RAB HEADQUARTERS

ASHKONA, UTTARA, DHAKA

Tausif Sabir
10308010

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Department of Architecture
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Lastly I would like to thank all may instructors that have guided me throughout the years.

Abstract

For the longest time our fair country had been plagued by crime and lawlessness. Local law enforcement agencies ware at their wits end trying to contain the situation. Continuous failures and acts of corruption had made the people lose faith in law and order, but all was not lost. In our darkest hour hope came in the form of The Rapid Action Battalion. An ever vigilant uncorrupting force of justice. RAB quickly swept across the streets of Bangladesh eliminating crime with extreme predigest. Many years have passed since those days and the newest member of our countries law enforcement agencies have earned their strips in a trial by fire. RAB is still active today and has grown significantly in size and complexity, and yet it has to this day no proper means to centralize its operations and chain of command, no Headquarters. That is what we seek to change in this paper.

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Chapter 1: Project Background

1.1Project brief

Project Title: Rapid Action Battalion (RAB) Headquarter

Function: Center for RAB and Administration related programs

Clint: Ministry of Home Affairs, Bangladesh

Site: Ashkona, Uttara, Dhaka (Approved)

Site Area: 5.3 Acres

1.1Project Introduction

It has been nearly half a century since our country fought for its freedom, against oppression and for the right to stand and grow as a nation. A free nation we may be, but fear and oppression still plagues the country. Over the decades the country has grown more and more corrupt. This corruption has become our number one hindrances to our nation's development. The early 2000's saw the worst crime waves of our countries history. We became the leader in "Corruption Perception Index", a list no nation wants to be a part of. This list made by Transparency International has awarded us the same rank not just once or twice, but 5 years in a row from the year 2000.

Fear rained on the people's day to day lives. Reports of rape, murder and other heinous crimes were found everyday on the newspapers. Men women and children wouldn't want to go out after dark by themselves. We had achieved independence long ago, yet, were living in fear. Condition of the nation was getting worse by the day. Some dire action was needed.

There were other active armed forces in the country that are doing their fair share of work for this country. The police had the hands full; Bangladesh is a country with a population of over sixteen cores. The police already had a lot on their plates with maintaining law and order of this massive population, and Deploying the army would appear as an announcement of incompetence by the government, plus there was always the fear of another martial law.

The condition was only getting worse with every passing day. Rates of murder, rape, robbery and other heinous crimes were getting higher than ever. Some major action was needed to stop the briskly growing crime rate. Hence, on march 26 2004, The Ministry of Home Affairs founded Rapid Action Battalion. RAB's sole purpose was the elimination of corruption. Its ranks drew from all branches of the nation's armed forces as well the police.

Over the decade RAB has spared nationwide into 12 battalions, At this point RAB require a central headquarter to better manage all its activities in an organized an cohesive manner. They need to be equipped with modern technology, intelligence and skilled man-power to take prompt action against crime. They need facilities to do their research and analysis to provide administrative commands to all their branches. They also require facilities for air-support, transport, emergency actions, drug-testing, conference and accommodation. The RAB HQ should have all these means and keep potential for future advancements.

1.2 Proposed Program

Operation Wing
Investigation and Forensic Wing
Intelligence wing
Legal and media wing
Training and orientation Wing
Air Wing

Offices
Conference room
Meeting room
Seminar room
Operation room
Briefing room
Central co-ordination room
Communication Branch

Interrogation space
Holding Cells (Jail)
R and d cell
Armory (Arms and ammunitions space)
Recreation/ Games Room

Multipurpose Hall (300 Person)
Library
Visitors Room
Complain Booths
Library
Complain Booths
Prayer Hall
Cafeteria

Souvenir Shop
Parking

Chapter 2: Literature Review

2.1 Public/Private Space

Of all the things considered when designing, whether architecture or city planning, among the most important are private and public space, and the transition between the two. There are times when the need is obvious, private space in a residence for instance, and other times when it's more ambiguous, such as in the case of privately owned public spaces where who the "public" is can be widely interpreted. The move between private and public spaces can also vary from a well defined boundary to a more loose transition. These ambiguities are increasing especially in this time of increased connectivity.

Throughout history the outdoors has been considered the ultimate public space. For millennia people have gathered outdoors for the most basic of activities from celebrations, sharing news, preparing and consuming food, and socializing. Outdoor public spaces can take many forms; there are spaces that have been deliberately created for this function and others that have been adopted by the local population to serve this function. In our time the manifestation of outdoor public space has largely included public parks and town squares but also includes the streets and paths that connect us. These are the places that fill with people to commemorate an event, like the Fourth of July, join a parade, or start a protest. When not used for this type of large scale function outdoor public spaces offer a place of recreation and relaxation. People often use a public park as one would use a private yard; reading a book, having a picnic, talking with friends, or just enjoying the space. Others have used the town square to sell their wares, provide entertainment, and practice their right to free speech.

Public space is key to the health of a community. While providing a place for the activities mentioned above they also contribute to public health by providing fresh air and a place to exercise. Access to public space also provides the opportunity to be around other people. Humans are social creatures and have an inherent need to interact. An active public space can offer this interaction. Jane Jacobs in her book "The Death and Life of Great American Cities" spoke of the security active streets offer, illustrating how public spaces and the surrounding community have a symbiotic relationship. The value of public spaces offer to individuals and the community as a whole is undeniable.

More recently the shopping mall has become a type of public space. While offering areas for some of the activities mentioned above the fact that retail centers are technically private spaces means that we do not necessarily have the same rights as we would in a truly public space. A discussion of the pros and cons of this is sure to be a lively one but isn't the subject here so we'll save it for another time.

Complementing public space is, of course, private space. As with public space there are many different scales of private space. The private space of your personal bedroom is quite different than the private space of a corporate office. Regardless of the level of privacy a private space it is typically smaller than a public space, if for nothing else than the fact of a lower occupancy. Historically private space has been as small as a bed or as large as a castle. Either way it offers security, safety, and a place to rest. Activities that society, or an individual, has determined are not appropriate for public are carried out in private. Our society values personal space, whether a child or an adult we all want our own space. This may be a space used for work, hobbies, self reflection or to wind down. The best part of private space is we can do whatever we want. As like public space, the value of private space is clear.

We seem to be entering an age where these two types of spaces are overlapping and, in some instances, shifting. With the increased connectivity of the world and the rise of social media more and more traditionally public activities are taking place in private spaces. The news media highlighted the role social media played during the so called Arab Spring in the Middle East towards the end of 2010. This specific example demonstrates an overlap of traditional public and private spaces; people organizing, from their private space, protests to be carried out in the public space. Generally this use of technology illustrates how people with common interests and/or goals can be brought together without the benefit of proximity; I would consider this one of its primary advantages.

This type of shift in the relationship between public and private space is illustrated in the fact that people often use their private spaces to communicate with the public using online public forums. More often than not the groups organized online or through social media never meet in a public space; in fact many participants may never leave their private spaces. I write this now in my home office, in a room all alone, definitely a private space. Where I start to see this shift as a detriment is in the fact that everyday people are making "friends" without ever meeting, while in their private space. While this may not be harmful in itself, increased connectivity may negatively impact our interaction with the public. I'll admit, the interaction available with the use of technology can be productive it doesn't yet offer the nuance, spontaneity, or physicality of real life interaction. In the worse cases people are substituting online communication for real life contact. While this can be quite troubling I don't think it is common enough to be cause for concern.

Where the biggest risk lies is the reduction of our public spaces. If large numbers of our community are filling up on conversation and interaction in virtual public spaces will they still have a need, or desire, for our physical public spaces? From my own observations it appears that many people don't want to interact in public. I understand we don't always want to be social but it seems when walking on the street or taking public transportation people used to talk to each other and now they have their heads buried in some sort of device, trying to avoid the fact that they are in a public space. I wonder, is one of the core functions of public space, to bring people together, is starting to disappear? If it is the blame cannot be put solely on technology, there are other factors, but I would argue it is the main factor.

Technology has given us many reasons not to use public space. It has increased private mobility with the automobile, allowing us to travel to distant places without ever having to interact with someone we don't choose. We now have abundant at home entertainment with the television and video games so we don't need to leave the house to have fun. When I was young outside was my entertainment, many children now staying in for theirs. Often we don't even need to leave the house to go shopping. In fact the rise of social media may be the most beneficial technology for public space, reminding us that sometimes we need to literally stand together as was seen during the Arab Spring.

2.2 The Next Generation of Law Enforcement Facility Design

Nick Seierup, FAIA, NCARB, LEED® AP BD+C
Principal, Design Director
Perkins+Will
Leigh Christy, AIA, LEED AP BD+C
Senior Associate
Perkins+Will

Lancaster Public Safety Building in Texas serves as a gateway, signifying unity and pride for users and the community.

Law enforcement methods are constantly evolving in every part of the country, but recent changes have occurred rapidly and across jurisdictions. Connecting facilities to their surrounding contexts, the embrace of community policing, the implementation of comprehensive gang intervention programs, and the utilization of technology to track crime statistics and complete reports all have impacts on the physical requirements of law enforcement facilities. Combine these trends with increasing awareness of quality of life for those working in the facilities–both in terms of security and general well–being–and the result is a series of external and internal pressures shaping a new generation of police stations nationwide.

LAPD Rampart Station in high-density central Los Angeles preserves perimeter green space as an informal public park.

Community Friendly

The recent worldwide shift toward collaboration as a more effective and comprehensive way to get things done sets the context for the rebirth of community policing. The desire to work with neighbors to prevent and discourage crime is incentive enough to create warmer, more inviting police facilities.

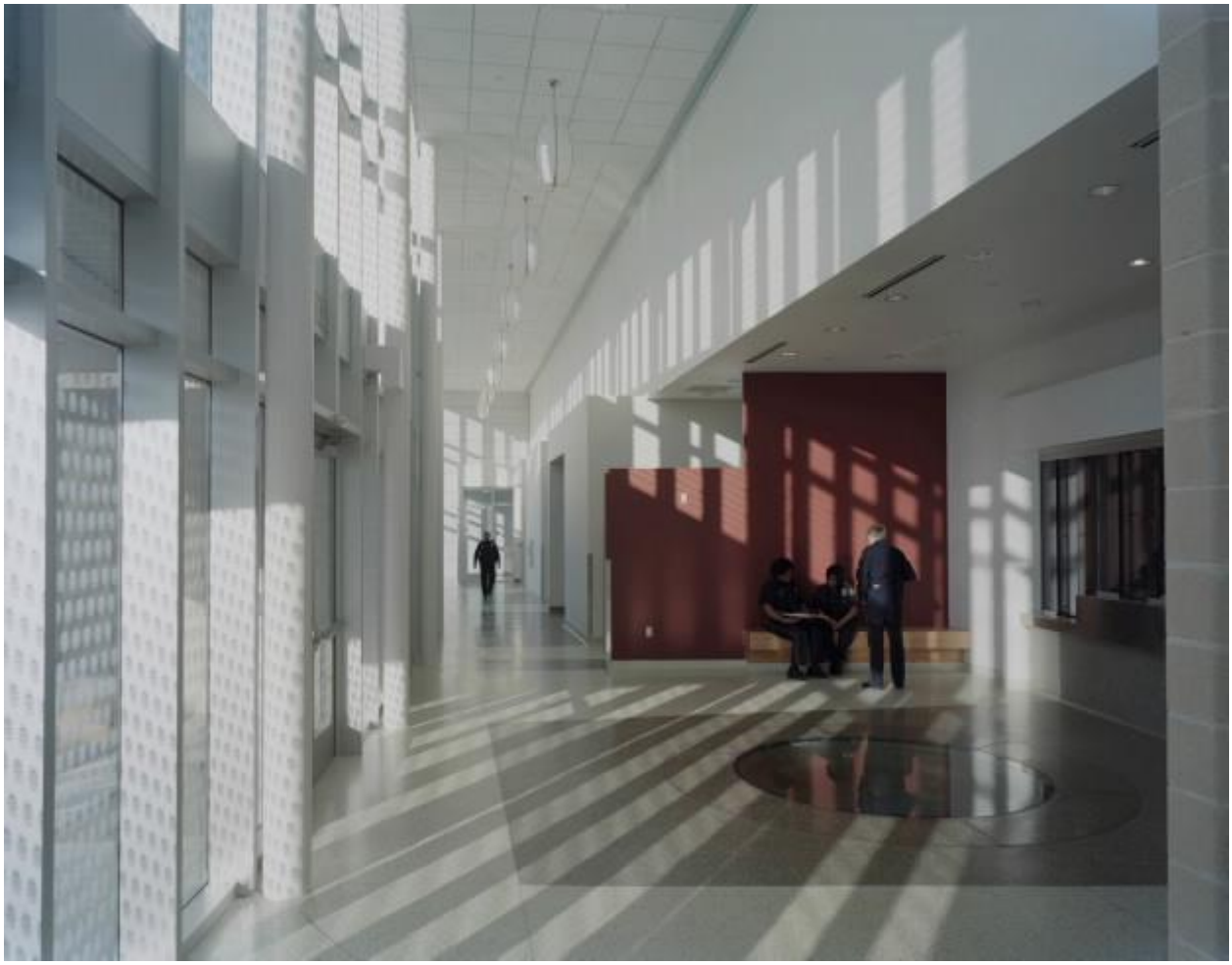
Police stations are now expected to welcome community members with open arms. Including publicly accessible aspects in a facility's program allows a station to function as a front porch for the community. Such public components can include informal spaces such as public gardens, or more formal spaces like meeting rooms available by reservation to neighborhood groups.

LAPD Harbor Station puts forth a new public image as a beacon of safety near the Port of Los Angeles.

Image and Identity

The rise of marketing and branding is not just for big business. Public entities such as cities and their individual departments are using such strategies to attract tourists, clarify identities, increase citizen involvement and speak the language of younger generations. Spurred on by a few unfortunate but well–publicized events in the 1990s, many law enforcement jurisdictions saw the need to revamp their images become a priority in an era when the public and burgeoning grassroots organizations increasingly demanded more transparency from our governmental and legal systems.

These forces combined to create a rebirth of civic pride in many communities, which resulted in a desire for the public institutions that represent a city or a neighborhood to physically reflect the best of that neighborhood's values and hopes – and to do it openly. Police stations no longer serve as glorified bunkers, but instead as beacons of safety harkening back to the days of symbolic public architecture. They need to appear transparent, ensure human safety on and directly around the property, and consider the cultural and historical context of their location. Involving the community from the beginning of a new project is an effective way to ensure that project development is transparent and obtains true community buy–in.



The lobby of Dallas South Central Police Station extends a warm civic welcome by concealing security measures.

Invisible Security

Given that physically connecting with the community through transparency and openness is a primary goal of modern police stations, the continually increasing variety and intensity of external threats to a law enforcement facility cannot be forgotten. The ever evolving power of firearms, explosives, and human creativity (to name a few) are difficult to anticipate but must be planned for, and protection designed into, a facility as invisibly as possible.

The development of new composite materials and more advanced digital security systems conveniently allow “invisible security” to be achievable without much difficulty. As many of these materials are quite costly, however, less pricy solutions such as thoughtful site planning (clustering buildings, minimizing blind corners, planting prickly species along the building base), judicious use of masonry, and careful placement of windows are still advisable.

Diffused natural light pervades the work areas of Lancaster Public Safety Facility.

High Performance

Public funds are always scarce, but never so much as during times of economic downturn. Lower cash flow often means fewer public employees–which include officers, detectives and other law enforcement staff. It also means less money available for construction, building operations and building maintenance. Moreover, using public money involves increased levels of responsibility on the part of project teams and scrutiny on the part of citizen oversight committees. The easiest way to ensure that a design is making the best use of precious funds both now and in the future is to design a high performance facility.

The term “high performance” has been largely associated with sustainability and green design recently, and indeed the ideas are clearly linked. However, high performance buildings include such features as efficiently laid out spaces, self–monitoring mechanical and lighting systems, durable low–maintenance materials, adequate day–lighting to occupied rooms, and water saving plumbing fixtures. Many of these directly relate to sustainability, but all relate to facility maintenance costs through good times and bad.

Employing a checklist certification system such as the USGBC's LEED program is a good way to incorporate many of the characteristics of a high performance building and to ensure that initial design plans are followed through construction and beyond.

Lounges, terraces, and the weight room in LAPD Rampart Station provide informal personal spaces for employees.

Employee Responsive

Conventional wisdom supported by research tells us that long work hours and high stress situations can take a toll on physical and mental well–being. Those working in the law enforcement field feel these pressures more than most and their health and productivity matters not just to employee and employer, but also to greater society. Their facilities need to be healthy environments which promote communication, boost morale, and provide informal resting spaces. Light and air quality inside buildings are crucial to employee health, with the added benefit that recent studies have shown significant cost savings to green building owners as a result of increased health and productivity of workers.

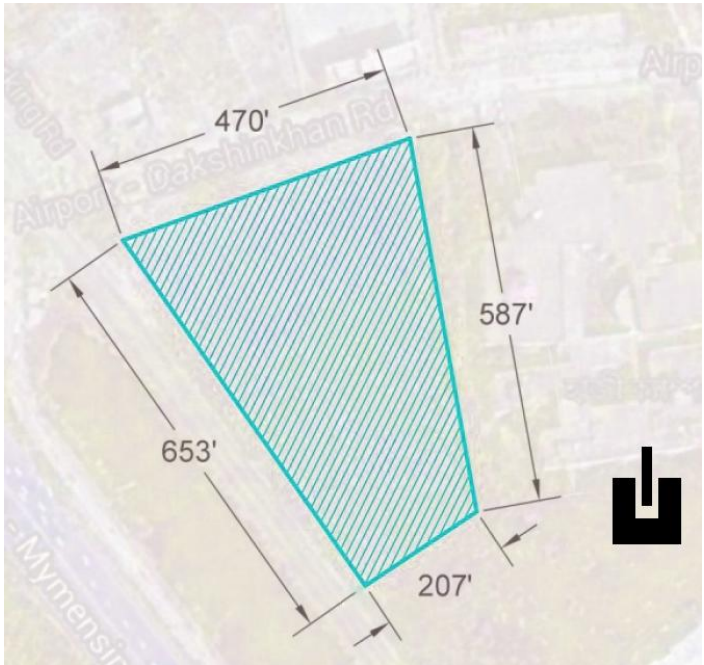
Finally, across all professional fields, employers are finding more and more that buildings can be used as recruiting tools. Similar to how the city of Bilbao, Spain found that a single new museum attracted thousands of additional tourists to their region, so too are police departments finding that an attractive, comfortable, state–of–the–art facility brings pride to current and future staff.

Condensed from a feature article that was originally published in The Journal: The Voice of Law Enforcement *in July 2009.*

Chapter 3: Site Analysis

Location and Boundary

Location : Ashkona, Uttara, Dhaka

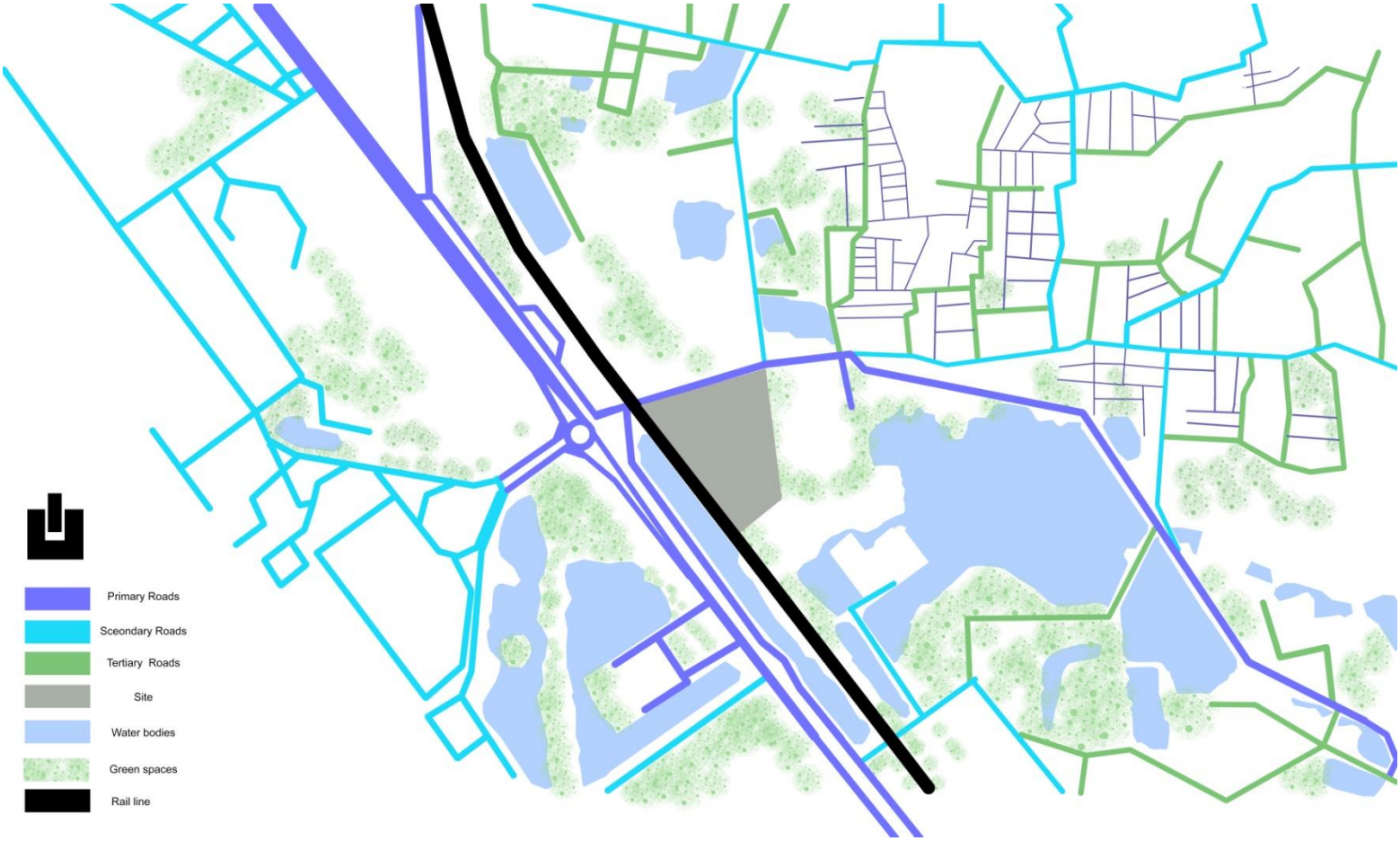


Site area : 4.3 Acres (2'300'000 Sqft Aprox)

Coordinates : 23°51 ′N 90°24.4′E

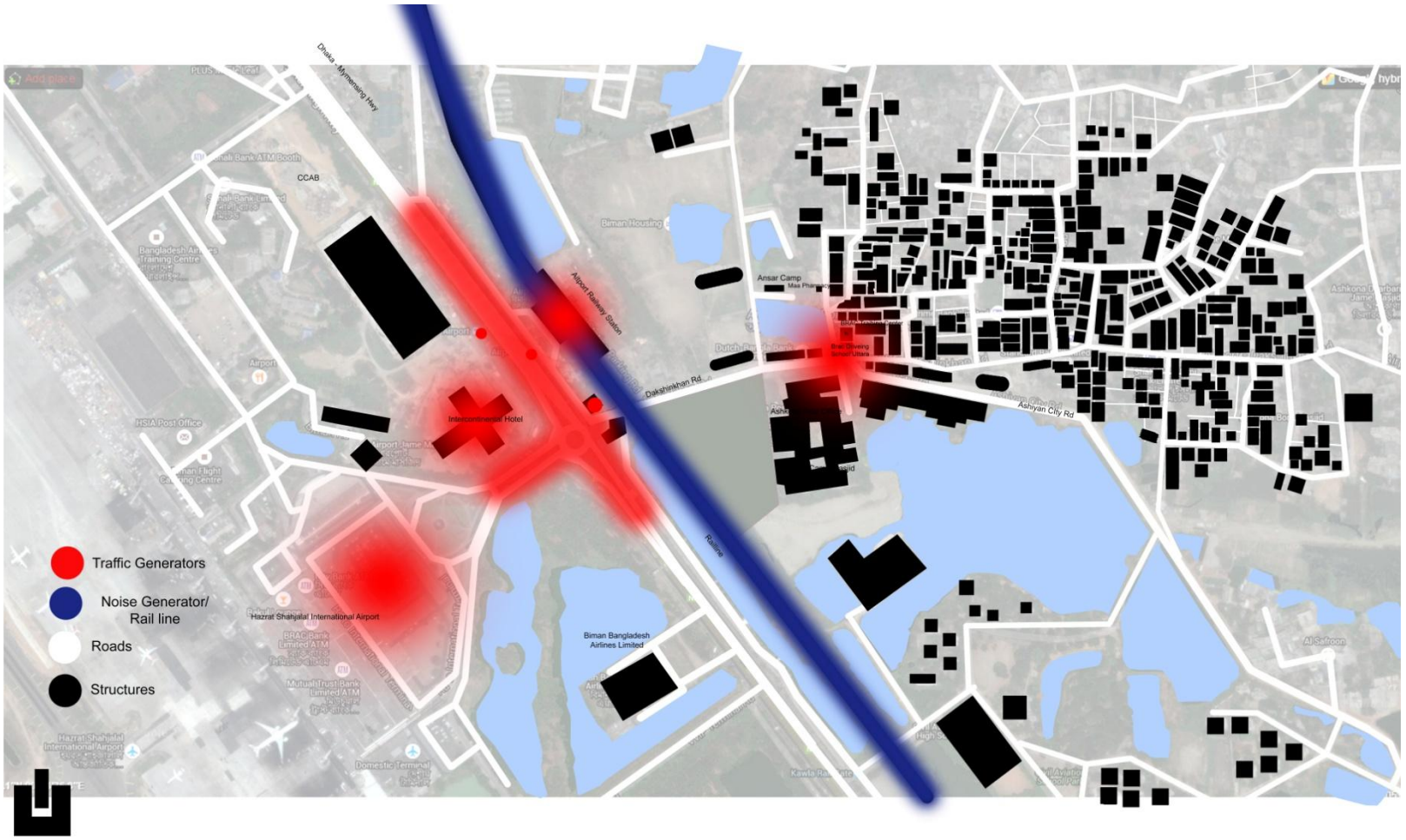
Site Mapping

Water and green spaces



Significant Structures

Traffic and noise



SWOT Analysis

STRENGTH

- Located next to significant Highway
- The Airport, a rail station and a few bus stands are located close by, making commute very easy.
- Water body close by
- Rail line and water body adjacent to the site creates necessary segregation for security, restricting access points into the site.
- Located in a developing zone

Weaknesses

- The airport, rail station, nearby hotels and buss stands create traffic congestion.
- Only one side of the site has access to a road and that road is one of the primary access points to and from the ashkona community.
- Adjacent rail line and water body restricts the possibility of an alternate/secure entrance or exit.

Opportunity

- Close proximity to the airport will be of great help to the headquarters' Air wing and will also make resupplying much easier
- Preexisting features of the site such as the rail line and the water bodies can be utilized as an additional layer of security.
- The adjacent rail line may be utilized as a direct access point to the HQ.
- Having only one access road to the site will make the security and surveillance much easier.
- The presence of the HQ will act as a natural deterrent to local criminal activities.
- Making the HQs Library and Health unit open to the public will help establish a good relation with the locals.
- Having the HQ so close to the Air port will give a good impression to the visitors of the country.

Threats

- The dense population of the site locality may hamper the HQs privacy
- As there is only one access road to and from the site, transportation of VIPs and prisoners can prove to be risky.
- If the HQ is ever under attack, then local civilians will be put in harm's way

Chapter 4: Case Studies

4.1. The David and Lucile Packard Foundation

Location:
343 Second Street
Los Altos California 94022
United States
Architect:
EHDD (Esherick Homsey Dodge and Davis)
Project Completion Date:
July, 2012
Project Site Context/Setting:
Urban
Previously Developed Land
Project Type:
Office – 10,001 to 100,000sf
Building or Project Gross Floor Area:
49,161 square feet

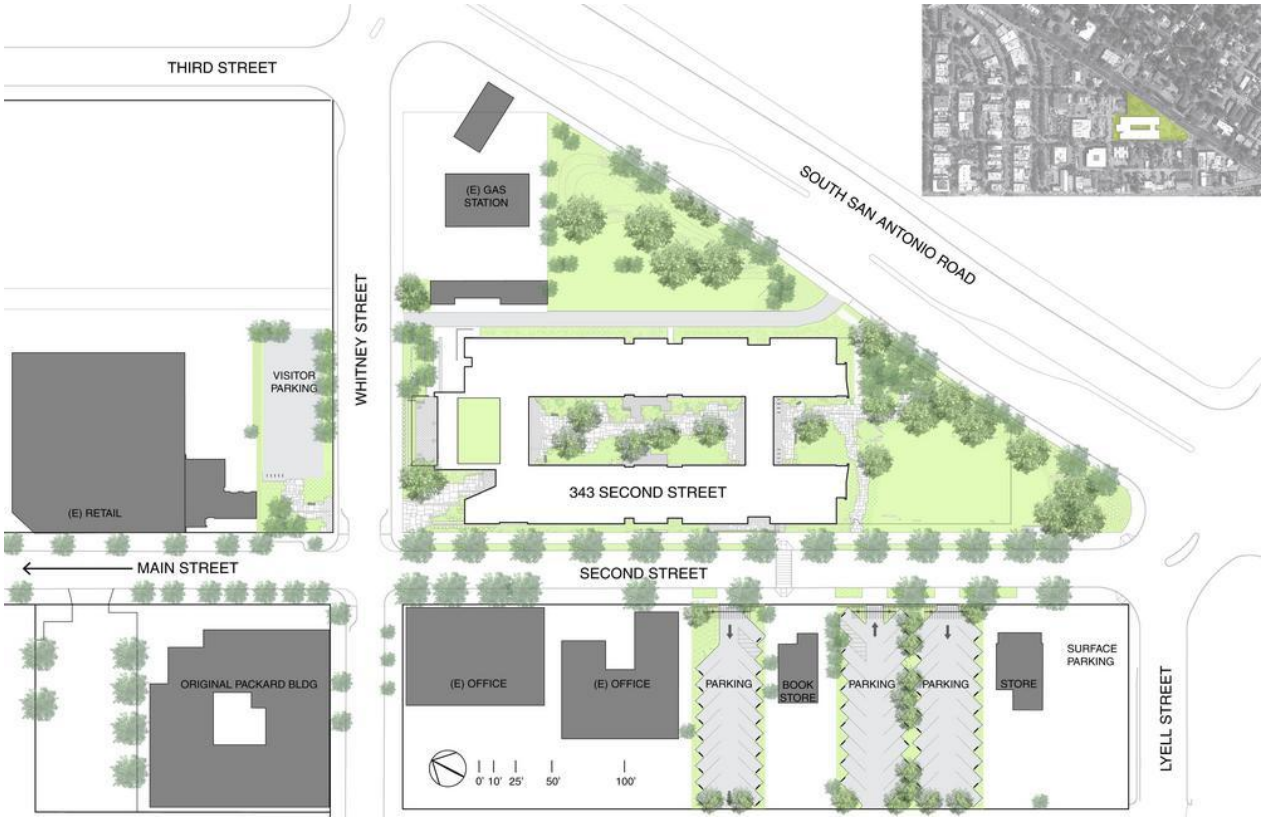
The headquarters for The David and Lucile Packard Foundation in Los Altos, California brings staff, grantees and partners together to solve the world’s most intractable problems. Passive, bioclimatic design strategies support the core philanthropic mission while serving as the basis of the net zero energy (NZE) and LEED Platinum building performance.

The Packard Foundation's connection to the Los Altos community dates back to its inception in 1964. For two decades, as the Foundation's grant making programs expanded locally and internationally, staff and operations have been scattered in various buildings. This project enhances proximity and collaboration while renewing the Foundation’s commitment to its local community. The project's focus on sustainability brings the Foundation's facilities into alignment with its core work of conserving and restoring the Earth’s natural systems. Its new home--the largest building to date to receive Net Zero Energy Building Certification™ through the International Living Future Institute--is the cornerstone of its effort to demonstrate how an organization can improve its effectiveness and the quality of life for its employees while emitting carbon at the rate needed to keep temperature rise below 2°C.

Bioclimatic Design

Sometimes good urbanism and energy efficiency can work against each other. Early on, the design team chose to align the building to the street grid--which is oriented 40 degrees off true north--in order to be good neighbors and affirm that sustainable buildings can “fit in.” The task was then set: if ALL direct sunlight could be kept out of southwest-facing spaces and extra attention was paid to glare control, the energy penalty would be kept to less than 5 percent as compared to an optimally oriented building.

This was achieved by utilizing layering of sun shading and glare control strategies; including roof overhangs, balconies, trees, interior blinds and automated exterior blinds on all southwest-facing windows. The design is tuned for the uniquely benign California climate; emphasizing connectivity between indoor and outdoor spaces through an operable façade that opens up to invite staff to access the outdoors. The largest “room” in the project--the outdoor courtyard--functions as a casual meeting space set in a bucolic California landscape. Detailed design studies tested options to ensure a good outdoor micro-climate, with an optimized length, width and height for both winter warmth and summer cooling



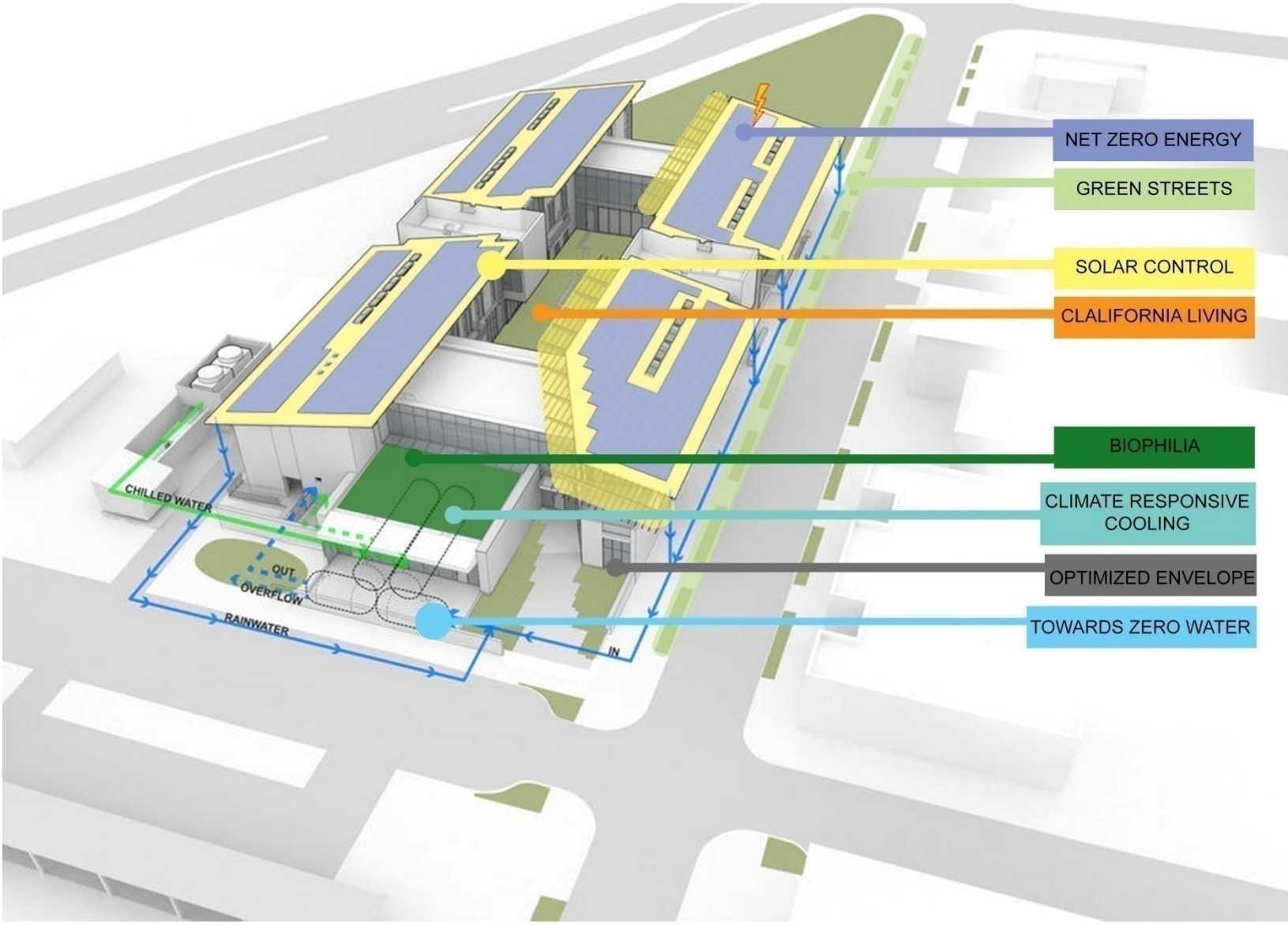
Light & Air

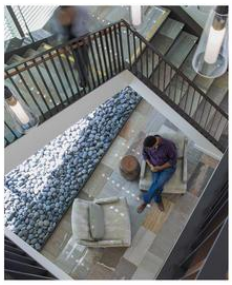
This is a building shaped by daylight and access to the outdoors. Two 40-foot wide office wings are pulled apart to create a landscaped courtyard space at the figurative and literal heart of the site. In that narrow building footprint, all occupants are within easy reach of daylight, views and operable windows. Natural ventilation displays on laptops and break rooms alert occupants when outdoor conditions are optimal for opening windows. Interior shades are user-controlled to combat glare, but automatically rise each night as a default. To harvest the potential energy savings made possible by the exceptional day lighting, electric lighting automatically dims when daylight levels suffice. Under-counter LED task lights are controlled by occupancy sensors at each desk. The day lighting design aimed for “perceptual brightness”-–a space so well daylight that no one thinks to override the lighting controls. To that end the design includes linear skylights and light shelves throughout the upper floor and a ground floor made as tall as possible to extend the reach of daylight. The energy model predicted a 40% reduction in lighting energy but the first year measured results showed performance 26% better than modeled as the performance of the day lighting system exceeded expectations.

Features

- Net Zero energy: 285 KW PV array provides 100% of net annual energy.
- Green streets: gardens filter and absorb the excess rain runoff from the street.
- Parking Reduction: 57 parking space meet demand instead of 160 required by code.
- Solar Control: Layered Sun shading including Dynamic blinds protects the south east exposure.
- California Living: Collaborative central courtyards acts as a focal point and heart of the building
- Narrow Building: 40' width maximized delighting and natural ventilation.

- Efficient Systems: Chilled beams allow 75 % reduction in fan energy with 100% outside air delivery.
- Basophilic: Green roof provides habitat and enhances views from interior.
- Climate-responsive cooling: Compressor free cooling tower feeds 50,000 gallon chilled water storage.
- Optimized Envelope : Triple-Glazed windows and reduced thermal bridging shrink heating demand
- Towards zero water : Rainwater is captured in a 20,00 gallon cistern, reducing portable water demand by 69%





4.2. Los Angeles Police Department Headquarters

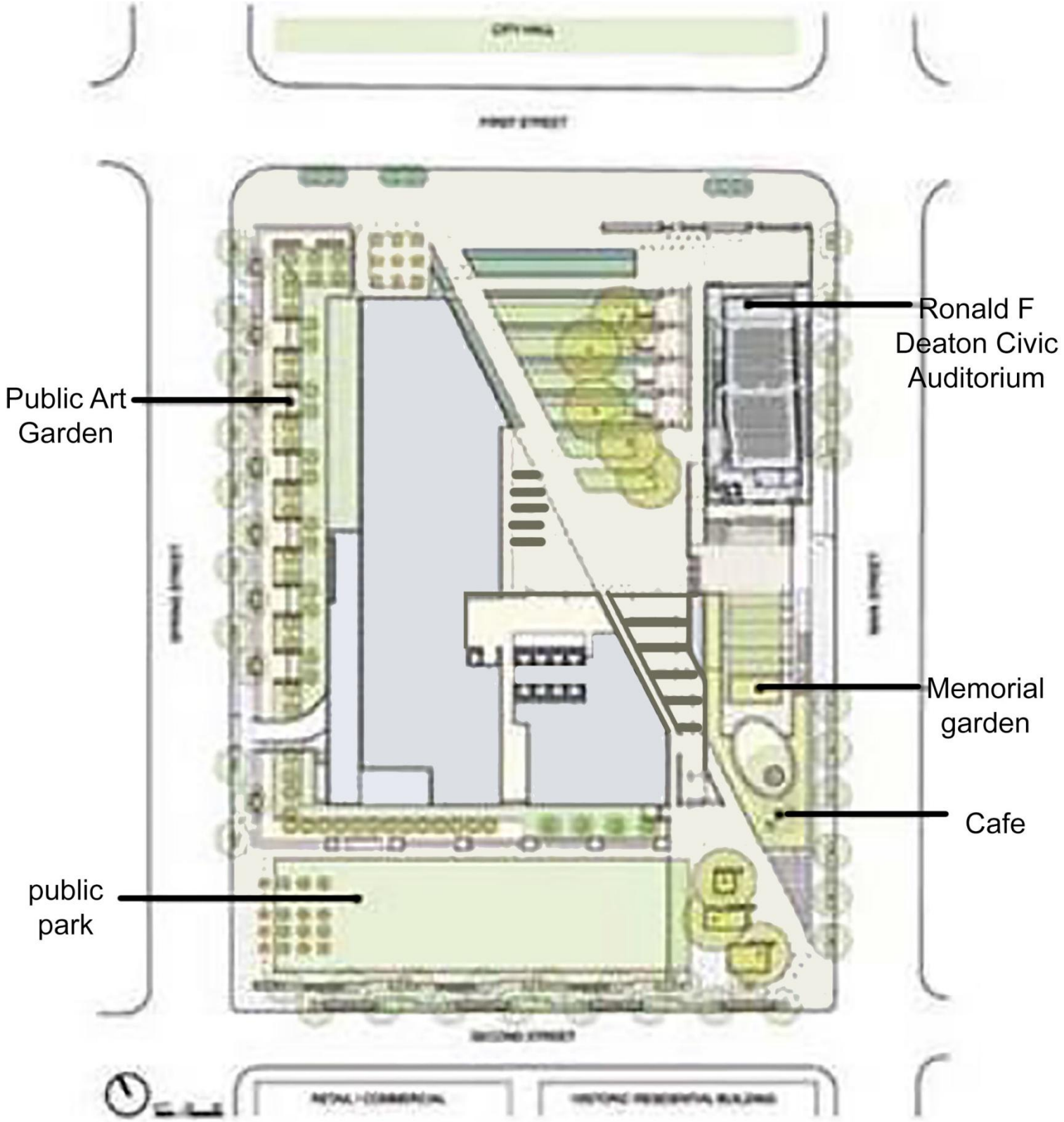
Location:
Los Angeles, California, United
Architect:
AECOM | Roth + Sheppard Architects JV
Project Completion Date:
Oct, 2009
Project Site Context/Setting:
Urban
Previously Developed Land
Project Type:
Office
Site Area-3.742 acres
Area of building-491,023 SF
Total cost of construction-$245,000,000

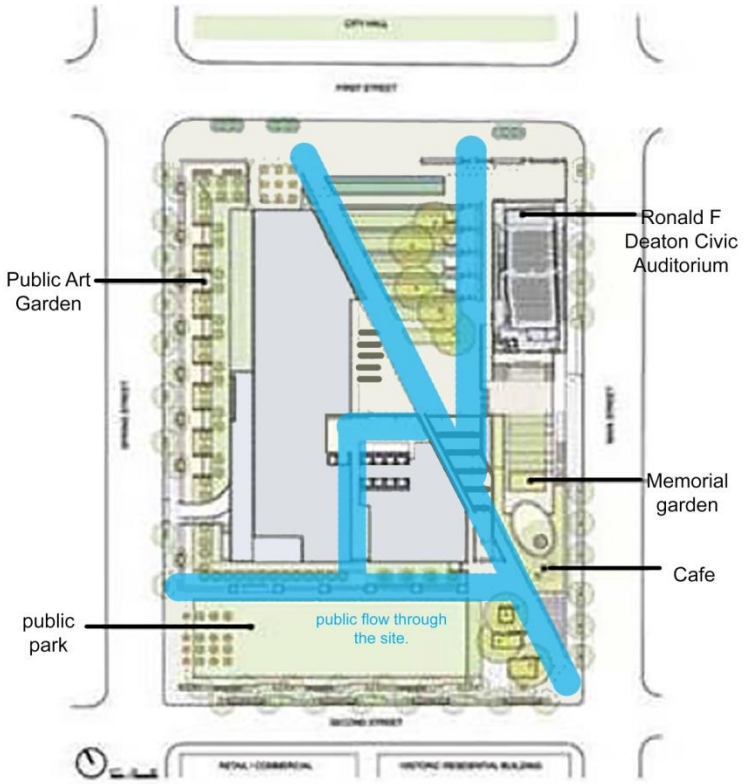
Designed to fit within the urban context of the Los Angeles Civic Center, the new 491,000-square foot Los Angeles Police Department (LAPD) Headquarters features areas dedicated to police administration and operations. The design is modern with both physical and metaphorical connections to the surrounding community. Setbacks, necessary for security reasons, are captured as opportunities for integrating the site at the human scale: a one-acre park; public art program, and plaza relate to passers-by and engage them with the headquarters.

The LAPD Headquarters project was recognized in 2009 with the American Institute of Architects' presidential honor award for "Building Team of the Year." The award acknowledges an important aspect of the project. More than 30 public workshops were held with community members.

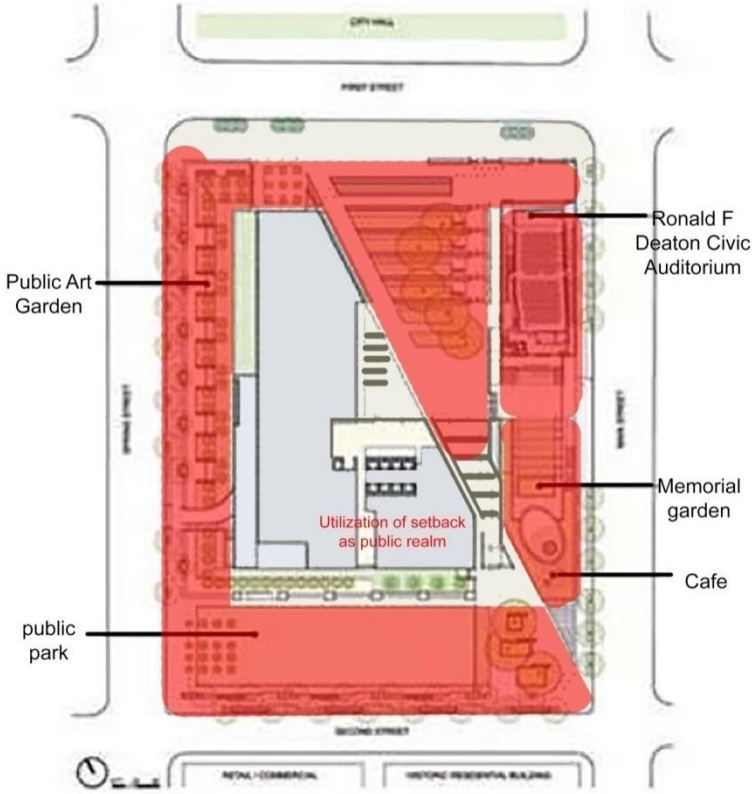
Responding to the city's goal of sustainable building practices, this project has achieved a LEED Gold certification from the US Green Building Council. Numerous sustainable strategies were incorporated into its design, including recycled content building materials; energy-saving day lighting design and lighting controls; a high-efficiency HVAC system; large amounts of locally produced materials; and water-efficient plumbing fixtures, irrigation systems and landscape materials.

The building is oriented towards City Hall, underscoring the relationship between these two halls of power. It's also trying to achieve a delicate balance between serving the needs of the residential community (such as open space, late night and weekend amenities, and public parks), and the need for a securitized zone. Each floor features an open floor plan, so cubicle dwellers will have access to natural light, while the offices and conference rooms line the inner perimeter of each floor.

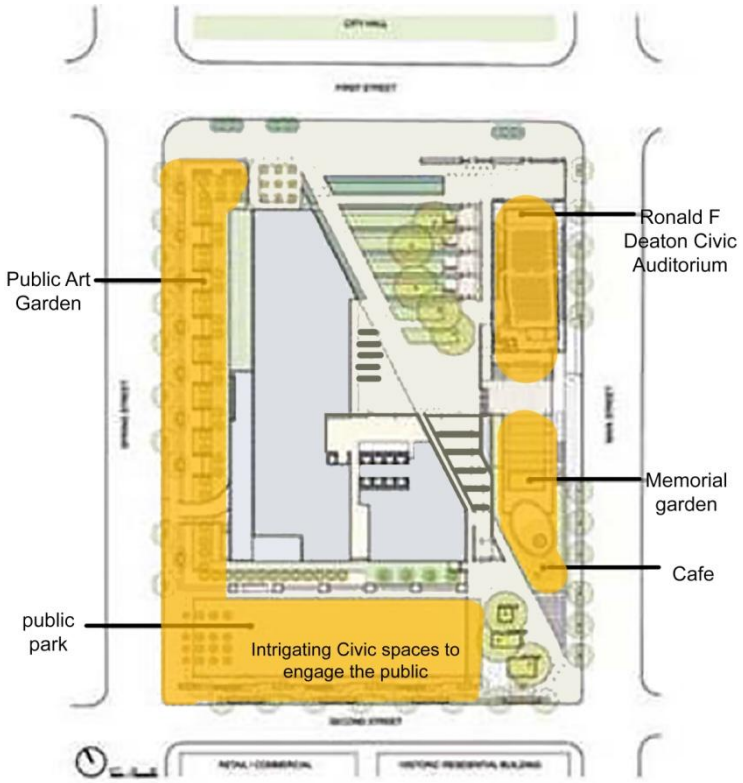

Ronald F Deaton Civic Auditorium
Public Art Garden
Memorial garden
Cafe
public park



Public flow through the site



Utilization of setback (necessary for security) as public realm.



Chapter 5: Program Analysis & Development

5.1 Description and Breakdown of functions

The entire facility can be broken down into seven core groups of functions or Wings.

- The Operations Wings
- Admin & Finance Wing
- Investigations Wing
- Comms & MIS Wing
- Legal & media Wing
- Air Wing
- Training and orientation Wing

The Operations Wings
The operations wing functions as the command center of the facility, as well as for RAB's larger field operations. The wing is under the DG and the Additional DG.

Comprised of the following functions:

- Operations Room
- Central Co-operations room
- Operation beefing room
- Meeting room
- Transport facilities
- Dog Squad (with Dog kennels)
- Bomb Squad

Admin & Finance Wing

This wing handles all the administrative, financial and logistic aspects of RAB.

Comprised of the following functions:

- Administrations office
- Finance and Development branch
- Transport and Logistics Branch
- Personnel and discipline branch
- Heath unit

Investigations Wing
This wing consists of the criminology and crime scene and forensics related branches. The wing is host to several officers, detectives, and Lab technicians and is under the command of the Additional DG of Administration.

Comprised of the following functions:

- Investigation Branch
- Holding cells
- Evidence lockers
- Forensic Labs
- Armory

Communication and MIS Wing
The primary function of this branch is to establish and maintain clear, secure and rapid communications between all the RAB battalions. This branch is also under the command of the Additional DG of Administration.

Comprised of the following functions:

- Communication Branch
- MIS Branch
- Cyber crime & Digital forensics
- IT Consultancy
- Server Room

Legal & media Wing
Under the command of the DG and assistant director this wing provides all sorts of legal assistance, Deals with human rights issues, Public relations and internal investigations.

Comprised of the following functions:

- Human rights Branch
- Legal Cell
- Public Relations branch
- internal investigation

Air Wing

Under the command of the additional DG of operations, the primary functions of this wing are the surveillance of threats, transportation of RAB personnel and escorting VIPs.

Comprised of the following functions:

- Helipads
- Maintenance
- Air control & surveillance Branch
- Briefing room
- pilot lockers
- Armory
- VIP waiting

Training and orientation Wing

Under the command of the Additional DG of Administration this wing provides training to both domestic and foreign agents of RAB. This will be the secondary location for Training and orientation as to the original T&O located in Gazipur, Simultali comprising of 21 acres.

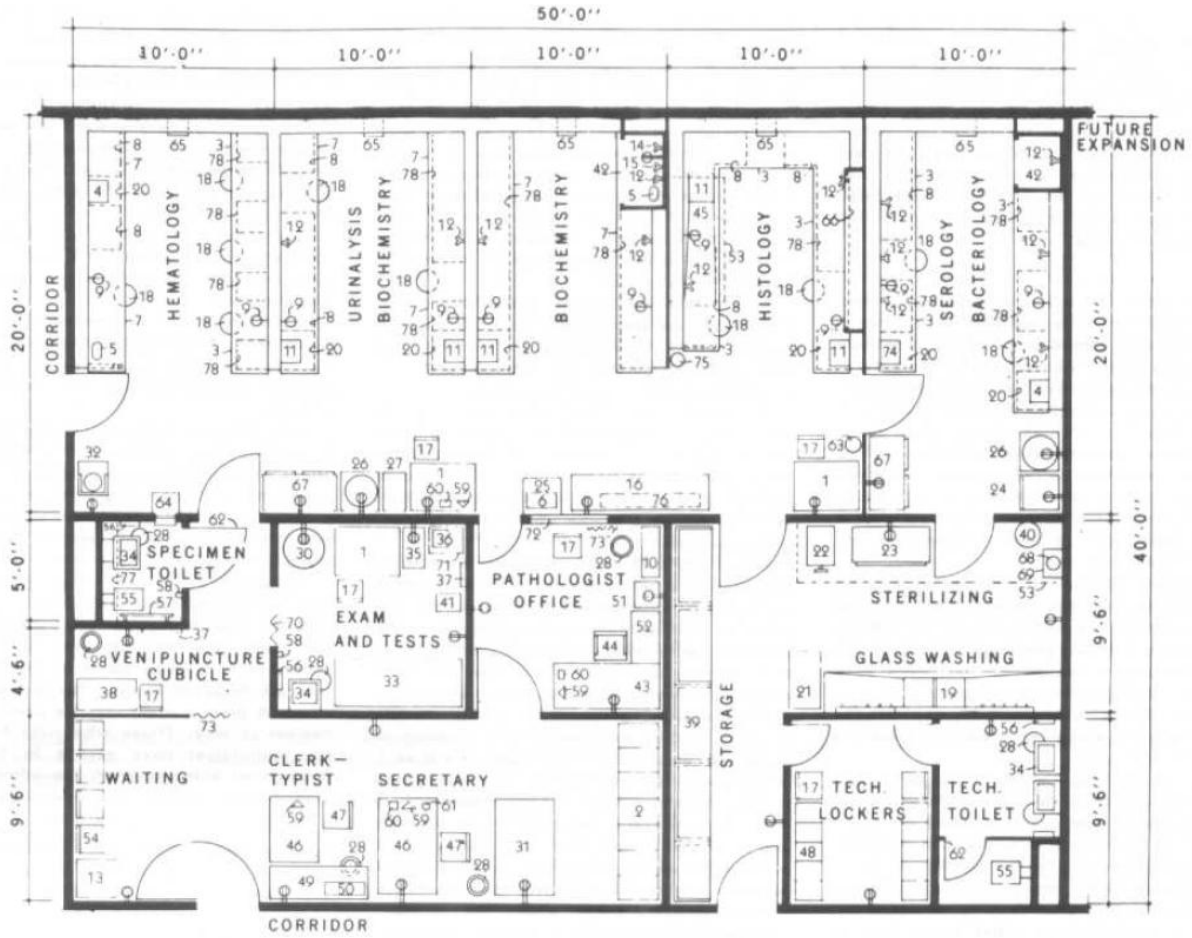
Comprised of the following functions:

- Course rooms
- Teachers rooms
- Orientation hall

5.2 Special requirement for certain functions

Forensic Labs

Laboratories, be its forensic or medical, often host the same workstations and experiments. So it's fore efficient in staffing and space management if their functions care made to overlap.



The medical unit and the forensic lab can use the same workstations without any conflicts of interests. The location of the laboratory in a police building is relatively unimportant, and some advantages are gained in having it in a remote area. Space requirements and utility connections are the principal considerations; space needs are strongly influenced by the size of the laboratory staff and the equipment used. A police laboratory should be designed to meet future requirements .Every agency should have at least a rudimentary laboratory. Depending upon the department's expertise and size, a laboratory could range in size from a single photography darkroom to a complex facility with separate rooms to accommodate: a darkroom ; copy and other photographic work; chemical examinations ; other laboratory instruments; evidence storage; a repository of standards for comparison ; a director's office; a reception room ; and a polygraph room . Needless to say, those agencies that are physically located near a county, regional, state, or federal laboratory facility would require less laboratory space.

Evidence Room

An evidence storage room should be included in any planning for a police facility. The room should be secured against unauthorized intrusion and should allow for four different types of storage modes:

- Open bins
- File cabinets
- Safe
- Possible refrigerator

Open bins should constitute the majority of the room area. The bins should be approximately 3 feet wide and should be designed to allow for expansion upward. The balance of the evidence room can best be utilized by installing standard, letter-sized file cabinets. Small items that are more subject to loss are better stored in cabinets.

A good-sized safe should constitute the third storage mode for inclusion in an evidence room. This receptacle should be used to safeguard monies, jewelry, and other such valuables. A refrigerator should be used to store narcotics, blood samples, and other perishables. Since the evidence room would not normally be open 24 hours a day, it is necessary to establish temporary holding lockers into which evidence can be placed until it can be secured by the department evidence custodian. These lockers should be either self-locking or equipped with open padlocks. Officers coming into possession of evidence should properly mark it and deposit it in a locker. The door can then be snapped shut or padlocked. It should thereafter be opened only by the duly designated evidence custodian. All evidence should be kept in the evidence storage room when not otherwise being examined or presented at trial.

Library

A police library is o reflection of the philosophy of a police administrator and his agency to achieve the best possible law enforcement through constant staff study and improvement. Savings of police budget dollars can be used to justify a professional library. It can save money on duplicate subscription costs, long-distance telephone calls, and duplication of files, space, effort, and materials. Ordering subscriptions to journals for each supervisor and administrator can be an unnecessary and excessive expense. A library should be provided with a sufficient number of bookshelves and seating capacity to accommodate approximately five percent of the work force. Tables in the library should be at least 5 to 6 feet from each other if the chairs are to be placed back to back. Between the tables and the walls, there should be an aisle approximately 5 feet wide. The length of the shelving should not be more than 3 feet per section.

CRIMINAL INVESTIGATION

Several design features should be considered when allocating floor space for criminal Investigators. Investigators make extensive and constant use of records; therefore, it is practical to place investigators as near as possible to the records center. A great number of people coming to the police facility do so in order to confer with investigators; public access is an important feature that must be considered when physically locating detectives. The area allocated to detectives should provide for individual work space and a degree of privacy for each officer. Collectively, however, detectives should be in constant contact with one another. Therefore, a single spacious room is recommended to house all detectives. The room could then he divided into individual office areas by movable partitions. Interrogation rooms are another important feature that should be located near the detectives. Again, in the same general vicinity, the architect should provide for office space for both the unit commander and supervisors. Figure 8 shows a practical solution for all of the individual requirements needed in order for detectives to conduct their daily operation. Figure 9 shows model interview rooms.

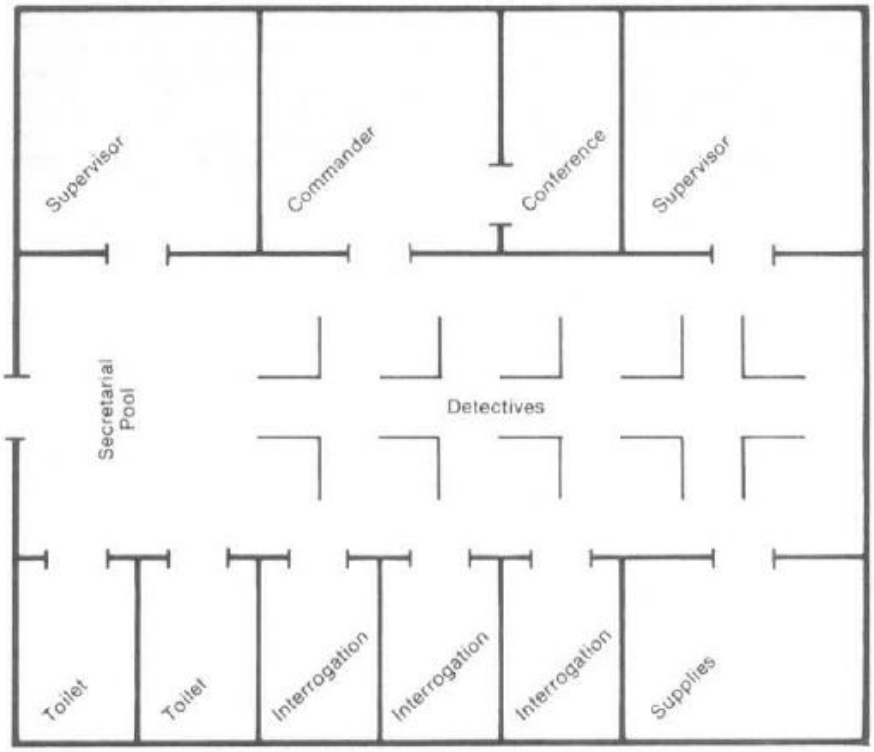


Fig. 8 Model detective area.

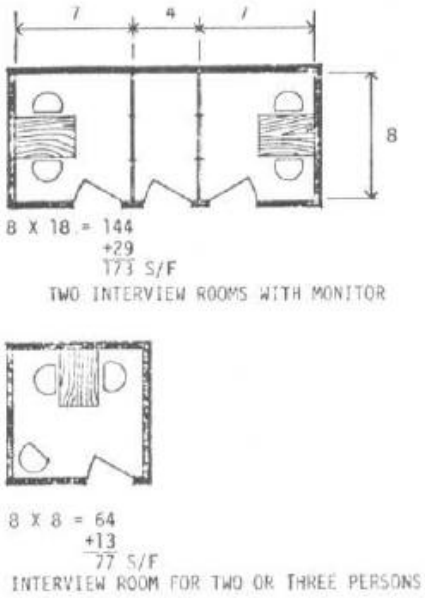


Fig. 9 Interview rooms.

Parking

The site should be adequate, not only for the building itself, but to accommodate a police motor-court activity, staff parking area, and public off-street parking requirements . The parking space allocated for employee vehicles and for police vehicles is important when making shift changes and removing prisoners to and from jail. In the case of a combined police/jail facility, a private jail booking entrance (sally port) and prisoner processing area, easily accessible to automobiles, should be included in the plans. In some instances, a basement-level parking garage for police vehicles may be desirable. A ramp leading from the basement level would provide adequate street access. Placing the garage and official parking facilities in the basement will reduce noise levels at shift change times and during the conduct of daily activities, thereby avoiding inconvenience to adjacent land owners. The parking lot or roof of the structure should also be considered as a possible site for a helicopter landing pod.

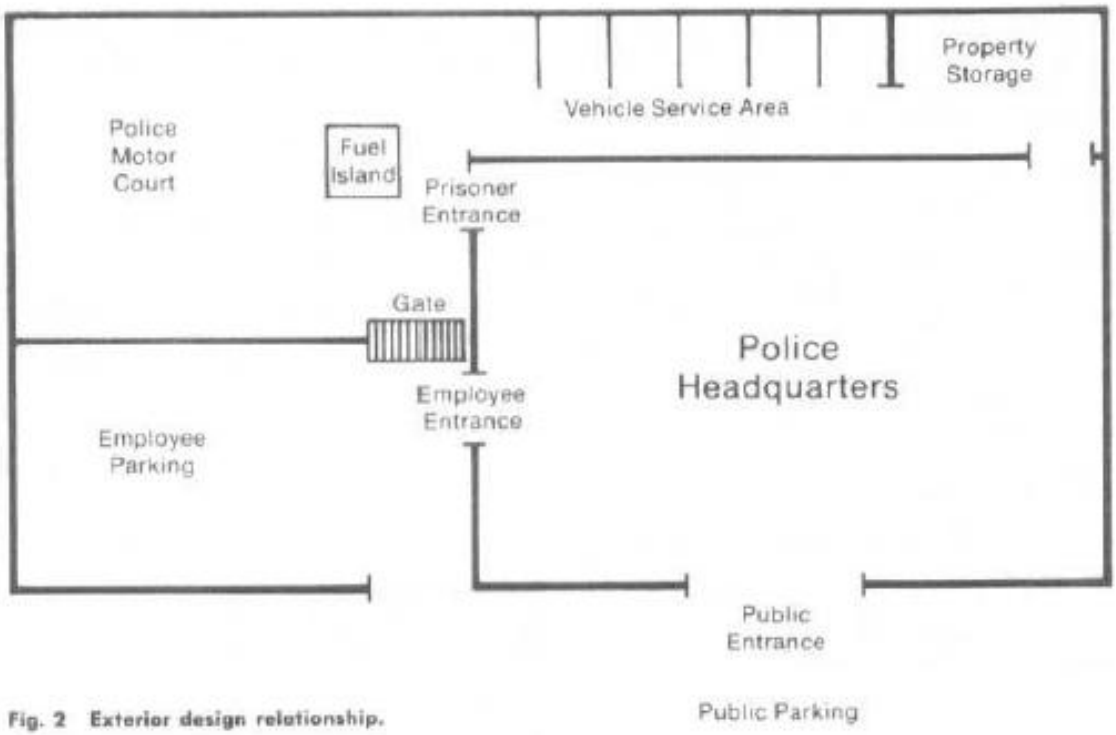


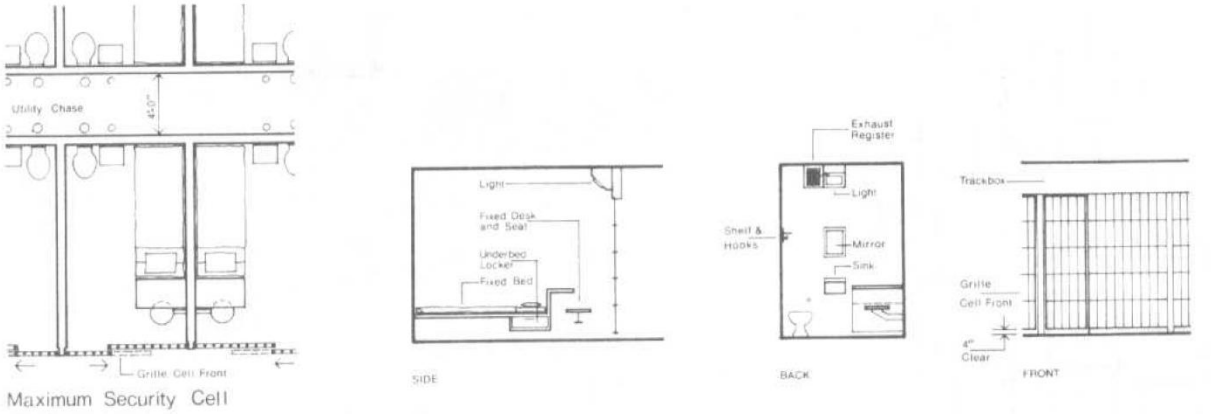
Fig. 2 Exterior design relationship.

When the jail facility is located within the police building and/or when prisoner booking is done at police headquarters, special design features must be incorporated to accommodate this function. Prisoners should enter the building through a separate secure entrance. A sally port with automatic doors and drive-in provision should be part of the security entrance.

Fig. 2 shows a better understand the relationship of the three separate entrances, public parking, employee parking, and police vehicle parking. Note in Fig. 2 the security feature of the gate separating the police vehicles from public access. Whenever the police facility is located in a residential area, high shrubbery and, more preferably, a masonry wall surrounding the police parking area should protect the adjacent residents from the glare of vehicle lights at night.

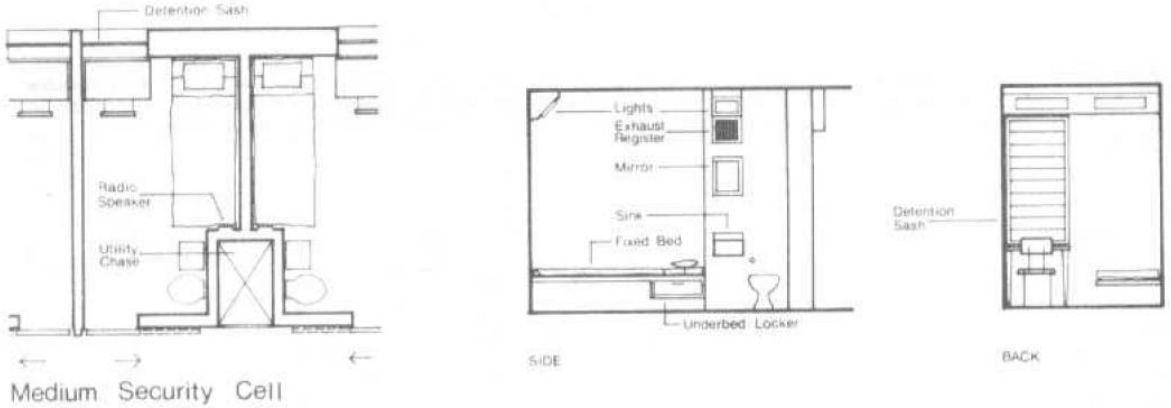
Holding cells

There can be either individual cells or large rooms called tanks for holding groups of prisoners together. The cells should be arranged so that maximum security is provided for prisoners serving time, and these cells must be separated from those housing material witnesses. The maximum number of individual cells makes possible segregation of prisoners. Individual cells are advised for small jails where accommodations are limited. Cells for women prisoners, where women prisoners are rarely housed, can be used for juveniles. One cell should be capable of heavy padding for violent prisoners and should be unfurnished.



Maximum Security Cell

Segregation: Male and female prisoners must be kept entirely separate. Other segregations are necessary, such as separations of juveniles, sentenced from unsentenced prisoners, those with crime records and disciplinary cases separated from drunkards, vagrants, traffic violators, and witnesses. Prisoners of unsound mind, contagious disease carriers, and known sex perverts must be isolated. Plans should provide close and readily maintained supervision of the jail sections housing drunks, the insane, or the mentally disturbed.

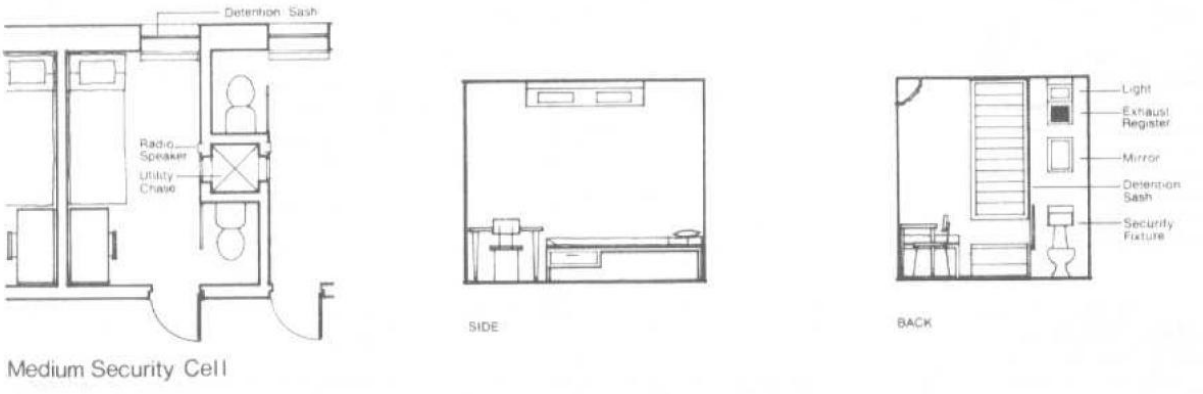


Medium Security Cell

Cell Furniture: Cells should be equipped with toilet, washbowl, a locker or cabinet (preferably an under-bed type), a table, and a chair or stool. The cell beds should be metal, equipped with a

clean mattress, clean sheets, mattress cover, blankets, pillow, and pillowcase. The bed should have a rigid bedspring frame bracketed to the wall. The washbowl and toilet should be prison type.

Tanks: Tanks can be equipped with a fastened bench and open toilet and urinal for prisoners. Tanks should be limited to accommodate not more than 15 men each.



Medium Security Cell

Receiving Garage: A receiving garage should be built immediately adjacent to the building or made a part of it, so that cars could drive in off the street or alley directly into the garage. This garage should not be used for parking purposes but merely for the discharge of prisoners when they are brought to the police station. The jail elevator should be in such a position as to be easily available directly from this garage.

5.3 Programs

Program category	Program	No.	Sq.ft per program	Total Sqft
Administration	Director's room	1	600	600
	Additional director's room	2	200	400
	Assistant additional Director's room	4	200	800
	Deputy director's room	4	150	600
	Deputy assistant director director's room	6	150	900
	Finance / budget office	1	240	240
	Transport and logistics office	1	150	150
	Personal discipline branch	1	370	370
	Health unit	1	400	400
Operation wing	Central operations	1	600	600
	Operation briefing room	1	400	400
	Meeting room	1	400	400
	Central co-ordination room	1	400	400
	Bomb squad	1	1600	1600
	Dog squad (+ dog kennels)	1	1600	1600
Comms and MIS Wing	Communication Branch	1	700	700
	MIS Branch	1	150	150
	Cyber Crime and Digital Forensics	1	200	200
	IT Consultancy	1	150	150
	Server Room	1	400	400
	Surveillance room	1	200	200
	Video conferencing room	1	400	400
Air Wing	Helipad	1	2500	2500
	Maintenance room	1	200	200
	Control and Surveillance room	1	400	400
	Pilot Lockers	1	360	360
	Waiting	1	150	150
	Briefing room	1	200	200
Training & orientation wing	Classrooms	4	200	800
	Teachers room	3	100	300
	Consulting room	1	150	150

Investigation Wing	Forensic Labs	1	2000	2000
	Detective Office spaces	1	1620	1620
	Commanders Office	1	225	225
	Briefing room	1	400	400
	Interrogation rooms	3	56	168
	Interrogation monitoring room	1	32	32
	Waiting room	1	100	100
	Evidence room	1	1000	1000
	Jail cells (Tanks)	2	200	400
Legal and media wing	Legal department	1	1600	1600
	Public Relations Department	1	1600	1600
Miscellaneous	Multipurpose hall	1	4000	4000
	Games room	1	1000	1000
	Prayer space [30 person]	1	3600	3600
	Gymnasium	1	1600	1600
	Souvenir shop	1	180	180
	Cafe	1	500	500
	Library	1	2000	2000
	Armory	3	100	300
Parking and vehicle storage	200 cars	200	50	10000
Total				55463
Total with 30% ground coverage				**72102**

5.4 Ground Coverage

Site area = 5.3 acres = 230868 sqft

FAR for public spaces = 5.5

Maximum ground coverage is 50% of site area, 114534 sqft

Total build area = 5.5 x 230868 = 1269774 sqft

Total built area with 30% circulation = 1269774 + (1269774 x 0.3) = 1650706

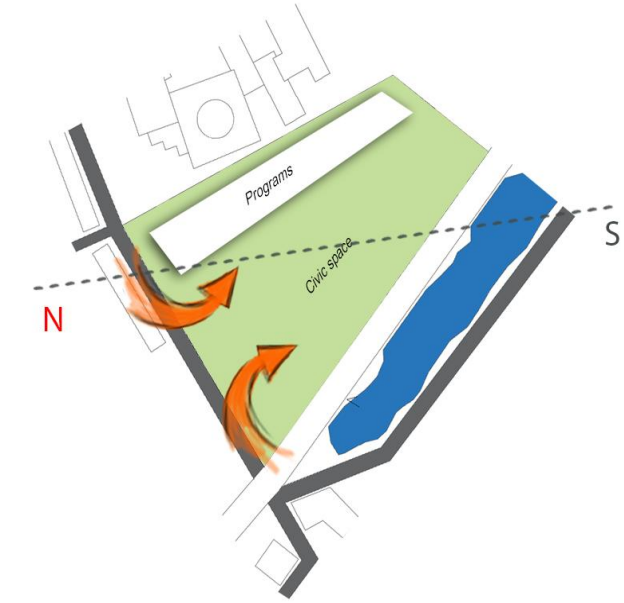
Total number of floors that can be built = Total built area / Max ground coverage = 14

5.5 Program Layout

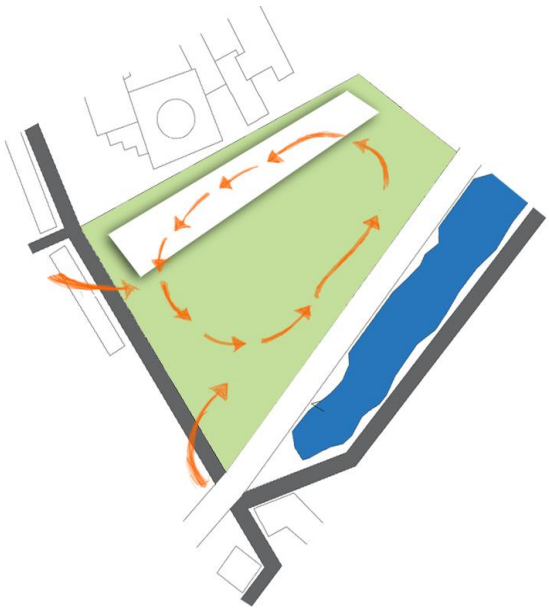
public	reception
	Medical Unit
	Complain booth
	Cafe
	Souvenir shop
	Prayer hall
	Library (lower)
Semi Privet	Multipurpose hall
	Admin and finance wing
	Legal & Media wing
	Rec room
	Gym
	Orientation and training wing
Restricted	Operations wing
	Investigation wing
	Air wing
	Library (upper)
	Comms and MIS Wing
	Amory

Chapter 6: DESIGN DEVELOPMENT

6.1 Study and Approaches of the Site



Flow of the City



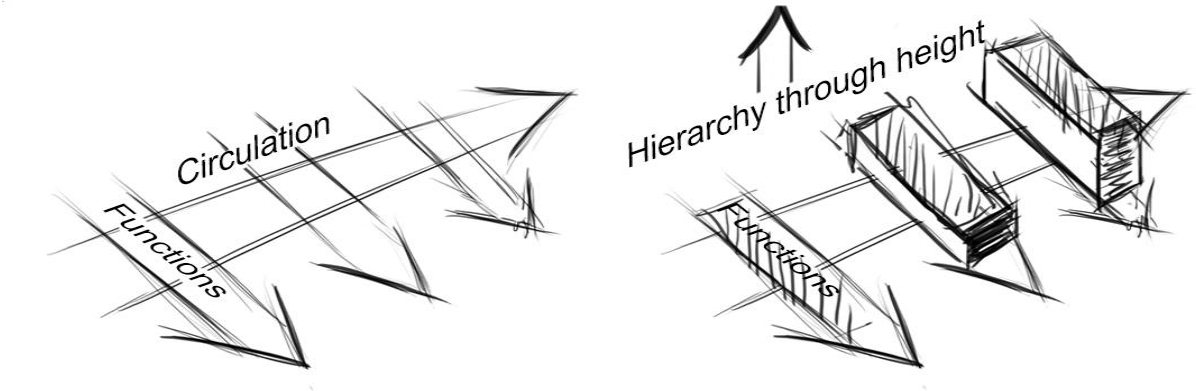
Creating a Loop

After observing the orientation and the different forces of the site, I came to certain logical conclusions:

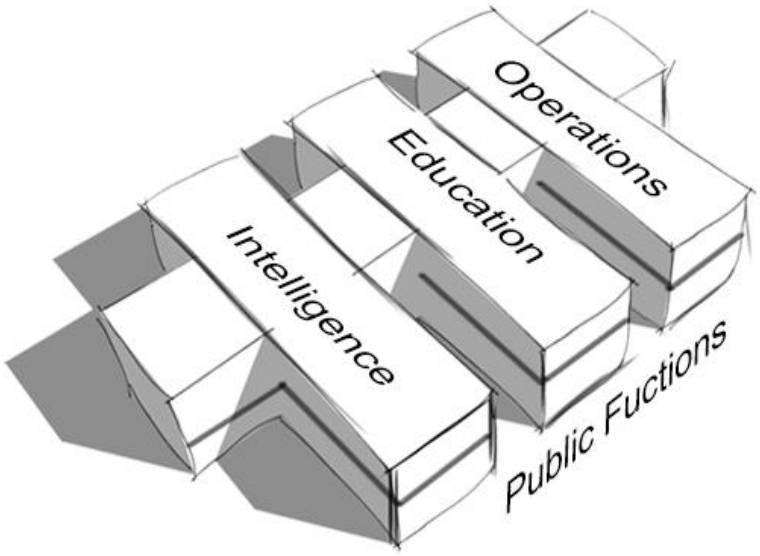
- There is only one road adjacent to the site, effectively making it the only point of access.
- The south-west of the site gives a spectacular view of the airport beyond the main road, so placement of the functions on the north-east would open up the best view for both structure and landscape.
- Both south-east and south-west sides have water bodies, the view of which would benefit a civic space.
- A linear form would maximize space utility.
- The public functions and the civic space should be connected in a circular loop.

6.2 Concept Development

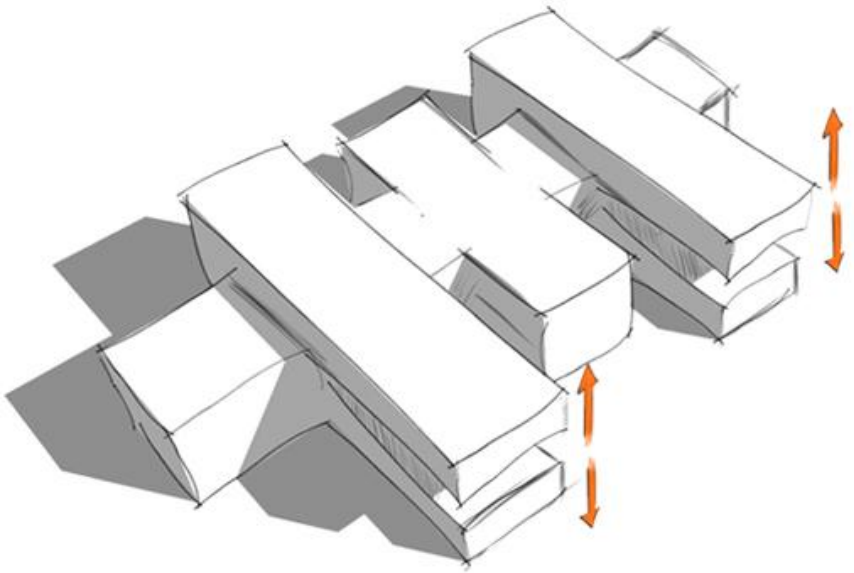
The philosophy behind the concept was to improve public relations with RAB, the brake the stigma associated with their name. The core concept was to leave a considerable portion of the sit open to the public as civic space, and create a leaner form to which the civic space would connect through a looped path.



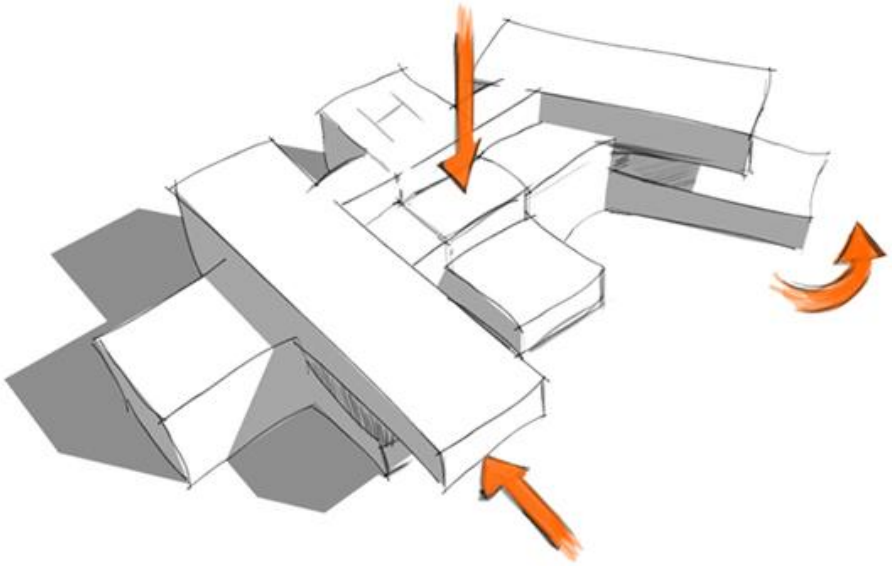
The basic concept was to separate the structure into three wings based on functions and privacy while connecting them through a single linear circulation. Giving it a strong programmatic identity.



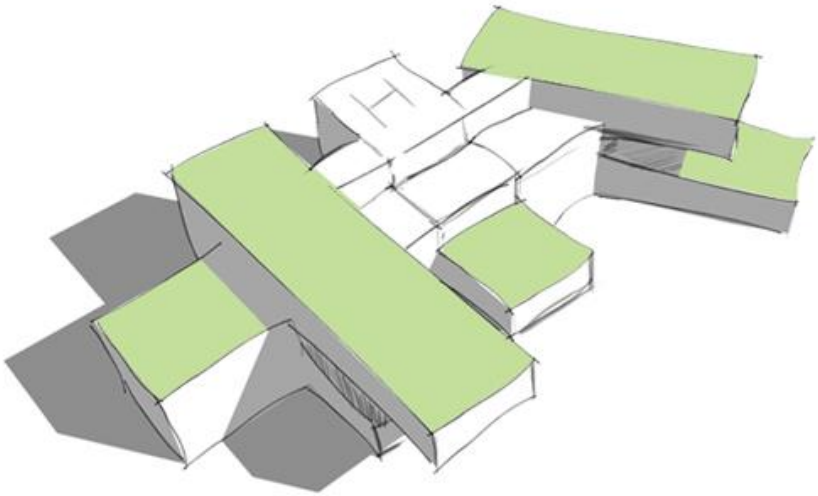
Based on climatic consideration, functional requirement and aesthetics the wings were varied in size and elevation and further divided vertically.



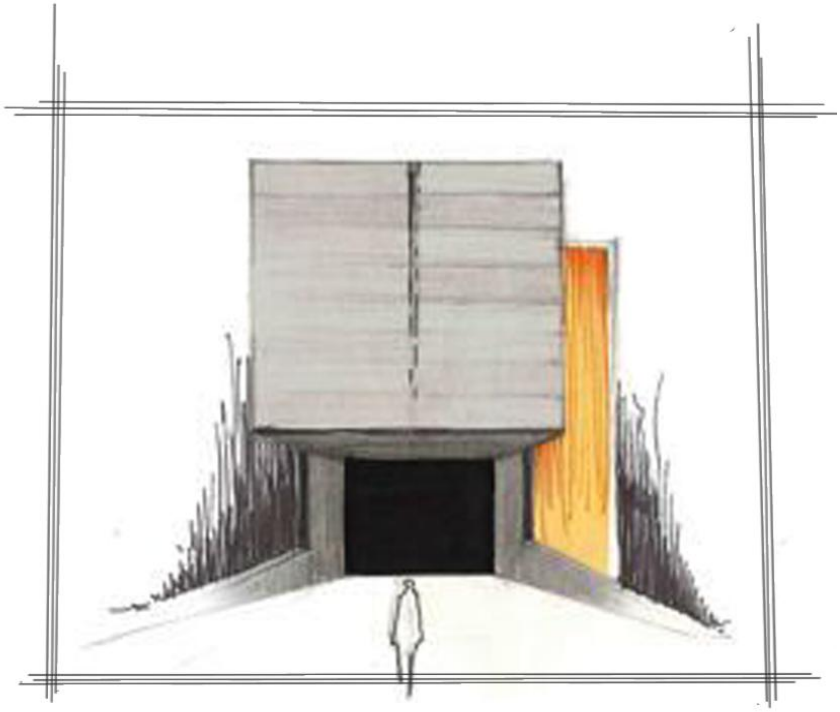
Spliting the wings



Pushing, pulling and rotating the wings to better utilize the North-South wind flow

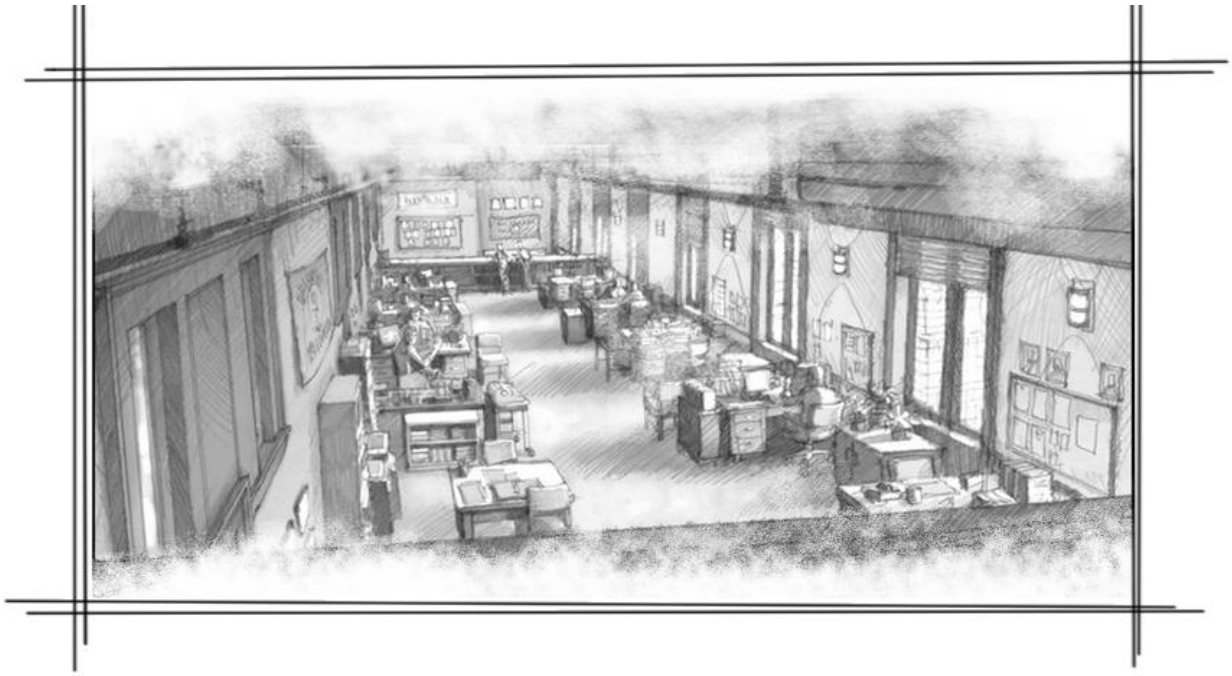


Green terraces compliment the surrounding landscape, Provide passive cooling for the structure as well as recreational spaces.



The intention was to make the headquarters as nonthreatening and welcoming as possible, a grand entrance seems to suit that purpose.

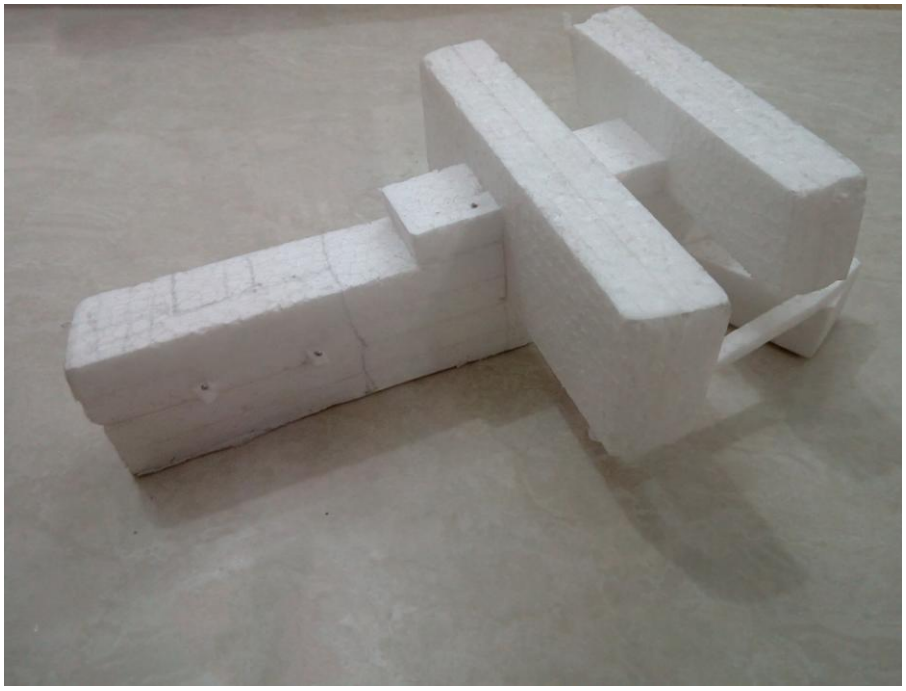
At the same time I wanted to HQ to have a sense of grandeur, adding double, triple height spaces, and functions being connected via interlinked crisscrossing bridges over the linear atrium.



As most of the programs are types of offices, I wanted to create un-columned, visually uninterrupted spaces for a more open and familiar work spaces.

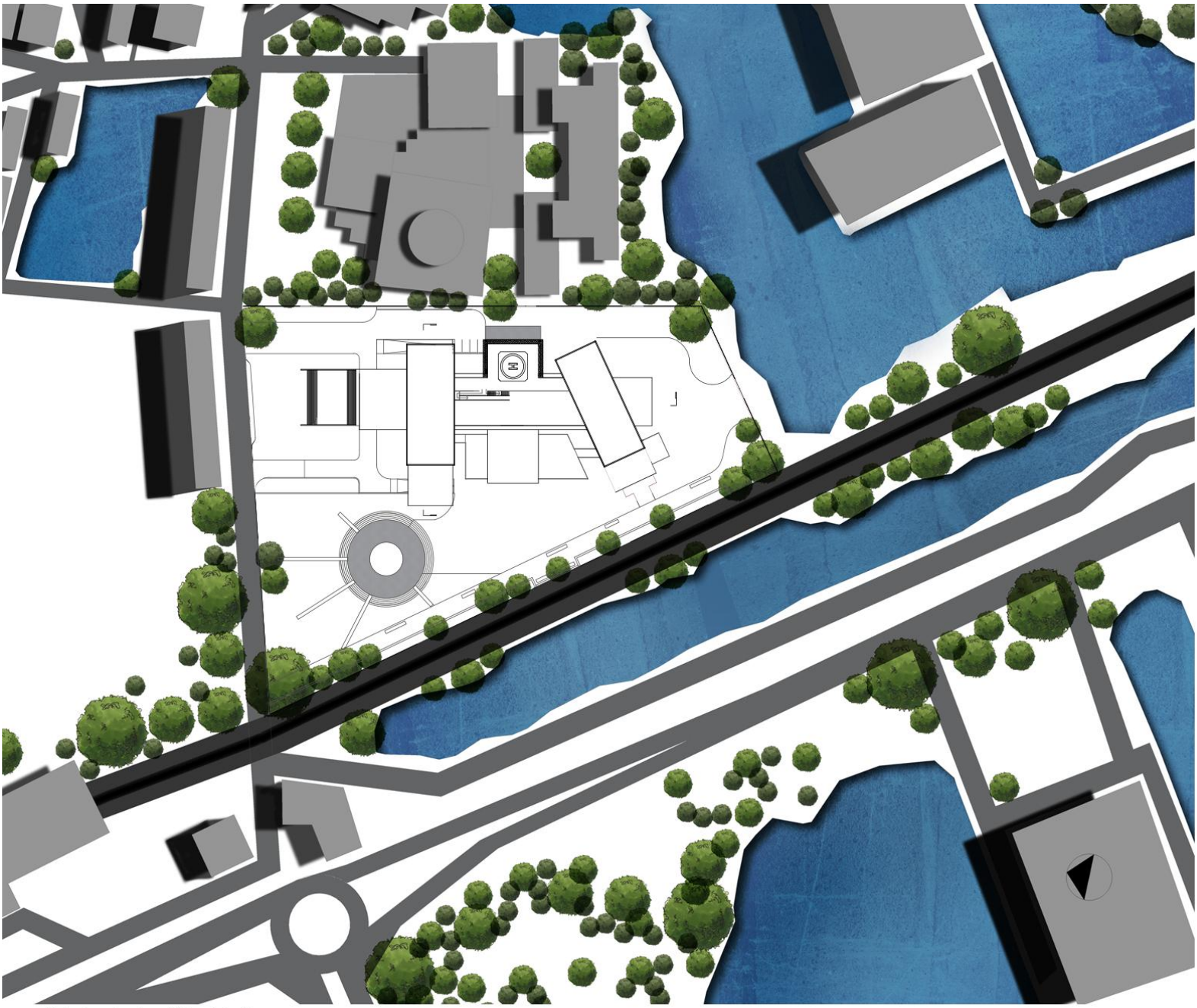
6.3 Form Development

The basic idea was to have the wings extrude and extend outward, hanging over the civic space and public functions. A symbolic representation of the guardian/ defender role of RAB. Gradually the shape of the form has changed little by little based on climatic consideration, functional requirement and aesthetics.



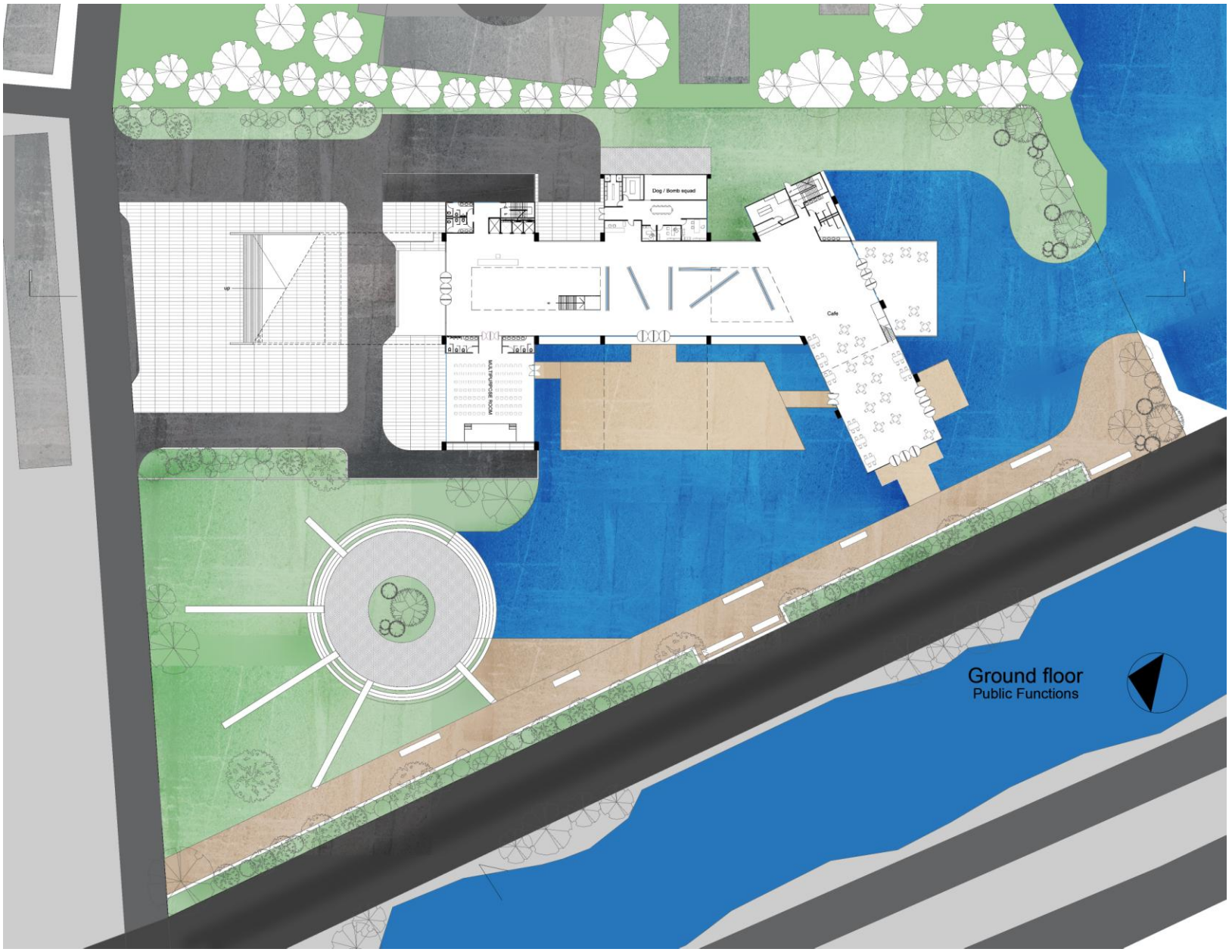
Chapter 7: FINAL DESIGN

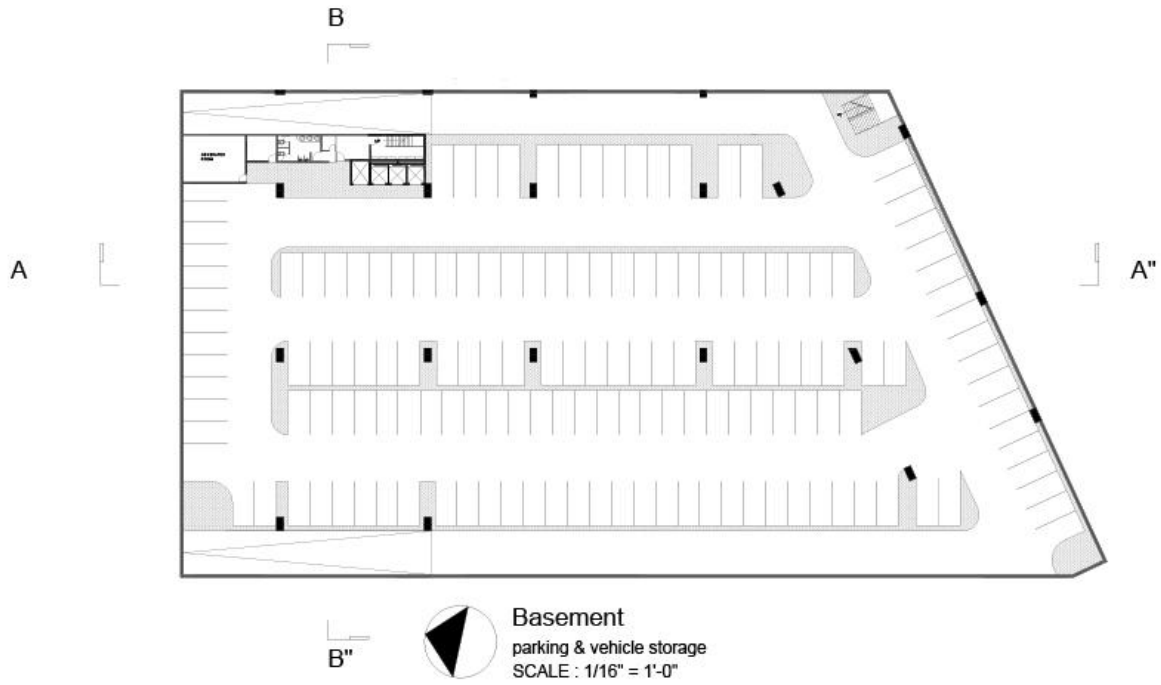
7.1 Site Plan



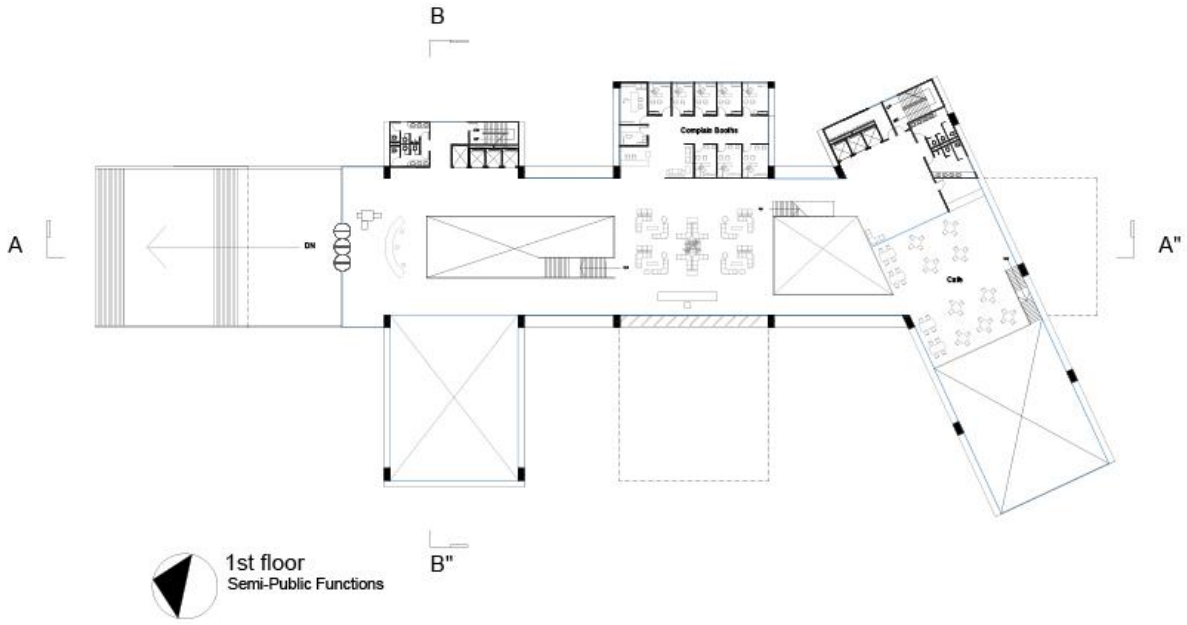
SITE PLAN

7.2 Floor Plans

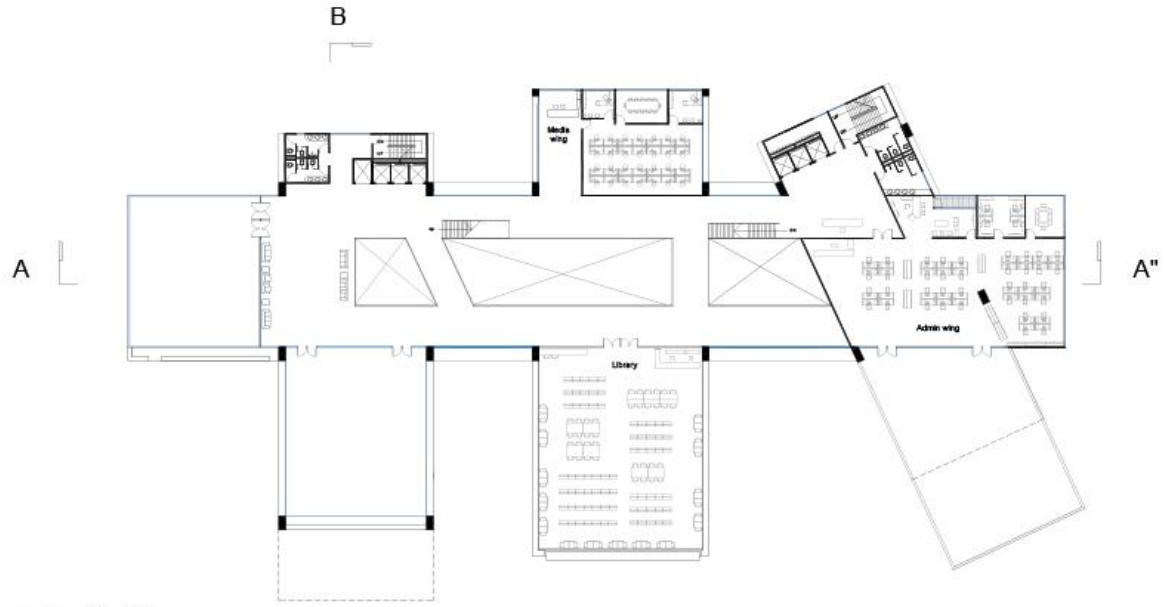




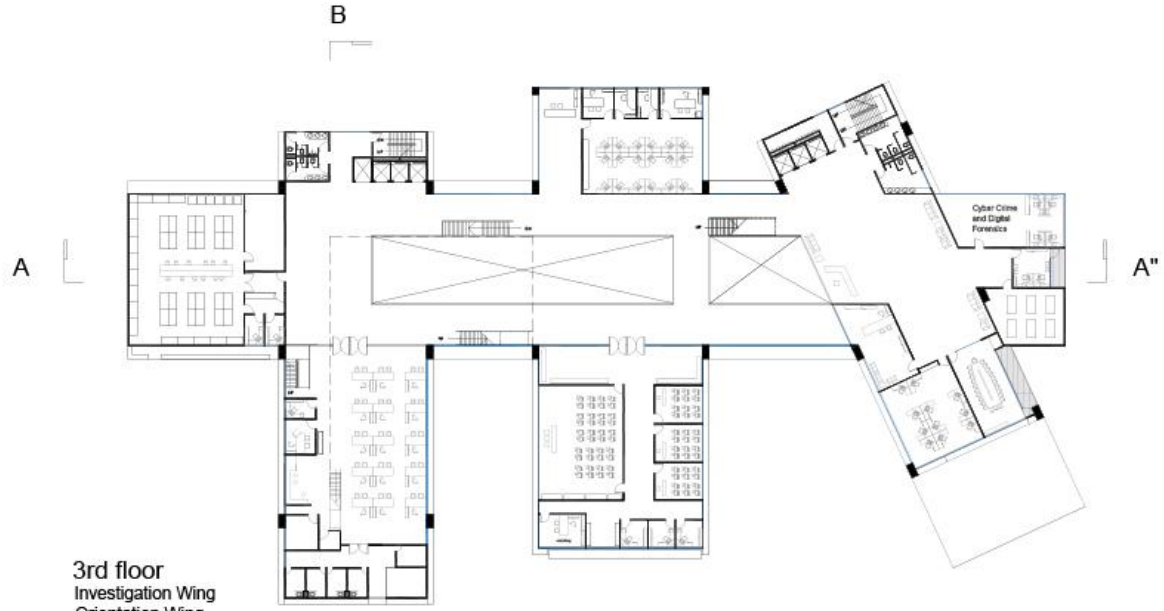
Basement
parking & vehicle storage
SCALE : 1/16" = 1'-0"



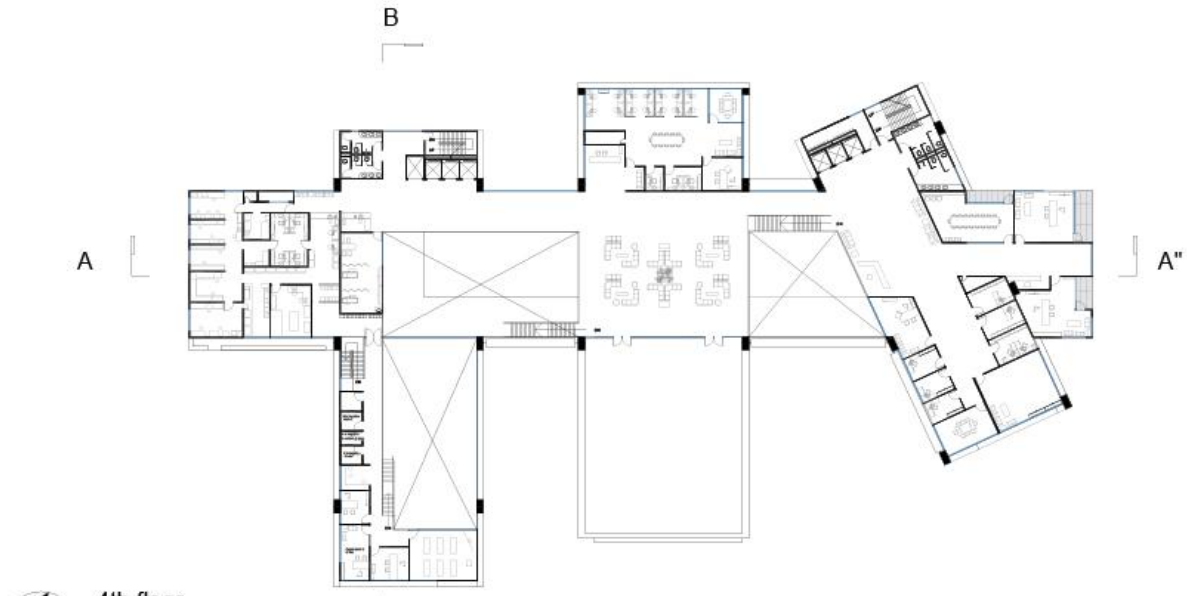
1st floor
Semi-Public Functions



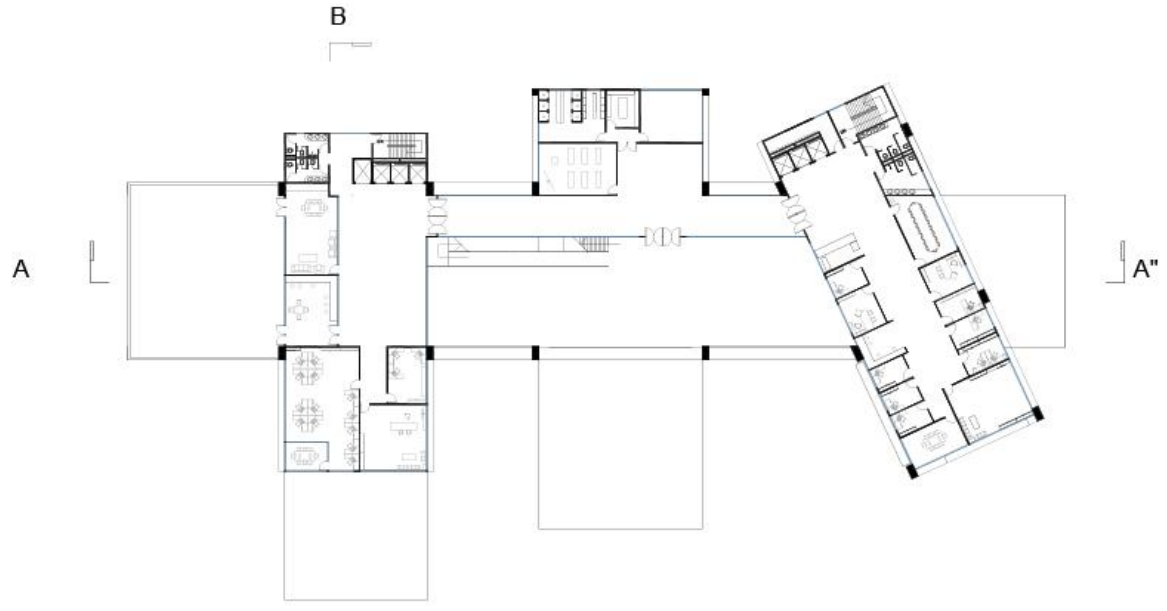
2nd floor
Admin and Media Wing



3rd floor
Investigation Wing
Orientation Wing
Legal Wing
Communications Wing
SCALE : 1/16" = 1'-0"



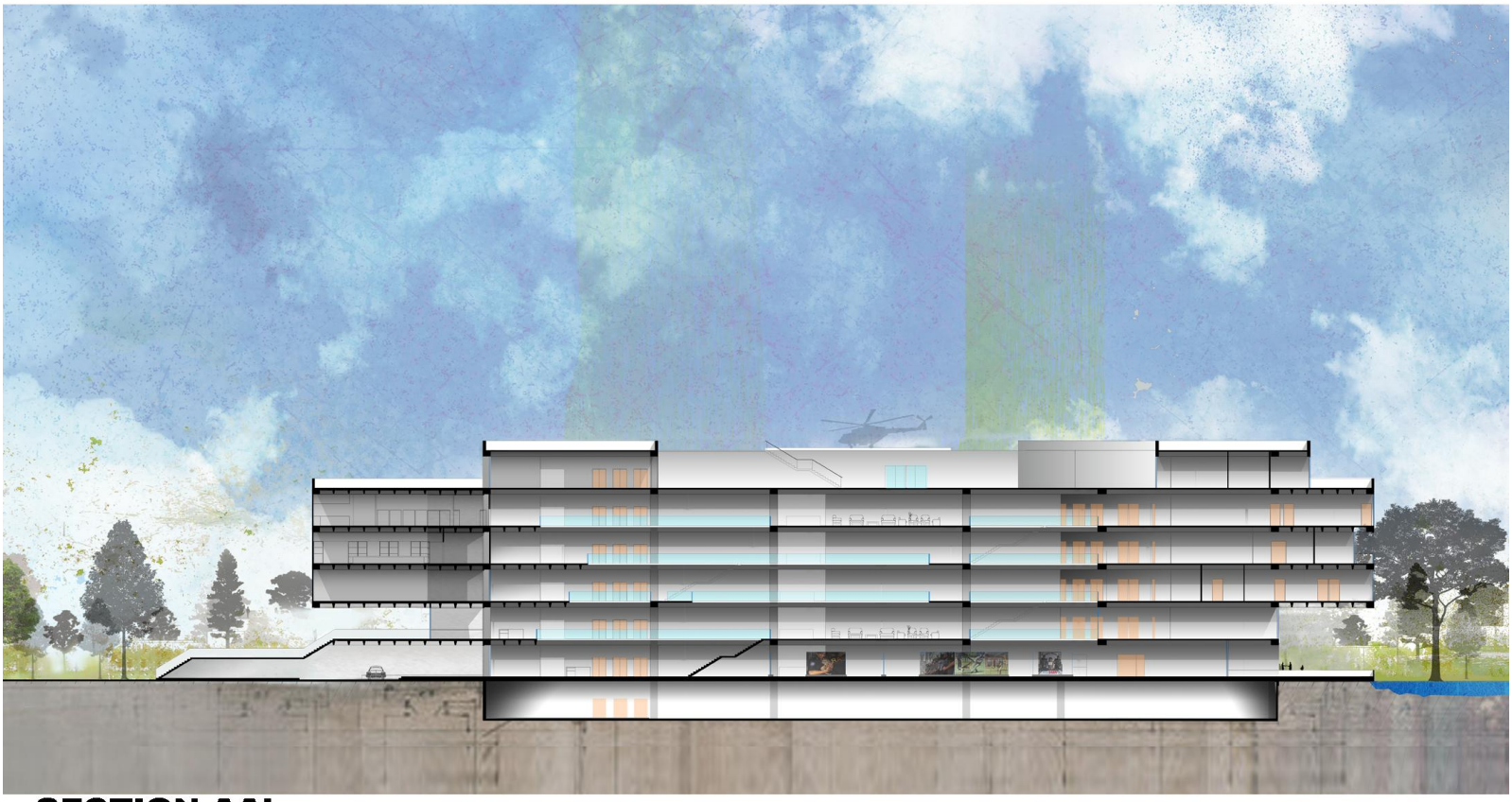
4th floor
Investigation Wing & Forensic Wing
Operations Wing
SCALE : 1/16" = 1'-0"



5th floor
Air Wing & Operations Wing
SCALE : 1/16" = 1'-0"

7.3 Sections

SECTION BB'



SECTION AA'

7.4 Perspective

7.5 Model Pictures

Chapter 8: CONCLUSION

RAB Headquarters should be a place that represents safety and security for the people not fear. The relationship of RAB with the people shouldn't be clouded by stigma and misconceptions.RAB can serve the people in many other ways than just being their guardians of peace dressed in black.

REFFERENCE

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