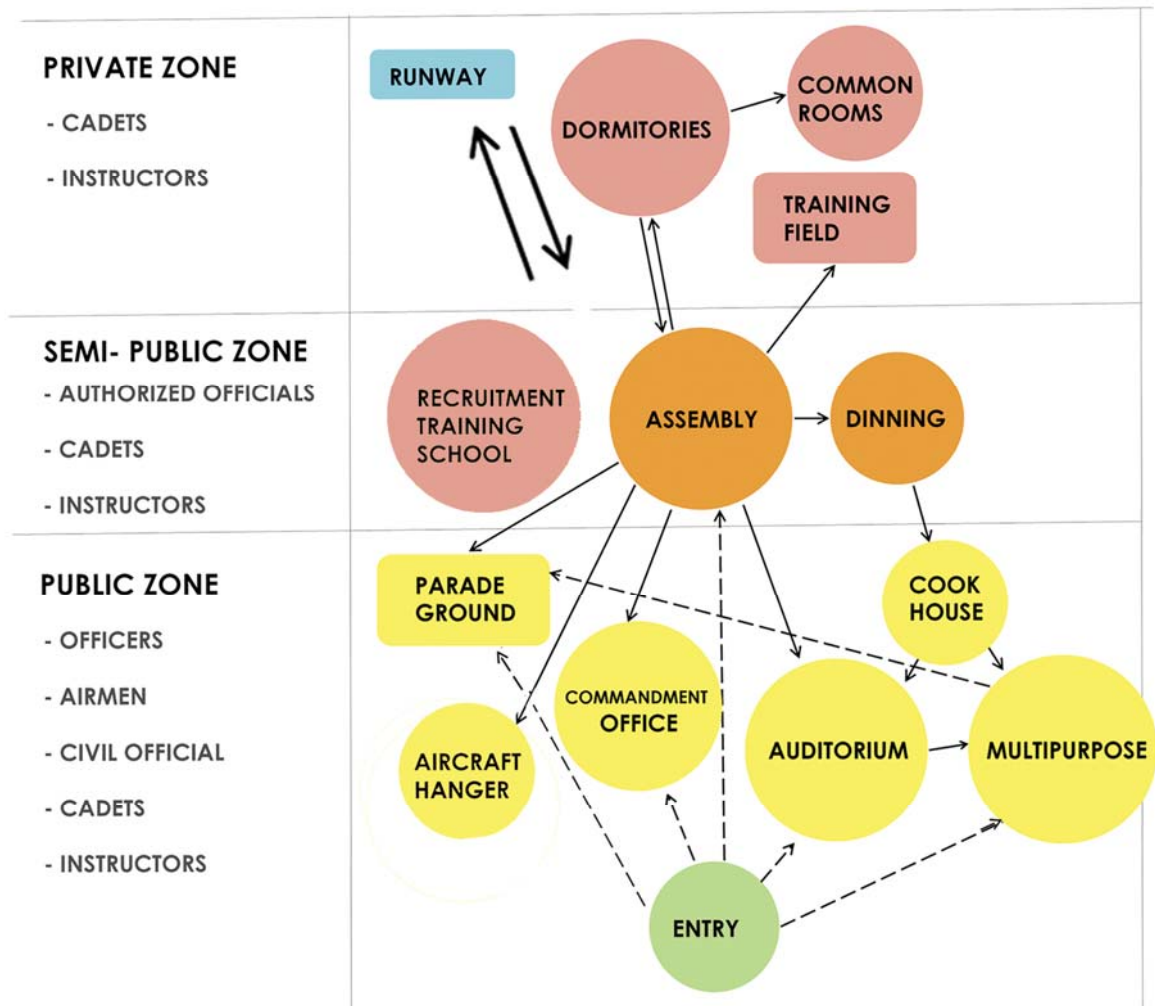


Figure: Diagram of Functional flow (Source: Author)

6.2.2 Zoning and derivations

When I get the site and inspected it I found the elongated part of my site is North-South oriented. It means it's a liner site with more coverage in North-South. Since the site is very restricted and also situated in BAF base which is also a restricted military area, the only site force was a water body situated in the west end of the site. Besides the Liner shape of the Parade ground created an axis itself. My consideration was to achieve a visual clarity toward the water body from the maximum point of the site after placing the form and the water body will be a center of a recreational activity.

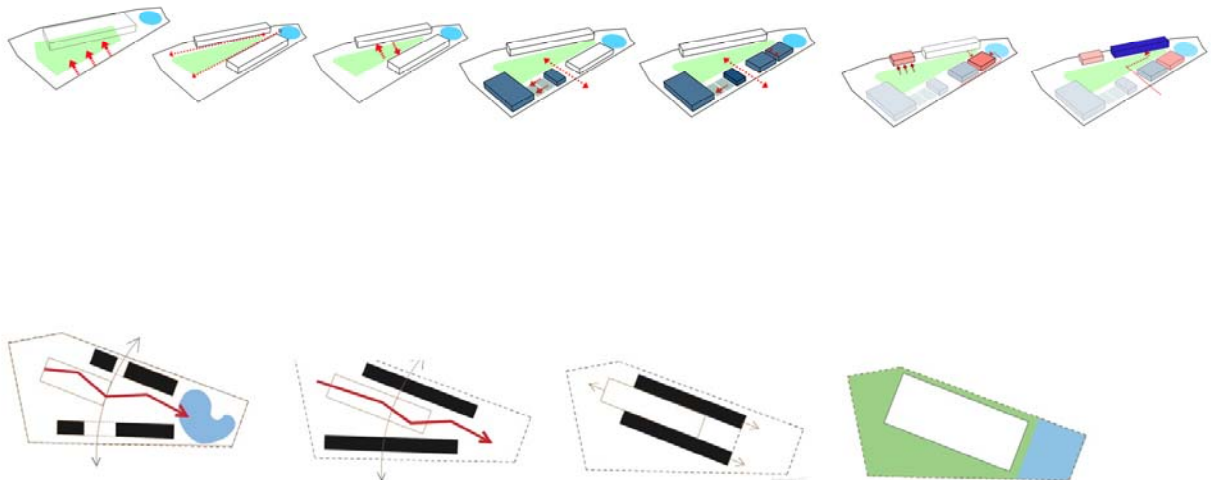


Figure: Diagram of zoning in form derivation (Source: Author)

6.2.3 Circulations



Figure: Diagram circulation in spaces (Source: Author)

6.3 Design phase

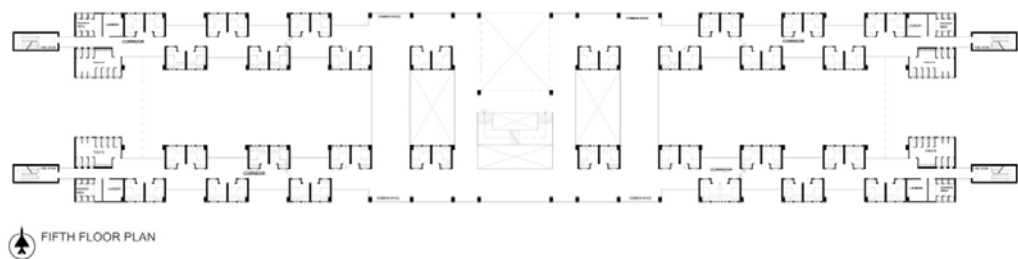
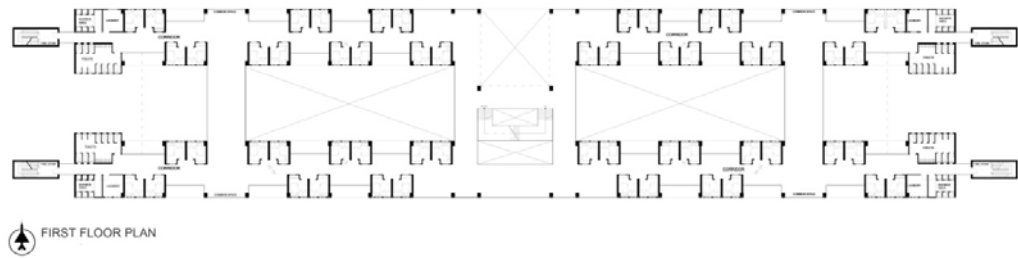
6.3.1 *Drawings*

6.3.2 *Blow-ups*

6.3.3 *Rendered perspective*

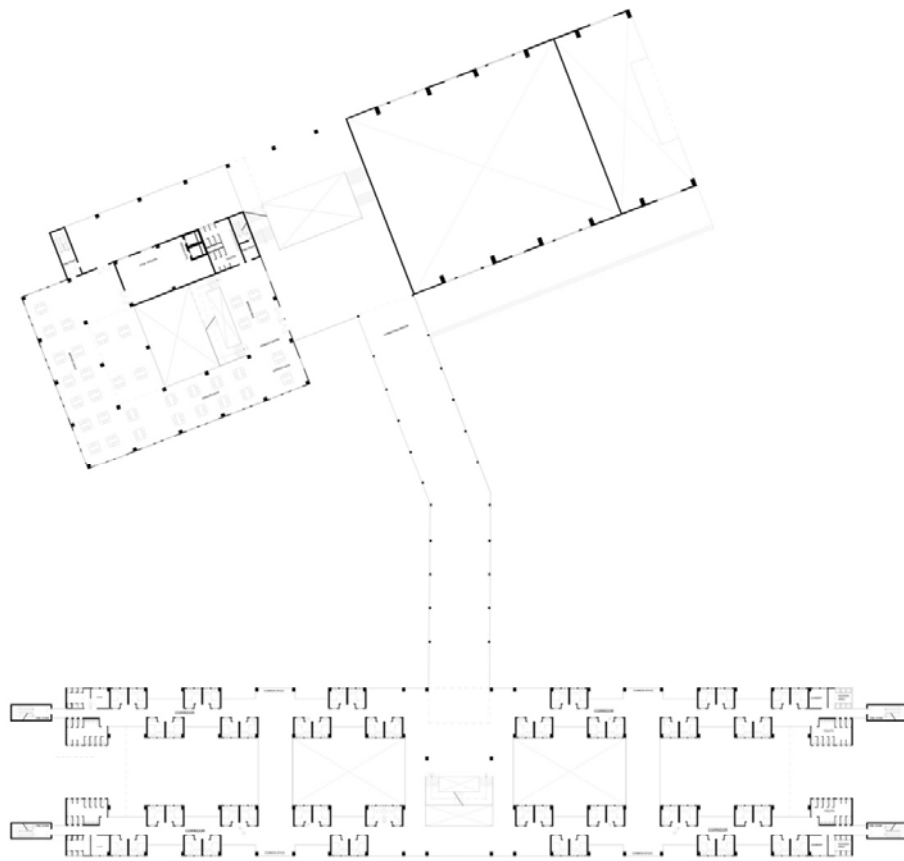
6.3 Design phase

6.3.1 Drawings

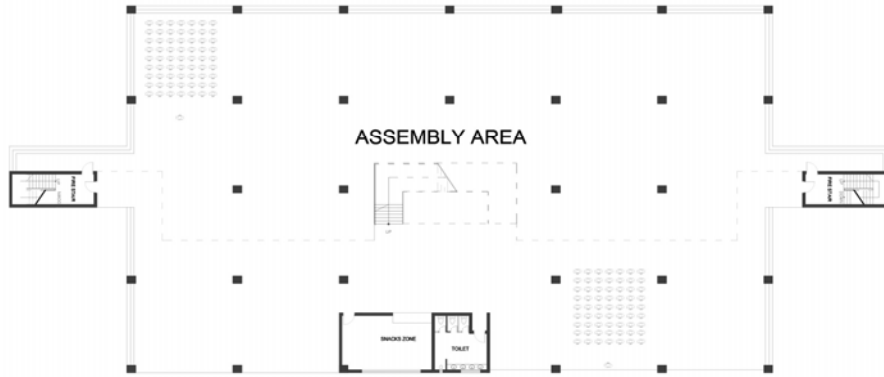




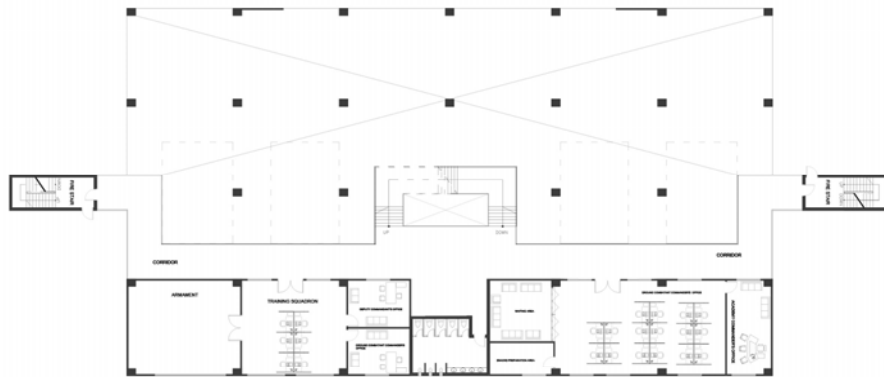

THIRD FLOOR PLAN



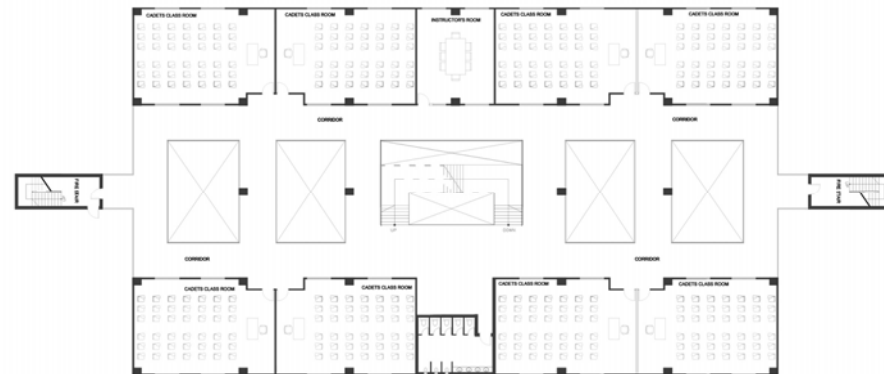

SECOND FLOOR PLAN



GROUND FLOOR PLAN (RTS)



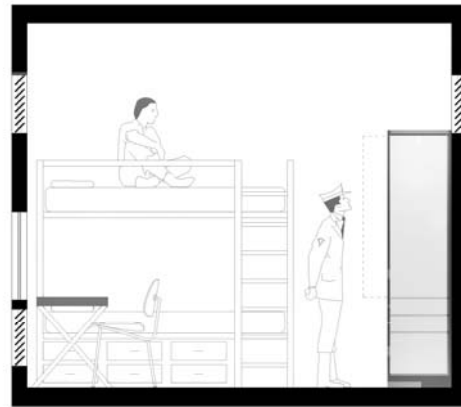
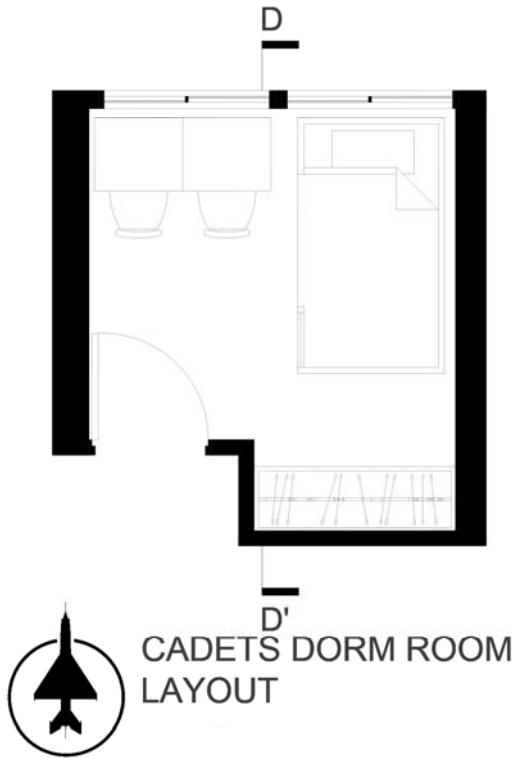
FIRST FLOOR PLAN (RTS)



THIRD FLOOR PLAN (RTS)



6.3.2 Blow-ups



6.3.3 Rendered perspective



Chapter – 07: Conclusion

Chapter – 07: Conclusion

The completed project presents spaces and forms which can enhance more visual interactions and provide more of a psychological relief. The whole project is designed in a concept where we can realise 'Airmen' are also human being.

Although the intense training process in part of the mental build up for military mind set, I tried to give spaces and a complex where I can reduce their mental stress. This character of architecture has been iteratively realized by the need of the Soldiers of Bangladesh Air Force. Growing up in an Air Force base from childhood inspired me their daily life and gave me an opportunity to do something for them from my situation.

In conclusion, the project has attempted to provide efficiency of the cadets and enhance the training so that our country can get more capable Airmen and they provide great services from their situation. Since this is the first time a complex like this is built for the Airmen, this will add a great dimension in their training and also serve as a monument to the soldiers of Bangladesh Air Force.

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