

KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,  
KUMASI

COLLEGE OF ARCHITECTURE AND PLANNING  
FACULTY OF ARCHITECTURE AND BUILDING TECHNOLOGY  
DEPARTMENT OF ARCHITECTURE,

KNUST

DESIGN THESIS:  
REGIONAL COURT COMPLEX,  
TAMALE.

A DESIGN THESIS REPORT SUBMITTED TO THE DEPARTMENT OF ARCHITECTURE  
OF THE KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY,  
KUMASI, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE  
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August 2009

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## DECLARATION

I hereby declare that this thesis report has been undertaken solely by me and is an original and not a duplicate or plagiarised work. It has resulted from thorough research and logical analysis and synthesis under department staff supervision.



18TH SEPT. 2009

Benedict Owusu-Brown

Date

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I hereby declare that this work is an original research undertaken by my student and has been done under my supervision



18TH SEPT. 2009.

Dr. Victor Kootin-Sanwu

Date

I declare that the student undertook this study under supervision

Prof. G. W. K. Intsiful

Date



## DEDICATION

This design thesis is dedicated to my family for their support and encouragement throughout my educational life.

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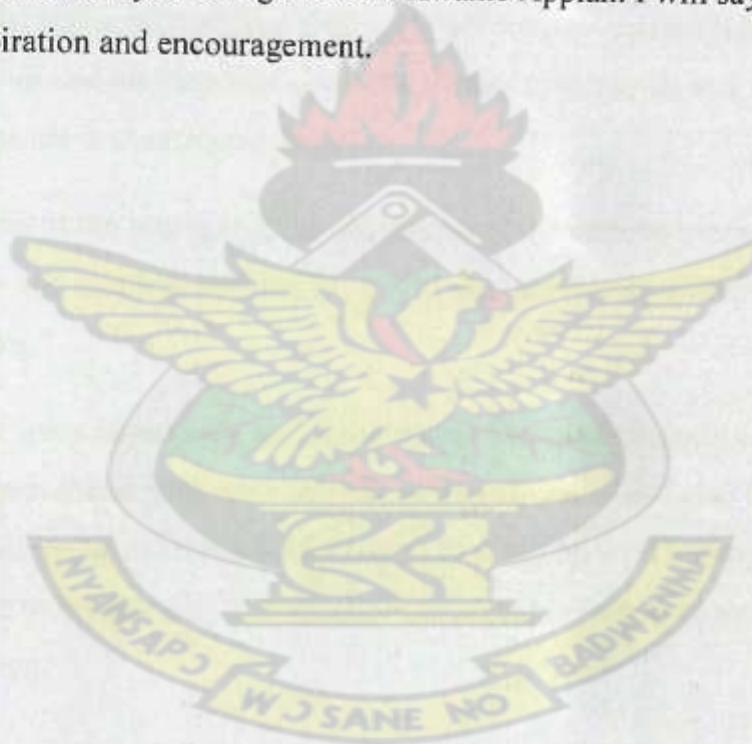
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## ABSTRACT

The building of Regional Court Complexes in the various regions in the country is very essential to the decentralization of the judicial process. This allows the various case types to be adjudicated at the regional level and this in the long run will reduce the backlog of cases at the courts in Accra. A court complex in Tamale is very strategic because of Tamale's location since in the short term, it will help determine cases from the Upper East, Upper West, Northern and the upper portions of the Brong Ahafo Regions which need to go to Accra for adjudication. It will save time and cost.

The objectives of the design will be to come with a court facility which will have facilities like an electronic referencing library, appeal courtrooms, specialized courts like the commercial court and an industrial court and district courtrooms and also meet up with the modern trends in courthouse designs.

The design will look at the segregation of circulation of the various users to ensure maximum security and minimal interaction. It will also provide an edifice people relate to and see as their own.

In order to achieve these objectives, various works of literature on court complexes were studied to fully comprehend what goes into the design of courts and also studies were done on court buildings in and around the country to come up with a design that will be functional, respond to the climate, utilize local and available resources and also aesthetically pleasing.



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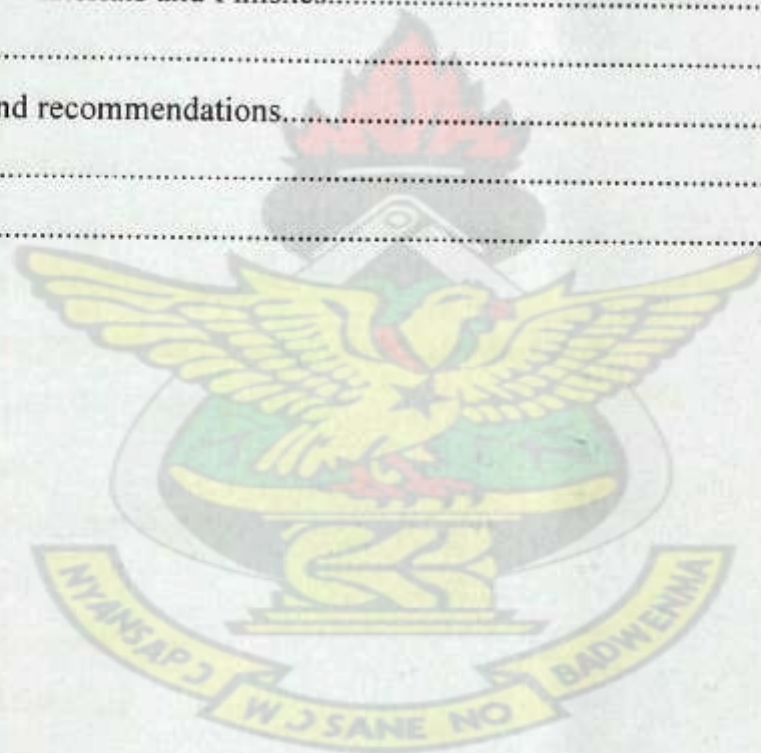


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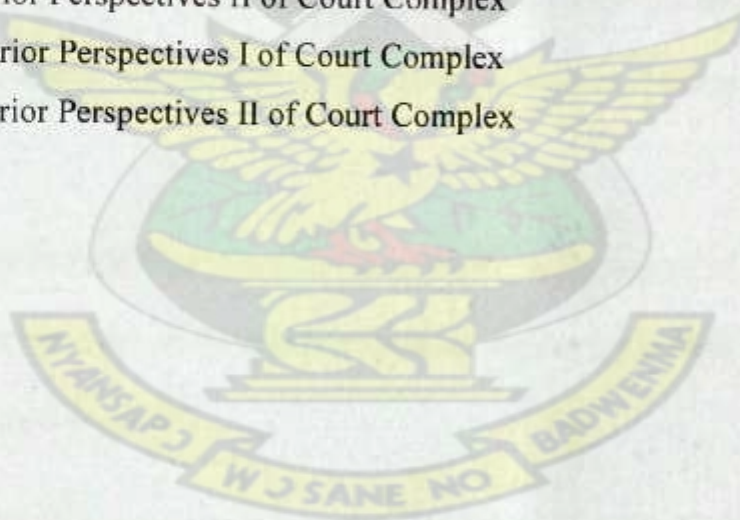
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## CHAPTER ONE

### INTRODUCTION

#### 1.0 OVERVIEW

Courts can be described as the legal system of the government established to administer civil and criminal law. The courthouse is among the most important and symbolic public buildings. It represents the government of the people and the ideas of the Ghanaian system of justice, the rule of law, equal justice and the peaceful resolution of disputes. The courthouse has great significance as a place of public service. It is here that disputes are resolved and justice pursued. It is also here that judges and responsible citizens consider together the difficult questions of guilt, innocence, responsibility and equity. (Utah Judicial System Master Plan for Capital Facilities.)

Courts are also seen as symbols of liberty and the independence, purveyors of justice in the land of the free and also, they are seen as staunch symbols of the people's faith in their ability to govern themselves. (Almaraz, Jr., 2004)

With the government's aim of bringing justice to the Ghanaian, and ensuring fairness, efficiency and effectiveness in the delivery of justice, it has plans of building a five-storey 34-courtroom complex to be sited at Victoriaborg on the 28th February Road in Accra. It has also built a new Regional Court Complex in Adum, Kumasi. The new court complex which is an Appeal Court is houses High Courts, Financial Tribunals, and a Human Rights court for the Commission for



Human Rights and Administrative Justice (CHRAJ) to handle all cases in the Northern Sector of the country.

The proposal for a Regional Court Complex which in this case will house an Appeal Court has become necessary because of the numerous cases the Appeal Court in Accra is burdened with and the pressure it puts on this court. This problem was the main reason why an Appeal Court Complex was built by the government in Adum, Kumasi to absorb the cases emanating from the northern sector of the country.

Do you know that if the number of cases concluded in 2007 by the Appeal Court (145-Civil Cases) is taken as an average for a year, then with the 1,622 pending at the beginning of 2008, it will take the Appeal Court 11.1 years to conclude on all the pending cases assuming there are even no new cases?

Do you also know that if the number of cases concluded in 2007 by the Appeal Court (16-Criminal Cases) is taken as an average for a year, then with the 99 pending at the beginning of 2008, it will take the Appeal Court 6.2 years to conclude on all the pending cases assuming there are even no new cases?

With the subsequent building Court Complex to house an appeal court, it will help to hear most of the court cases and also reduce dramatically the time in administering justice.

The design of the proposed Regional Court Complex will employ all the various design guidelines for the designing of courts to make it functional, utilize local resources available, and modify climate and aesthetically pleasing. The facility will also house 2 district courts, 1 high court (Commercial Court), offices, libraries and conference facilities.



## 1.1 PROBLEM STATEMENT

Though most regions have high courts to hear most of its cases, they lack special courts to hear specific cases and also lack appeal courts to hear appeals emanating from the high courts. For instance, until recently, a lawyer who had his case heard in a high court in Kumasi had to travel to Accra to hear an appeal if an appeal has been made, at the Appeal Court. Also facilities like office complexes, conference facilities are either inadequate or non existent in most Regional Court buildings. For example, there are times when lawyers hold meetings in courtrooms in the Kumasi High Court building.

The problems with inadequate offices was echoed by Ghana's Chief Justice, Justice Georgina Wood when she said "Judges have had to share chambers... it is easy to understand how our best endeavors to administer justice effectively were to some extent hampered by these conditions"(Friday, 31<sup>st</sup> October 2008). This was said at the commissioning of a government of Ghana-funded facility comprising of a Judicial Service administration block and a Land Investment Court complex which will house five land courts to handle the many land cases that are filed on a daily basis in the courts, a human rights court, an industrial (labour) court and two other courts to handle both civil and criminal financial cases in compliance with the Financial Administration Act, 2003, Act 654.

With these inherent problems there is the need to provide a court complex to tackle all these issues to enhance our judicial system in the country.

## 1.2 OBJECTIVES

A Regional Court Complex is being proposed for in Tamale as part of the nation's decentralization policy so as to ensure that the administration of justice is as fast as possible and



also relieve the courts in Accra of the numerous cases from all the regions they have on their hands to handle. The proposals will seek to pursue the following objectives.

1. The design will house courtrooms such as Appeal Courts, Commercial Courts and District Courts.
2. Provide other facilities like an office complex, a conference facility, libraries for workers in the facility and the general public where they can go and have unlimited access to the laws governing Ghanaians.
3. One critical thing the design will also look at is the circulation routes in the building for the people who will use the facility such as the general public, the convicted person or victim, the judge or the attorney who will sit on a case and lastly, workers in the facility.
4. The accesses and exits to the facility. This will take into account the parking places for the various users mentioned above so as to ensure their security.
5. A design that will be welcoming. That is the final design will carry an image of a place where people will be willing to go to receive justice in times of need. A place where people will see as their own and not foreign.

### 1.3 SCOPE

1. Courtrooms
2. Restaurants
3. Parking lots
4. Offices
5. Conference facilities.

## 1.4 TARGET GROUP

The design will target cases from the three northern regions thus, the Upper East Region, Upper West Region and the Northern Region, Brong Ahafo region and some cases from Ashanti Region. The cases will include appeal cases, criminal and civil cases, commercial cases, human rights cases and industrial cases.

## 1.5 PROJECT LOCATION

The project will be located at Tamale for the following reasons;

1. It is a nodal city that serves as convergence zone for the three Northern Regions and also linked directly to the Brong Ahafo Region so its location is strategic in absorbing appeal cases from these regions and even from the Ashanti Region.
2. The judicial service is also considering putting up an appeal court complex in the Northern Region in the near future.
3. The district court in tamale has only one courtroom and one magistrate to handle 756 criminal cases and 385 civil cases pending as at the end of November 2008 and this as told by the magistrate is really slowing the administration of justice.
4. Figures collected from the Regional Police Headquarters in Tamale shows an increase of 31.16% in the number of cases sent from their outfit to the courts from 2006 to 2008. With the increasing numbers of cases being sent to courts, there is also the need to equip the courts with enough infrastructure to match up to this increase.

## 1.6 CLIENT

Government of Ghana



### 1.6.1 CLIENTS INTENTIONS

With the governments plan to decentralize governance, it has built a court complex in Adum, Kumasi to take care of cases from the northern sector whiles the complexes in Accra takes care of cases in the southern sector of Ghana. An interview with the Director of Judicial Reforms, Project Development and Implementation Unit revealed that the Chief Justice has plans of building additional appeal courts before her tenure of office ends to further entrench efficiency, effectiveness and fast delivery of justice in the country with a consideration to the Northern Region.

### 1.7 RESEARCH METHODOLOGY

Information to aid the design will be sought for from

1. Case Studies of existing court facilities
2. The Judicial Service
3. Journals
4. Internet

The information acquired will help come out with the design criteria and standards, the refined brief, technical studies, accommodation schedule, design process and conceptual, sketch design and the services for the facility.

## **CHAPTER TWO**

### **2.0 BACKGROUND INFORMATION AND LITERATURE REVIEW**

#### **2.1.0 BACKGROUND INFORMATION**

##### **2.1.1 HISTORY OF COURTS**

The history of law courts is believed to have its roots in ancient Athens where people born in the highest social class known as the aristocrats were accorded the responsibility of arbitration. In situations of disagreement or argument between individuals or cases where one was offended, harassed or robbed of valuable items by an individual, one could drag the offender to an aristocrat and convince the aristocrat to order the person to be beaten or killed.

During the Athenian democracy, the system changed, now instead of having aristocrats deliberating on cases, there would be juries of people deciding who was guilty and how he or she could be punished. Athenian juries were made up of 500 people and they sat in a long theatre and listened to the accuser lodge a formal complaint by making a speech and then the defendant would then have the opportunity to rebut. The jury then voted on whether the accused person was innocent or guilty. Whoever got more votes won the case. Following that, the accuser and the defendant would make speeches in turns stating what specific punishment they were in favor of and a vote will be conducted by the jury. The punishment that got more votes would be carried out. This system meant that if you had the love of the people or you were very influential you would always go unpunished for crimes committed.



There was therefore the absence of equal justice and disputes could not be settled peacefully. The correction of this flaw led to the involvement of lawyers, judges and paralegals in modern day arbitration and though juries are still used, they are carefully selected and things are done in an orderly manner.

## **2.1.2 HISTORICAL BACKGROUND OF GHANAIAN COURTS**

Ghana's legal system was built on a foundation of received Anglo-Saxon common law, statutory law, and other documents, such as those heralding the legal existence of various military regimes. In addition to this received and imposed law, there is an enduring body of largely unwritten customary usages and practices that still are a contextual feature of the modern legal system of Ghana.

### **2.1.2.1 THE COURT BEFORE INDEPENDENCE**

The Stage was set for active British Administration of Ghana when, in 1859 and 1872, the Dutch transferred all their forts to the British and left Ghana. Ghana became one of the first territories, outside of England, to benefit from the English reforms brought about by the Judicature Acts of 1873-75 Structure of Court system.

Established by the Supreme Court Ordinance (1876) was the Divisional and District Commissioners' courts established as lower tier of Supreme Court. The Supreme Court remained the highest tribunal in Ghana during colonial era and appeals from it were sent to the West African Court of Appeals (WACA).

#### **2.1.2.2 THE COURT AFTER INDEPENDENCE**

There were few changes in court system, until, following first the military coup in 1966, the National Liberation Council (N.L.C) passed a degree to abolish the Supreme Court and vested judicial power in two sets of courts: the Superior Court of Judicature and the interior Courts. The Constitution of the Second Republic created a Supreme Court, Court of Appeals and High Court of Justice (as Superior Courts of Judicature) and same Inferior Courts were created by law.

In 1972, the Supreme Court was again abolished, this time by the National Redemption Council (N.R.C.), the military government that followed that of the Second Republic, reasoning that, with the suspension of the 1969 Constitution, there was no need for a court to interpret and enforce it. The functions of the Supreme Court were transferred to the full Bench of the Court of Appeal. The Supreme Court was re-established under the Third Republican Constitution.

#### **2.1.2.3 THE INFERIOR COURTS**

Circuit courts were introduced in 1960 and have become a permanent rung in the ladder of courts. These, along with the District Courts, make up the Inferior Courts.

#### **2.1.2.4 CONSTITUTION OF 1979**

Preserves pattern of courts established since 1960. Supreme Court re-established and status quo has been maintained since the 1981 military coup, with slight diminution in number of members of the Court. An appeal lies as of right either from the High Court to the Court of Appeal or from the Court of Appeal to the Supreme Court.



### 2.1.2.5 TRIBUNALS

In 1979, a Special Tribunal was created by the Armed Forces Revolutionary Council (A.F.R.C.D) Public Tribunals. In its constitutive document in 1981, the Provisional National Defence Council (P.N.D.C.) continued the courts in existence with the same powers, duties and functions as before, while at the same time establishing independent Public Tribunals.

The purpose of the Tribunals as presently constituted by law, (the original law was amended in 1984) is to achieve social justice, rather than the rule of law. The system provides for tribunals at the national, regional, district and community level and is governed by a Public Tribunal Board. The National Public Tribunal (N.P.T.) has original jurisdiction to hear cases resulting from the report of a Commission of Inquiry, other offenses arising under the Criminal Code, offenses relating to rent control, price control, exchange, government revenue, import or export, and any offense created by the Public Tribunals Law of 1984.

In summary, revolutionary enactments added enormously to the body of laws which relegate the relations between the citizens and the State. Several new offenses against the State have been created, just as public tribunals and other adjudicatory committees have been created to try many of these new offenses.

Currently the High Courts operate in distinct geographical jurisdictions rather than a single court throughout the country with branches in regional capitals. This has resulted in confusion as to where suits are to be filed, and for the opportunity to appeal based on argument that the case was initially filed in the wrong region, and has also resulted in suits being brought in two places.



### 2.1.2.6 THE COURT TODAY

The equality of all persons before the law and their freedom to enforce their rights and liberties in a Court of Law is guaranteed under the Constitution. The independence of the Judiciary from the Executive and the Legislature is entrenched in the Constitution. The Judiciary is the branch of government given authority to interpret, apply and enforce the laws of Ghana.

The Judiciary shall be made up of the Supreme Court, the Court of Appeal, High Court and Regional Tribunals and such Lower Courts and Tribunals as Parliament may establish and shall have the Chief Justice as the Head, who shall be responsible for its administration and supervision. The amendment of the Courts Act (Act 620) 2002 abolishes Community and Circuit Tribunals and re-establishes the Circuit and Magistrate Courts

The Supreme Court is given power as the highest authority to interpret the Constitution and shall have final say in all matters. The High Court shall also have the power to enforce the Fundamental Human Rights and Freedoms under the Constitution. All citizens as guardians of the Constitution have the right and unimpeded access to the Courts to challenge any acts of the President, Parliament or any other body public or private which are inconsistent with the provisions of the Constitution.

The following are by Act 620 established as the lower courts of the country-(a) Circuit Courts; (b) District Courts; (c) Juvenile Courts) the National House of Chiefs, Regional Houses of Chiefs and every Traditional Council, in respect of the jurisdiction of any such House or Council to adjudicate over any cause or matter affecting chieftaincy; and (e) such other lower courts as Parliament may by law establish.



## **2.2 THE JUDICIAL SYSTEM OF GHANA**

The legal framework of the courts in Ghana can be found in the 1992 Constitution and the Courts Act, 1993 (Act 459) as follows:

### **2.2.1 THE SUPREME COURT**

The Supreme Court is the highest court in Ghana with both original and appellate jurisdictions. The Supreme Court has original jurisdiction in all matters relating to the enforcement or interpretation of the Constitution and questions of judicial review, and supervisory jurisdiction over all courts and adjudicating authorities.

Appeals lie to the Supreme Court from the Court of Appeal in any matter which has been initially determined by a High Court or Regional Tribunal in the exercise of their original jurisdiction. Appeals also lie from the Court of Appeal to the Supreme Court and from any court lower than the High Court and Regional Tribunal, where the Court of Appeal is satisfied that the case involves a substantial question of law or is in the public interest. The Supreme Court also has appellate jurisdiction to the exclusion of the Court of Appeal, in treason cases and chieftaincy matters from the National House of Chiefs.

### **2.2.2 THE APPEAL COURT**

The Court of Appeal is an appellate court only and hears appeals, in both civil and criminal matters, from decisions of the High Court, Regional Tribunal and the Circuit Court. The Court of Appeal shall be duly constituted by any three of not less than 10 justices making up justices of the court of appeal. The court of appeal has jurisdiction throughout Ghana to hear and determine,



subject to the provisions of the constitution, appeals from a judgement, a decree or order of the high court and regional tribunal.

### **2.2.3 THE HIGH COURT**

The High Court has original jurisdiction in both civil and criminal matters. The High Court also has jurisdiction to enforce the fundamental human rights and freedoms guaranteed by the Constitution. The High Court has appellate jurisdiction from decisions of a Community Tribunal in civil matters as well as supervisory jurisdiction over all lower courts and any lower adjudicating authority and may in the exercise of that supervisory jurisdiction, issue orders and directions including orders in the nature of *habeas corpus*, *certiorari*, *mandamus*, prohibition and *quo warranto* for the purpose of enforcing or securing the enforcement of its supervisory powers.

### **2.2.4 THE REGIONAL TRIBUNAL**

The Regional Tribunal has concurrent and original jurisdiction with the High Court in all criminal matters. Particularly, it has jurisdiction to handle offences such as Causing loss, damage or injury to state property, illegal importation of explosives, and using public office for profit. It also has jurisdiction in respect of matters arising out of the Customs, Excise and Preventive Services Law, 1993 (PNDCL 330), Internal Revenue Act the Narcotic Drugs Law (PNDCL 236), and any other offence involving serious economic fraud, loss of state funds or property. A Regional Tribunal has appellate jurisdiction to hear appeals from Circuit or Community Tribunals in criminal trials. The Regional Tribunal includes all lower courts like the District court, circuit court, commercial courts and house of chiefs.



### **2.2.5 THE CIRCUIT COURT AND CIRCUIT TRIBUNAL**

The Circuit Court has original jurisdiction in most civil matters but subject to the pecuniary limits specified in the Courts Act. Appeals from the Circuit Court go to the Court of Appeal.

The Circuit Tribunal has no jurisdiction in civil matters. It has original jurisdiction in all criminal matters arising within its specified area of jurisdiction except that it does not have jurisdiction to try the offence of treason or murder, a first-degree felony or an offence punishable by death or by life imprisonment. Appeals from the Circuit Tribunal go to the Regional Tribunal.

### **2.2.6 THE COMMUNITY TRIBUNAL/ DISTRICT COURT**

The Community Tribunal has civil and criminal jurisdiction in specified cases. Appeals from a Community Tribunal in a civil matter go to the High Court while appeals in criminal matters go to the Regional Tribunal.

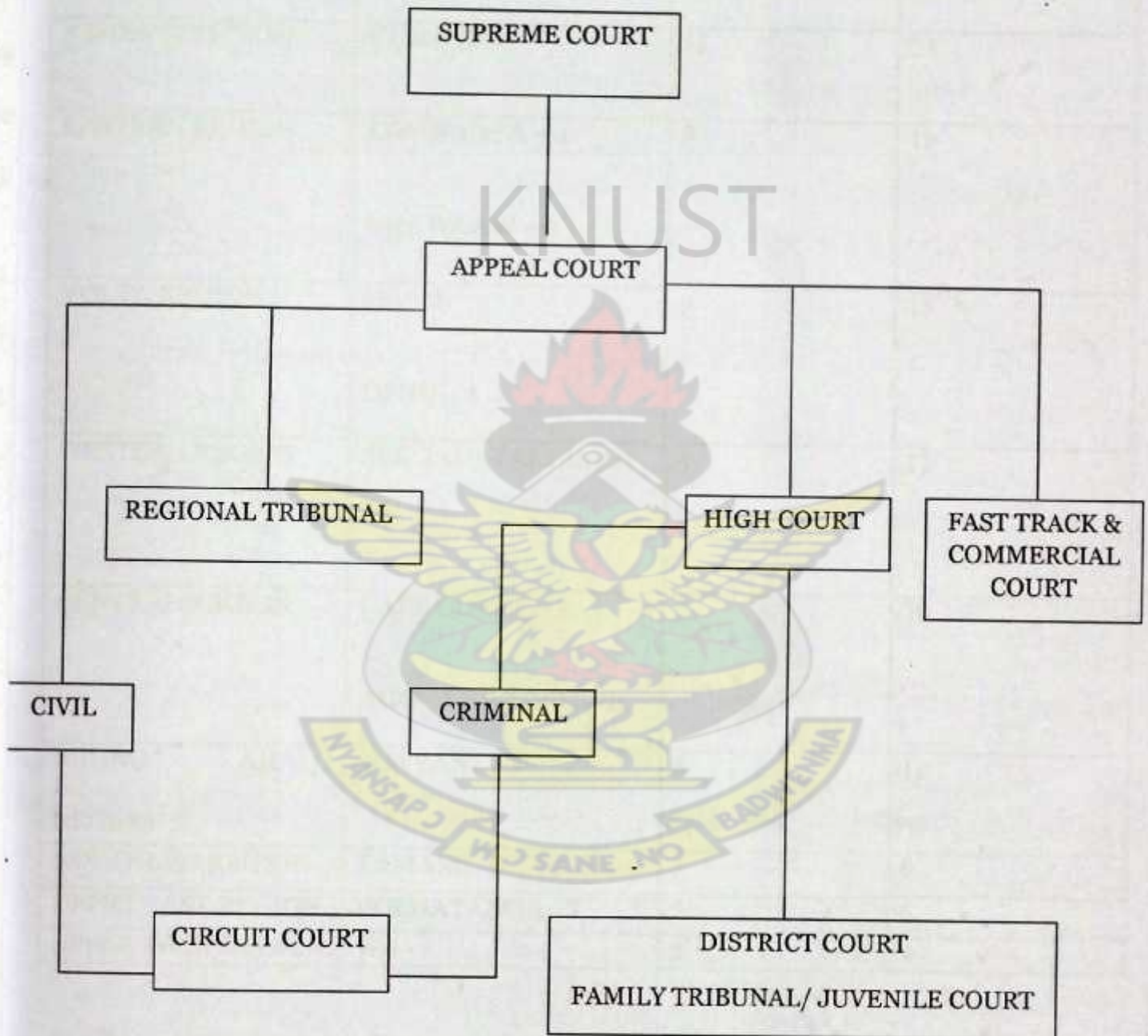
### **2.2.7 THE HOUSE OF CHIEFS AND TRADITIONAL COUNCILS**

The Constitution provides that matters affecting Chieftaincy are to be determined by the National House of Chiefs, the Regional House of Chiefs and the Traditional Councils. These institutions are to settle such disputes in accordance with the appropriate customary law and usage.

The National House of Chiefs is made up of five paramount chiefs from each region of the country. The function of the National House of Chiefs is to advise any person or authority on matters affecting Chieftaincy, codify customary law and undertake an evaluation of traditional customs aimed at eliminating outmoded customs. The National House of Chiefs has appellate jurisdiction in any cause or matter affecting chieftaincy which has been determined by the Regional House of Chiefs. Appeals lie as of right to the Supreme Court in cases decided by the

National House of Chiefs in its original jurisdiction and by leave in cases decided in its appellate jurisdiction.

### 2.2.8 THE COURT STRUCTURE OF GHANA





## 2.2.9 COURTS DISTRIBUTION NATIONWIDE IN GHANA

REGION	HIGH COURTS	CIRCUIT	DISTRICT
GREATER ACCRA	ACCRA – 26	13	14
ASHANTI REGION	KUMASI – 7	13	23
EASTERN REGION	KOFORIDUA – 3 NKAWKAW – 1	9	19
VOLTA REGION	HO – 2 DENU – 1	9	15
WESTERN REGION	SEKONDI-TAKORADI – 5	4	17
CENTRAL REGION	CAPE COAST – 3 AGONA SWEDRU – 1	5	10
BRONG AHAFO REGION	SUNYANI – 3	8	19
NORTHERN REGION	TAMALE - 3	3	9
UPPER EAST REGION	BOLGATANGA - 2	2	6
UPPER WEST REGION	WA - 1	2	4

The Supreme Court is located in Accra and there are also two appeal courts in the country, one in Accra and the other in Adum, Kumasi.

## 2.3 RELATED COURT DESIGN THEORIES

In order to fully comprehend the subject matter, various literatures were reviewed so as to inform the choices and standards which were adopted in this design proposals. The first literature reviewed is the Utah Judicial System Master Plan for Capital Facilities Section II and Key Elements In Courthouse Design, February 2002 by DPK Consulting

### 2.3.1 UTAH JUDICIAL SYSTEM MASTER PLAN FOR CAPITAL FACILITIES SECTION II

According to this literature, planning and designing a Courthouse is a very special process. First, it is special because it is so infrequent. Only occasionally does a community face the necessity or undertake the challenge of providing a Court facility.

Secondly, the planning and design process is special because it has such great community significance. The Courthouse has great significance as a place of public service. It is here that disputes are resolved and justice pursued. It is here that important records are kept and made available for public use.

Thirdly, the courthouse planning and design process is special because it bears unique responsibilities. It must create a building that will be practical and functional, meeting the needs of the Courts and agencies that will be in it. It must create an appropriate image: an image that will reflect the honor of the Court and engender respect for its rulings. It must also be economical, making wise use of limited resources, and not be seen as wasteful or extravagant.



### **2.3.1.1 COURTHOUSE SITTING**

Courthouse siting is an issue of great public importance and should not be made without careful consideration of all relevant issues including the following:

- Ease of public access
- Availability of public transportation and parking
- Proximity to other government buildings and programs
- Relationship to other services such as restaurants, office supplies, libraries, copy centers and attorney offices
- Relationship to civic center
- Impact on surrounding neighborhoods and Prominence of site
- Availability and cost of site, expansion potential and site amenities and the physical constraints of the site and Site use restrictions

Courthouse siting decisions should be made on the basis of a balance of interests rather than on single-issue considerations such as prisoner transport, parking or land cost. Priority consideration should be given to civic center sites and where possible, local governments and citizens should be included in the site selection process.

### **2.3.1.2 COURTHOUSE OCCUPANTS**

Where feasible, Courthouses should include all levels of trial courts including District, Juvenile and Justice Courts. Collocation of Courts will allow economies of scale and will enable the shared use of courtrooms, judges, court administrative personnel, clerk of court staff and security personnel.

Courthouses should include all organizational and functional units falling under the administration of the Courts including Judicial Officers and staff, Court Administration, Clerk of Courts, Guardian ad Litem, Court attached mediation and Juvenile Probation. Courthouses should provide flexible space for the accommodation of Court Program and court annexed initiatives such as those related to Domestic Violence and to Pro se Assistance and Alternative Dispute Resolution (ADR).

### 2.3.1.3 PUBLIC WAITING AREAS

It is important that the traffic patterns of the general public and persons having business before the court not be overlooked. When court is in session, persons will typically congregate in hallways by courtroom entrances while waiting for their cases to be called. These include defendants and their families (often with small children), the private bar, law enforcement officers, witnesses, the press and members of the general public. Most courts provide no waiting space for these persons, forcing them to mill about in congested hallways or compete for limited seating.

The problems of traffic congestion in narrow corridors, the noise this generates, and the debris which accumulates, can be remedied by providing a waiting area off the hallways. Waiting areas provide seating to draw this traffic out of the hallway and into a semi-enclosed area. This arrangement substantially reduces noise by removing it from the hard, reflective surfaces of a corridor and placing persons in a space with acoustically deadened walls, ceilings and furniture.

It is recommended that one public waiting area be provided for every four courtrooms in large jurisdictions. If courtrooms are in clusters of fewer than four and are on different floors, one



waiting area should be paired with each cluster. A single waiting area should be provided for smaller jurisdictions and be in sight of the courtrooms it serves.

#### **2.3.1.4 COURTHOUSE SECURITY**

Courthouse security is essential to the integrity of the judicial process and to the safety of courthouse occupants and users. Except under rare circumstances all courthouses should be planned with a single point of public entry to the facility. The public entry of courthouses should provide for the installation and operation of weapons screening equipment in a way that is as unobtrusive as possible and in a way that promotes efficiency. Extended delays at screening are not acceptable.

Under normal circumstances, public parking should not be located under court buildings for security reasons.

Courthouses should provide separate circulation areas as follows:

- Judges and other court personnel should be able to access courtrooms, chambers, jury deliberation rooms and staff offices without interacting with the public. Separate circulation areas alleviate much of the potential for hostile confrontation.
- While members of the Bar and the public should have access to judges, and court staff, such access should be controlled through checkpoints where visitors can be identified and screened.
- The same principle of separate circulation applies to prisoner movement. Defendants in custody should be transported from their place of confinement to their court destination without passing through any public areas. Separate corridors in a court facility can



achieve this goal. Shared or intersecting staff/prisoner corridors are advisable only with proper security staffing, training and procedures. Once in the courthouse, prisoners should be kept in secure areas, such as group or individual holding cells, until their appearance in the courtroom is required. Such holding areas must comply with all life-safety requirements, have secure space for attorney/client meetings, and should be sound proofed against prisoner disruptions.

- The principle of separate circulation areas can be best expressed in terms of "zones" which are as follows:

*Public Zone* - This includes jury assembly areas, attorney/client conference rooms, public corridors, food service areas, as well as spectator seating in courtrooms and waiting areas.

*Private Zone* - This includes judge's chambers, access to judicial parking areas and the courtroom, jury deliberation rooms, staff offices, copier/work rooms, conference rooms and libraries.

*Prisoner Zone* - The prisoner zone requires a holding area adjacent to the courtroom, attorney/detainee conference areas, prisoner circulation (including a secure sally port) to and from the jail, and security officer support areas.

*Interface Zone* - The principle interface zones are courtrooms. These zones also include those spaces where attorneys and the public meet (e.g. public corridor conference rooms), and space where court staff and the public interact. In general, these zones require access from two different kinds of circulation patterns.

Courtroom Security should incorporate the following features:



- If a security checkpoint is not provided at the building entrance, courtrooms must have a single public entry from a public corridor. This entry vestibule should accommodate a security checkpoint for spectator identification and metal detection.
- Entrance for the judge should be adjacent to the bench. If jurors have a separate entrance, this should be adjacent to the jury box. Prisoner entrances from holding cells should be directly into the courtroom well near the attorney tables or witness box.
- Any other access to the courtroom should be designed to inhibit unauthorized entry or exit. These include maintenance access, windows, and skylights.
- The courtroom design should reflect a clear separation between the spectator area and the well. No spectator should be able to make physical contact with an attorney, defendant or juror from this area. This separation should also be sufficient to permit private conversation between attorneys and their clients.

Parking for judges should be in an area that is secure and protected from public access. Judges should have passage to and from this parking area through a secure entryway directly into the secure or private zone of the building, and accordingly should not pass through public areas for ingress and egress to parking.

### 2.3.1.5 THE COURTROOM

- The design of a courtroom should express the serious nature and function of the court. The courtroom should be dignified and business-like, although attractive and in conformance with the building in which it is housed.
- The physical dimensions of the courtroom should be sufficient to promote the appropriate formality of the proceedings. In order to accommodate state and local codes regarding



proper fire exiting requirements, all courtrooms must have two public entry/exits accessible from a public circulation corridor, each located from the other at least half of the diagonal distance of the courtroom's length. Ceiling heights should be proportional to room dimensions and allow bench elevation. In a standard 1,800/1,600 square foot courtroom the appropriate ceiling height is approximately 12 feet in the well and no less than 10 feet in the spectator area.

- All courtrooms should be adequately lighted, particularly in the well. Lighting should be designed so that the courtroom cannot be completely darkened from access to light switches at public entrances to the courtroom. The judge and court clerk should have access to light switches at their respective entrances to the courtroom.
- Air handling equipment must be silent in the courtrooms. All courtrooms should have individual climate controls.
- All courtrooms should be designed to accommodate installation of equipment for audio and/or audio/video recording of court proceedings.
- Courtrooms in multi-story buildings should be located on upper floors, which can provide quieter and more secure space. Courts, which generate a high volume of fines or probation traffic, should have necessary support offices nearby.

#### **2.3.1.6 THE JUDGES BENCH**

- The judge's bench should be the focal point of the courtroom. It should be designed and constructed to impart an appropriate sense of authority and dignity to the judicial office. The judge should have an unobstructed view of the witness, jury and Counsel. The bench should be situated either in a corner orientation or centered at one end of the courtroom as



has been traditional in many courts. The corner orientation will, particularly in smaller courtrooms, utilize available space more efficiently than centered benches.

- The height of the bench should be at least three risers, (18 to 21 inches is standard for 1,800 and 1,600 square foot courtrooms) or at a level so the judge's line of sight is not obstructed.
- The front of the bench may be surrounded by a chest-high shelf approximately 12" in width. This will allow attorneys to refer to files and documents during a bench conference and will prevent attorneys from resting their arms and elbows on the top of the bench.

#### **2.3.1.7 JUDGE'S CHAMBERS**

- Judge's chambers must be conducive to efficient work practices. This includes the reception of visitors, legal research, in-chamber hearings and conferences, and private telephone conversations. This office should be spacious to accommodate a small conference area, shelving for legal texts, filing, an appropriate desk area, a robing closet, and toilet facilities.
- The location of the chambers should be adjacent to or near the courtroom. All judges' chambers should have extra sound insulation. If the chambers enter directly from the courtroom, the door and adjoining wall should be sound insulated. If on a corridor, the area should not be directly accessible by the public, but be convenient to clerks, secretaries, law clerks and court attaches'. If possible, the chambers should have some natural lighting, but not so that the chambers can be directly viewed from the building's exterior.



### 2.3.1.8 JURY DELIBERATION ROOMS

- Jury deliberation rooms should be near the courtroom in a private or semi-private area. The rooms should be soundproofed to prevent people in adjacent areas from hearing the deliberations. This is particularly true when the room's walls are adjacent to a courtroom or a public area.
- A vestibule area with two restroom facilities should be provided, designed for men and women. A drinking fountain is recommended for the vestibule area.
- A telephone must not be provided, but a telephone jack and electrical outlets should be installed. This permits flexible use of the room during the frequent periods that juries are not using it.

### 2.3.1.9 SPECTATOR SEATING

- As a general rule, trials must be open and public. Persons, who wish to view trials and hearings, whether they are press or ordinary citizens, have a right to both see and hear the proceedings. Seating for spectators, in particular notorious criminal trials usually overwhelms even the largest courtrooms. Generally, the size of juror empanelment should determine the minimum number of spectator seats in a standard courtroom.
- Multi-courtroom facilities should consider the feasibility of one large or "ceremonial" courtroom to accommodate unusual spectator demand. This courtroom can also be designed for high security trials and be equipped with audio-visual and news media features not normally required for most trials.
- Seating may either be bench type or theater type. Moveable or stacking chairs rarely contribute to a sense of decorum or order in the courtroom. Usually bench seating with



comfortable padding is preferred over theater seats because benches can accommodate "more people per foot".

- The seating must conform to tall building code regulations and allow for disabled movement to the well. The front row of seats should be distanced somewhat from the rail for sound and physical separation.
- Public entry to the courtroom should be through a vestibule for noise control and security. The inner set of doors should have sufficient glass panels to permit visual identification of courtroom activities and participants without physical intrusion into the courtroom.

#### **2.3.1.10 VICTIM/WITNESS AREA**

- With the advent of victim's rights movements nationwide, there is now general consensus in the criminal justice system that victims of violent crime and witnesses in criminal trials deserve sensitive and compassionate treatment. One of the most traumatic aspects of court process for victims and witnesses are the numerous and prolonged appearances necessary in many cases. These proceedings normally require that all parties appear at the courthouse at the same time and congregate in the same public areas. This often results in victims having to physically associate with their alleged assailants and the defendant's family. The intermingling of defendants and witnesses for the prosecution always has the potential for intimidation and conflict. The opportunity for a mistrial due to improper communication is also increased.
- In view of the recognized rights of victims and witnesses to be shielded from further intimidation and trauma, it is recommended that victim/witness areas be provided for their use while awaiting trial. These can be multi-functional rooms that can accommodate



both victim/witness waiting and attorney-client conferences. These areas should provide sight and sound separation from public waiting areas and should be able to accommodate attorney/client conferencing functions. These areas should be adjacent to the courtrooms or in a non-public zone such as on a judicial staff corridor.

- It is recommended that individual victim/witness areas be a minimum of 120 net square feet and larger for group and long-term waiting. The areas should be comfortably and attractively furnished with access to nearby restroom facilities and drinking water.

#### **2.3.1.11 PRISONER DETENTION FACILITIES**

- Each facility should provide a secure vehicular sally port for prisoner delivery with immediate and secure access to a centralized detention holding/staging area to accommodate prisoners in transit to and from courtrooms. This area will connect by a secure route to small clusters of holding cells located between pairs of courtrooms from which there will be direct entrance into the courtrooms.
- Each holding cell should have a combined toilet-wash basin and a shelf secured table and chair for writing and study. All fixtures shall be tamper-proof. All cells shall contain floor drains.
- The ceilings and walls should have smooth surfaces that can be cleaned and disinfected easily.
- All cell doors should have a glass panel installed so that prisoners may be viewed by security personnel. Ideally, multiple holding cells should have adequate sound separation to prevent inter-cell communication between prisoners.
- Access to the holding cells should be convenient to attorneys and should not require travel through the well of the courtroom. The cells should be as close as possible to the



courtroom, and the entire area must be soundproofed so that sound from the holding cell is not transmitted to the courtroom. If separate interview space is provided this must be within the secure envelope of the holding area.

- Juvenile holding must be sight and sound separate from adult holding.

#### **2.3.1.12 WITNESS BOX**

- The witness box should be placed between the jury and the judge. The box should be elevated one or two risers and be in clear view of the judge, jury, attorneys' tables and spectators. The box should be enclosed on two or three sides depending upon whether the entrance is from the side or rear. A desk area should be provided for the witness and a shelf should extend from the front of the box for attorneys to rest files or evidence and to ensure an adequate non-encroachment distance. The width of the box should be at least three feet and the height should shield the witness only from the waist down so that all non-verbal gestures can be easily viewed.
- The witness box should be stationed no closer than four to five feet from the jury box, so that the nearest juror is seven to eight feet away from the seated witness, to lessen any feelings of intimidation jurors may have due to their proximity to a criminal defendant or other witness.

#### 2.3.1.13 JURY BOX

- The first row of juror seating should be elevated one riser and the second row at two risers.
- The jury box should be situated so that the attorneys' tables, witness box, judge and audio-visual area are in full view. The jurors themselves should be in view of the court as well as the spectators to ensure the perception of an open and public trial. However, the jury box should be sufficiently distanced from the spectator area to inhibit any physical or verbal contact. Seven feet from the center of the first juror's chair to the rail is adequate. This leaves an additional 2-3 feet from the edge of the rail to the center of the nearest spectator's seat.
- The standard jury box should accommodate 14 jurors so as to provide maximum flexibility for present and future trial courts. Space should also be provided for a disabled juror. The disabled Juror space can occupy one of the 14 required seats. Seating placement can vary, but a two-tiered configuration with the front row on one riser and the back on two risers is preferred. In any configuration, however, the jury box should not extend past either the witness box or the attorney's tables. This affords at least a 90-degree view of all participants

#### 2.3.1.14 BAILIFF

- The bailiff is principally responsible for maintaining order. The bailiff typically escorts witnesses to and from the witness box, escorts jurors to and from the jury box, handles heavy or hazardous evidence, and announces the entry of the judge. As such, the bailiff



has multiple stations in the courtroom depending upon the type of proceedings at any given moment. The jury box entrance should provide space when defendants in custody are testifying. In non-jury trials where defendant security is a concern, the bailiff should be stationed between the clerk of court and the spectator rail

#### **2.3.1.15 ATTORNEY'S TABLE**

- Attorney tables and their placement should facilitate attorneys' in-courtroom work and movement throughout the well. The tables' positioning should insure that litigants are in full view of the judge, court reporter and jury. The tables' distance from each other, the spectators, and the jury should be such that private conversations cannot be overheard. This usually requires at least five feet between tables and eight feet from the nearest juror or spectator.
- The tables should be at least six feet in length and eight feet if multiple litigants or attorneys are common. The well should accommodate a third table in all juvenile courts and in cases which involve Guardians ad Litem and unusually large numbers of attorneys and litigants.
- The distance between the back of the table's chairs and the spectator's railing should be sufficient to comfortably accommodate a row of chairs along the railing for staff, paralegals, etc. The space at each end of the tables should permit easy movement to and from the tables.

### **2.3.2 KEY ELEMENTS IN MODERN COURTHOUSE DESIGN, FEBRUARY 2002 BY DPK CONSULTING**

Outlined below are some of the key elements in modern courthouse design that have been introduced in courthouses in order to better serve the clients of the courthouse.

#### **2.3.2.1 DOCUMENT RECEPTION DESK**

Lawyers and members of the public deliver legal documents to the reception desk at the entrance to the courthouse. These documents are officially received, and delivered by messenger to the appropriate court. This system minimizes the time required to deliver papers to the court and reduces people traffic throughout the courthouse.

#### **2.3.2.2 AUTOMATED CASE TRACKING**

Modern courthouses have an integrated, automated case tracking systems. After case documents are received at the Document Reception Desk, they are passed to the Document Entry Desk.

Document Entry Clerks then enter the case information into an automated case tracking system by case number and document type. Case histories are immediately updated to include these new documents. Once a document is entered, it is delivered to the appropriate court. Clerks in the judicial area enter any orders or sentences issued by the judge so that case histories are kept current for both documents received from the parties and decisions and actions taken by the judge. Some courts have also adopted systems that enable lawyers to connect with the case tracking system electronically from their offices to find out the status of cases.



### **2.3.2.3 PUBLIC INFORMATION BOOTH**

A key element to modern courthouse design is the location of an information booth at the public entrance to the court where trained personnel are available to provide information to the users of the court. This service greatly minimizes the number of non-case specific inquiries received by court professional staff and maximizes the professional staff's time to address court proceedings.

### **2.3.2.4 PUBLIC COMPUTERS TO CHECK CASE STATUS**

Once an automated case tracking system is installed, members of the public can check the status of a case on computers located in the public entrance area of the courthouse. These computers mitigate requests for case files at the public counters, improving efficiency in the courthouse. Many courts also have developed systems that allow attorneys and the public to access case information via the Internet.

### **2.3.2.5 ATTORNEY MAIL BOXES**

The first floor public area of many courthouses has mailboxes for registered attorneys so official notices can be delivered to them within the courthouse. There are other systems of notification that have been adopted to minimize the problems of non-appearance for hearings such as allowing for notification via fax, and using e-mail for the same purpose.

### **2.3.3.6 MODERNIZED SERVICE DESK**

Each type of court, e.g., civil, criminal, family, labor, has an individual service counter to address the needs of the public. Public counter clerical staff often employs modern computerized system and case tracking systems to provide the public with up to date case information. At these

counters, the public can inquire about their case status; receive support payments in the case of family law matters, and make other miscellaneous inquiries. Each court should have a numbered waiting system and a seating area so that the public can have their matters attended to in a relaxed, private, and professional manner.

#### **2.3.2.7 MODERNIZED JUDICIAL CHAMBERS**

The judges' chambers should be on the upper floors of the courthouse, separated from the clerical and record keeping areas. The chambers should be grouped so that judges considering the same material are in a common area. The public cannot get to the judicial chambers floor without a prior appointment, removing the judge from unscheduled and unnecessary contact with the public.

#### **2.3.2.8 TRIAL COURTROOMS**

Modern trial courtrooms are located on a separate floor and have three different entrances: for judges, the general public, and prisoners. Judges access the courtrooms via a secure judicial circulation area; the public enters the courtrooms via a public corridor; and prisoners enter through a separate secure corridor from the holding cells, which are in the basement of the building. The courtrooms have elevated seating, allowing the public a better view of the proceedings.



## **CHAPTER THREE**

### **3.0 RESEARCH METHODOLOGY**

#### **3.0 INTRODUCTION**

Various research methods were employed for the collection the data to aid in this research. These methods can be broadly grouped into two sources 1.Primary sources and 2. Secondary sources. This chapter elaborates on the data or information collection methods as well as the limitations and constraints faced.

#### **3.1 PRIMARY SOURCES**

The primary sources of information comprise of photographs, visual observations, measured drawings, interviewing through interactions and precedent studies or case studies on existing court facilities.

##### **3.1.0 Photographs**

Pictures were taken of existing court facilities as one of the means of documentation. This was done mainly to buttress some of the findings made and also bring into the limelight the realities of the findings. All the court facilities visited like the Appeal Court in Kumasi, the Kumasi High Court and the Tamale High Court had photographs taken of them.

##### **3.1.1 Visual Observations**

Visual observations were basically the personal observations I made during my visits to the court facilities in the course of the study. My initial observations started with a reconnaissance survey before doing a critical observation in and around the facilities. Exterior observations included a

study of all the accesses and exits to the site, parking and the circulation patterns of the users of the facility from where they park to where they enter the facility.

Interior observations included the circulation zones and how they are interlinked to ensure that the users are safe and secure.

### **3.1.2 Measured drawings**

A measured drawing was done on the Tamale High Court building because the original drawings were unavailable. This was also done to have a rough idea of the spatial requirements for such facilities. The drawings for the other facilities were obtained to aid in the study.

### **3.1.3 Case studies**

The case study is a much elaborate study on both local and foreign court buildings. Local court buildings were studied because the design of every building should respond to the local climate and also to the special needs of the people. This helped to draw conclusions on design decisions to be employed in handling the scheme. The local court buildings studied were the Kumasi High Court building, Tamale High Court building and The Kumasi Appeal Court Complex. Foreign court buildings were also studied to enable the author know new and modern trends in courthouse design so the designs of local courthouse buildings will be at par with new trends. The Birmingham Magistrate Court building was therefore studied. The visual observations, sketches and photographs were taken at this stage of the study.

### **3.2.0 SECONDARY SOURCES**

The secondary sources of information include information from the library, journals and also from internet searches.



### **3.2.1 Library**

A lot of information for the research was obtained from the library. The pieces of information were obtained from both published and unpublished articles on the topic under research. Though most of the information was not directly related to the topic under research, useful information was extracted. For example, most of the documents were about how many countries and states in the United States of America were treating their court buildings and how they employing standards to guide the construction of new court buildings. These standards are to be adhered to by any architect who will be contracted to design any new court building. These standards were studied to inform this study.

### **3.2.2 Journals**

Journals in the form of periodic publications by the Judicial Service of Ghana were also looked into. They aided in getting information on the plans of the judicial service, information on the number of cases pending at the various courts in the country, the distribution of courts in the country and the court structure of Ghana. The information gotten formed the premise of most of conclusions drawn during the research.

### **3.2.3 Internet**

The World Wide Web was used on many occasions to get lots of information especially with those information which were not available locally. For instance, it help in my study of the Birmingham Magistrate court and also helped in getting information on the both the security and design standards of most of the courts around the world.

### 3.3 LIMITATIONS

This research work was not devoid of limitations. Some information about Ghanaian courts and their standards were not readily available such that information on other courts in other parts of the world had to be depended on and well analyzed in order to extract the salient parts to aid the research work. This proved to be a flaw in the build up to this research work.

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### 3.4 CASE STUDIES

There are lots of courthouses and complexes which have been built in and around the country and a few have been chosen and studied as the basis for the proposed design. The study was primarily conducted to bring out the strengths and weaknesses in the designs of the facilities studied. The strengths will be adopted in the proposed design and the flaws in the case studies corrected and not repeated. Special studies were also done to know standards to be adhered to in designing spaces in court facilities.

#### 3.4.1 APPEAL COURT COMPLEX, KUMASI

##### 3.4.1.2 Location:

The appeal court complex is located at Adum, Kumasi in the Ashanti Region of Ghana. It is located in the civic area where most of the departments of the government are located. The building has a plane façade with lots of glazing and this takes away the feeling of a court building.



Fig. 1 Appeal court complex, Kumasi.

#### 3.4.1.3 Client's intentions:

The appeal court was built in Kumasi because the government and the judicial service wants to make justice accessible to all and also cut short the distances people would have to travel from every part of the country to Accra. It is suppose to serve the northern sector of the country.

#### 3.4.1.4 Number of courtrooms:

The appeal court complex houses 2 Courts of Appeal, 1 Human Rights Court, 1 Industrial (labour), 2 Land Courts and 2 Commercial Courts.

#### 3.4.1.5 Main Spatial features

Courtrooms

Alternate dispute resolution rooms

Judges chambers

Offices

Conference rooms

Library

#### 3.4.1.6 Architecture and Planning

- The architectural style of the design is more of the modern style than the classical and neo-classical styles courthouses are usually associated with.
- The structural system used is that of the post and beam.
- The columns used at the entrance makes the entrance very conspicuous and imposing



#### 3.4.1.7 Spatial configuration

There are three main entrances to the facility. The judges have their own entrance, the staffs also have an entrance and there is also one for lawyers. The segregation of entrances was done to ensure minimum interaction between the judges and the other users of the facility.



Fig. 2 Sub-basement Plan

There are also separate parking spaces for these users. The sub-basement of the facility has a parking space for the judges from where they have a staircase and a lift which takes them to the floors on which their chambers are located. The sub-basement also houses a canteen, an ICT room and a sanitary area to serve that floor.



Fig. 3 Upper Ground Floor Plan

The ground floor has the reception and waiting area, offices for the staffs, the registry, the dockets and archives room. Five judges' chambers are also housed on this floor. The main accesses to the ground floor are through the judges' entry, staffs entry, visitors' entry which leads to the courtrooms and the main entrance to the reception.







Fig. 4 First Floor Plan

The first floor also houses five judges' chambers, a judge's common room, a judges meeting room, a conference hall, Appeal Court 1 and High Court 1. A lobby has created between the high court and the stair area to absorb the large number of people who come to the high court.

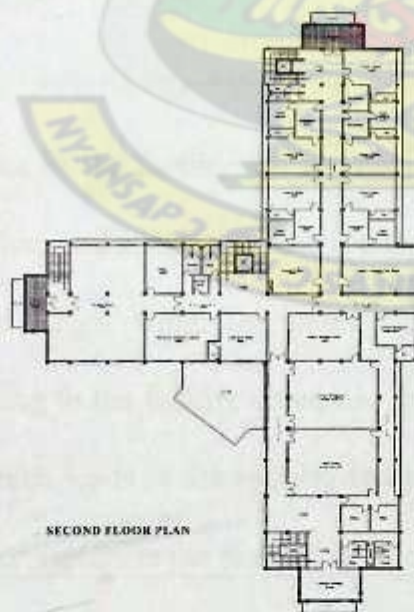


Fig. 5 Second Floor Plan

The second floor's spatial configuration which does not vary much from the first floor has a library, Appeal Court 2 and High Court 2, a lawyer's robbing room and five judges' chambers.



Fig. 6 Third Floor Plan

Finally, the last floor has another conference room, an Appeal and High courtrooms, offices and judges chambers.

#### 3.4.1.8 Circulation

The circulation patterns in the facility are segregated. The judges have their wing where they have their own lift system and a stair they use if the electricity should fail. Visitors and staff have restricted access to the judges' wing. The staffs also have their wing and a different entry point they use. Visitors coming to the facility either use the main entry which leads to the reception or another entry point which leads to the registry from where there is a stair which takes them the courtroom. The corridor system is the main circulation system used in the building.



### 3.4.1.9 Services

No institution can operate successfully without services like water, energy and mechanical systems. The facility has electricity supply and this is supplemented by a stand-by generator for use during power outages. Water supply to the facility is from the mains but there is also an underground water storage system to supplement water used in the facility. Sewerage and plumbing systems have been installed so also are fire alarm systems.

### 3.4.1.10 Security

Close circuit television cameras have been installed in most of the spaces to monitor the various activities which take place in the building. The monitoring of these cameras is done from the security room.

### 3.4.1.11 Merits

- The different entrances and exits have helped segregate movements around the facility.
- The segregation of parking for the various users of the facility also ensures minimal interaction between the users of the facility.
- Every space in the building has close circuit television cameras to monitor all the activities in the various rooms.
- The separate circulation patterns in the facility also have helped in achieving segregation.
- Fire alarm systems, fire extinguishers and fire extinguishing holes have been located at vantage points to aid fire fighting in the facility.
- There are separate entrances for the judges and the victims being brought for trial

#### **3.4.1.12 Demerits**

- Security systems are not full proof
- The facility lacks sun-shading devices
- There are no parking spaces for visitors.

#### **3.4.1.13 Conclusion**

Segregation in the design of courthouses is very essential for the judicial process and this was looked at critically in the design of the Appeal court building. From the study, segregation can be achieved by looking at where people who use the facility access and exits the building, where they park and the circulation patterns in the facility.

### **3.4.2 TAMALE HIGH COURT**

#### **3.4.2.1 Location**

The Tamale High Court is located at Tamale near the Lands Commission, Labour Department and the Regional Police Headquarters. This is within the civic centre of Tamale. The use of vertical shading devices and honey-comb walls has aided in enhancing the façade of the building.

#### **3.4.2.2 Reasons for Study**

The Tamale court building was studied because first of all that particular site is being chosen for the location of the proposed Regional Court Complex. The study was aimed at looking at the kind of architecture since it is supposed to be quite different from the architecture of southern



Ghana. This comprises of the wall thickness, shading, orientation and the materials for construction.

### 3.4.2.3 Main Spatial Features

2 High Courtrooms

Transcription Room

1 Regional Tribunal

HFC Outlet

1 Circuit Court

Bailiffs Office

Regional Registrars Office

Circuit Court Registrars Office

High Court Registrars Office

General Office Spaces

### 3.4.2.3 Architecture and Planning

The design of the building is more modernism than the usual classical and the neo-classical styles adopted by most court building. The use of vertical fins on the façade of the building is to help shade the facility due to the adverse climatic conditions. This is also complimented on other facades by honey-comb walls. The thickness for some of walls is 300mm because of the high day temperatures. This is to ensure heat transfer between the interior and exterior walls is slowed down considerably during the day.

The use of stack effect in the courtrooms is applaudable because the numbers which come to listen to court proceedings. This aids in the removal of stale air from the space.

The roof has been raised to create a buffer space between the roofing material and the ceiling.

This to a larger extent helps to cool the spaces.



Fig. 7 View of the Facility

#### 3.4.2.4 Spatial Configuration

Circulation in and around the facility is not segregated as in most of the court buildings. The main circulation system used in the facility is the verandah type.



Fig. 8 Ground Floor Plan



The ground floor plan houses most of the offices for the administration of the facility. The cells for the criminals are also located on the ground floor with stairs linking them to the courtrooms. Unfortunately, one of the cells has been converted into stores due to inadequate spaces. Some of the administrative spaces on the ground floor include the strong room for exhibits, the office of the regional registrar, the transcription room, computer room, the general office, the HFC Bank outlet, the office of high court registrar, bailiffs' office, circuit court registrars' office and the general office for the workers.

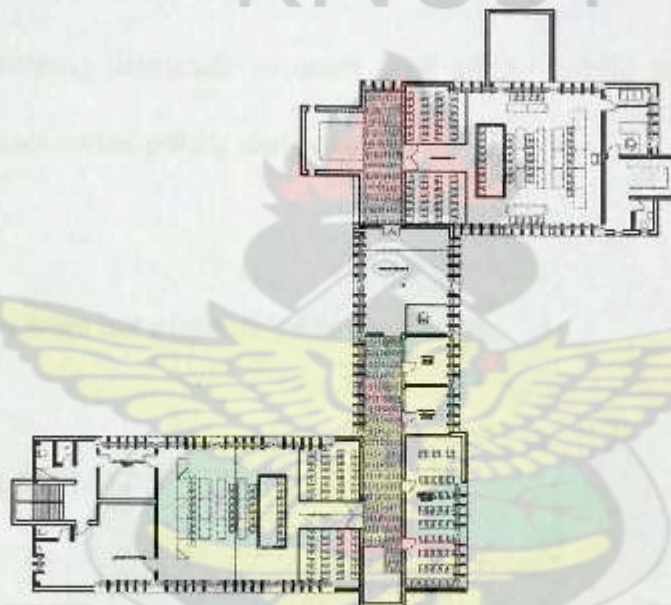


Fig.9 Second Floor Plan

The upper floor houses the 2 courtrooms, the regional tribunal and circuit courtrooms, the 2 judges' chambers. The judges have direct access from their chambers to the courtrooms without interaction with the public and the staff.

- Lack of a waiting area in the facility leading to people using the veranda
- There is also no conference facility and lawyers robbing room in the building
- The inadequacy in storage spaces has led to the use of cells and stair areas for storage areas.
- Judges of the regional tribunal and circuit court access their courtrooms through public corridors.
- Lack of segregated parking facilities for judges which makes judges liable to attacks.
- Lack of parking for motor cycles.
- Vehicles bringing criminals to court park at the public parking area which poses security threats to the public and criminal.

#### **3.4.2.9 Conclusion**

Security and circulation were not planned for in the design.

### **3.4.3 KUMASI HIGH COURT**

#### **3.4.3.1 Location**

The Kumasi High Court building is located in the civic area of Adum opposite the Bank of Ghana building. It is also close by the military museum. The façade is a simple one with the dominant element being vertical fins tilted at 45 degrees to aid in sun-shading.





Fig 10 Kumasi High Court

#### 3.4.3.2 Reasons for study

A case study was conducted on the Kumasi high court building to take up some important aspects of the design which will be adopted and some flaws of the design which will be solved in my design. One aspect of the strengths is how two of the judges' car parks have been located in relation to their chambers'. Secondly the proposed court complex is going to house two high courtrooms so the study was conducted to study the high courtroom spaces.

#### 3.4.3.3 The Main Spatial Features

6 High Courtrooms

Regional Registrars Office

2 Circuit Courtrooms

High Court Registrar

Exhibit room

Bailiffs Office

Witness quarantines

General Office

HFC Bank Outlet

Internal Audit Offices

Typing pool

Dockets and Archives Office

#### **3.4.3.4 Architecture and Planning**

The architectural style adopted for the design of the building is that of the modern style. The building has a welcoming edifice which does not come with any intimidation. The orientation of the facility necessitated the adoption of vertical fins rotated 45 degrees on plan to help cut out solar ingress. Natural lighting is efficiently utilized by the use of long strips of openings and this similar to the one in the Tamale High Court building. Some of the courtrooms have awing windows which makes it possible to see what is going on in the courtrooms which creates a feeling of transparency.

#### **3.4.3.5 Spatial configuration**

The building goes up on floor. The ground floor of the facility has the main reception area where people seek for information and directions. The administrative offices are all located at the ground floor. The judges also have their parking on the ground floor. Two of these judges car parks are located directly under their chambers which helps segregate them from the public. Two of courtrooms are located on the ground floor while the other four are located on the upper floor.

The first floor houses four of the six high courtrooms which has their floor to ceiling height of about 4.2 metres with supporting facilities like witness quarantine, cells which are located below the courtrooms and the judges chambers'.



#### 3.4.3.6 Circulation

There are three main accesses into the facility and two exits. Two of the entrances are used by the judges and one by the public. Signage is poor in the facility. The public parking is separate from the judges parking but the same as the staff parking. High courts 1 and 2 have the judges parking under the judges' chamber so they access their chambers from their car parks. The other judges have to walk in the open before they can access their chambers. All the judges access the courtrooms either through restricted corridors or directly from their chambers. The public also have a different access to the courtrooms and this enhances total segregation.

#### 3.4.3.7 Engineering Services

The air conditioning system used in the facility is the split system. There are no overhead or underground water tanks to help in water storage and this has led the sanitary areas into deplorable states. There are also no stand-by generators to be relied on if electricity from ECG fails.

#### 3.4.3.8 Merits

- There are three main entries and exits to the site. Two out of the three are used by judges because of the location of their courtrooms and the other one used by visitors and staff
- Two of the judges car parks have direct access to a staircase which leads them to their chambers
- Quarantine rooms have been attached to the courtrooms where witnesses are kept before they are called upon to testify thereby preventing them to hear what happens in the courtroom

- Courtrooms are well lit due to the long strips of openings and awnings used and this also aids in ventilation.



Fig. 11 Picture of awning windows for the courtrooms

- Some judges enter courtrooms directly from their chambers and others too through restricted corridors therefore there is minimum or no interaction with the public
- Fins have been used on most parts of the building to help shade the openings
- The design of stair areas makes them well lit and ventilated while their locations makes them visible
- Raised floors in courtrooms enhances clear line of sight

#### 3.4.3.9 Demerits

- There is poor demarcation of restricted areas.



- Adequate parking spaces for judges were not planned for to take care of additional judges.
- Lack of adequate parking spaces for visitors and staff.
- Lack of waiting areas for the public.
- Path for criminals is not well segregated from that of visitors.
- Lack of adequate storage facilities.
- The facility lacks conference facilities
- The design is not disable friendly

#### 3.4.3.10 Conclusion

From the study, it was noticed that some of the courtrooms were not considered at the initial stages of the design making it difficult to place the judges parking close to their chambers thereby posing security threats to the judges. There are also no security post at the entrances and exits to the facility so the people entering the facility are not checked and controlled. Aside all these flaws, circulation in the facility is fairly good.

#### 3.4.4. BIRMINGHAM MAGISTRATE COURT

##### 3.4.4.1 Location

The Birmingham magistrate court is located in Birmingham in England. The Birmingham Magistrate Court is designed in the style of post-modernism unlike most of the courthouses around. The building is closed in a single rectilinear silver metal gown from the ground floor to the roof.



Fig 12 Picture of Birmingham Magistrate Court

#### 3.4.4.2 Reason for Study

Courts in and around the world have some similarities when it comes to circulation and matters pertaining to security. The form and façade also adopted for courthouses should also come with some characters so the Birmingham magistrate court was studied so that important elements on and in the facility will be studied and employed in the proposed courthouse.

#### 3.4.4.3 The Main Spatial Features

24 Courtrooms and facilities for

Judges

Legal Professionals

Judicial Officers

Defendants

Witnesses

#### 3.4.4.4 Architecture and Planning

The administration is enclosed around a central internal atrium to create a dynamic and interactive working environment. Into this surface, a series of irregular horizontal- slotted and stepped cut- outs provide daylight to the courtrooms and the consultation areas. At court levels,



translucent white glass-clad boxes containing consultation and magistrates retiring rooms cantilever beyond the curvilinear surface reflecting the rectilinear nature of the internal planning and offering a more complex external reading of the building

#### 3.4.4.5 Spatial Configuration

The courtrooms are located on the lower floors so as to cut short distances to be travelled by visitors to the facility. The courtrooms are located on the first six floors with four courtrooms on each floor. The offices for administration are also located on the upper four floors. The circulation patterns have been segregated with the magistrates, staff and visitors having separate routes. The chambers for the magistrates are located close by the courtrooms so they enter directly into the courtrooms without having any contact with public.

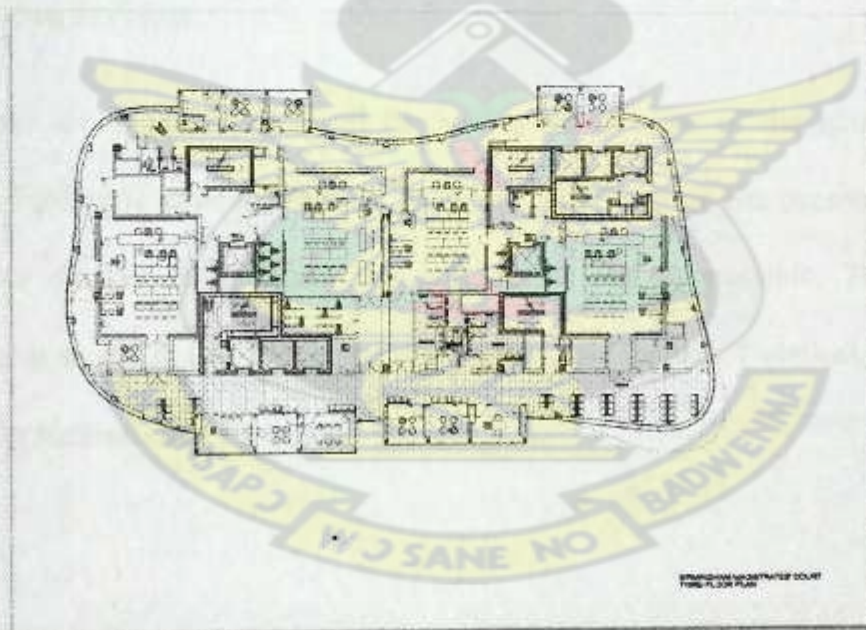


Fig 13 Ground floor of the Birmingham Magistrate Court

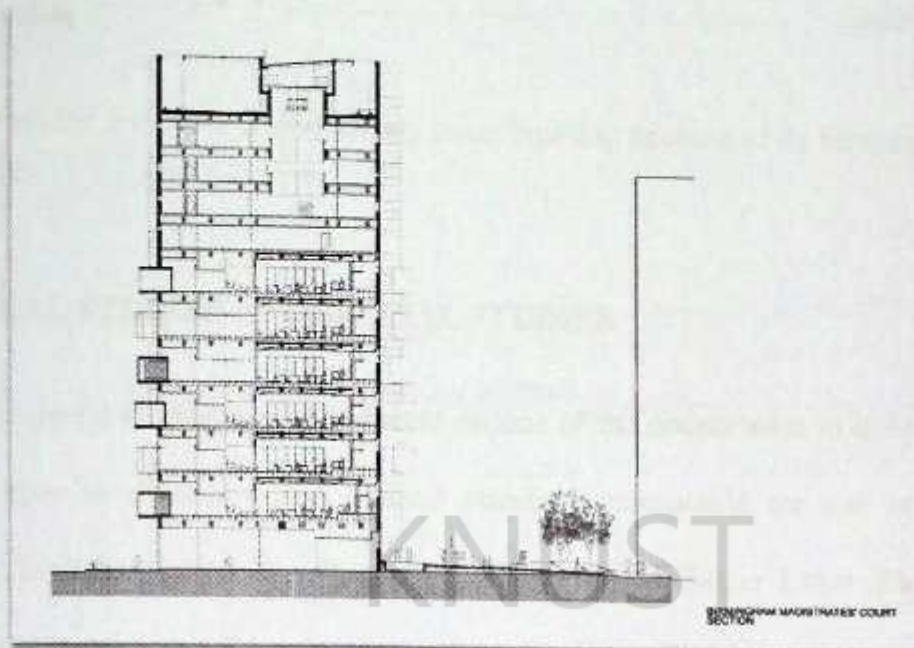


Fig 14 Section through the court building

#### 3.4.4.6 Engineering Services

The building uses air conditioners in all the spaces but because of the glazing used on the facades, natural lighting is achieved in most of the spaces. There are fire escape routes and stairs in the facility to aid people evacuate the building as fast as possible. There is also fire extinguishing holes to aid in fire fighting. Lifts are the main means of vertical circulation in the facility with stairs located close by them.

#### 3.4.4.7 Merits

The use of glazing aids in natural lighting.

The circulation routes in the facility allows for security provisions for the various users in the facility.



### **3.4.5.8 Conclusion**

The facility provides a view of a modern day court building because of its form and the treatment of the facades.

## **3.5 TECHNICAL STUDIES AND SPECIAL STUDIES**

Technical and special studies were conducted on one of the courthouses in the United States of America in order to determine the general standards acceptable for use in the design of courthouses. The technical studies basically review the Michigan Court Facility Standards Project to help in the design of the proposed court complex at Tamale.

### **3.5.1 General Standards**

- Separate the judicial functions from the administrative functions and servicing the public.
- Concentrate the needs of the public on the first floor(s) of the building.
- Maintain three distinct circulation patterns--for judges, for the public, and for prisoners.
- Introduce a system of modern security.
- Take advantage of the advances of technology to assist in the management of case flow, provision of information internally and externally, and maintaining necessary records.
- Give emphasis in the points of contact between the public and the personnel of the Judicial Branch in order to ensure that the contact be rapid and efficient.
- Avoid inappropriate contacts between judicial officials and the public that reduce the efficient administration of justice.
- Introduce architectural design that reflects the symbolic significance of a justice center in civil society.

### **3.5.2 Accessibility to the Site**

The location of the judicial center should be readily accessible to the public and take into account the growth of the population, public transportation, and proximity to other offices of the local and national government and importance. Access of the public to the Judicial Center should be limited to one main entrance to allow for better security control.

### **3.5.3 Circulation Concepts**

A judicial center should have three circulation patterns: public, private (judges) and controlled (Prisoners). A key element is to separate the movement of judges from the public in general.

Each element of circulation (judicial, public and controlled) should have its own entrance to the facility. The public zone should include areas of circulation, waiting, public restrooms, kiosks of information (manned or unmanned), public telephones, access to the area to file and receive documents and to the public hearing rooms. Only with permission of judicial officials should the public enter into the area of judicial support personnel or the judge's chambers. The separation of circulation patterns should begin at the entrance of the building. By preference judges should enter directly from the parking area.

Designs should allow between 10-15 per cent for circulation.

### **3.5.4 Adjacencies and Circulation**

The courtroom is an interface area where the public, private, and secure circulation systems converge. The courtroom should be easily accessible from the courthouse's main public entrance using the main public circulation system. Judges and court staff should be able to reach and enter the courtroom using the building's private circulation system.



When entering the courtroom, prisoners and defendants should not be escorted near the public, jurors, or witnesses. Generally, prisoners should enter the courtroom from the opposite side of the courtroom from the jury. Likewise, jurors should not have to pass near the defendant or the public when entering or exiting the courtroom. Jurors should be able to exit the courtroom immediately from the jury box and enter the deliberation room. The spectator seating area often serves as the waiting area for litigants prior to their case being called. The seating area should be adequate to accommodate projected peak volume, particularly if additional waiting areas are not readily available adjacent to the courtroom. Controlled movement into and out of the well and litigant/counsel tables should be spacious enough to expedite efficient case processing.

### **3.5.5 Courtroom Environment**

Acoustics should be clear, with no reverberations or echoes so that participants are able to hear the proceedings clearly. Larger courtrooms require a public address system, and most courtrooms and hearing rooms will require a sound system in order to support video or audio recording.

Courtrooms should have adequate ventilation, heating, and cooling systems with easily adjusted controls located at the bench or clerk's workstation.

Features such as soundproofing between courtrooms and surrounding spaces (particularly holding cells), double-door vestibules and/or sound locks between the public corridors and courtrooms, and carpeting reduce noise within the courtroom and are essential to a dignified atmosphere. The presence of large windows can easily transmit outdoor noise into the courtroom and interrupt proceedings.



Generally, the front wall of the courtroom may be constructed of reflective materials to enhance the sound from the well area, while the back wall should be covered with sound absorptive materials to reduce noise generated by spectators. The floor should be finished with carpet or padded vinyl to reduce noise. While natural lighting is often desirable for psychological reasons, courtrooms containing exterior windows can suffer from sunlight shadowing and dappling effects, heating and cooling complications, reduced security, exterior noise, and visual distractions.

If the location of the courtrooms permits, skylights are an excellent source of natural light without the problems presented by windows. The use of skylights should consider the impact of light on evidences and testimony presentation.

### **3.5.6 Shape of Courtrooms**

Careful consideration should be given to the shape and layout of the courtrooms. The traditional courtroom is rectangular and deeper than it is wide. The bench is typically located in the center of the front wall but may also be slightly off-center or, in some cases, placed in the corner. Generally, a corner bench arrangement provides superior sight lines and makes more efficient use of space in the litigation area. Another arrangement is the circular courtroom in which the participants (judge, witness, jury, attorneys, and clerk) are arranged in a circle. It is thought that this provides superior sight lines because all of the participants face one another across the circle. It is often criticized for its informality and often times it results in a smaller litigation area forcing parties into close proximity. The shape of the courtroom must allow all participants to clearly see and hear one another. Wide sight angles interfere with concentration and cause



physical fatigue, as participants must look back and forth. The courtroom should be divided into a litigation (well) area and a public (spectator) area, separated by a bar or low railing approximately 30 to 36 inches in height to allow unimpeded observation of the proceedings. There should be a swing gate in the bar or railing to provide an additional psychological barrier between the well and the spectator seating. The litigation area may be rectangular with the judge's bench located along the front wall or in the corner of the room, which allows the judge a better view of the courtroom and is slightly more space efficient.

### **3.5.7 Courtroom Technology**

Today's courtrooms need to be fully capable of handling the full-range of court technology applications from the use of office automation technologies, automated case and financial management systems, video conferencing for arraignments and remote testimony, access to on-line legal research and legal databases, evidence presentation systems, video and audio recording for taking the record, security, and accessibility.

As a general rule, electrical receptacles, data lines, and phone lines need to be installed at the bench, clerk's station, litigant/counsel tables, bailiff's station, court reporter or recorder station, and witness stand. Additionally, the jury box needs to be capable of the installation of video display monitors. All receptacles should be flush-mounted in the floor. A telephone may be installed for emergency communications and for holding telephone hearings. All equipment should be recessed into the millwork if possible to avoid blocking the judge's view of the courtroom. The courtroom should have an electrical equipment and storage closet for the storage of computer equipment, VCRs, and other switching devices.



### **3.5.8 Intrusion and Duress Alarms**

Intrusion alarms are designed to alert the court to unauthorized entry after hours. The alarms can be of several varieties, including space alarms, vibration alarms, and door contact alarms. The alarm system can be set to produce a loud sound to alert the police and deter entry, or alarms can be silent to alert police only.

Duress alarms are designed to signal for immediate help. Recommended locations include: judges' benches and/or staff positions in the courtroom, chambers, cashier stations, probation offices, and any office where staff may meet alone with the public.

The alarm should sound at the court's security station and at the responding law enforcement agency. Door alarms should also be placed in all exits from the building. Staff sometimes prop doors open for breaks and then forget to close them. Side doors should be marked, "Emergency exit only; alarm will sound."

### **3.5.9 Video and Tele-communication Systems**

In addition to video cameras for the purpose of taking the record, video conferencing equipment should be planned and installed for purposes of video arraignments, preliminary hearings, and other non-adjudicatory hearings. Video conferencing may also need to be available for remote witness testimony. Video display monitors should be located at the bench, witness stand, litigant/counsel tables, and jury box.



### **3.5.10 Exterior Areas**

In design programs, 30 percent of the building area should be left for open area.

Parking should be included sufficient for the use of the public and private parking for judges with direct access to the building through a private judge's entrance. A public patio at the entrance to the building allows for the public to gather in a pleasant atmosphere before entering into the judicial complex.

### **3.5.11 Entrance Vestibule**

A courtroom entrance or vestibule serves as a transition between the courtroom and the public circulation areas. It also blocks noise from the adjacent corridor. Typically, the vestibule consists of two sets of doors.

Glass panels should be placed in both sets of doors to allow viewing of the interior without disturbing the proceedings. The distance between the doors should be regulated by applicable codes, but generally eight to ten feet are recommended. The vestibule should permit easy passage of a wheelchair. Approximately 70 to 90 square feet would be required for the entry vestibule.

### **3.5.12 Services For Users of the Building**

The Judicial center should have public bathrooms, public telephones, and drinking fountains for the use of the public. There should be ramps for wheelchair access and other facilities for handicapped persons.

There should be a system of signage to orient the public to functions within the building.

There should be access to photocopying service for the public. Judicial centers should also take into account the needs of the public including providing an adequate number of bathrooms,

drinking fountains, seating in hallways, public telephones, signage and other services dedicated to their needs.

### **3.5.13 Electricity**

The electrical system should be sufficient to maintain adequate lighting for the interior of the building using 110 Volts and the exterior lighting using foto cells if possible.

The electric panels should have a security key and be located in a space dedicated to this use without any possibility that the public can enter. The electrical design should comply with the local code, the local fire department regulations, and the norms of the local electrical company.

There should be provision for the correct functioning of the building if the main electrical power is cut.

### **3.5.14 Air Conditioning**

Air conditioning should be provided depending on local conditions. The air conditioning should be provided in all areas except for storage areas, cells, and other areas not used by the public or judicial employees.

### **3.5.15 Furnishings and Finishings**

Generally, the colors and tones of the walls and ceilings should promote a dignified, calm atmosphere in the courtroom. Furniture and finishes should be comfortable, sturdy, durable, vandal-resistant, and easy to clean. Draperies, or other window coverings, should be used if the courtroom has windows. Seats, benches, and chairs should be comfortable and easy to maintain. Space should be provided to display flags and state seal. Every effort should be made to minimize loose items in the courtroom that could become potential weapons in the event of a



disturbance. Additionally, the courtroom should be furnished to minimize hiding spaces for any type of contraband and insure efficient security searches.

### **3.5.16 Handicapped Access**

All areas of the office should be accessible to persons with disabilities. Particular attention should be given to designing at least one public counter position to accommodate a staff person or customer with a disability. Chairs or benches should be provided in the public waiting area for the elderly or mobility-impaired individuals.

### **3.5.17 Telecommunication Closets**

There should be a minimum of two telecommunications closets designed to house intermediate distribution frames for data/voice/video provided per floor, stacked vertically and located close to the building service area, preferably in the core area. Wiring should not exceed 90 meters.

Closets should be positioned so that it is possible to gain access without disrupting normal office work and sized to allow an engineer to work within the closet and provide front and back access to the cabinets with space for additional wall mounted data patching frames. The closets should be at least 110 square feet. Access flooring may be used to accommodate the cables entering from the riser, connecting to the frames, and accessing the secondary distribution system. Telecommunications pathways, or conduit, should not be located in elevator shafts. Closets should have waterproof ceilings and no windows. HVAC ducting and pipe work should be kept out of the telecommunications risers. The minimum size closet will be 60 square feet for most equipment.



### 3.5.18 Telecommunication Systems and Information Technology Room

A separate telecommunications and computer room needs to be provided to serve the courts, clerks, and all other offices located in the building. The room should contain all of the building and court's communications and computer equipment. If the court and other offices have separate computer networks, the room will need to be partitioned for the different servers and networks.

Access to the file servers and telecommunication devices for installation, upgrades, and maintenance of equipment is necessary. The computer rooms should be equipped with proper fire extinguisher devices and smoke detectors. Also, a raised floor system for easy access to wiring and cables should be a requirement. The communications/computer server room should have controlled temperature and humidity just as the cable entrance room. A/C units should be on emergency generated power and should be independent from the building air. For security and temperature reasons the room should be located away from outside windows and doors.

All equipment should be protected from power surges and brown outs with the installation of power conditioning equipment and an un-interruptible power supply (UPS). The electrical feed, including neutral and ground, for the technology room should be isolated from the rest of the building's electrical system.

Cable runs should not be placed in areas where high electromagnetic field strength exists. The size of these rooms will depend upon equipment selected, but a square foot per piece of equipment is a base size.



### 3.5.19 Public Circulation, Elevators and Escalators

Courthouses generate a high volume of traffic during the course of a day. A clear and adequate circulation system using stairs, escalators, and elevators is needed in multi-story buildings to move people expediently. Because of the height of many modern court facilities, stairs are generally limited to life safety exit requirements and to quick access between two floors. Stairs also do not permit access to the physically impaired. For these reasons, escalators and elevators have become the primary means of moving people, even in two-story facilities.

Both elevators and escalators have their uses, and one system supplements the other. Escalators are the fastest and most efficient way to move a large number of people in an uninterrupted manner, especially between the lower two to three floors. These levels should contain the most active functions, including the clerk's office, high volume courtrooms, jury assembly areas, and other highly public areas of the court. These activities necessitate the movement of a large number of people quickly from the public entrance without creating a large queue at the elevator banks. Escalators cannot, however, serve the needs of the physically impaired or disabled, and they are impractical for higher floors because of the space and time they require to travel beyond several floors.

Elevators, on the other hand, are good for moving small volumes of people quickly to the upper floors. Other advantages are their capability to serve the physically disabled or impaired, transporting injured or ill individuals during emergencies, and to move equipment, furniture, and supplies.



The number of elevators planned for a courthouse should be based on a number of factors, including the volume of people at peak periods, the time interval between stops, the cab capacity, and speed of the elevator. The allocation of courthouse elevators should be calculated on the highest capacity of riders during peak times of the day and week. In addition, separate elevator systems should be planned for moving the public, court staff and judges, and in-custody defendants. Private elevators, which open onto restricted areas of the building, can be programmed to respond to only a card or key access. One of the most common deficiencies found in older courthouses is the lack of elevator capacity.

### **3.5.20 Public Restrooms**

Court facilities should include an adequate number of public restrooms. Because of the large number of people and the often-long periods of waiting involved, restrooms will be frequently used. Male and female restrooms should be grouped together rather than located in different areas of the floor to make them easier to find. A single location also deters visitors from wandering through the building in search of the restroom. The largest bank of restrooms should be located on the main floor. Other toilet facilities should be located on the court floors near the public-waiting areas. Additional facilities may be provided on floors containing only office functions.

Code requirements should be adhered to in the distribution of toilet facilities for the physically impaired. Baby changing stations should be considered for some of the public restrooms.

For security and noise considerations, restrooms should not directly adjoin the courtrooms. Separate toilet facilities should be located in the private staff areas of the courthouse for the use by court staff.



## CHAPTER FOUR

### FINDINGS AND DISCUSSION

#### 4.0 THE SITE

- **LOCATION**

The site is located in the civic area of Tamale where the high court building is presently located. It is located near the Tamale Regional Police Headquarters and bounded by the Lands commission, the Town and Country Planning, the Regional Archives and the Labour Department. The main road leading to site is the watherston road

- **LOCATION MAPS**

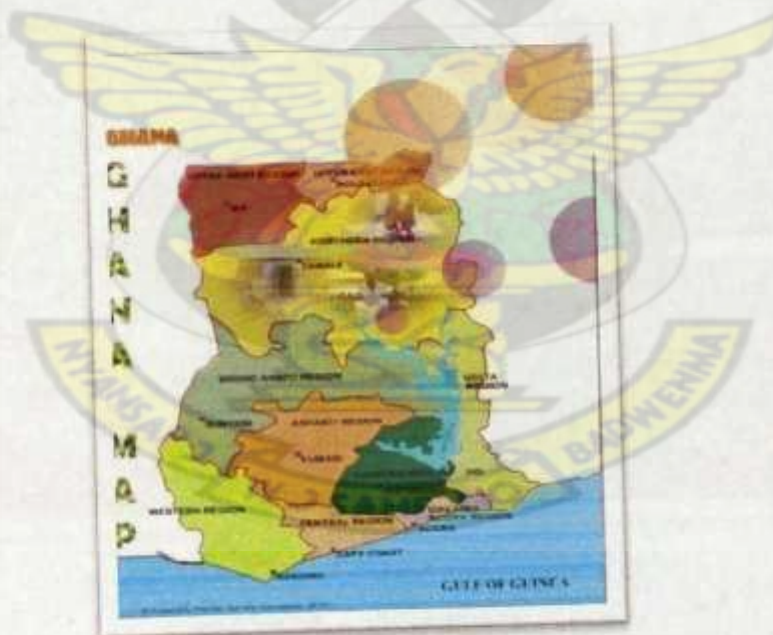


Fig. 15 Map of Ghana

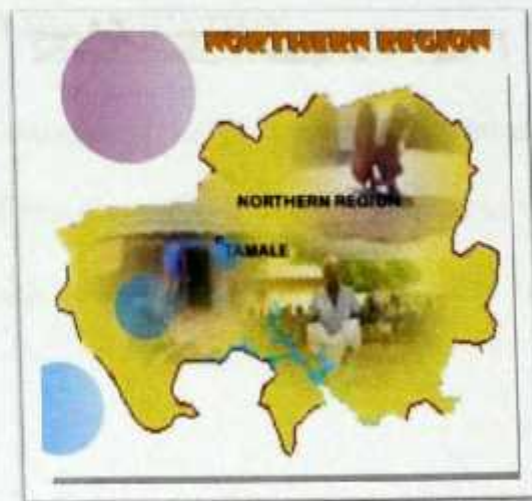


Fig. 16 Map of the Northern Region



Fig 17 Picture of the site



## 4.1 SITE LOCATION AND JUSTIFICATION

The Tamale site was chosen because of the government's intention to make justice accessible to all and sundry. In the light of this, the site is located in Tamale so that cases from the Upper East and Upper West Regions which needs appeals will be handled in Tamale.

### 4.1.1 POTENTIALS

- The site on the present high court building site and so makes it an already prominent site
- There is adequate land at the High Court Building site for the development of the court complex.
- The new court will enhance collaboration between the various divisions of the judicial services in Tamale and beyond.

## 4.2 SITE CONDITIONS AND INVENTORY

The whole site covers an area of about 19419.9 metres square. The site presently has the high court building and a legal aid building.



Fig. 18 Picture of entrance



Fig. 19 High Court Building

### 4.3 SITE ANALYSIS



Fig. 26 Site analysis

#### • CLIMATE

The temperature of Tamale is warm and humid. Tamale has two seasonal wind directions. The North-east trade winds which blow for some part of the year mostly around the dry seasons and the south-west monsoon winds which blow around the rainy season. There are 2 main seasons. The dry season and the wet or rainy season.

#### • VEGETATION

The vegetation in Tamale is the savannah type where they have mainly tall grasses growing there. On the site there are mango trees and some grass patches.



- **GEOLOGY**

By inspection, the general soil type observed on the site is sandy loam with stony areas on the site.

- **RAINFALL**

Rainfall figures are around 750mm and 1050mm

- **TEMPERATURE**

Day temperatures average around 40 degrees Celsius and night temperatures around 14 degrees Celsius

- **SUN SHINE DURATION**

The sun is up on the average of about 8 hours daily through out the year.

- **TOPOGRAPHY**

The site has a gradient of 0.04 which makes the site relatively flat. The fringes of the site have gentle slopes. The central portion of the site is flat.

- **SERVICES**

The site has access to all the utility services including water, electricity and telecommunication.

- **TRAFFIC AND NOISE**

It was also observed that there was a low traffic level along the watherston road with about 9 cars passing in one direction in a minute during peak hours (between 9am and 11am, and, between 3pm and 6pm) generating less noise to the site.

## 4.4 SITE PERIPHERAL STUDIES AND ARCHITECTURAL STYLE

### 4.4.1 Peripheral Land use

All the buildings around the site are all civic buildings



Fig. 21 Statistical Service Building



Fig. 22 Town and Country Planning

### 4.4.2 ARCHITECTURAL STYLE OF PERIPHERAL BUILDINGS

Most of the peripheral buildings have a modernist form of architecture and construction. The building forms reflect the harsh climate of the area. There are large overhangs for most of the facilities to aid in shading and ventilation. Most of the buildings have a single zone layout with the facilities located in the centre and verandas on both sides of the facilities. Pertaining to the existing high court building, the double walling system has been incorporated into the design to reduce the rate of conduction of heat through the walls of the building and attenuate noise. Parapets have also been used to aid in rain water collection since Tamale records high amounts of rainfall.



## CHAPTER FIVE

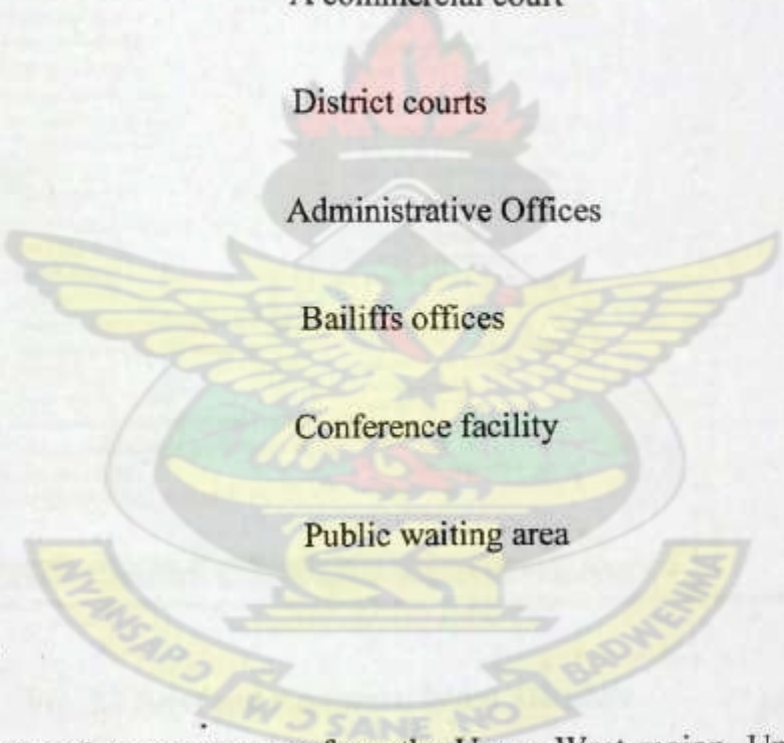
### 5.0 DESIGN EVOLUTION

#### 5.1 Clients Brief

##### Client: Judicial Service of Ghana

It is the client's intention to build a facility that will make justice accessible to all and sundry.

The court complex will house facilities such as



Two appeal courts	A commercial court
Legal aid facilities	District courts
Library	Administrative Offices
Judges' chambers	Bailiffs offices
Lawyers robbing room	Conference facility
Public information area	Public waiting area

##### 5.1.1 Potential Targets

The facility is being designed to target cases from the Upper West region, Upper East region, Northern region and the northern part of the Brong Ahafo regions.

#### 5.2.0 Design Requirement and User Function

The design requirements for courtrooms and facilities differ from one courtroom to another and from one space to another. ~~Notwithstanding~~, the facility should not create an ambience of

uneasiness since if the mere sight of the facility causes panic, then people cannot resort to it in times of need. The function of a particular space will also determine how it is designed.

### 5.3.0 DESIGN BRIEF AND ACCOMMODATION SCHEDULE

ACCOMMODATION SCHEDULE			
<b>DESIGN BRIEF</b>			
1. RECEPTION	7. OFFICES	13. RESTAURANT	15. INTERNAL AUDIT OFFICE
2. APPEAL COURT	8. RESTAURANT	Kitchen	16. STATS., RESEARCH & MONITORING OFFICE
3. COMMERCIAL COURT	9. STORE ROOMS	Store	17. DOCKETS AND ARCHIVES ROOM
4. DISTRICT COURT	10. LIBRARY	Eating area	18. LOCKER ROOM FOR WORKERS/ LABORERS
5. PARKING	11. LAWYERS ROBBING ROOM	Charging rooms (2male/ 4 female)	19. REGIONAL REGISTRARS OFFICE
6. H. F. C. BANK OUTLET	12. SERVICE PARKING	13. T. H. F. C. BANK OUTLET	Office
		14. 1 CONFERENCE ROOM	1 secretary
<b>ACCOMMODATION SCHEDULE</b>			
SPACE	UNITS	QUANTITY	TOTAL AREA(M <sup>2</sup> )
<b>RECEPTION</b>			
ENTRANCE FOYER			96
DOCUMENT RECEPTION			24
AUTOMATED CASE TRACKING SYSTEM			30
WAITING AREA			25
TELEPHONE EXCHANGE AREA			20
<b>TOTAL</b>			<b>195M</b>
<b>ADMINISTRATION</b>			
REGIONAL REGISTRARS OFFICE	5'5	1	25
REGISTRAR'S SECRETARY	4'3	1	12
GENERAL OFFICE FOR REGISTRY	7'5	1	35
APPEAL COURT REGISTRAR'S OFFICE	5'5	1	25
APPEAL COURT REGISTRAR'S SECRETARY	3'5	1	15
DEPUTY REGISTRAR'S OFFICE	5'5	1	25
DEPUTY REGISTRAR'S SECRETARY	3'5	1	15
GENERAL OFFICE FOR APP. COURT	8'5	1	40
COMM. COURT REGISTRAR'S OFFICE	5'5	1	25
COMM. COURT REGISTRAR'S SECRETARY	4'3	1	12
STATISTICS, RESEARCH & MONITORING	7'7	1	49
DOCKETS & ARCHIVES	5'10	1	50
INTERNAL AUDIT	7'5	1	35
H.F.C BANK OUTLET	4'5	1	20
BAILOFFS OFFICES	5'6	2	60
TYPING POOL	7'6	1	42
TRANSCRIPTION ROOM	7'6	1	42
ESTATES OFFICE	6'6	1	36
I.C.T OFFICE	6'6	1	36
<b>DETAILED BRIEF</b>			
1. RECEPTION	5. INDUSTRIAL/ LABOUR COURT		
Document reception	1 Judges chamber		
Automated case tracking system	1 industrial courtroom		
Waiting area	Deliberation room		
Telephone exchange	Judges Waiting Area		
2. APPEAL COURT	6. DISTRICT COURT		
Appeal court registrar's office	2 Magistrates chambers		
Deputy appeal court registrar	2 Magistrates courtrooms		
2 appeal courtrooms	2 Witnesses quarantine		
5 appeal court Judges chambers	4 Cells		
Typical Judges chamber	Typing pool		
Chambers	7. COMPUTER NETWORKING ROOM		
Secretary	8. LIBRARY		
Judges referencing room	Librarians office		
Judges sanitary	Secretary		
Judges common room	Electronic referencing library (25 people)		
3. COMMERCIAL COURT	Main library reading area (45 people)		
1 Judges chamber	9. PARKING		
1 commercial courtroom	Judges parking (13 cars)		
Administrators office	Public parking (25 cars & 100 motor cycle)		
General office (Bailiff)	Lawyers' staff parking(15 cars & 36 motor)		
Court Managers Office	10. EXHIBIT ROOM		
4. 2 STORE ROOMS	11. 2 LAWYERS ROBBING ROOMS		

Fig. 23 Brief and Accommodation Schedule



## ACCOMMODATION SCHEDULE

SPACE	UNITS	QUANTITY	TOTAL AREA	SPACE	UNITS	QUANTITY	TOTAL AREA
GENERAL OFFICE FOR COMM. COURT	8'5	1	40	<b>JUDGES CHAMBERS</b>			
SUBVENTIONS & SUBVENTIONS	7'5	1	35	APPEAL COURT			
<b>TOTAL</b>			<b>75.00M</b>	CHAMBERS	4'5.5	9	198
<b>PARKING</b>				SECRETARY	2.5'3	9	67.5
JUDGES PARKING	2.5'5	13	162.5	JUDGES REFERENCING ROOM	2'2.3	9	45
PUBLIC PARKING (cars)	2.3'5	80	375	JUDGES SANITARY	1.5'2	8	24
LAWYERS & STAFF	3'5	15	187.5	APPEAL COURT JUDGES COMMON ROOM	6.2'6.3	2	39.06
MOTOR CYCLE PARKING	1.5'1	136	204	<b>COMMERCIAL &amp; INDUSTRIAL COURT</b>			
SERVICE PARKING	7'6		42	CHAMBERS	4'4.5	2	36
<b>TOTAL</b>			<b>679M</b>	SECRETARY	2.5'3	2	15
<b>COURTROOM</b>				JUDGES REFERENCING AREA	2.5'2	2	10
APPEAL COURTROOM	12'13	2	312	<b>MAGISTRATE COURT</b>			
DISTRICT COURTROOM	12'15	2	360	CHAMBERS	4'3.5	4	58
COMMERCIAL COURTROOM	12'12	1	144	SANITARY	1.5'2	4	12
INDUSTRIAL/ LABOUR COURTROOM	12'12	1	144	JUDGES REFERENCING AREA	3'2.5	4	30
<b>TOTAL</b>			<b>960M</b>	SECRETARY	3'3	4	36
<b>SUPPORTING COURTROOM FACILITIES</b>				<b>TOTAL</b>			<b>668.56M</b>
LAWYERS ROBBING ROOM	5.8'5.7	2	66.12	<b>DETENTORY</b>			
WITNESSES QUARANTINE AREA	5.5'6.5	2	71.5	KITCHEN	5.5'6.5	1	35.25
CRIMINALS CELLS	3'2.5	4	30	STORE	3'5	1	15
SANITARY FOR CELLS	1'2	4	8	EATING AREA	20'14	1	280
ALTERNATE DISPUTE RESOLUTION ROOM	9'4.5	2	81	CHANGING ROOMS	2'1.5	5	15
OFFICE FOR A.D.R OFFICERS	6'4	1	24	SANITARY FOR WORKERS	2'1.8	5	18
<b>TOTAL</b>			<b>226.04M</b>	<b>TOTAL</b>			<b>563.10M</b>
<b>LIBRARY</b>				<b>LEGAL AID OFFICE</b>			
LIBRARIANS OFFICE	4'6	1	24	OFFICE	4.5'5.5	2	49.5
SECRETARY	3'3	1	9	SECRETARY/ WAITING AREA	7.5'4	1	30
ELECTRONIC REFERENCING LIBRARY	8.8'6.5	1	55.25	<b>TOTAL</b>			<b>79.5M</b>
MAIN READING AREA	12'14	1	168	PUBLIC INFORMATION AREA	7.5'11.5	1	86.25
<b>TOTAL</b>			<b>266.19M</b>	PUBLIC INFORMATION AREA	8'11.5	1	92
CONFERENCE ROOMS	22'10	1	230	<b>TOTAL AREA OF FACILITY</b>			<b>5197.31.01M</b>
STORE ROOMS	4.3'4.5	1	20.25				
SANITARY AREA FOR THE PUBLIC	1.5'2	20	60				
SANITARY AREA FOR STAFF	1.5'2	18	45				

Fig. 24 Brief and Accommodation Schedule

### 5.4.0 Site planning principles

Site planning in the design of courthouses is very essential to the functionality of the whole design. Some of these principles are

- Segregate accesses for judges, the accused and the public
- Segregate their parking spaces also.
- Parking spaces for the judges and accused should be well secured
- Allow for one entry and exit for the public so they could be checked and controlled

- Achieve orderliness, unity and beauty

### 5.5.0 Design philosophy

*Dignity and Respect for Justice:*

*Regardless of the changes in process and experiments in more appropriate settings for justice operations, the overall projected image of the courthouse should not reduce the significance of justice or of the judiciary in our democratic society.*

### 5.5.1 Architectural Style

Neo – classical style



Fig. 25 A courthouse designed in the neo-classical style

The use of ionic columns, rhythm, harmony and other elements of neo-classical architecture makes the building stand out and gives it the feeling of a civic building.





## 5.9 CONCEPTUAL DEVELOPMENTS AND PLANNING

### 5.9.1 Conceptual Site Planning

The site was planned in various stages, gravitating from a macro zoning level to the planning of the court complex. Various options were thought of to ascertain which one really works for th

#### Stage one

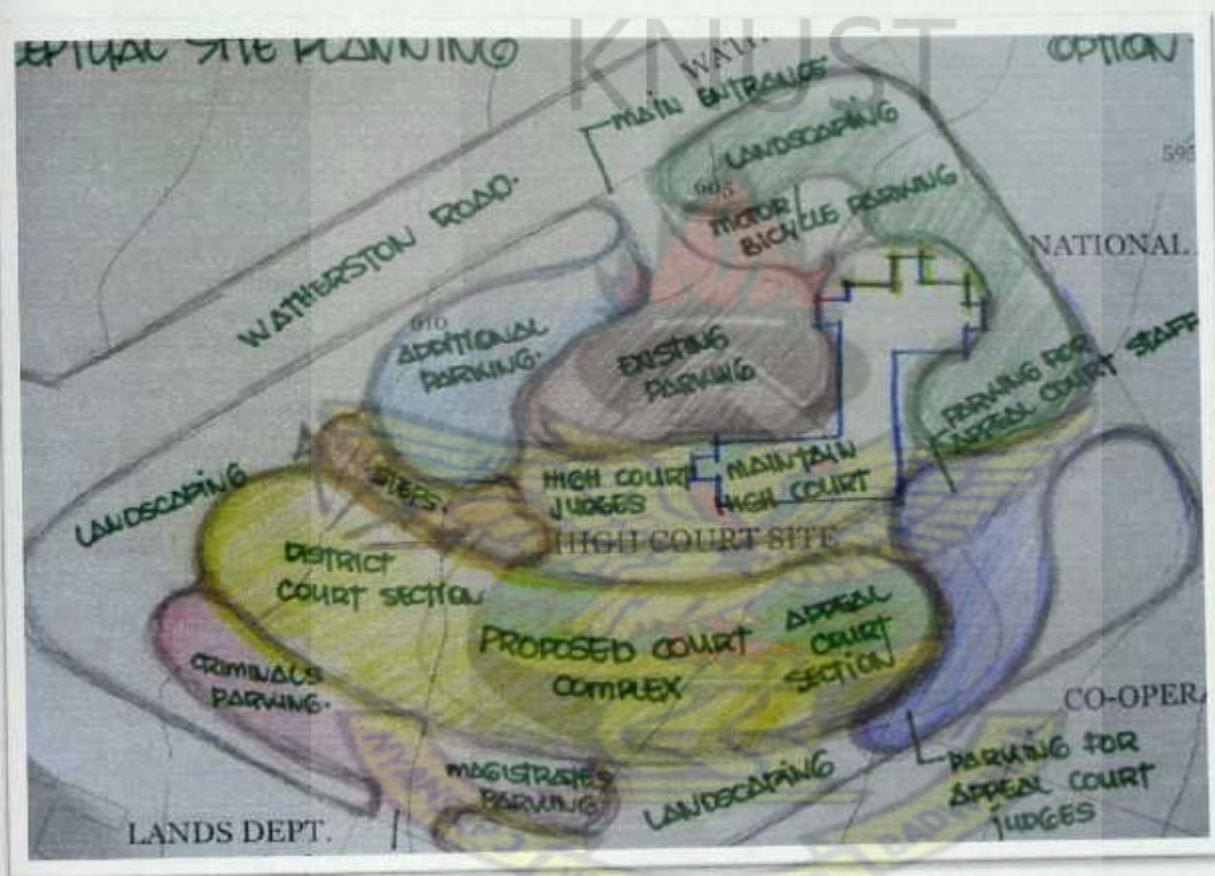


Fig 27 Conceptual site planning option 1

In this first option, the various facilities to be provided were bubbled out with the accesses to and from the site. Three main accesses were considered. One from the lands department site to be used by the judges and the accused persons, one from the national archives to serve the restaurant and the third, the existing entry point into the site. The parking space for the old



building was going to be increased so as to accommodate the extra people who will come to the place because of the proposed court complex.

The proposed court complex was also aligned in the north-south orientation so as to cut out the east-west sun.

### Stage two

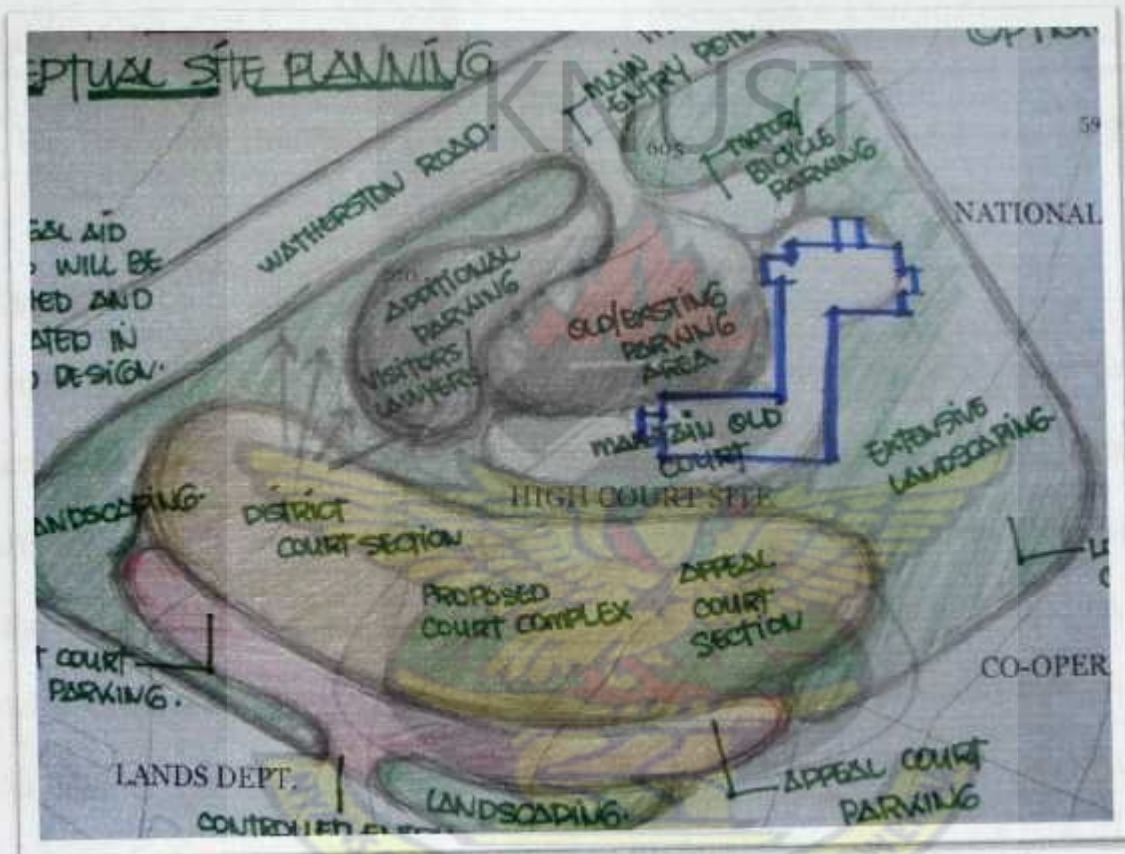


Fig 28 Conceptual Site Planning Option 2

In this second option, the first option is built upon by taking out the access from the national archives area in order to control entry and exit of the facility.

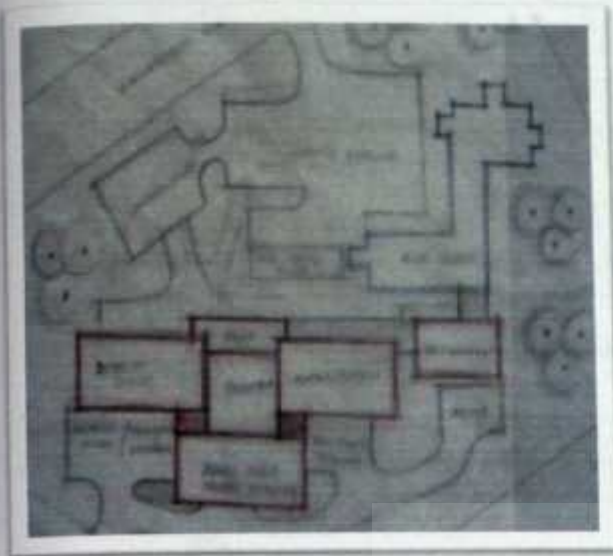


Fig. 29 Process Drawing 1



Fig. 30 Process Drawing 2

### Stage Three

At this stage, a look is taken at layout of the whole layout and how it works. The main entrance to the facility has been maintained to serve as an entrance for the staff and visitors to the facility. The staffs for the high court and the proposed building use the same car park from where they access the facilities. The visitors have two parking spaces. One for motor cyclists and the other for vehicles. From the visitors car park, the visitors can either enter the facility through the main reception area or through the open public area which has been raised on stilts to serve as a convergence and divergence point.





Fig 31 General site layout

The judges for the proposed facility enter the site from the back where there is a secured entry point. The appeal, commercial and the industrial court judges park just beneath their chambers under stilts with a security post and a space for their drivers to wait while the judges are away. The magistrate courts also have a separate parking close by their chambers. The registrars also have a separate parking area so in all, there is segregation in how the various users of the facility come into and exit the facility.



## **5.10 DESCRIPTION OF DESIGN ESSENTIALS**

Security provided through the segregation of the various circulation spaces for the users of court facilities is very critical in the design of court houses. Courthouses though is establish to adjudicate on cases, should be one of the safest facilities for users. The design therefore provides a facility which is first of all, easy to use and also have the various circulation routes segregated to ensure safety in the facility. New facilities such as an electronic referencing library, a public information area for pro se litigants and public waiting areas has been provided to meet up modern trends in court house designs.

### **5.10.1 COLUMN SPACING**

To ensure uninterrupted views in the courtrooms, there was the need to avoid the placement of columns in the courtroom thereby going in for longer spans and the use of waffle slabs as the structural system. The column spacing is 15m\*5m.

### **5.10.2 RECEPTION**

The reception has been located such that it is central to all the activities which take place in the facility. The space has the document reception area and enquiry section, the automated case tracking section, the telephone section, the documents and archives section and a H.F.C. Bank outlet so all activities such as filing for cases, checking the status of cases and making enquiries can all be concluded at the reception area. The public are not allowed beyond the reception area unless permitted to do so.



### **5.10.3 COURTROOMS**

There are three different courtrooms in the facility. There is the district courtroom, the specialized courts like the commercial and industrial court and the appeal courtrooms. The arrangements though not so different, the amount of seating provided for the lawyers differ. The district court has the least number of seating, the seating for the high courts is more than the district court and the appeal court has the most seating. The type of seats also varies across the various courts as a result of the caliber of people who use the spaces. Access and exits into the courtroom by the various users are also segregated to reduce interaction to the minimal. Surfaces in the courtrooms are going to be sound insulated so as to keep whatever goes on the courtrooms within the space there. Attached to the courtrooms are also witness quarantines and judges deliberation rooms

### **5.10.4 JUDGES CHAMBERS**

Access to the judges' chambers by the judges is directly linked to their parking spaces. The chambers are linked to the courtrooms as in the case of the district court but in the case of the superior courts, the chambers are linked to the courtrooms with a restricted corridor. Every chamber has a space for the judges' secretary and a sanitary facility for the judge. Within the judges section is a library, a secretariat, a conference room and a tea room for them.

### **5.10.5 PUBLIC WAITING AREA**

The public waiting area is located on the first floor so as to make it accessible to all visitors to the facility. The space also serves as an audio-visual space where whiles waiting, they can have access to what is going on in the other courtrooms.



#### **5.10.6 PUBLIC INFORMATION AREA**

With the emergence of people wanting to defend themselves in other countries, the public information area has been provided to equip the public with proceedings of the courts so they will be able to learn about them to defend themselves if need be. The media can also go there to check up on rulings.

#### **5.10.7 LEGAL AID SECTION/ ADR SERVICES**

The legal aid section is also a section in the building where the public can meet up lawyers for assistance

### **5.11.0 SERVICES AND CONSTRUCTION TECHNOLOGY**

#### **5.11.1.0 SERVICES**

##### **5.11.1.1 ELECTRICITY**

With the absence of a transformer on the site though the existing high court building has electricity, a transformer will be provided since an additional facility which is three times as big as the existing building will have its energy requirement being more than the existing. A generator room has also been provided to have a standby generator which automatically comes on when there is a power failure. The generator room will have the switch boards from where connections will be made to the main facility. There will be three phases in all. All the courtrooms will be on one phase, the administrative areas will be on another phase, then the judges areas will also be on another phase.



### **5.11.1.2 LIGHTING AND VENTILATION**

- **Ventilation**

As a measure of prudence in a developing country, the court complex has been primarily designed around architectural principles which will enable a full operation on natural ventilation. The orientation of the facility allows the building to capture the south-western and north-eastern winds. Operable windows have been provided to allow for natural ventilation.

Since natural ventilation alone cannot provide the entire thermal comfort needed, they are supplemented by artificial ventilation systems like air conditioners and extractor fans for the sanitary areas

- **Lighting**

Natural lighting will be the main form of lighting in the facility during the day. This has been achieved through the use of openings so as to cut down on artificial lighting. Emergency lights within the facility will be provided by separate battery operated system and positioned at specific locations in accordance with fire regulations. This is to help people evacuate people if there is any fire emergency and all the lights go off. External lights will also be provided to light the place at night. They will mainly be located at the entrances to the site, along the pavements and driveways and at the car parks.

### **5.11.1.3 SECURITY**

Security in the courthouse is very essential. Close-circuit television cameras will be provided in all courtrooms and circulation areas to monitor activities in those spaces. They are going to be

monitored from the computer room and records kept there. All the other spaces will also be monitored with the exception of the judges' chambers.

Duress alarms will also be installed under the judges' bench which he could use to alert the security when he is under attack. Metal detectors and magnetometers will also be installed at the entrances to check people who come to the court with dangerous materials.

Security check points have also been provided at the entrances and exits to also control the caliber of people coming to the facility.

#### 5.11.1.4 FIRE

- **Protection and Prevention**

Fire controls systems such as smoke detectors and fire alarms systems are controlled from the service room located at the ground floor. The electrical system where the building has been sectioned into independent load centres act as fire protection. Here, electrically induced fire outbreak can be prevented from one area to other. Sprinkler heads and Hose reels supplied by mains are placed at strategic location within the facility as a fire fighting measure.

Automatic fire alarm systems are installed. These operate on the principle of heat sensing and smoke detection. It consists of fire alarm initiators, indication panels and bells. Smoke detectors are located at vantage point. Fire extinguishers also located at strategic intervals within the facility is an additional source of fire control. Fire hydrants are located strategically on site to aid fire fighters when the need arises.



- **Fire and smoke detection**

Automatic sprinkler and standpipe water flow indicators will be provided in the facility. Area smoke detectors will be provided in all electrical and telecommunication equipment rooms and elevator machine rooms. Duct smoke detectors will be provided in recirculation air systems as required by code. Smoke detectors will be provided in all elevator lobbies. Activation of this detector will initiate automatic elevator recall to the designated floor.

#### **5.11.1.5 INFORMATION SYSTEMS**

Information systems are very important and vital in courtrooms. Public Address systems will be provided in the courtrooms. This includes microphones on the attorney's table and lawyer's bench. Recorders will also be provided for recording court proceedings.

#### **5.11.1.6 WATER SUPPLY**

The main source of water supply will be from Ghana Water Company. The water from the GWC will go to the service room from where it will be pumped to storage tanks on the roofs. The water from there will be allowed to flow under gravity to the various spaces where they are needed.

#### **5.11.1.7 DRAINAGE**

Covered surface drains have been provided to help drain rainwater to the main drains bounding the site. Since the site slopes by a gradient of .04, all the drains will be directed in the direction of the slope so as to allow water to move off the site easily.

#### **5.11.1.8 TELECOMMUNICATION**

Information relay is also vital in courthouses. All the computers in facility will be networked. This will enable people to get access to information easily. Proper networking will aid in the automated case tracking process since the public will be able to check the status of their cases from computers at the reception area. Telephone outlets will also be provided in each space.

#### **5.11.1.9 SEWERAGE**

Soil wastes from all the sanitary areas will be discharged by underground pipe work into a septic tank and filtration bed which has been located at the lowest point on the site.

#### **5.11.2.0 CONSTRUCTION TECHNOLOGY**

##### **5.11.2.1 STRUCTURAL SYSTEM**

The structural system which will be the waffle slab system. This system was employed because of the uninterrupted spaces which needed to be achieved in the courtrooms. The grid spacing for the columns is 5m by 15m.

##### **5.11.2.2 MATERIALS AND FINISHES**

- **Walls**

The walls for the facility will be basically sancrete blocks. The exterior of the facility will be painted with white emulsion paint. The interior finishing for the walls will depend on the use of the space. The vestibules before you enter the courtrooms will be clad with perforated boards



so as to improve the acoustic properties of the space. The administrative spaces will also be painted with emulsion paints.

- **Ceiling**

The ceiling for the courtrooms will be of perforated boards or fibre board to improve the acoustic properties of the space. The same will apply for the judges' chambers. All other spaces will have the ceilings being made of tongue and groove.

- **Floors**

Asphalt finishes and pavement blocks are used in varied ways for driveways and car parks. Pavement materials such as concrete blocks, stone finishes are employed. Materials used for steps, ramps and retaining wall definition are consistent with general hard landscape finishes. Floor finishing for the courtrooms will be either be of sand-cement screed or terrazzo with a resilient quilt layer underneath it. All other spaces will be finished with porcelain floor tile finishes.

- **Roofing**

The roofing material for the facility will be long span aluminium roofing sheets held onto wooden purling and steel trusses.

- **Windows**

Even though conscious effort was made to use sliding windows only on the north and south facades of the facility, control of solar ingress into the facility remains critical. Both vertical and horizontal shading devices have been employed on the facades. The material for the glazing is

Zinc coated Aluminium oxide heat reflecting glass, which reflects about 70% of the solar radiation incident on it and converts the remaining 30% into a red bias light.

- **Signage**

Multi coloured diverse materials from glass to plastic are employed for these elements.

Directional signs are all made of stainless steel satin finishes.

## **5.12 COSTING**

The costing for this facility was done based on another used for a similar project.

Cost per square metre = GHC 250

Cost for Ground floor =  $250 \times 2765.8\text{m}^2$

=GHC691,450

Therefore for three floors, the total cost of the facility will be  $3 \times 691,450$

Total Cost = GHC 2,074,350

## **5.13 CONCLUSIONS AND RECOMMENDATIONS**

With the increase in crime rates in Ghana and the number of cases sent to the various courts across the country, there is the need to provide appropriate courts to adjudicate on the various cases that are sent before them. This will in some way reduce the backlog of cases that are unattended to. The facility provided should

- Provide good signage to guide users



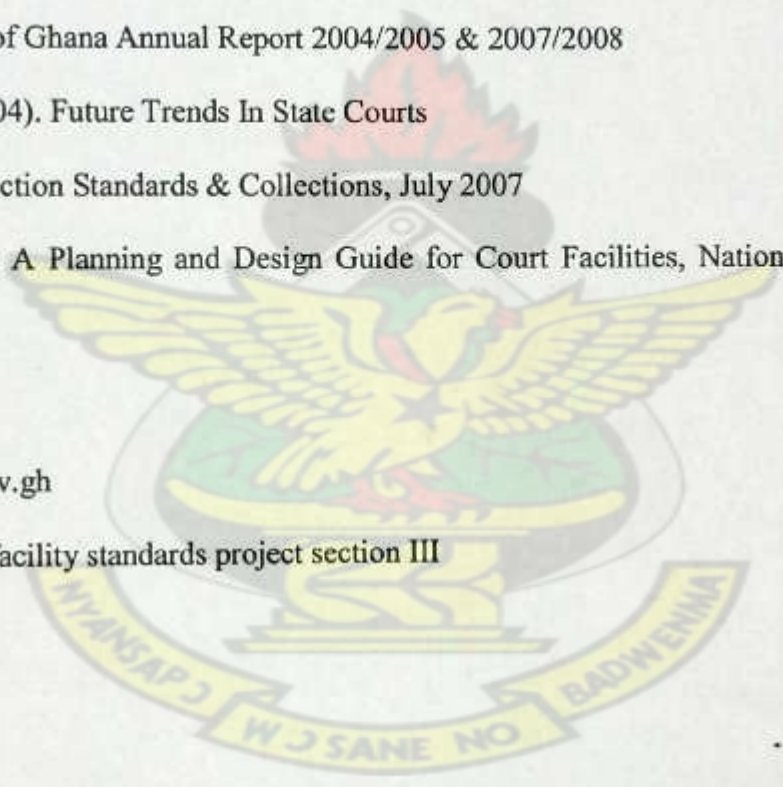
- Provide adequate security through proper planning of circulation routes of the various users of the facility and also through the segregation of the user spaces to avoid interactions.
- Carry an image of an edifice people will be able to relate to and have confidence that the cases they send there will be resolved.
- Finally, employ all the modern trends in courthouse design and also plan for flexibility for the continuous changes in the judicial structure and their workings.

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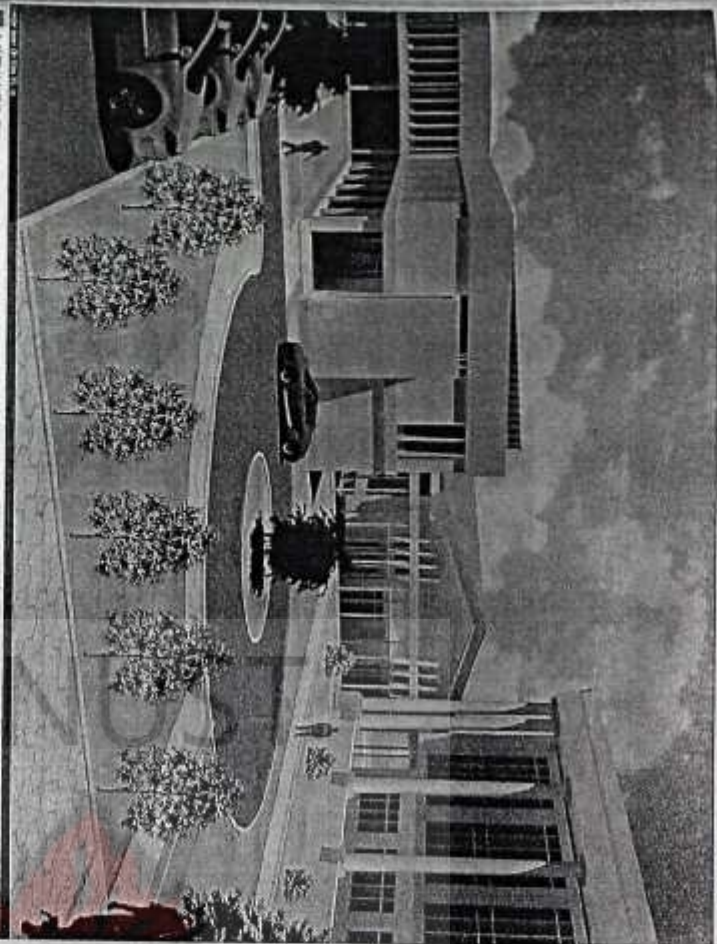
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13. Michigan court facility standards project section III

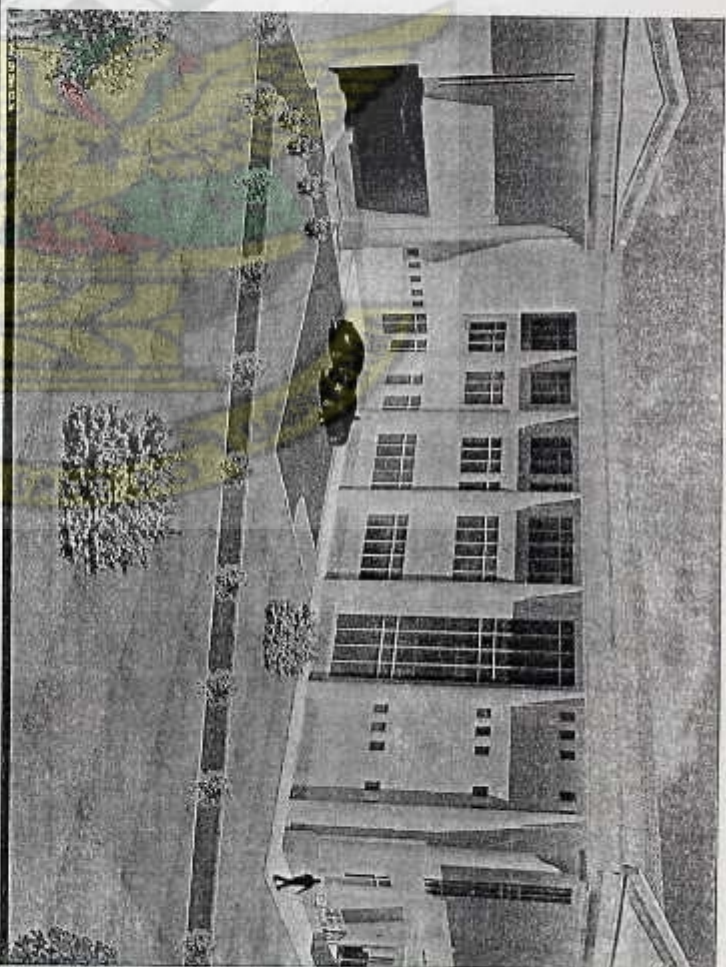




# EXTERIOR PERSPECTIVES



VIEW FROM THE PARKING AREA  
SHOWING THE RESTAURANT



VIEW FROM THE BACK SHOWING THE  
REGISTRARS PARKING AREA.



VIEW FROM STAFF PARKING AREA

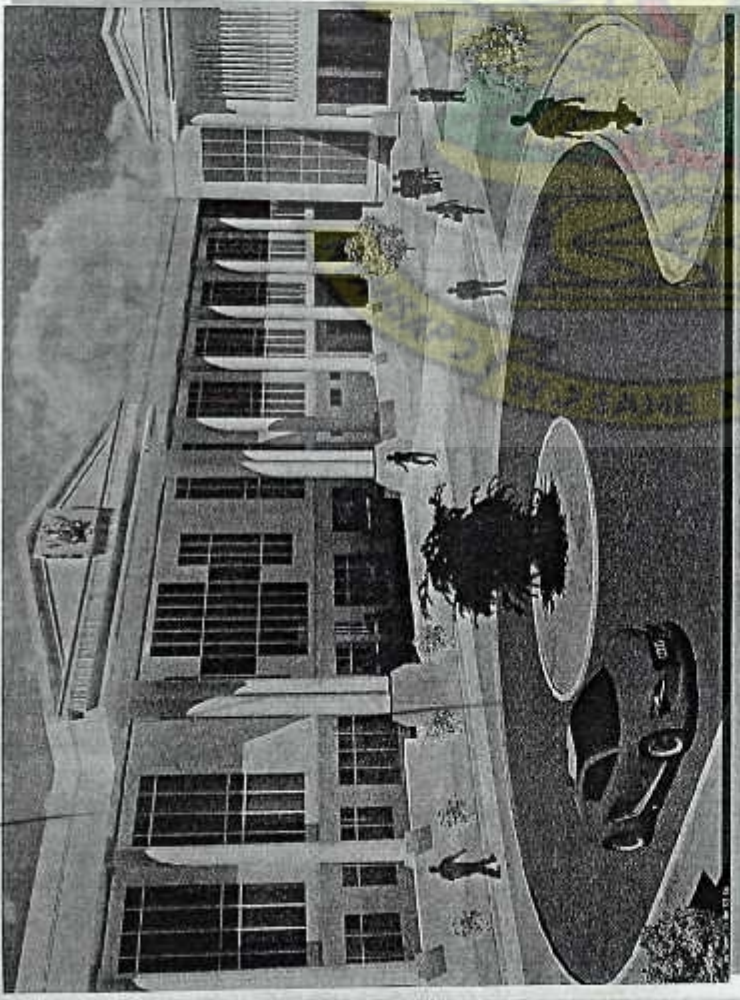


REGIONAL COURT COMPLEX DESIGN TEAM

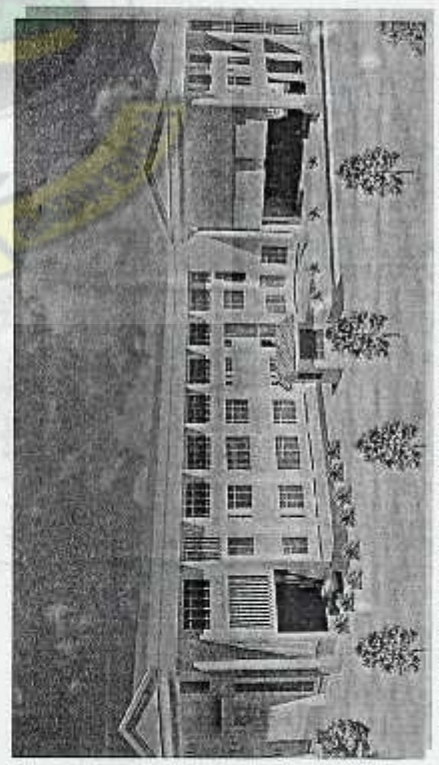


NAME: BENEDICT OWUST-BROWN	DATE: 10/10/2010
DEPT. OF ARCHITECTURE, KNUTST	SCALE: 1/4" = 1'-0"
COURSE: DESIGN THESIS 1A ARCH 111	
DATE: MAY 2010	

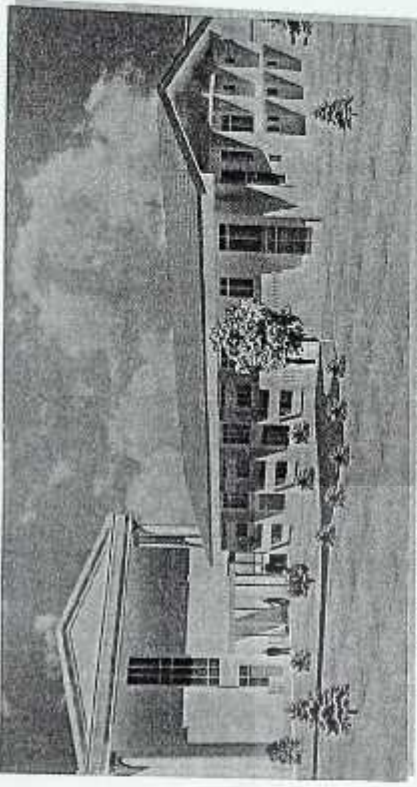




■ VIEW SHOWING THE MAIN ENTRANCE TO THE FACILITY



■ VIEW FROM THE BACK SHOWING THE JUDGES PARKING AREA



■ VIEW OF RESTAURANT FROM THE SERVICE AREA



■ VIEW FROM THE WATHERSTON STREET



# REGIONAL COURT COMPLEX DESIGN-TAMALE

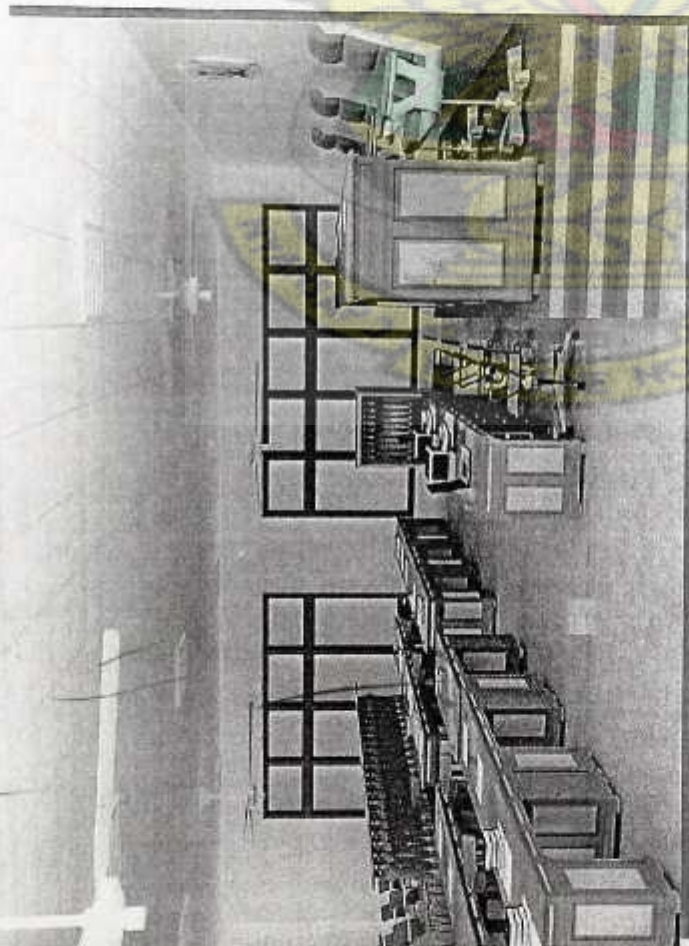


NAME: FENEDICT OWENS, BROWN	DATE:
DEPT. OF ARCHITECTURE, KNUST	DATE:
COURSE: DESIGN THEMES	MARCH 11
DATE: MAY, 2009	SCALE:

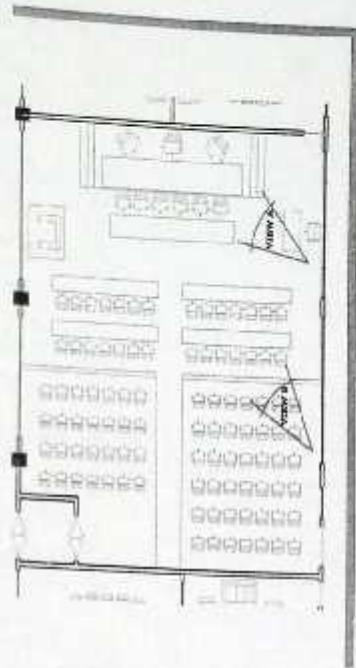


# INTERIOR PERSPECTIVES

## APPEAL COURTROOM



VIEW 'A' OF APPEAL COURTROOM



PLAN OF THE DISTRICT COURTROOM

VIEW 'B' OF APPEAL COURTROOM



# REGIONAL COURT COMPLEX DESIGN-TAMALE

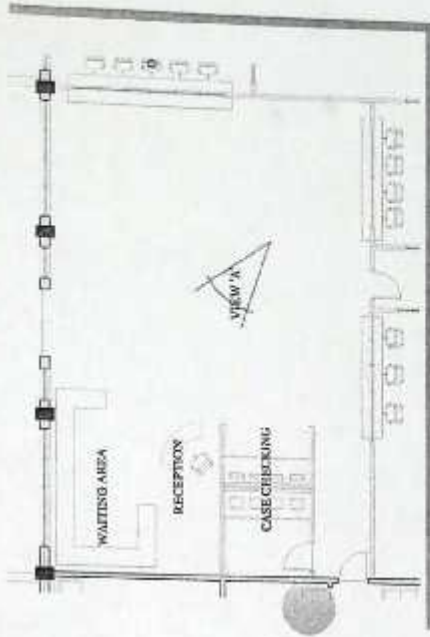




# INTERIOR PERSPECTIVES



PERSPECTIVE OF THE RECEPTION AREA

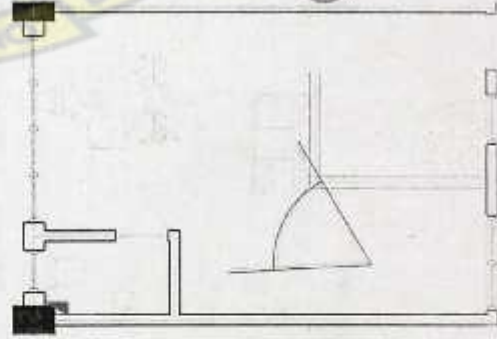


PLAN OF THE RECEPTION AREA

PERSPECTIVE OF JUDGES' CHAMBERS



PLAN OF THE JUDGES' CHAMBER

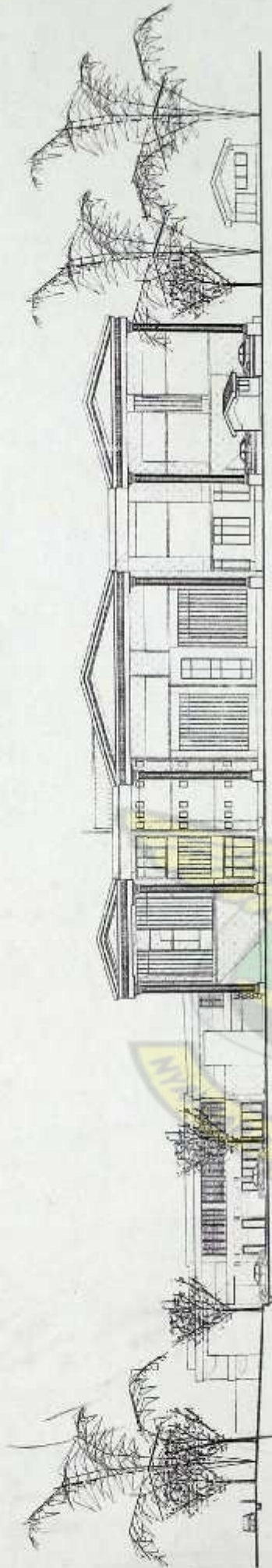


## REGIONAL COURT COMPLEX DESIGN-TAMALE

NAME: BENEDICT OJUSU BROWN  
DEPT. OF ARCHITECTURE, KNUST  
COURSE: DESIGN THESIS | MARCH II  
DATE: MAY, 2009 | SCALE:



ELEVATIONS



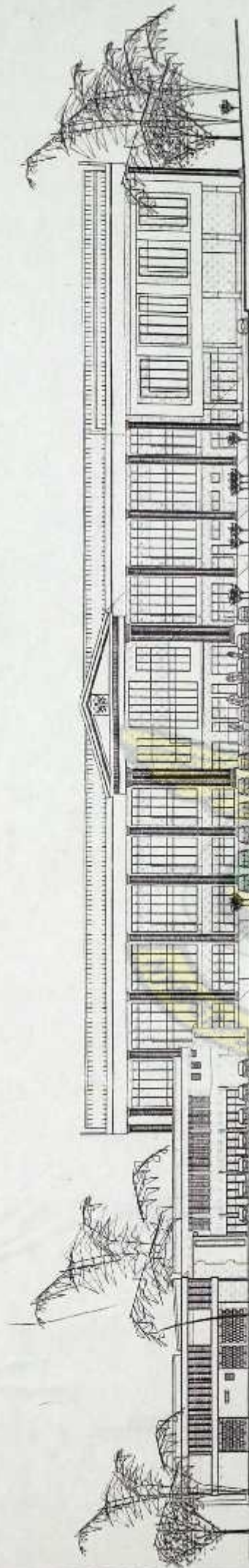
WEST FACADE



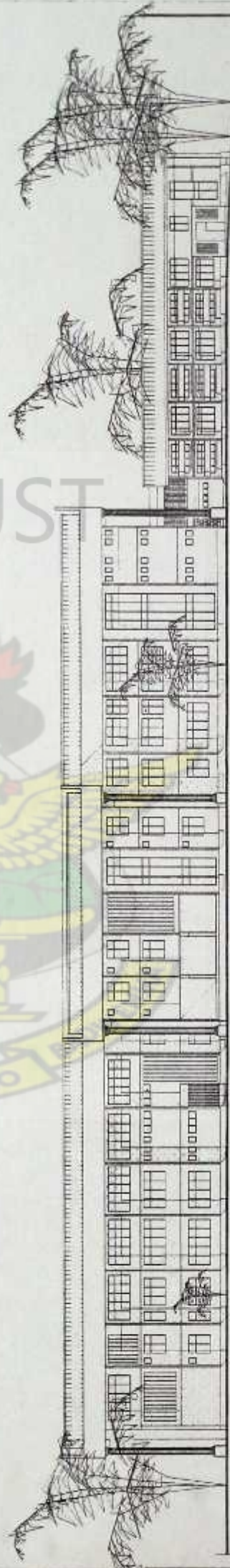
EAST FACADE



ELEVATIONS



NORTH FACADE



SOUTH FACADE

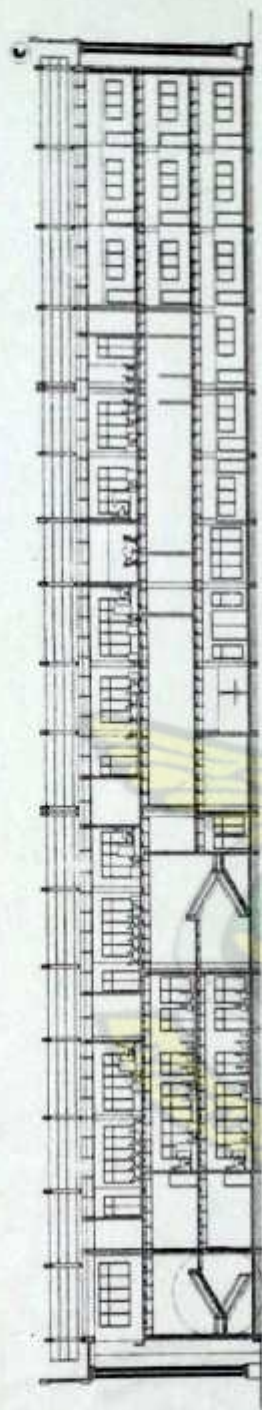


KNUST



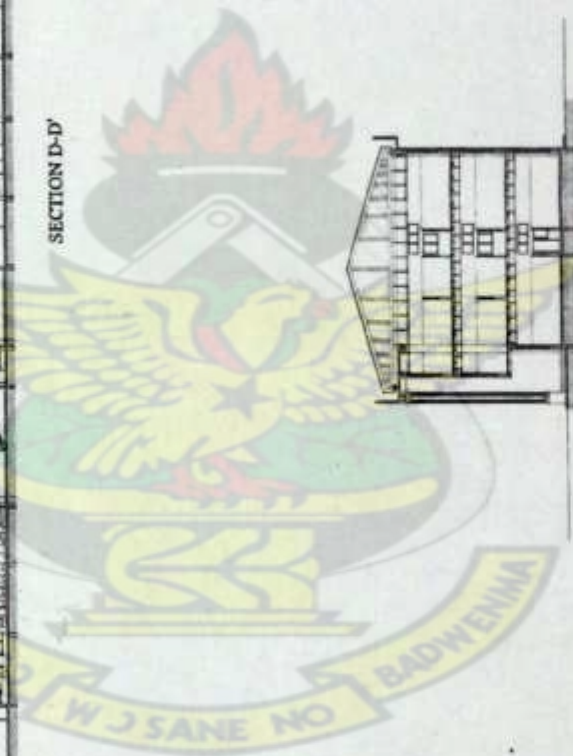
SECTIONS

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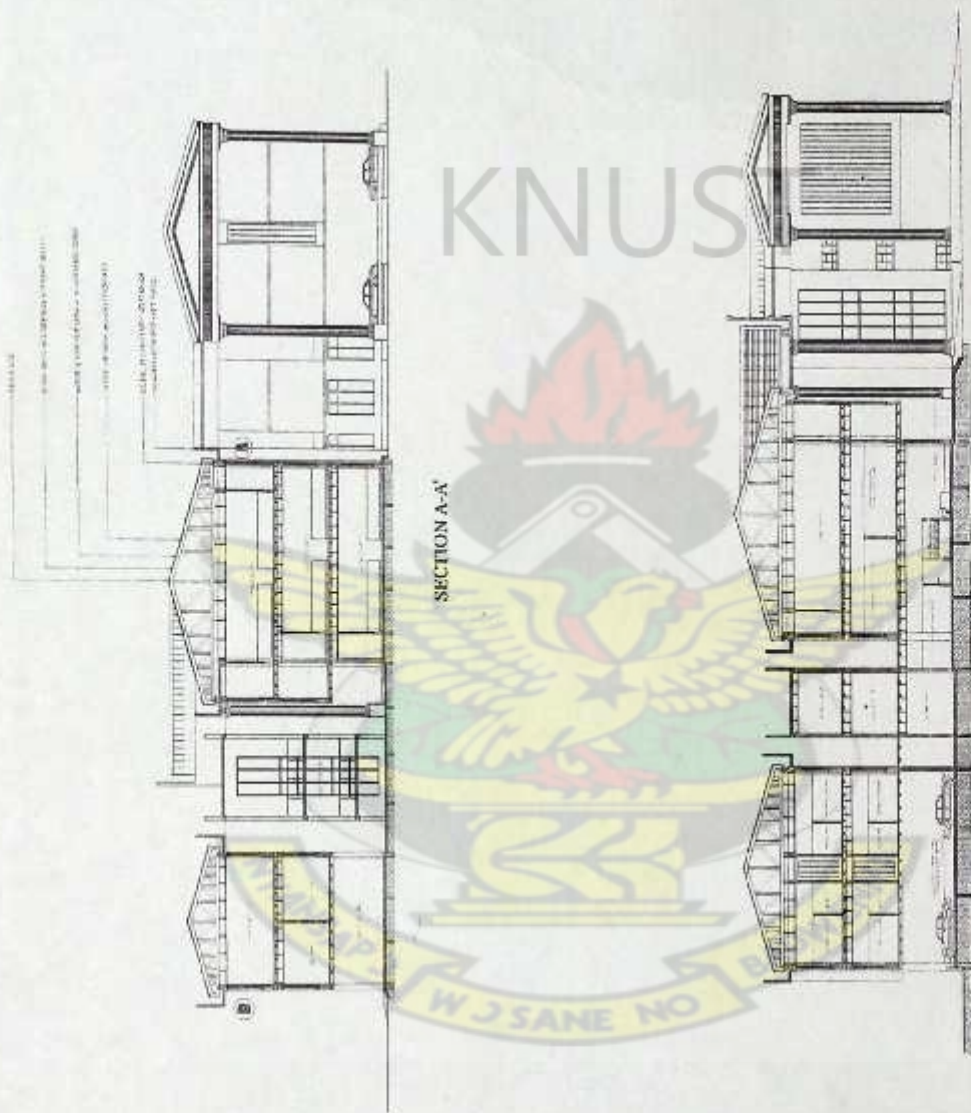


SECTION D-D'

KNUST



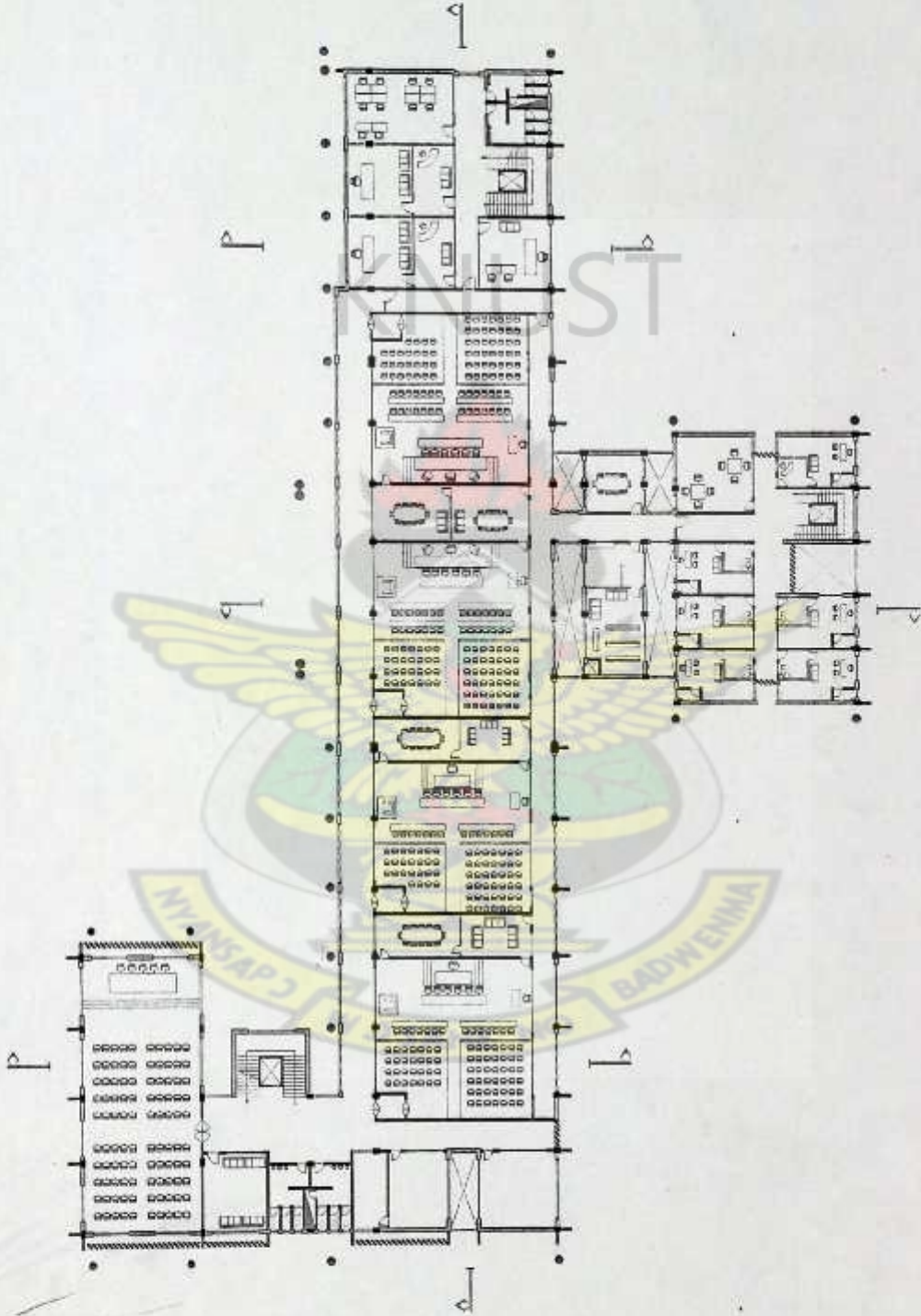
SECTION C-C'



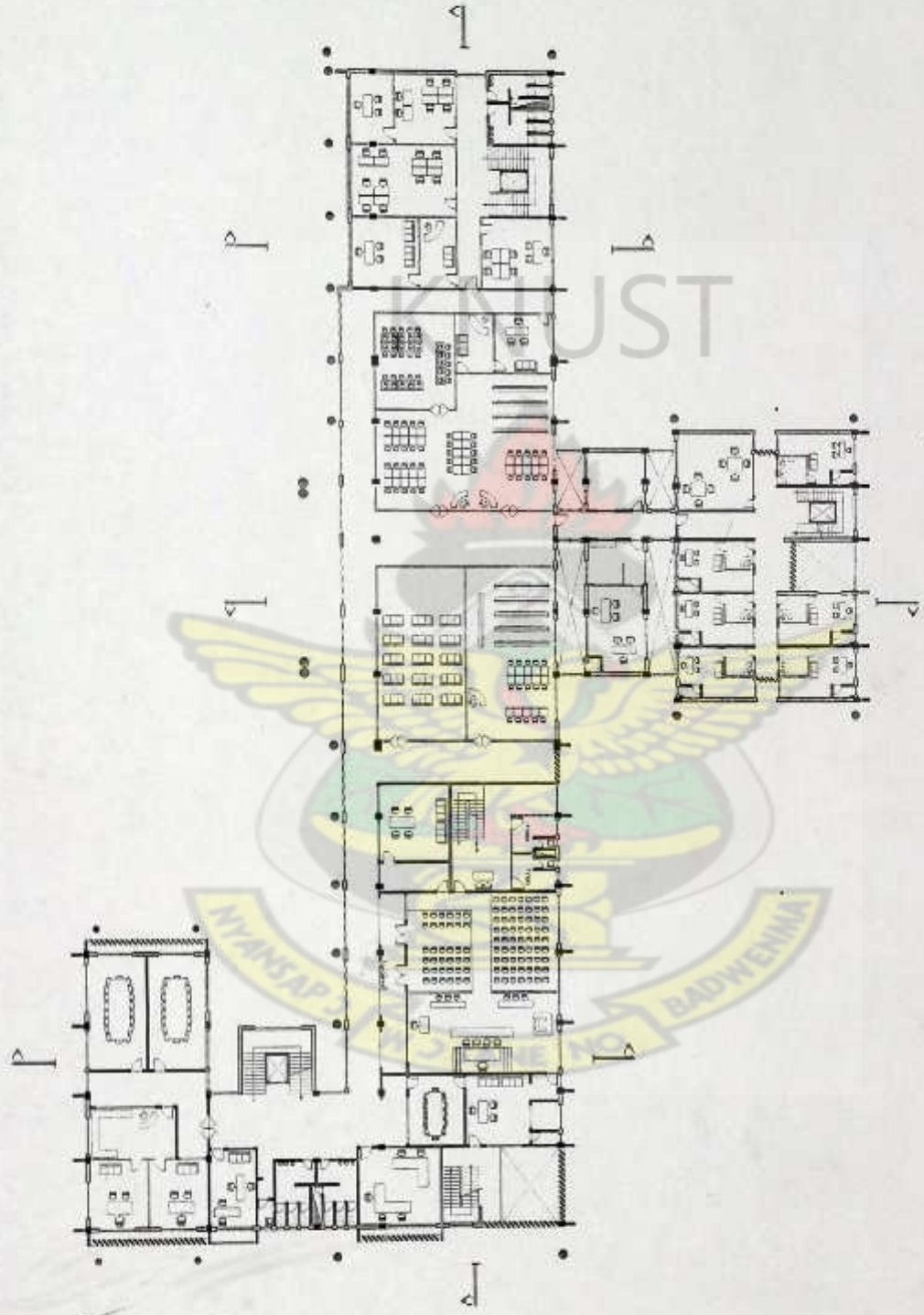




PLAN



SECOND FLOOR PLAN

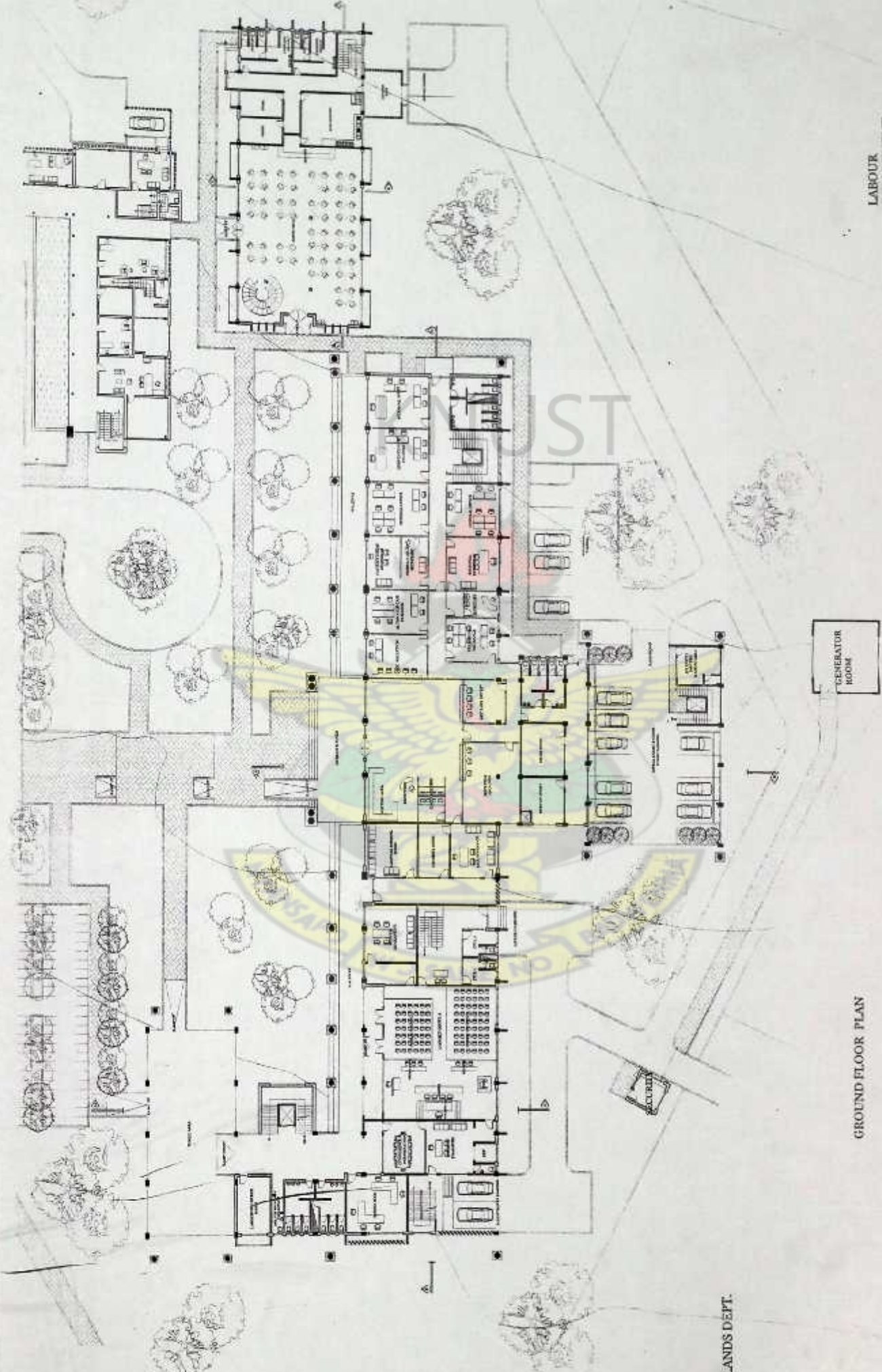


FIRST FLOOR PLAN

PLAN



PLAN



LABOUR  
DEPARTMENT

GROUND FLOOR PLAN

GENERATOR  
ROOM

LANDS DEPT.

# REGIONAL COURT COMPLEX DESIGN - YAMALE



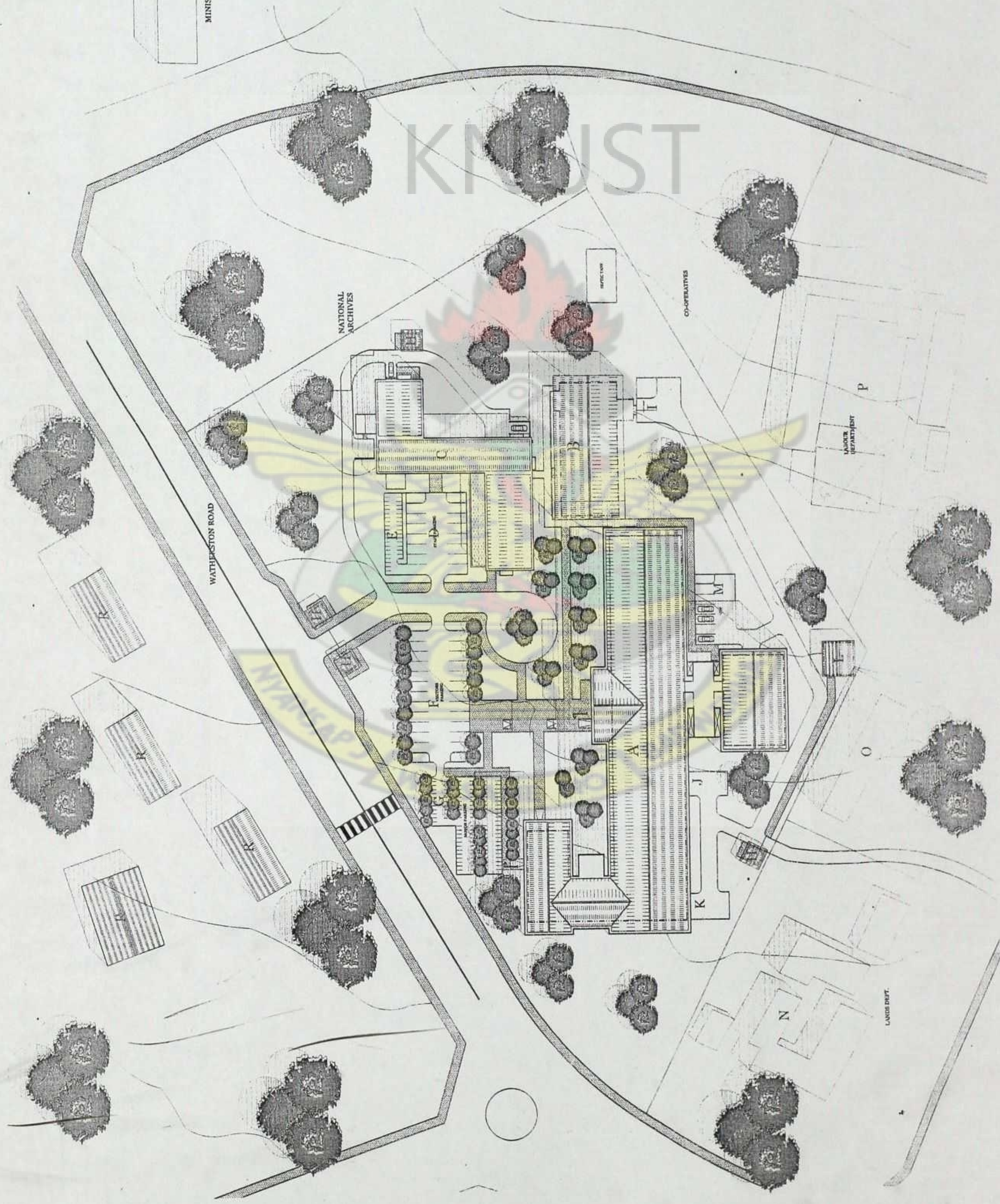
# BLOCK PLAN



MINISTERIAL BLOCKS Q

## LEGEND

- A - PROPOSED COURT COMPLEX
- B - PROPOSED RESTAURANT
- C - EXISTING HIGH COURT BUILDING
- D - STAFF CAR PARKING
- E - STAFF MOTOR CYCLE PARKING
- F - VISITORS CAR PARKING
- G - VISITORS MOTOR CYCLE PARKING
- H - SECURITY POSTS
- I - SERVICE PARKING
- J - ACCUSED/CRIMINALS CAR PARKING
- K - MAGISTRATES CAR PARKING
- L - GENERATOR ROOM
- M - REGISTRARS PARKING
- N - LANDS COMMISSION
- O - ATTORNEY GENERALS DEPARTMENT
- P - LABOUR DEPARTMENT
- Q - MINISTERIAL BLOCKS
- R - RESIDENTIAL BLOCKS



# REGIONAL COURT COMPLEX DESIGN - TAMALE

NAME	RESIDENTIAL BLOCKS
DATE	10/11/11
DESIGNER	KNUT
CLIENT	KNUT
SCALE	1:1000
DATE	10/11/11