A BAPTIST CHURCH FOR KNOXVILLE, TENNESSEE

by

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Thus saith the Lord, the
heaven is my throne, and
the earth is my footstool:
where is the house that ye
build unto me? and where
is the place of my rest? [1]

1. HOLY BIBLE, King James Version, Isaiah 66:1

The problem which has been chosen for this thesis is the design of a church plant for the Bell Avenue Baptist Church of Knoxville, Tennessee.

The author has chosen this problem because of a personal interest in this field of design. This particular program was chosen because it was in the early stages of formulation and because it was an interesting ecological study.

The subject of church design has not been presumed an easy one. The lack of real effort on the part of designers has, however, been partially responsible for the insignificant progress in this field. The author feels that the design of religious buildings requires more varied study than the design of any other building type. In addition to being convinced that there is a real need the designer must understand the historical development of religious buildings and their total present requirements. The author has attempted an inquiry into these matters in this thesis. In addition to this he has attempted a physical solution to a specific problem.

It is not possible
to run a course aright
when the goal itself
has not been rightly
placed. [2]

2. Francis Bacon quoted by L. Maholy-Nagy; Vision in Motion. Chicago,
   Cuneo Press, 1947, p.19.

The materials available for research on this project are almost limit-
less; it touches every major phase of knowledge. It involves human
relationships and human needs (both spiritual and physical), the theory
of art and architecture and the very nature of religious worship. In a
limited paper there cannot be an exhaustive treatment of all matters per-
taining to the subject. The author has, however, tried to achieve a com-
prehensive study within the limits of this work.

Silence and composure,
self exercise and
spiritual effort are
greatly lacking in
American life.[3]

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3. Vogt, Von Ogden; Art and Religion. New Haven, Yale University Press, 1921, p.73.

Someone has said "buildings are shaped <u>by</u> the institutions they are shaped <u>for</u>." History would seem to indicate the truth of this statement. If, therefore, a building is to be designed for religious worship, it will, if successful, not only be a functional answer to the specific needs of a congregation but it will also reflect the needs of the larger institution--our culture.

We are at the beginning of the
transformation which will end
in the superior race and which
will require a sustained effort
for hundreds of centuries. [4]

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4. du Nouy, Lecompte; Human Destiny. Longman's, Green and Company,
New York, 1947, p.177.

Many men are concerned about the lack of depth in our society. It is more than a concern for morals. There seems to be no universal movement to achieve the development of the total personality. Life is becoming full of complex emptiness. The acceptance of the commercial entertainer and the commercial thinker is robbing man of his desire for serious self development, and people are becoming spectators in the "art of living". More resources for complete living are available now than ever before in history but there seems to be a lack of integration and orientation. There is a failure to grasp the inter-relatedness of human affairs. Our society is therefore weakened and many men become prey to confused, radical and reactionary thinking; there is a tendency to vacilate with the daily newspaper. This is a matter of concern to those who cherish our heritage and appreciate the early effort involved in freeing our society from the shackles of the old world.

A noted architect assures us that "we may find comfort in the reflection that truth and liberty have this invincible excellence, that all man does for them or does against them eventually serves them equally well."[5] It is significant, however, that man is the only creature having a choice in what he shall do and that if he cannot visualize a goal he cannot make a choice, and society suffers.

5. Wright, Frank Lloyd; Kahn Lectures of 1930. Princeton, N. J.,
   Princeton University Press, 1931.

It has been suggested that the new visions (telescopic and microscopic) have upset man's traditional scale of understanding. Whatever the cause one may agree that some element is lacking in our society.

Serious religionists are convinced that the ultimate answer to man's problems lies in his dependence upon inner resources (which must first be developed). According to Plato it would take man 10,000 years to move from tyrant to philosopher going through the stages of artisan, painter and brave man. The Christian points out that Christ offered a different course by which man could realize the significant; Christianity stands alone in offering without the traditional need of sacrifice on the part of the recipient, an instantaneous reorientation by the Creative Source.

If mankind is to use his new physical resources to pursue a higher destiny it would seem that he needs some sort of reorientation. Such a reorientation as Christ offered would not limit man's approach to the complete life by setting arbitrary limitations on the search for knowledge or upon the development of other aspects of living but rather it would serve to acquaint men with their personal significance in the total scheme of things; the development of their total personality.

.....nowadays we can hardly
expect to destroy atheism by
the sentimental and tradi-
tional arguments.....of the
past.[6]

6. Supra 4., p.15.

Mankind has traditionally depended upon the church in the matter of spiritual leadership. That the churches in America have contributed immeasurably to our society can not readily be denied; that they have failed to inspire universal interest is also true. Church membership has increased until more than half of the population are church members.[7] Unfortunately, however, many people who would contribute to a significant ministry are not in sympathy with the operative program. As long as man could be coerced into acceptance of religion the program was not so important; man now demands more if he is to participate. Various criticisms of the operative programs have been made. Some of these are: the emphasis on negative tabu rather than positive thought; the reactionary attitude toward scientific and social progress; the emphasis on repitition (verbalism); the division among the churches; the lack of beauty in the service, etc.

It is impossible to discuss these criticisms from the standpoint of the Protestant Church as a whole. The Protestant Church varies in structure and attitude from the church which has a liturgy based on the emphasis of the priestly functions and ordinations of the authoritarian clergy to the type which is congregational and emphasizes the prophetic and pastoral functions. The former holds that the prime function of the church service is to allow participation in a significant rite. The later contends the purpose is intellectual instruction and emotional inspiration.

Ever since Gutenberg published his Bible in 1456 there has been an increasing tendency for man to interpret for himself the meaning of

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7. Architectural Forum, December 1949, p.67.

Christ's teachings. This culminated in freedom of worship and the development of democracy. It encouraged the formation of new branches of Christianity since various interpretations grew up. There have been attempts to consolidate these various branches, but fear of the development of another religio-political organization has prevented their fulfillment.

Despite the various handicaps to universal acceptance of the Church in America it has been a dominant factor in our society since the beginning. Eighty-seven percent of our population are said to have expressed the belief that religion was a necessary element in our society.[8] But there seems to be an insufficient amount of incentive for personal support of that necessary element. To achieve this incentive is the function of a vital church program.

In a pioneering society such as that which existed in America in its early history and throughout the westward settlement days the prophet who is careless of accepted standards of worship is well suited. There is no inclination toward lighted altars and vested choirs; fiery speech and rugged action are in keeping with the surroundings. In such a society public confessions and dedications indicate the degree to which a people are sharing a common lot. Communal song gives expression to a very real unity of purpose. It is the traditional pattern, however, for a more developed social organization living under more secure and comfortable circumstances to demand more refined ceremony. In former days such a

8. Literary Digest, January 15, 1927, p.30-31.

settling down to domesticity was the signal for the development of a
priesthood and subsequent ceremonialism. There is at the present time
a movement in the Protestant Churches to use more symbolism and more
conventional ceremony. This movement is in answer to those people who
feel the church services (with a few exceptions) are generally too in-
formal. That formality has for some time been available within the
Protestant Church, however, leads one to the conclusion that the answer
to a fuller and more universal participation does not altogether lie
in this direction. It would seem rather that the difficulty is more
deeply seated -- a lack of vitality. Churches have a tendency to
blame the lack of effectiveness on problems of modern living, pleasure
attractions, etc., but it might be suggested that introspection, with
the view of finding out why people have no consuming desire to attend,
might be in order. Any spiritual vacuum, no matter how loudly dis-
claimed, can destroy the interest of the non-church member.

The Protestant concept of a church to serve the people in their
search for God and good would seem to call for a program of worship
service and instruction so vital to the community that there need be
no particular effort to accomplish participation. This would require
sustained effort by the best minds within the churches. Such a pro-
gram would exclude mediocrity of purpose. It would also exclude in-
sufficiency of planning. The entire church program and its physical
accommodations would be planned with confidence and thoroughness,
but with flexibility which would not exclude the possibility of
change as new knowledge is gained. It would require the maximum

use of mans greatest gift: constructive imagination.

"The test of the success of a church and its ministers is no longer the number of people that can be attracted to the preaching service at a given hour on Sunday....." [9]

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9. Dobbins, G. S.; Building Better Churches. Nashville, Broadman Press, 1952, p.15.

"If there are vital and imaginative
 movements in the direction of
 religious thought and feeling and
 purpose, there will be in architecture
 equally strong movements expressive
 of the vital life underneath." [10]

10. Supra 3., p.199.

Churches are a symbol of a religious belief (Christian philosophy) as well as a meeting place for the practice of religious expression (congregational worship). It would seem to follow, therefore, that the function and form of a church building should be derived not from the romantic memories of the past but from the total, yet particular needs of the congregation for which it is built.

In former times the efforts of religious builders were channeled to a particular form development. Once a trend was begun, as in classical times, it might last for hundreds of years, until such time as it reached the ultimate and declined. Even if a radical departure in form had been sought the structural processes would have limited the experiment to arch, or post and lintel, solutions. Today the architect has a wide range of structural methods and materials at his disposal and all of the knowledge of the past to guide him in his solution to the Church building problem. Yet, despite a good beginning, there remains no universal trend toward good contemporary church building.

> "If now there were a church which by the same means affirmed
> its unity and that spirit; a church which, careless of doctrinal
> disputations and ancient privilege, made its present purpose ex-
> press and visible in the unequivocal language of modern structure;
> which illumined that purpose with picture, sentiment, and symbol
> drawn not from the researches of antiquarians but from the life
> that flows around and through it; well, then I might call that
> church good architecture. I might even call it Christian archi-
> tecture." [11]

11. Hudnut, Joseph; Architecture and the Spirit of Man.
    Cambridge, N. J., Harvard University Press, 1949, p.79.

"Nowhere is the contemporary architect
so sharply confronted with the necessity
for making his peace with tradition
as in the field of ecclesiastical art.
For here the past cannot be ignored.
The Church comes out of the past...
and new art must interpret ... convincingly
and intelligently."[12]

12. Fitch, James M.; St. John the Divine. Architectural Forum, December 1954, p. 113.

Architecture, as much as any human achievement, is dependent upon the civilization which have preceeded our own for the framework of its very being. Certain constituent facts have been developed at each interval of progress. At the same time each culture has contained much that proved to be transitory. It is for the knowledge and assurance that such knowledge gives that architectural history is pertinent to this study. [13]

13. Gideon, Sigfried; Space, Time and Architecture. Cambridge, N. J., The Harvard University Press, 1949, p.18. Quote: "Constituent facts are those tendencies which, when they are suppressed, inevitably reappear.......Constituent facts in architecture, for example, are the undulations of the wall, the juxtapositions of nature and the human dwelling, the open ground-plan."

Hamlin has given a classification of religious building types
which the author believes is sufficiently important to quote in full:

> "Religious building fall into four different categories. The
> first type results from the conception of the temple as a House of
> God---that is, the god's actual or symbolic residence. Among
> peoples where this conception rules, the temple tends to follow
> house designs, with cult statue or symbol replacing the human in-
> habitant. The classic Greek and Roman temples are of this type,
> and elaborate temples of Egypt are but a development of the same
> idea; Chinese and Japanese temples were originally based on it also.
>
> The second type may be generally referred to as the High Place---
> that is, an area set apart for the worship of a nature god (frequent-
> ly a sky or sun god) and so arranged that the worshipper is brought
> into close communion with the diety. Hills and mountains were natural
> locations for such areas; where they are lacking, the sects erected
> artificial hills of earth or brick or stone to raise the worshippers
> from the plain to the higher and purer air. Such were the Ziggurats,
> the artificial pyramidal temple mounds of Mesopotamia, and the great
> pyramids of Maya, Toltec, and Axtec Mexico. In many cases sugges-
> tions of the first category appear in connection with the second, and
> shrines are built on the summits of these pyramids.
>
> The third type is that of the tomblike shrine over the body or
> a relic of a saint or a diety. Since early man, in many parts of the
> world, erected a pile of earth over a king's or hero's body to form
> a tumulus, it is natural that the same tumulus form was taken over,
> regularized, and built in all sorts of symbolic shapes to memoralize
> a god or a saint. The stupas or topes of Buddhist Asia are character-
> istic examples of this type of religious building. Owing to its solid
> hill like shape, there is occasional confusion between this type of
> structure and that of the High Place, but the origins of the two types
> are different and their purposes dissimilar.
>
> The last type of religious building, and in some ways the most
> advanced, is the meeting place. Here the dominance is given not to
> the god but to the worshippers. Classic "mystery" religions, like
> the mysteries of Eleusis or the cult of Mithra developed religious
> buildings of this type, wherein the faithful could meet to take part
> in a ritual service or to observe a ritual drama. The Jewish syna-
> gogue was primarily a meetinghouse and the prayer hall was an import-
> ant place in many Chinese and Japanese temples. It was natural that
> early Christianity should adopt the same idea and for its early
> churches take over and modify the basilica---the great public court-
> room and meeting hall of the Roman world." [14]

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14. Hamlin, Talbot; Architecture Through the Ages. New York, C. P.
Putnam's Sons, 1940, p.11.

"The art of primitive peoples, living today and as widely separated as the South African Bushman and the American Indian, shows identical characteristics. These facts would seem to confirm Dr. Hocking's assertion that the esthetic aspects of art are aboriginal." [15]

In the more advanced areas of the world the hunter is thought to have been replaced by the farmer about 10,000 B. C. The former left evidences of his belief in the supernatural powers by his paintings and by his burial preparations, while the latter expressed his feelings for the supernatural by setting up stone memorials and by constructing burial chambers. The exact beliefs of both are obscured in antiquity.

The important thing seems to be that at this early date some sort of supernatural belief did exist. This idea that there existed an unseen power responsible for pain and pleasure stimulated man to produce "art" to control or influence that power. Eventually these early men came to formulate ceremony which included sacrifice and tabu and to set aside "sacred" places or objects. With the increased complexity of the belief a priesthood developed to which was ascribed certain magical powers and the ability to prepare a departing soul for the after life.

Although the development of religious building in pre-Columbian America and in the Far East have little if any direct bearing on the later Western development they are interesting as a part of the larger picture of religious building.

Each of the cultures of pre-Columbian America seems to have had some sort of religious belief although they varied in architectural

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15. Bailey, F. Edward; The Arts and Religion. New York, The Mac Millan Company, 1944.

development from the mound builders of Ohio to the benevolent Incas with their impressive sun temple (who were eventually "Christianized" by the Spaniards). Apparently all of these cultures had a religion founded on a supernatural interpretation of some aspect of visible nature. In some instances the religious structures of the more advanced cultures showed a high level of architectural achievement of a flavor reminiscent of both Egypt and the Orient and yet similar to neither.

In the Far East one of the earliest developments seems to have been the Indus Valley culture which had a religion centered about the worship of a mother-goddess. Brick temples were built for this worship.

Later Indian culture developed an animistic religion and from this Hinduism developed. The Hindu religion had as tenets of its belief the idea of the caste system, of the transmigration of souls, of a plurality of gods, and of supernatural powers in certain natural objects, along with certain high moral concepts. Developing from Hinduism was Janism (which soon returned to Orthodoxy) and Buddhism which taught man to be his own master. Buddhism, like Brahmanism, stressed the complete detachment from the material world. "Both Buddha and Christ tried to set men free from formal dogma that they might follow their own convictions and consciences." [16] Buddha's efforts, however, resulted only in a new set of dogma developed by his followers.

Rock cut shrines and domed temples seem to be the most characteristic types of Indian religious architectural achievements. The mass decoration on Indian architecture can hardly be appreciated except by identification with the religion. The importance of this art was to

16. Berry, Gerald L.; Religions of the World. New York, Barnes & Noble, Inc., 1947, p.45.

channel the emotions. It exhibits no tendency toward tension. The approach to art was through introspection and cost or effort did not count.

The Chinese culture has been a continuum for approximately 4,000 years. During this time the three religions which have proven most important are Confucianism, Taoism and Buddhism. Confucianism is actually the formulation of certain ancient Chinese teachings. It dealt with morals and ethics as well as cosmology, government and the social order. It was concerned with the development of wisdom (thought) as well as knowledge (learning). Eventually Confucianism developed into a kind of religion.

Taoism taught frugality and simplicity and denied the Confucian educational program. It declined into a hierarchy of the gods and a belief in magic.

Buddhism in China differed from that of India in that it retained its essential early character, while growing somewhat more complex (in India it eventually reapproached Hinduism). Buddhism and Taoism became the popular religions of China while Confucianism became the philosophy of the educated.

In China as well as in India religious buildings bear many of the same plan characteristics regardless of the particular faith.

Chinese planning is formal and conceived in large terms. Horizontality is the basic visual tendency but it is tempered with the gentle curve. The Chinese were interested in natural phenomena while the Indian showed more concern with introspection. Chinese architecture showed a sensitivity to the significance of line and

shadow whereas the Indian seemed more interested in a wealth of detail mass ornament. It is interesting to note that the Chinese developed temple roofs which approximated the slopes of the Greek temple. The Chinese temples have no facade, but exist as a unit. Once they were developed they were little changed. The Chinese architect tried to blend his building into its natural setting while at the same time keeping a very formal plan.

Japan, in the earliest times, had a nature religion. Shinto is the name given to the traditional religion before Buddhism was introduced. Buddhism, once introduced took on a distinct Japanese flavor and became the national religion. Eventually, due to the delving of the priests into politics, Shintoism was restored to its national status. In the late 19th Century freedom to all religion was granted.

Buddhism has been the energizing force in Japan. The temples are more subtle than the Chinese Buddhist temples and a higher expression than the Japanese Shinto temples.

The modern architect has found much to admire in the architecture of Japan. It shows a lightness and delicacy, a high regard for textural quality, a consideration for simplicity, and almost always a fine relationship to the natural landscape. The Japanese believes he can produce art only after going through a state of mental concentration.

The Moslem religion has influenced the Western development more than those previously discussed since it came in contact with

Christianity in large areas of the world.

Beginning with Mohammed's flight to Medina to avoid per-
secution in Mecca (622 A. D.) the Mohammedan religion, militant in
nature, spread over much of the civilized world. The burning faith
became the basis of a sphere of influence which cut across political
boundaries and cultures. The religion had presumably been estab-
lished to simplify confusing beliefs and return to the idea of a
personal and congregational religion. Its anti-ritualistic con-
ception, however, was soon supplanted by the ideas of a specially
educated clergy. Although the Koran demanded that sumptuousness
and idleness be avoided the people managed to circumvent that part
of the instructions.

The Mohammedan religion maintained strict regard for the second
of the ten commandments. This caused the artist to explore geometry
and nature as a means of decoration. He developed the arabesque with
palmet motif with an interlacing pattern of decoration and he managed
to be surprisingly creative within the bounds of his decreed limita-
tions.

Moorish regard for craftsmanship and tile surfaces was influ-
ential in most Spanish countries including Latin America. In India
the Moguls (Mohammedan rulers) built magnificent tombs and mosques,
palaces and audience halls. The tomb carried a dome, the mosque a
minaret and tower from which the calls to prayer were given.

The Mohammedan needs for religious worship were simple: a
secluded place, a fountain (to bathe before worship), and a shady

place where he could pray toward Mecca.[17] There needed to be a niche
in the wall of the mosque to indicate the direction of Mecca, a raised
platform for scripture reading and a pulpit for the sermon.

Egypt and Western Asia were the prime contributors of esthetic theo-
ries and structural systems to the western world. Mesopotamia furnished
the dynamic element while Egypt furnished the static.

The cultural stimulus in Egypt was religion while Mesopotamians were
more interested in warfare, law and business transactions. The Egyptian
design is quieting while that of Mesopotamia is torn by tension and rest-
lessness. The two tendencies defined artistic trends later refined by
other peoples. The masculine element in Mesopotamian art was largely
dominant and this required the display of strength and splendor.

The religion of the early nomads in Mesopotamia consisted of a be-
lief in many nature gods who could be rendered powerless by prayer and
who could be bargained with. Ritual was more important than right living.
Although there was a belief in justice, kindness and mercy, there was no
consideration for charity. The practice of human sacrifice was employed.

With a gloomy view of the after life (a feathered creature on a
dusty plain) the tombs of Mesopotamia were neglected for the temples
through which the Summerian hoped to influence his gods for immediate
material gain. The Summerian farmers and traders eventually gave way
to the Assyrian military system. The Assyrian developed architecture
with even more rugged power expression than had the Summerian.

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17. Gardner, Helen; Art Through the Ages. New York, Harcourt, Brace
   and Company, 1948, p.288.

The Ziggurat dominated every Mesopotamian town. It was sometimes symbolically colored with a white court, black lower stage for the underworld, red middle story for the earth and a blue shrine with a gilded dome (for the heavens and the sun). The columns were dispensed with in favor of the arch, vault and semi-dome.

In the earliest days of Egyptian history there seems to have existed a religion of animal and ancestor worship. The totem (an object, often animal, considered closely related to a clan) was a natural development of fetishism (object held in blind reverence as the habitation of a potent spirit).[18]

In later times the mythology concerning the death of Osiris at the hands of Set and the subsequent search for his body by Isis was one manifestation of the Egyptians regard for the preservation of the body after death. Another was the development of mummification. The search for a permanent means of preserving the body led to the use of permanent materials for funerary architecture and to the study of means by which security could be obtained for the body. Immortality was at first thought to apply only to nobility but gradually all men were included.

"Osiris was successively god of the Nile, a life-giver, a sun-god, god of justice and love, and finally a resurrected god who ruled in the after-life." [19]

How the soul fared in the judgement hall of Osiris depended upon its morality in life but the "good life" alone could not get the soul to

18. See Funk & Wagnall's College Standard Dictionary.
19. Supra 16., p.8.

heaven. The death, partition and resurrection offered a chance for a religious dramatic presentation.[20]

With the belief in immortality and the consequent regard for morality religion took on a new significance which had not existed in more primitive religions. The "ka" or soul of the Egyptian was provided for by furnishing the tomb with its material needs.

In the beginning the burial urn was the Egyptian provision for the after-life; later the tumulus; then the mastaba and its development the pyramid, and finally the temple. The temple was designed for emotional content and was derived from the dwelling. The Egyptian services were not congregational but the temples provided a series of progressive divisions to accomodate those of different rank and status.

Eventually temples came to be built separate from the pyramids. Ikhnaton (14th Century B. C.) an advanced visionary conceived of a mono-thestic religion and built magnificent temples with a design regard for nature. He called his god Aton (sun or light). The priesthood overthrew this advanced concept at his death, however, and destroyed all that they could find of his influence. The new art approach was also destroyed. His influence was not completely done away with, however, because there continued to be a regard for a one-god religion.

The majesty of Egyptian architecture and the concept of religion held the people's attention for many centuries in Egypt. The building during this time evolved into larger and more complex plans, but the building was

20. Stites, Raymond S.; The Arts and Man. Chicago, McGraw-Hill, 1940, p. 179.

always massive and monumental. The hot climate called for thick walls and small openings. The decorative elements used were those native to Egypt, the lotos, papyrus and palm. The structure was post and lintel.

The religion of the pre-Greek culture on Crete and on the mainland showed a fusion of Mesopotamian and Egyptian influences. There are evidences of the worship of solar and underworld dieties along with nature gods nearer at hand. The beehive tombs and the stone-chest graves indicated the regard for the necessity of preparation for the underworld journey.

The buildings of this early period were not structurally significant being in the stage of corbelled arch and elementary post and lintel. On Crete the temple consisted of a shrine out among nature--at times walled in with a tree in the enclosure. Two columns on a pedastal formed the actual shrine. The decoration was naturalistic and gradually tended to be geometrized.

There is little evidence that the later Greek culture inherited much from this civilization. The religion of the classical Greek period, like that of the Norsemen depended upon mythology for an explanation of the supernatural forces. Although this explanation was sufficient for the average Greek the philosophers rejected it and tried to develop a more rational approach which became a systematic inquiry and the basis for later philosophy.

In the early period of Greek history the nobility served as the priesthood. In later times the tyrant unintentionally prepared the soil for democracy by discrediting the nobility.

The Greek gave his gods human attributes and did not seem to greatly love nor fear them. The Greek valued the triumph of final good but he did not have an extremely happy prospect of the after life.

Zeus headed the delegation of gods and was the power which protected the good and punished the evil. The idea of mercy, an attribute of an advanced religion was prevalent in the Greek religion. In addition to this there was a regard for the sanctity of the oath as in the Hebrew religion. The really advanced characteristic of the religion seems to have been the idea that moral and scientific progress as well as speculative thought and artistic creation were attributes of the divinity.

To the Greek, with a "this-world" conception of religion, memorials were important but not as tombs for preservation. The temple was not in any sense a "house of worship", either, but rather a memorial house for the god, patterned after the house of the early tribal chief--the megaron. It served as a repository for the god and for gifts to the god.

Impressive homes were frowned upon by the Greeks before the culture began to decline. Greek art and architecture in this enlightened period was dedicated to public enjoyment and satisfaction. The Greek was objective and was impressed with the reality of living. The Greek was neither concerned with the fears of the Mesopotamian religion nor the permanence of the Egyptian religion. He therefore built a temple which expressed self-possession. His building was pleasantly calm with control of materials and form dependent upon his use of the eidos or perfect image (which led to the deviation from the geometric in the manner of the law of natural growth). He used realistic sculpture which was compositionally

controlled despite its level of importance religiously or memorialy. The sculpture was not an addition to, but a part of the building.

In later times the basic concept of the temple came to be affected by the mystery cults. It grew much larger to accomodate the new rituals and the priesthood.

From the late fifth century the Greeks were no longer free to create according to their own desires but became world school-teachers.

The Roman culture which was to supercede Greece as the world leader was in its earliest times based upon a belief in animism. This was true when Rome was but an agricultural province. In this age there was primarily an attitude of fear toward the gods with whom, however, the Roman found it convenient to bargain. These early Romans attempted to define a legal relationship between themselves and their gods. The rituals were extremely formal. The spirits were thought to exist in certain secret spots in and about the round hut which was the dwelling. The father of the household was the priest. There were also seasonable out-door religious observances in which groups would participate.

As the state religion developed the household cult was reorganized and expanded into a consistant system. The state officials became representatives to the divinity. The religious ceremony became brief and formalized. The Roman religion was particularly susceptible to outside influences both Italian and foreign for as the state grew it absorbed various new religions. The Etruscan religion (which bore a similarity to that of Egypt), and the mythology of Greece, were both of considerable importance, to which later was added the various oriental cults.

The Roman gods and the Roman religion have been described as "clean but cold". [21]

The form of the Roman temple was copied from that of Greece and as the later Oriental religions demanded more space the early temples became art museums and libraries. The Roman designed for interior use to a greater extent than the Greek while attempting to achieve exterior impressiveness and the effect of grouping of various buildings. The facade became important at the expense of the unity of the building.

The Western development of Christian architecture was for a time but a continuation of the Roman tradition, for most of the areas to which Christianity spread were under domination of the Roman state.

The Bible relates some early Christian worship practices. After the ascension of Christ the Apostles were "continually in the temple, praising and blessing God." [22] This was, of course, the Jewish temple. The first meeting of Christians as such seems to have been in a private home for the purpose of prayer. [23] The first recorded sermon was in or near a private house (an informality instituted by Jesus). [24] From this humble beginning Christianity soon spread to Egypt, Persia, Syria, Greece, Rome, etc.

The history of early Christian architecture was concerned largely with two branches of the Christian church with centers at Constantinople and Rome with the former taking precedent in architectural development. Before the architecture in Syria and Egypt could fully develop these areas

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21. Supra 16., p.19.
22. Supra 1., Luke 24:53.
23. Ibid 1., Acts 1:13.
24. Ibid 1., Acts 2.

became subject to non-Christian rule.

The architecture of the early Christians did not represent a totally new approach but it did search for a means to express the new salvation. Men were no longer content with the traditional beliefs in the ancient and classical array of gods. The popularity of the mystery cults had already indicated the desire for a new religion when Christianity came along with its philosophy of confidence and faith. Being a communal religion it required a new religious building plan. Having an actual message to bring it focused the attention upon the interior rather than the exterior of the building. Being monotheistic it allowed a concentration on one building rather than many temples.

In the West where toleration was late in coming the Early Christian style may be designated as the development between the beginning of the Christian toleration and the period that the Romanesque style flourished. This period was one of constant change, socially, politically and economically. The classic culture was replaced by that of the barbarians. The chruch assumed the dominant place in European civilization. Christians who had previously been forced to worship in the catacombs were now able to experiment with building form.

After the Milan decree the Early Christian churches in Rome were either copies or adaptations of the Roman basilica and often were built out of materials pilfered from classical buildings. The usual arrangement in plan was that of nave and aisles divided by arcades, with a semicircular apse, a choir enclosed by low screened walls and a covered narthex preceeded by an open court (atrium). As the technical abilities

of the classical world were gradually lost, churches came to have wooden beams for roof support and the church forms became heavy. Marble from classical buildings was used for floors and for mosaic decoration while the walls were usually of re-used brick. Materials used to cover the roofs were red tiles, lead or slate. Domes were used over apses and sometimes vaults over the side aisles. Openings were circular headed, windows were often filled with pierced marble slabs. Mosaic decoration was extensively used on floors, walls, domes, vaults, columns, church facades, etc. The subject matter was biblical and the colors were bright. There developed an increasingly conventional symbolism. These Early Christians attempted to render visible the mysterious nature of the supernatural world. The church became the symbol of the believer's straight line progress toward the Divine Presence. The columns along the nave helped to develop the forward drive and there was seldom a transept to slow the progression. The transept first appeared in Egypt. [25] The Atrium, baptistry (a circular building), and sometimes the transept and campanile were Christian additions to the classical basilica. The basilica form had a romantic recall appeal in the different areas as it was a familiar form as a Roman public court or banking house. The basilica of Porta Maggiore is considered to be the most convincing single source of Early Christian architecture yet found. [26]

The Syrian school of Early Christian architecture began before that

25. Supra 20., p.328.
26. Pevsner, Nicholas; An Outline of European Architecture. New York, C. Scribner Sons, 1948, p.6.

of Rome. The buildings were mostly of stone and were very solid and well planned but exhibited ornament which lacked refinement. This particular school ceased to develop when the Mohammedans conquered the area in 641 A. D.

The Coptic Church with its center at Alexandria was very important in Early Christian history. Here, as in other areas of the Roman empire, materials were pilfered from pagan temples and here also the plans were basilican. The walls were usually of brick or stone, either plain or stuccoed. The arch and pier, the vault and dome were employed and in some cases the buildings carried wooden roofs. The exterior was very unimpressive while the interior was richly decorated with symbolism similar to that of other Early Christian schools.

The Eastern or Byzantine development of Early Christian architecture evolved more original solutions than that of the west. The cross with an apse became an early plan form, but the highest development was of the central plan type. At first the Byzantine technicians drew their knowledge from Rome. For this reason the architecture has been designated as "orientalized Roman." The dome became the principle feature. Byzantine walls were of brick or coarse stone (sometimes laid in bands and laid up with wide joints). The exterior was neglected for the interior which was finished in marble. The masonry or wooden roofs were covered with sheets of bronze or lead or roofing tiles. The windows which were usually placed in the drums were filled with pierced marble slabs. Floors were marble slab or marble mosaic. New column types were introduced. Domes and vaults were ornamented with mosaics or paintings. The mosaics were largely of opaque glass giving them more brilliance than

marble mosaics. All subject matter was of religious reference but generally geometrized. The Roman idea of surface decoration was carried to extreme limits while the expression of Greek structural clarity was largely subjugated to other desired effects. The Greek emphasis on exteriors was no longer sought, while the Roman emphasis on interiors was expanded. Santa Sophia built in honor of the Holy Wisdom in 532 A. D. was the largest achievement in this style of religious architecture and influenced innumerable lesser churches. The Byzantine style influenced later western architecture to a degree but its direct effect was largely to the east where architecture developed separately after the iconoclastic controversy.

The Romanesque Age, a period of Church extension, was one of experimental building in which the builders were seeking a means of filling the new needs of society and of the church. It was an age in which ideals were mixed with fear and superstition.

After Charlemagne's efforts to resurrect a former status had died out, a monastic system grew up parallel to the feudal system and both functioned partly as a means of protection. The Eastern and Western branches by this time had completely separated. The Western Church soon became very powerful and through a system of monetary gain became a great landowner and came to largely control the crafts. It was the custodian of practically all that resembled culture. In addition the people depended upon the Church sacrament or celebration for each significant moment in life.

In this age there were many evidences of mental conflict. Certain ideals were in conflict with daily life. The people were largely ignorant

due to the stratification of society and the church sought to gain support by the encouragement of the veneration of relics. The people responded to this program and the Church soon found that it needed to provide more chapels for more relics. This brought about a change of plan from the Early Christian form. It now became expedient to provide substantial transepts with apses and to add transepts to the end of the side aisles and eventually an ambulatory was added to provide access to the many altars. Each apse was required to possess a "genuine" relic.[27] This provided a new source of income and new churches.

Two other factors tended to make the undeviating Early Christian form obsolete. One was the desire to vault the church in stone rather than to continue the use of the wooden roof which was a fire hazard. The other was the massive feeling produced by masons unskilled in the ancient art.

In decoration, belief that "truth" was a revelation rather than a substantiated fact provided a receptiveness to preconceived standards of art. Sculpture and painting were regulated by convention. The decorative elements were aspects of an idea. The decoration was simple with lavish color. [28] Fear and hope were expressed by the artists.

Romanesque art is the expression of a barbaric people religiously enthusiastic and being in contact, to some extent, with the ruins of classic culture.

"The cruciform plan with many chapels, the general idea of a low side aisle and a higher nave and choir, the use of clustered piers and of

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27. Supra 14., p.257.
28. Supra 20., p.418.

round arches, a rich west front and an elaborately decorated portal and
sometimes flanking towers and ornament which is composed of elements de-
rived from the classic world, from the northern grotesque and from Con-
stantinople—these qualities are well-nigh universal during the Romanes-
que period throughout Europe; but the exact character varies enormously
from locality to locality, and climate and tradition joined to produce
a series of important local schools." [29]

The abbey of St. Denis which was to have summed up Romanesque act-
ually began Gothic since Romanesque was the necessary experimental period
for the Gothic development. There, were, however, new factors which allow-
ed the enthusiasm for Gothic. Gothic was a northern expression by a peo-
ple who had in antiquity had a mythological belief less completely de-
fined than that of the classic world and who were dynamic and restless
by nature. This heritage was more influential than the traditions of
the Roman, Byzantine and Mesopotamian styles.

The Scholastic philosophy tried to fit classic thought to Christian
beliefs and to explain the will and idea as related to conduct and in so
doing raised many questions and trends eventually culminating in individ-
ualistic philosophies.

The decay of the feudal system, the rise of the town bishop, the
growth of nationalism all played their part in the development of Gothic.
The church became the focal point of the town which had grown in import-
ance. At times the Church building became the bank, the armory and the
community building. "Life was a succession of significant episodes in

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29. Supra 14., p.265.

man's progress to heaven, for each great moment the church had its sacrament or its celebration." [30] If the ceremony was too complex for the individual he was at least impressed with its size and magnificence.

The Celto-German expressed inner tensions in this new art. He used it to "save his soul." The visual cathedral became the mirror of an invisible cathedral of thought——the entire process of life was a drama of creation and redemption. But the Cathedral was now a "studied progress" rather than the Early Christian compelling drive. The inside of the Cathedral was an emotional experience while the outside was a structural mechanism.

The Gothic developed best in countries structurally inclined. In France it was developed as an integrate structure in a period of approximately fifty years. The heavy Romanesque wall gave way to a filler wall between piers buttresses and vaults. The pointed arch allowed freedom of plan while the ribs allowed the vault to be built in sections. The feeling of lightness so obtained was enhanced by the entire bay of traceried glass. The lines of force in this new expression (carried to a height of three to one) were carried out by the pointed arch and the flying buttress. The rib defined the planes, covered faulty masonry lines and articulated the space. This sky-flung, tense, dramatic form was in contrast to the Oriental calm and classic human concepts. However, man had come to love nature to a greater extent and naturalistic carvings along with humorous grotesque replaced the fear art of the Romanesque. The major sculpture was still rather rigidly controlled by the clergy but

30. Supra 14., p.61.

the craftsman had his chance to express a lighter mood in the lesser decoration. The art of stained glass, which had been started in the monasteries, had been developed until it was possible to fill a whole bay with light compositional and symbolic design.

The Renaissance was not a continuation of Gothic but reverted back to classic Rome. In this sense the Renaissance did not continue the evolution of religious architecture.

There are several reasons why the Renaissance artist followed this particular course. To begin with Gothic architecture had been completely developed into a unified expression and its solution had become somewhat dependent upon convention both structurally and decoratively. The new freedom of the Renaissance could not be contained by convention. Another reason that the Renaissance could not work from the Gothic was the development of the new humanistic tendencies of thought. The individual had now become important and the central horizontal building expressed this idea better than the tense-sky-flung gothic. Still another reason was the renewed interest in the "glory that was Rome." This historical study became purely academic in late times, but to begin with it was an interest in visual proportion and technological methods and retained a freedom of solution and of experimentation. This new idea of re-examining the past and of artist's license has persisted to the present and having run the course of past styles is slowly developing a contemporary approach even among lesser architects.

The Renaissance was an age of new learning methods which brought about the examination of ecclesiastical authority. The church began to

share the architectural drive with the palace. The first religious
work of importance was Brunelleschi's dome for the Cathedral of
Florence. In Florence there was the civic pride, wealth and leisure
necessary to allow the individual artist to establish self-reliance
and classical inquiry. Brunelleschi's octagonal pointed dome with
several shells and iron chain reinforcement may have lacked visual
effect on the interior but it served as the starting point for experi-
mentation. This was to be an age when beauty of form rather than
structural expression was sought.

Two types of Church plans were common to the Renaissance, the
basilica and the central. The classical orders were adapted to the
facade. The materials were not used as the Romans had used them but
rather in the Medieval manner.

The elements of Renaissance design are treated in a relatively
independent manner except in the later Baroque period when the
building was treated as a plastic unit. The architect of the Renais-
sance was concerned however with spatial problems and with inner-outer
harmony.

The Renaissance movement eventually began to divide into the
sometimes eccentric Michelangelo school and the intensified classicism
of Palladio and Vignola. Vignola combined in the Gesu the Renaissance
central theme (dome) with the longitudinal plan (nave with low side
chapels) of the Middle Ages. The light used was not common to the
Romanesque church but achieved in a sensuous way the Gothic lighting
effect.

Baroque architecture became an architecture of display. It became at times voluptuous and suggestive of the infinite (in that it defied structural laws).[31] It ignored honesty of materials in an effort to over-awe with splendor. It was an expression of the Counter-Reformation,[32] and as such spread throughout the Roman Catholic World. The first great Baroque church, the Gesu, was widely imitated.[33] It had a nave with side chapels, short transepts and a dome over the crossing. The centralized type of Baroque church was developed into an oval scheme which gave some directional space movement and a complex spatial experience. In the church of the Fourteen Saints light was allowed to flow in dazzling proportions. The altars in these churches became as complex as the ceremony.

Whereas, the Early Christian builders had been satisfied with simple brick or stone walls with a richly treated entrance the Renaissance broke the facade into bands of orders but still in a flat plane and the Baroque builders introduced the warped plane into the design.

Baroque architecture became very important in South America under the Spanish influence. Enslaved Indians were often available for labor of both skilled and unskilled nature. The fortress church in these countries gave way to the cathedrals as the Bishops were imported from Spain.

After the Renaissance shaded off into neo-classicism and Baroque

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31. Supra 14., p. 446.
32. Supra 17., p. 525.
33. Supra 26., p. 117.

there was a succession of revivals and movements without any real direction. No church designed anywhere after 1760 is amongst the historically leading examples of architecture.[34]

"There never was a colony save this that went forth to seek not gold, but God."[35]

The early American settlers were more interested in the ideals of Christianity than in it's form or ceremony. They had found no preceeding culture to absorb and were determined to conduct their experiment free from the pomp and ceremony of Europe.

They had little material with which to build churches and would therefore have been unable to erect magnificent churches had they desired to do so. The earliest American church was described as a barn-like structure.[36] The early New England churches were bleak and austere and based primarily on the order of the small English church; a meeting hall with a belfry and a spire. This building served as a community center as well as a religious building. It was rectangular in plan with a balcony around three sides, a pulpit on the fourth, with the main entrance opposite. Rows of plain windows lighted each level. There was a cornice and a hipped roof. The belfry stood atop the center. This meeting house type was very influential in America until the 19th century. In addition to the New England meeting house the Quaker meeting house with the gabled roof was an interesting example of an early rectangular plan.

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34. Supra 26., p. 146.
35. Supra 20., p. 772.
36. Supra 12., Note: See discussion of early buildings in America.

The American Revolution brought about the use of more permanent materials with a more monumental appearance in form. But always, as the frontier moved across America people had little time for lighted altars and vested choirs. It was in the more settled areas that wealth brought about the adoption of the English Wren and Gibb's white spired Georgian (colonial) church. A desire to return to former times enabled the Adams church and the Roman Revival church forms to spread. The Greek revival was modern for the early nineteenth century and Cram propagated the Gothic revival by his literary efforts. Richardson's Romanesque was copied throughout the country. Even Byzantine and Egyptian styles have been employed. The twentieth century brought such additional innovations as the auditorium type plan and the Akron plan along with skyscraper temples.

Skilled craftsmen almost from the first have been available in America but romance and individualism prevented a coherent and logical development of an "American Style." In some strange way the colonial style came to be accepted as an American tradition while the later Victorian grew out of poor taste and inaccurate revival. Even as secular architecture reached for a new expression religious architecture clung tenaciously to the outmoded and inappropriate past. After the first failures at experimentation in this century churches were "advised" not to experiment. "America has something worthy of expression, some idea worthy of interpretation in creative architecture. No imitator, only a creator will discover the ideal and disclose the form."[37]

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37. Supra 3., p. 198.

C.   A BRIEF DISCUSSION OF CONTEMPORARY CHURCH ARCHITECTURE

....Our culture is like
an orchestra where the
instruments lie ready
tuned but where every
musician is cut off
from his fellows by a
sound proof wall.[38]

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38.   Supra 13., p. 17.

Prior to the fifteenth century religious building had been dominant throughout most of history. Except for the Baroque movement in strongly Roman Catholic countries the church has never regained this architectural monopoly. In our time man is more concerned with his efforts and achievements than his final destiny. It would seem that somewhere in between these two extremes is a state of society in which the various parts of the personality would be in balance. In such a state man would neglect no aspect of his nature and his buildings would reflect this.

The modern architect is constantly trying to design satisfactory religious form but the fact that he has as yet developed no significant trend is but a reflection of the attitude of our present society toward the problem. Each architect is trying to solve the form problem in an individualistic way. Belluschi is trying to retain something of the past "the contemporary architect is confronted by the difficult problem of creating forms appropriate to a modern society without destroying the symbols that given formal validity to the idea of 'church' in the past."[39] Mies Van der Rohe attacks the problem from the technological and form standpoint putting aside traditional associations of any sort "I chose an intensive rather than an extensive form to express my conception, simply and honestly, of what a sacred building should be.

"By that I mean a church or chapel should identify itself, rather

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39. <u>Progressive Architecture</u>, March, 1952, p. 64.

than rely upon the spiritual associations of a traditional fashion architecture, such as the Gothic....

"The chapel will not grow old...noble character...good materials... beautiful proportions...technological means."[40]

Eric Mendelsohn, who received considerable attention for his Jewish synagogues seemed to be primarily interested in "unity in his approach."

"In his troubled and confused present, living as he is between the fixed ideas of a relatively tranquil past and the yet unborn values of his future, man's return to spiritual unity is most urgent, the evidence of creative unity in his sacred building, therefore most enlightening. And as for its beauty, as Ezekiel said, "He set it in majesty."

"This is what I tried to accomplish in my synagogues."[41]

What to do with light in the church has concerned the contemporary architect to a great degree. Joseph H. Saunders, Jr., has designed a windowless Episcopal church (with a centered altar) in an attempt to shut out the physical surroundings. Going to the other extreme Lloyd Wright has designed a Wayfarers glass chapel which lets in "all the beauty of the outdoors;" Bruce Goff has designed a "Crystal chapel."

Frank Lloyd Wright has suggested the church should be like a country club except dignified and inspiring.

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40. _Arts and Architecture_, January 1953, p. 19.
41. _Architectural Forum_, April 1953, p. 108.

The Architectural Forum has summed up the modern movement as follows:

"But each of these lovely churches stands apart and alone. They still set no pattern for a coherent religious architecture to reflect our times as the Gothic reflected the 13th Century or the Wren church reflected the 18th. They still provide no fresh, firm authority for the guidance of lesser architects---no authority as gave excellence even to architectless parish churches in earlier times.

"Frank Lloyd Wright is always inimitable. The Belluschi churches seem as different one from the other as from the work of other architects. Few will follow Bruce Goff in his fanciful flights, and the very perfection of the Mies chapel marks an end as well as a beginning. Only the Saarinen churches seem likely to develop a prototype even for the Saarinens themselves."[42]

Europe has done more with the new technology in church designs than has the United States. Holzmeister developed "modern Austrian Baroque" trying to achieve something of romantic recall. Bohn experimented in Germany with parabolic arches. Moser in Switzerland succeeded in turning church design toward the modern approach. Bartnings experimented with stained glass, Pinno and Grund with concrete.[43] But in Europe, as in the United States there is no real trend except perhaps in Switzerland.

What Saarinen has said concerning the individuality of approach is nowhere more applicable than to the church.

"Fortunately, however, there have been, and are, many signs that herald a new era, for an awakening to a more sincere understanding of form is already widespread. Our eyes have been opened to realize the long persistent poverty of our form, and an intense search for

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42. Ibid., p. 93.
43. Supra 14., p. 41.

forms to come is now under way. Many are engaged in this search, although view points and methods vary. Some are surveying the whole field in an attempt to find the logical course between rational and emotional discretions. Some are reasoning on the firm ground of scientific experience. Some are utterly technical in trying to further form mechanization. Some are passionately imposing home-made philosophies and arbitrary doctrines. Others are bold and impulsive in using radical and novel means. Others again are loud in trying novelties for the mere sake of the novelties. Still others are searching sincerely in silence."[44]

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44. Saarinen, Eliel; Search for Form, Reinbold Publishing Co., New York.

The romanticist holds that
art principles had best be
left undefined because they are
essentially undefinable; the
classicist asserts that they
should and must be defined be-
fore any study of art can
be attempted. [45]

45. Supra 20., p. 23.

"In that eternal conflict between tradition and observation the history of human thought can be summarized.[46]

Man's viewpoints are constantly changing so long as the mind is free. To maintain this condition would be the ideal state for it would give progress the maximum opportunity. Development would occur as from instability to instability. If such were to remain the case in architecture, there would always be a continuous search for the vital factors of design with consideration not only to past but immediate influences. Formula would change with the forces and institutions that are its cause. This is essentially the philosophy of the modern architect. Within this concept a fixed "style" cannot exist concerning the design of a church.

The new element which replaces the formula is the attitude---a tendency to constantly refer to first principles and to search for architectural meaning.

46. Ibanez, Felix Marti "An Experiment in Correlation." Arts and Architecture, January 1953.

1.   CHANGING DESIGN CONCEPTS: FUNCTION
                                                                 EXPRESSION
                                                                 SPACE CONCEPTS

....new concepts have
already become integrated
into an ideology peculiar
to our time.[47]

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47. Ibid., p. 16.

Function and form, space and symbolism---these are some of the
factors with which the church designer is concerned. The "function"
of a church has to do with the manner in which the building provides
all of the physical requirements of the program. The concept of
function in the early Christian Church, as has been previously pointed
out, was quite simple----it was primarily a place to meet and share in
a few commemorative observances of Christ. The function of a large
city church is, today, quite complex. With hundreds of people to
serve, and in an effort to make each of these people a part of the
church program, there must, of necessity, be many activity groupings
in the worship, the educational and the fellowship services. This
calls for a more complex plan than existed in traditional churches.

Since the form of a church cannot be divorced from the function
and technology of a given time, the concept of form has also been
changed. As pointed out previously the form of religious building
in the far East varied but little between various religions. This
has been true during our ecclectic past; it was not possible to dis-
tinguish the buildings of the various major religious groupings al-
though the ceremonies and beliefs varied widely. At present, however,
there seems to be a recognition among some churchmen that a religious
philosophy should be expressed in a building by more than a mere in-
scription. The program for the Tabernacle Church of Christ said in
part "There are a few elements, in our belief that we could like to
have emphasized in the church. ...Because the gospel of Christ's death
burial, and resurrection lies at the heart of our faith, we would like

it illustrated in some way in the architecture of our building
....interpret the spirit of Christ and of the gospel .....promote
the ideals and assures their perpetuation among us."[48] This it will
be recognized would be the ideal of many branches of the Protestant
church. The fact that the beliefs and practices of the various
branches of the church are similar would seem to make it difficult
to express a separate form tendency for each.

Architecture of all ages has been influenced by the understanding
of spatial dimensions. In primitive times when man's understanding
of space and time were limited to the observation of nature about him
there was probably little conscious effort to shape these mediums to
bring about desired conditions. When the Egyptian learned that a
straight line approach into successively more impressive areas over-
awed the participant he included this principle in the design of his
temples.

The Greek with his larger understanding and deeper inquiry dis-
covered the two dimensional aspect of space planning. His temples
were grouped to be appreciated from various lateral directions but
principally from the exterior. The Roman discovered new engineering
processes by which the interior became important as an open unified
space. He began to group his buildings consciously but at the ex-
pense of Greek clarity.

The Byzantine period saw the continuation of the Roman desire
for large interior spaces but at the expense of the exterior. In

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48. Architectural Forum, January, 1942.

early Christian architecture the straight line approach was again employed to focus the worshippers attention. By Romanesque times this had been slowed to a compartmentalized approach. Next the Gothic builders changed the direction of the observers attention and diverted it upward. In Renaissance times the spatial treatment was again two dimensional with some emphasis on exterior-interior relationships and progression to a certain point. The baroque sought to develop the building as a plastic unit with enforced spatial movement and open vistas.

Until the present age the concern was largely with limited space concepts. The new space-time concepts have changed this to the extent that there is now a concern for three dimensional articulation of space with inter-outer continuity and "natural" relationships of form to surroundings.

We must leave the arts with
a clean surface with only
permanent and vital
meaning, native to ages yet
to come, may adhere.[49]

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49. Supra 2., p. 150.

Any penetrating discussion of religious building always engages the question of symbolism. The idea of symbolism begins with the art of magic in all cultures of the world from which it evolves into the symbolic and allegoric.

Symbols are a means of focusing attention upon an abstract idea. The primitive used the symbol as a protective or bargaining device. The Egyptian desired "to make helpful contact with unseen sources of power and joy."[50] The Greek adjusted his symbols to his art and used them in a lighter vein. The Hebrews of the Old Testament used symbols for remembrance of important events and for reverence. The Christian Church developed symbols very early in its history. Early Christians, however, tried to express thought with a "minimum of body and a maximum of idea."[51] Byzantine Art carried on the Early Christian tradition using suggestive mystical symbolism. Leaves were portrayed as if blown by a gentle breeze suggesting a mysterious presence. The western church accepted symbolism and even images of the diety. The latter point was largely responsible for the separation of the Eastern and Western branches of the Church.

Medieval man saw everything as a symbol. Number theories were developed by the Medieval Pythagoreans which made it necessary that complicated rules be developed to make them function. Sculptured symbolism came to fill the medieval church building. The masses of the people probably understood little of it but it impressed them and succeeded in teaching them something of the history of Christianity

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50. Supra 15., p. 36.
51. Supra 20., p. 336.

as the medieval church saw it.

Protestantism took a dim view of symbolism and particularly of image making due to the excesses of the time. There is still a strong feeling in the non-liturgical Protestant churches against applied symbolism. This seems to be based primarily on the belief that man is able to grasp an abstract idea with a minimum of symbolism, as well as upon the idea that symbolism, if excessive, tends to divert rather than concentrate the observers attention to the main theme.

Regardless of this controversy it would seem that the average man is no longer sensitive to traditional symbolism except in a historical sense. Mumford maintains that the true spirit of the modern age in architecture is the absence of visible symbols. Architecture he says "will give way to a more thorough going sense of form, not so conspicious perhaps on the surface, but capable of giving intellectual and emotional stimulus at every step of the revelation."[52]

There are several reasons why it is difficult for the modern architect to apply symbolism. The first, a lack of symbols pertinent to our age and society, has already been mentioned. In addition to this is the fact that machine made ornament cannot be a work of "art." Still another factor is that the public is not sympathetic yet to the works of the contemporary painter and the sculptor finds that his work (at least in the round) does not blend with contemporary architecture.

The following observations by Moholy Nagy might serve as a

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52. Mumford, Lewis; The Culture of Cities, New York, Harcourt, Brace and Co., 1938, p. 421.

further suggestion as to why modern art had not met with acceptance
in religious architecture "Contemporary art generally tends more
toward the direct and sensuous than the literary conceptual values.
It emphasizes more the general, the universal than the special. It
is based more on biological than symbolic function (without excluding
the possibility of its later transformation into symbolic meaning).[53]
It would seem, however, that art in the church, if kept vital and
simple could contribute to Christianity by giving amplification to
the philosophy. Such a usage would recognize that art, like religions
in the past, becomes self-conscious and sterile once it becomes routine;
that it must have meaning to those for whom it is designed. "A com-
plete civilization ....would be coincident with complete intelligence.
Life in such a state would be identical with art."[54]

Religion is a matter of feeling---no formula can approach simple
unrequited faith. Art is a matter of feeling---also beyond ration-
alization. If the artist is disappointed with religion it would seem
possible that he should ask what he has contributed or offered to
contribute. If the religionist is disappointed with art it would seem
that he should inquire whether he has not judged an avenue of thought
by standards he would not allow himself to be judged by---practic-
ability or materialistic worth. There seems to be no mutual under-
standing except on a romantic recall basis. Since art is a distillation
of complexities---a sifting for that which is vital---it seems reason-
able to assume that its ability to serve religious worship awaits only
an understanding application.

53. Supra 2., p. 141.
54. Edman, Irwin. Arts and the Man. The New American Library of World
    Literature, Inc., New York, 1949.

E.   FORMULATION OF THE PROGRAM

1.   HISTORY, PHILOSOPHY AND ORGANIZATION OF THE BAPTIST CHURCH

The Baptists belong to that group of protestants which holds that the ordinaces are symbolic rather than sacramental and who maintain a congregational form of government. There are more than 60 national or sectional bodies of baptists throughout the World which vary slightly in basic beliefs and organization. The largest group of Baptists in the United States is the Southern Baptist Convention. This Convention is composed of Baptist churches distributed over a greater portion of the south with scattered congregations in other sections of the United States. The 1953 World Almanac lists this convention as having 28,289 churches and a membership of 7,373,498. Its general boards include the Sunday School Board with headquarters at Nashville, Tennessee; Foreign Missions Board, Richmond, Virginia; Home Mission Board, Atlanta, Georgia; Relief and Annuity Board, Dallas, Texas.

The name Baptist originally was applied because of the belief that the ordinance of Baptism should be applied to believers only and because of the belief among most Baptists that immersion was the original method. Actually most Baptists have placed less emphasis on Baptism than some other denominations and do not hold the idea that it is necessary for regeneration; but rather that it is one way the believer has of following the New Testament example.

The Baptists are more difficult to trace historically than most Christian groups due to the fact that people who have held religious views which coincide with those of present Baptists have not always been called Baptists. Furthermore the beliefs in the individual

responsibility to God and to congregational decisions in matters
of church government did not tend to consolidate those who held
them into strong groups. The modern Baptist movement in England
can be traced from the time when a group of separatists living in
Holland issued a declaration of faith which contained the first
known expression of absolute liberty of conscience in any confession
of faith.[55]

In America Roger Williams founded the first Baptist church in
the Providence Settlement (1636). In this Providence Settlement
Williams founded what is "generally believed to be the first common-
wealth in which absolute religious liberty was combined with civil
democracy."[56]

The history of the Baptist church in America is very complex.
The movement was from North to South in Colonial times. Later as
the westward migration developed the denomination spread across the
country. There was considerable opposition to the church in the
early days by established churches and some persecution occurred.

The Baptist churches in the colonies held general meetings almost
from the first and in 1707 the Philadelphia Association was formed.
Since that time Baptists have generally depended upon the Associa-
tional meeting as a denominational cooperative method. In 1770 the
Philadelphia Association sponsored Brown University. Colgate Univer-
sity was founded in 1819. In 1928 the denomination maintained over

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55. Encyclopedia Britannica, Volume 3, p. 87.
56. Ibid., p. 88.

one hundred universities and colleges.[57]

Since the civil war the Northern and Southern Baptist Conventions have existed. These and other Baptist groups in the United States and in other countries participate in the Baptist World Alliance. The Baptists generally believe that the authority in denominational government rests in the "individual church member as he takes his rightful place in his church, in the district association, in the general association or state convention, in the regional convention (as Southern or Northern), or in the Baptist World Alliance."[58]

Certain beliefs are fairly characteristic within the Baptist denomination. Leading educators within the denomination have in general terms stated these beliefs from time to time but they have never been crystallized into a formal list and accepted as final by the denomination as a whole.

The Baptists denomination accepts the Bible as authoritative in determining denominational doctrine. They hold that errors which may have been made in the various translations do not altar its essential meaning.[59] They believe that science has generally served to substantiate the truth of the Bible.

They believe in the trinity, "There is only one God, but we see him in three persons, exhibiting three distinct characteristics, performing three different works, filling three different relationships to the believer, but all united in one God."[60]

On the subject of the Creation the following comment is offered by a leading writer "We need not be afraid of truth, no matter when

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57. Ibid., p. 90.
58. Supra 9., p. 111.
59. Boone, William Cook. What We Believe, Nashville, The Broadman Press, 1936.
60. Ibid., p. 42.

or where it is discovered. Nor need we be afraid that the truth of God's Word or the truth as God has written it in the rocks and fossils will contradict each other when both are rightly understood."[61]

Baptists in general believe that "sin" is a "wrong attitude" toward God rather than a specific act. But they believe that this "wrong attitude" results in the breaking of natural and moral law. They believe that all men have this wrong attitude at the age of realization and that it is through the "grace" of God (by the Atonement of Christ), that a suitable relationship between man and his Maker is made possible.[62] They hold the opinion that the only two requirements on the part of the applicant are repentence and faith.

Baptists believe that the word church has two meanings: that it applies to the entire body of Christian people; and secondly that it refers to the local congregation--"A congregation of baptized believers in Christ, all of whom are equal in rank and privilege, voluntarily banded together to carry on the work of the Master."[63] In matters of government they hold that their associational ties grant no authority except to the individual congregation and that the state shall have absolutely no authority in church matters. They hold that their church officers are servants of the congregation. Each member of the church has equal right to speak and to vote, and decisions are carried by majority vote.

The officers of the church are the pastor and the deacons. The

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61. Ibid., p. 49.
62. Ibid., p. 62.
63. Ibid., p. 81.

pastor is the church leader chosen by congregational election to serve
a specific church. The deacons are chosen to take care of the business
affairs of the church.[64]

There are only two ordinances of the church: baptism and the
Lord's Supper. These two ceremonies are not considered sacraments.
The first ordinance, Baptism,is considered as the act of initiation
into church fellowship. It is belief symbolic of the burial and
resurrection of Christ; as the outward sign of inward change; as
symbolic of the Christian triumph over death.[65] The congregation
authorizes the Pastor to Baptize a candidate for membership.

The second of the ordinances observed by Baptists is the Lord's
Supper. The Baptists "do not see anything mysterious or magical or
even miraculous in it, but only a memorial by which we may call
vividly to mind by means of the symbols used, His sacrificial death
for us, and also his promise to return to take us to himself."[66]

One of the leading educators within the Baptist denomination
suggests that the operative program of the church should begin with
the individual and community needs of spiritual growth, moral en-
lightenment, personality development, cultural needs, social and civic
needs and material needs "none (of which) is beyond the interest and
responsibility of a functioning church."[67] He further suggests that
the church should always have an office open; that it should daily
provide for conference, study and social contacts; that it should

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64. Ibid., p. 86.
65. Ibid., p. 89.
66. Ibid., p. 92.
67. Supra 9., p. 155.

constantly see after the needs of new-comers, sick people, or others who might need assistance; that it should show interest in community matters, etc.

The greater part of the educational program in the Baptist Church is carried on by the Sunday School and Training Union. The first of these has as its purpose the teaching of the Bible as a means of developing Christian character. The training Union has as its purpose "training in Church membership."[68]

An auxiliary organization, the Woman's Missionary Union, is interested in "missionary education, promotion, prayer, giving." The Brotherhood has education, enlistment, development, fellowship and personal aid as some of its responsibilities. There are also other smaller organizations within the church which provide a means of participation for the membership.

The following quotation might serve as an indication of the philosophy of the denominational leadership. "The swing seems decidely in the direction of emphasis on the church as a local, autonomous, creative group. Churches are coming to be thought of more and more as schools of religion. A christian church is a school of religious living, with connections and controls, but primarily set to serve a local constituency. People are turning to their churches as service institutions, and to their ministers as public servants. A new sense of value is thus being given to the churches as centers of helpfulness and usefulness and to ministers as indispensable conservers of the

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68. Supra 9., p. 191.

common good. The test of the success of a church and its ministers is no longer the number of people that can be attracted to the preaching service at a given hour on Sunday, but rather the measure of its success is in terms of varied and fruitful ministries. Vast new possibilities are thus being opened to churches and ministers equipped to accept and guide this conception."[69]

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69. Supra 9., p. 151.

2. _____ BELL AVENUE BAPTIST CHURCH

Bell Avenue Baptist Church is one of the oldest Baptist churches in Knoxville. It was organized in 1879 and originally known as Hills chapel. A new building was erected at its present location in 1895. On April 13, 1912, the entire church plant burned and soon thereafter the present church plant was erected. During the 1920's the Bell Avenue Church led the city in Sunday School attendance and choir work.

In the early period of the history of Bell Avenue Baptist Church it served the entire Baptist population of Park City (a division of Knoxville). It sponsored several missions within this general area, some of which have since become large churches.

Recently the Bell Avenue Baptist church has found that it is faced with an ecological problem similar to that which many city churches have experienced and are experiencing. Originally surrounded by a substantial residential zone it has gradually been encroached upon by a transition zone. Within a very few years almost none of the present members can be expected to live in the immediate area. This was somewhat anticipated several years ago, at which time sights could have been acquired near the center of the congregational residences had the idea found sufficient support. At present the desirable property has all been utilized and is prohibitive in cost.

In early 1953 a committee was appointed to study the church problem. At this time the plant facilities were described in the committee's report as "desperately crowded, woefully obsolete and unattractive in comparison to other churches of our size and program." The committee was aware of the large sum of money needed to make the plant efficient and in view of the ecological problem called in a

consultant Dr. Gaines S. Dobbins of Southern Seminary, to study the
problem. Dr. Dobbins recommended moving to a new location and the
construction of an entire church plant adequate for the present needs
of the congregation. In March, 1953, the church purchased twenty acres
of land on the Asheville highway and initiated a financial program
for the building of a "modern structure, adequate for the needs of
the future generations of the rapidly expanding Holston Hills area of
Knoxville." The church realized that not all of its membership would
be able to participate in the program at the new location but proceeded
on the assumption that those who could not would be absorbed by other
Baptist churches in the area. Some of the present members are already
residents of the Holston Hills Area and the trend is for the member-
ship to move in that direction. In addition to this a large part of
the congregation already depends upon the automobile for transportation
and the new location will provide both access to the church and ample
parking space.

The organization of the Bell Avenue Baptist Church is similar
to that of other Baptist churches. In addition to the Pastor and
Associate Pastor there is an administrative staff, a board of deacons,
leaders in the various educational and social endeavors, and various
permanent and special committees to deal with specific problems.

The major emphasis of the church is upon evangelism but a concerted
attempt is being made to expand the other ministries. The church has
experienced a substantial growth in the past few years due to the efforts
of the present Pastor, Rev. E. L. Williams. The music and educational

program are developing very orderly under the guidance of the Associate Pastor, Mr. Joe G. Walsh. There appears to be a great deal of enthusiasm among the church membership toward the achievement of a forward looking church program and in spite of the fact that the membership is not wealthy the new move is being supported energetically. There are approximately 2,000 members of the church who live in Knoxville. The Church leadership anticipates that approximately 1,000 of these will continue to attend at the new location and that 1,000 regular members will eventually be added from the area into which the church is moving.

F. _____ PROGRAM REQUIREMENTS

The site which has been purchased for the new church plant is approximately four hundred feet wide and 2600 feet deep. The church leadership is aware of the difficulty inherent in designing a church plant of this magnitude on a site this narrow. Measures are being taken to acquire more land adjacent to that already purchased. For the purposes of this thesis it is being assumed that this additional property has been acquired. The site, which is rugged and partially wooded, is visible from and directly accessible to highway 11E. The general area is composed of substantial homes and there is the possibility that other facilities will be built adjacent to the church property which will make it a part of a community center.

Most of the congregation will attend church by means of the automobile and therefore parking will be a major consideration.

Although the church plant is to be constructed outside the city limits the building regulations of the city of Knoxville will be assumed to govern.

The design of a Baptist Church is a problem, in most respects, similar to the design of many other protestant churches. There are very few specific requirements. The practice of Baptising the Believer in the presence of the congregation and by the method of immersion requires that the Baptistry be located within comfortable view of the congregation. It has become the custom to locate the Baptistry behind and above the choir.

The entire arrangement of the chancel in the typical Baptist church is symmetrical with respect to the distribution of the congregation.

In addition to the Baptistry, the Choir, Minister and Lord's Supper Table are centrally located. This arrangement is considered symbolic. It is traditional to have the choir grouped behind the minister and in front and below the Baptistry to express symbolically and actually the function of the choir which is "to lead the congregation in song." The central location of the pulpit places the "Word of God" in the most prominent position with respect to the whole congregation. The Lord's Supper Table is placed in front of the minister and next to the congregation to express symbolically the lack of mystery or exclusion in the ordinance. These are the basic considerations which govern the design of the chancel in the typical Baptist Church.

Strictly utilitarian considerations require the provision of dressing rooms for the Baptistry, the provision of storage space for the Lord's Supper utinsels, the proper arrangement of organ console and piano with respect to the choir and choir director, and the provision for proper acoustics and lighting in this area.

Seating in the nave presents a special problem. Several Sundays out of the year there are overflow crowds which must be provided for. This has sometimes been done by means of adjacent space on the same level as the nave floor, but such a solution usually prevents a feeling of unified space and presents acoustical problems. The second method which has been used to solve the problem is the use of a balcony, which presents problems of sight and egress.

The narthex is an area which is usually poorly planned. It is commonly much too small and its usual position with respect to the

entire church plant (which has to do with the orientation of the sanctuary) is to be questioned in view of the modern church program.

The problem of circulation requires special consideration in the design of a church to seat 2000 people. Provision should be made for the unobtrusive entrance of late-comers and for the necessary moving about of people during parts of the service. Within the nave of a Baptist church a central aisle is not necessarily desired for there are no specific services which require it and it serves to divide the congregation as well as present the minister with an uninspiring aisle to face.

Related to the church sanctuary but not necessarily a part of it are the choir assembly, robing rooms, and related storage space for robes, music and books. The choir assembly room serves for week day practice as well as Sunday morning preparedness sessions. This room serves to seat the choir in the proper arrangement. The necessary furnishings are a piano, elevated seats, a director's platform and stand, blackboard and chart space. This room needs special acoustical consideration.

The second major worship unit to be considered is the chapel. It is actually a miniature sanctuary with provision for the Baptismal service, for a choir of 30, an electric organ and for the ordinance of the Lord's Supper. Near it should be dressing rooms for the Baptistry and storage space.

In addition to the usual functions of a chapel such as weddings, baptismal services, prayer services, funerals, special church observances,

special group meetings and private meditation the chapel may also be
used as an educational assembly room.

The Administrative offices of a church plant, so vital to its
proper function, are often unplanned or poorly planned. This is
particularly true when no allowance is made for expansion when the
initial building is begun. The function of these offices requires
that they have control over the various areas of the church plant and
that they be easily accessible from the principle entrance to the church
plant. The offices listed in the program of space requirements are
considered desirable although the list may not exactly conform to the
administrative structure at any given time. It is debateable whether
or not the minister of music should have his office in the administrative
group or adjacent to the choir practice room. The location of the
pastor's study is another question for special consideration since it
should provide quiet and privacy.

The educational areas have requirements similar to a public school
with respect to light and air, lighting and acoustics, wall space for
maps and charts, chalk boards, circulation, storage, etc. Many of the
areas will be rather small and will require maximum flexibility. The
Junior and Intermediate departments for this program will require a
means of combining two Sunday School classrooms for training union use.
The various assembly areas should not contain a raised platform. Separate
assembly areas will not be provided for children under nine years of age.
Tables for these children should be ten inches higher than the chairs
(which will vary with each age group). The nursery department should be
provided with a central lobby or entrance area.

The library may be grouped near the administrative offices for convenience and to allow supervision by the Minister of Education. A program of visual education will require storage space for films, slides, projectors, screens, displays, etc. These should be located so that the Minister of Education may have easy access to them when they are needed.

In order to provide a well rounded community program the church leadership will endeavor to provide as much social and recreational activity as seems in keeping with a Christian Church program. Some of the activities to be provided for are fellowship suppers, dramatics, films, supervised play for youngsters, craft and hobby work and club gatherings.

The principle element of the building which will serve the social and recreational functions of the church will be the fellowship hall. This area should be designed to accomodate 600 people at tables with the necessary adjunct kitchen and serving facilities. For project method and visual education the fellowship hall should be provided with a stage and the necessary related facilities for scene changing, lighting, dressing, make-up, etc. There should be a provision for the storage of game equipment. In addition to its major purpose as a fellowship hall this space will also need to serve as Sunday School assembly areas.

The Church Parlor or Lounge will serve for informal meetings. The kitchen should be available to this area or a kitchenette should be provided.

Provision for the storage of outdoor game equipment should be made somewhere in the church plant.

Miscellaneous items which should be provided for are telephones and bulletin boards, cloak rooms, drinking fountains, and toilets. Ample usable storage space should be provided throughout the church plant. A receiving and storage room with a custodian's desk, janitor's and maid's dressing rooms and toilets will be needed.

The areas which will require air-conditioning are the main sanctuary, the chapel and the administrative offices.

Special lighting will be required in the sanctuary and in the fellowship hall. Lighting in the sanctuary should be variable, while lighting in the fellowship hall will require the customary stage lighting considerations.

The general requirements of the Church Program are as follows:

WORSHIP SPACE

Sanctuary (including choir) . . . . Seating for 2000 persons

    Choir of 100 voices

    Additional special choirs

    Choir assembly room and robing rooms

    Baptistry and 6 dressing rooms

    Lord's Supper Table and related Storage Space

    Organ and Piano

    Minister's retiring room

Chapel (including choir) . . . . Seating for 600 persons

    Choir of 30 voices

    Baptistry and dressing room

    Lord's Supper Table and storage space

    Pulpit

    Electric Organ

ADMINISTRATION . . . . 7 offices*

    Church reception room

    Church office   (includes desk for the Pastor's
                    secretary, Church Secretary,
                    Financial secretary, storage for
                    literature and files and a vault)

    Pastor's office

    Pastor's counseling room

    Associate Pastor's office

    Office of Minister of Education

Office for Minister of Music

Office for Fellowship and Recreational Director

Administrative Conference Room

Office for Superintendents of Sunday School and Training

Union

Pastor's Study

*There are various combinations of the above which would be satis-
factory and it is possible that the Minister of Music would prefer
his office next to the choir practice room. It is also possible
that the minister would prefer to have his study in a more remote
location. Some of these offices may be combined.

EDUCATION*

Sunday School Space for 36 departments with provision for 2654

persons as follows:

Nursery (0-3 years) 6 departments	150
Beginners (3-6 years) 6 departments	150
Primaries (6-9 years) 6 departments	192
Juniors (9-12 years) 3 departments	192
Intermediates (12-15 years) 3 departments	180
Youth Senior (15-18 years) 3 departments	180
Young People (18-25 years) 2 departments	200
Young Married People (to 25 years) 1 dept.	150
Adults (25 to 60 years) 6 departments	1260

Note: This is not the usual breakdown of classrooms in the Baptist
Church but is the one which the Associate Pastor recommends for this
program.

Education (Cont'd)

    Library

    Reading Room and Reference Tables

    Stacks (also space for cataloguing, book repair, etc.)

    Childrem's Room

Recreation and Fellowship

    Fellowship hall (with stage). . . . . to seat 600 at tables

    Kitchen, Serving Room

    Church Parlor and Lounge

    Craft and Hobby shop

    Indoor Games

    Outdoor Games (Storage, Fireplaces, Courts, etc.)

Further breakdown of Sunday School area requirements:

Age	No in Dept	No ea Class	No C L in Dept	Sq Ft Assm	Sq Ft C L	Area Assm	Area C L
60	240	30	8	7	7	1680	210
50-60	240	30	8	7	7	1680	210
40-50	240	30	8	7	7	1680	210
35-40	180	30	6	7	7	1260	210
30-35	180	30	6	7	7	1260	210
25-30	180	30	6	7	7	1260	210
Young Married People	150	25	6	7	7	1050	175
21-25	80	20	4	7	8	560	160
18-21	120	20	6	7	8	840	160
17-18	60	10	6	7	8	420	80
16-17	60	10	6	7	8	420	80
15-16	60	10	6	7	8	420	80
14-15	60	10	6	7	8	420	80
13-14	60	10	6	7	8	420	80
12-13	60	10	6	7	8	420	80
11-12	64	8	8	7	8	448	64
10-11	64	8	8	7	8	448	64
9-10	64	8	8	7	8	448	64
8½-9	32			17		544	
8-8½	32			17		544	

Age	No in Dept	No ea Class	No C L in Dept	Sq Ft Assm	Sq Ft C L	Area Assm	Area CIL
7½-8	32			17		544	
7-7½	32			17		544	
6½-7	32			17		544	
6-6½	32			17		544	
5½-6	25			20		500	
5-5½	25			20		500	
4½-5	25			20		500	
4-4½	25			20		500	
3½-4	25			20		500	
3-3½	25			20		500	
2½-3	25			20		500	
2-2½	25			20		500	
1½-2	25			20		500	
1-1½	25			20		500	
½-1	25			20		500	
0-½	25			20		500	

An architect's finished work
speaks more forcibly and with
less charity than his most
ingeniously expressed theories.[70]

70. New Pencil Points, July 1942, p. 59.

A.   **SUMMARY**

The design solution for this thesis seemed to present more than the usual amount of difficulty. The first and one of the most difficult problems was of course the ever present enigma of designing a contemporary church which would "look like a church." The author has never felt that a cross attached to the outside is sufficient to designate a building as a church. It seems also to be an expensive way of admitting defeat to resort to a romantic recall solution for appeal: to build arches which are hung from steel; to fling buttresses into the sky when the building is tied together with a rigid frame; to hang a stone veneer on a steel column. The question resolves into one obtaining through character and proportion and with simple materials and simple masses a tone of dignity or inspiration. In this solution the author has tried to use the structure as a visual feature; to use romantic recall only insofar as it honestly serves a purpose. The exposed rigid frames (usually hidden) are to the modern church what the ribbed vault was to the gothic. The author believes that if they have looked cold at times it has too often been the fault of proportion or workmanship and not material or idea.

The second major problem was that of relationships of the various parts. The problem of grouping the different elements so that worship, educational and social functions of the building best served the needs of the church was not an easy one. The author has chosen to express a "sanctuary in space" around which the essential elements could be wrapped to exclude the workaday world.

The third and most difficult problem was the arrangement of the

chancel. This area has seldom been solved successfully due primarily to economic considerations, and yet to save money at this, the focal point of the whole church plant, seems false economy indeed. The semi-circular solution used in this thesis appears to answer all of the functional requirements in a satisfactory manner while at the same time giving a sense of depth to this important area. Majesty and reverence should be expressed in the Protestant Church and these qualities should not be confused with the undesired qualities of pomp, ceremony or unattainability.

The remainder of the design of the church involved mainly space and circulation problems. The materials have been kept simple for the sake of economy.

Although the problem has been very complex, and was undertaken under difficult working conditions (working in absentia) the author feels that he has profited greatly by this exercise. It is his hope that by having gone through this additional period of study something has been gained which will allow him to do more creditable work in his profession, for it is the unknown and unacclaimed men working silently who will do most to raise the general level of architecture.
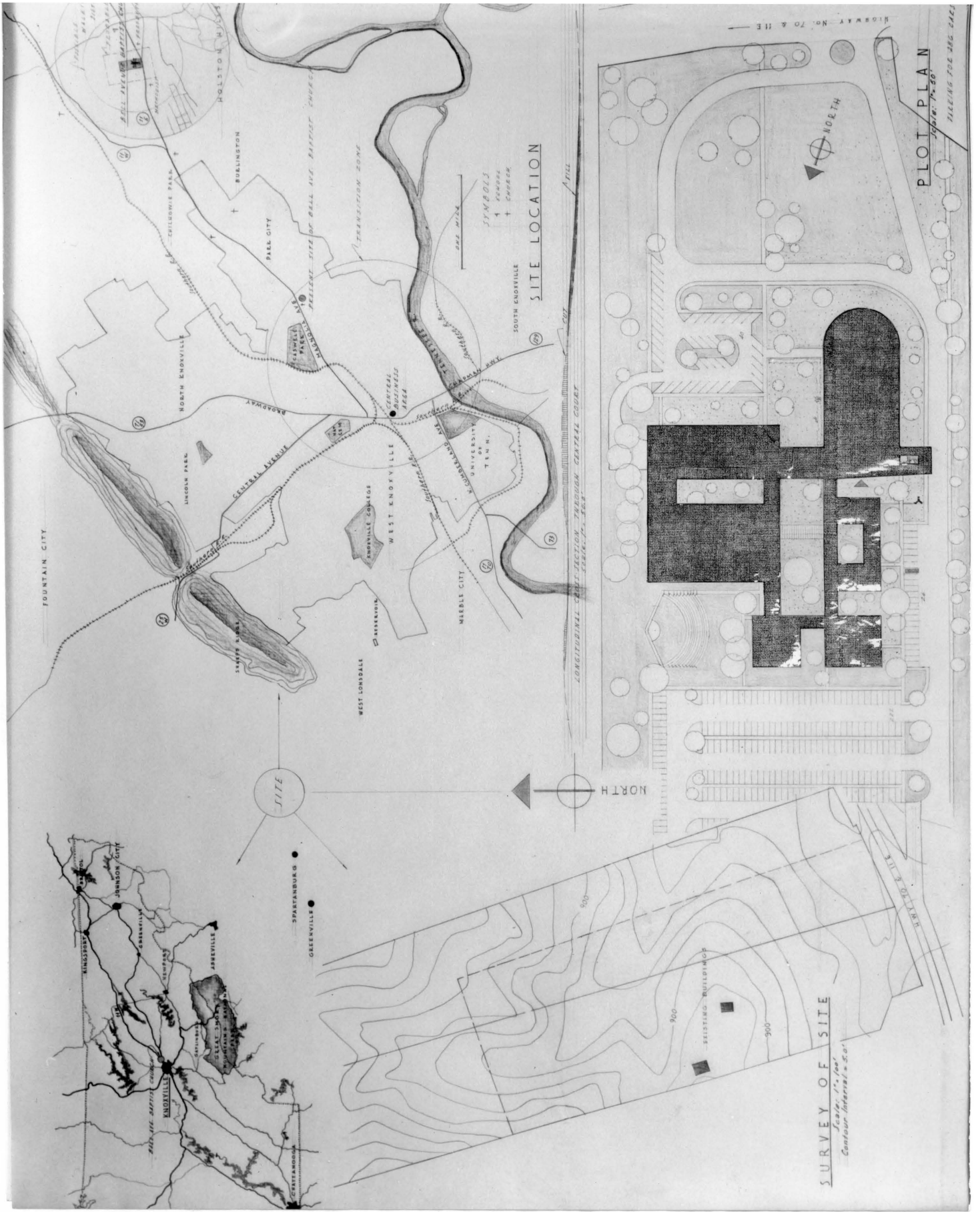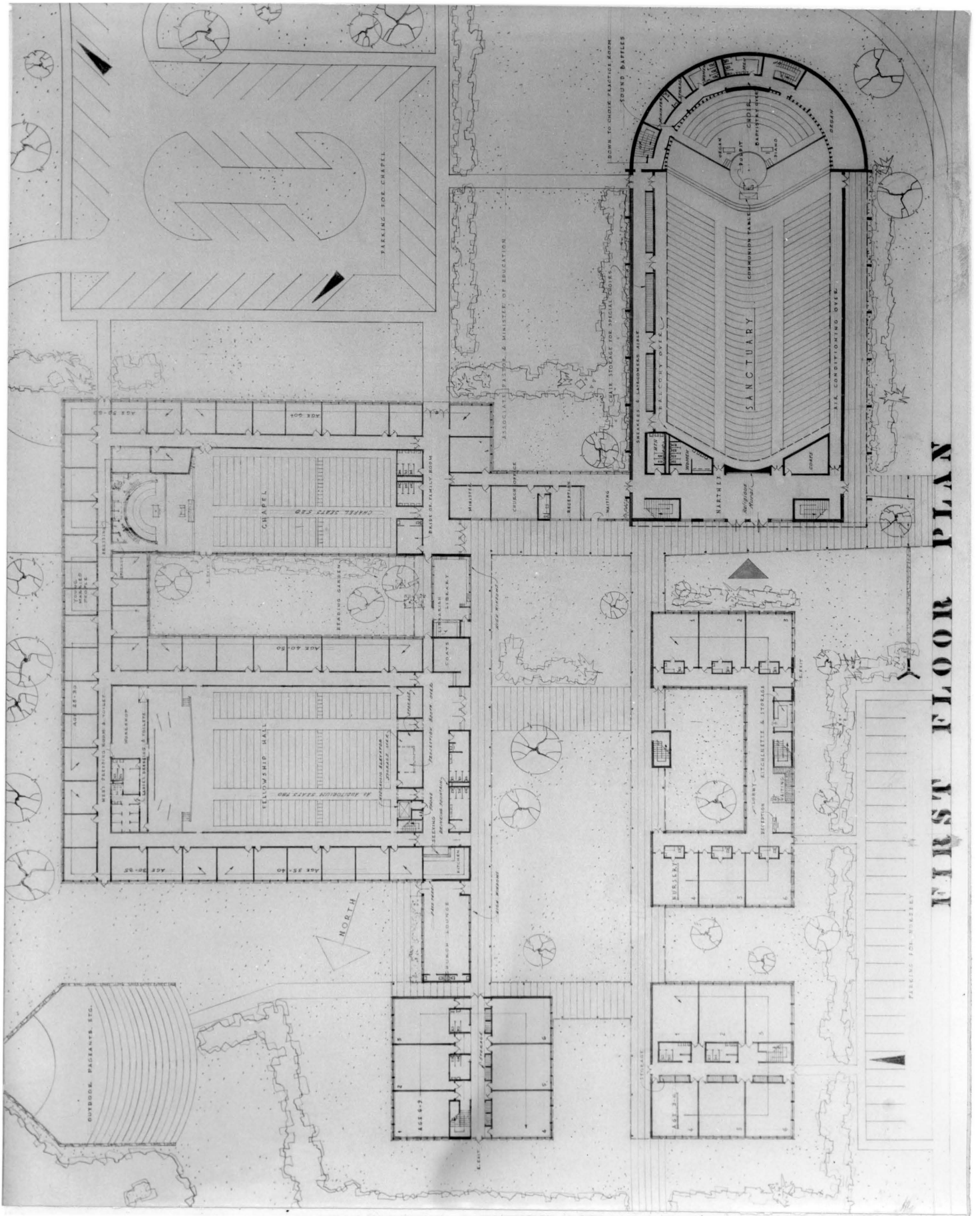
B. PLATES

SITE LOCATION

PLOT PLAN

SURVEY OF SITE

NORTH

PLATE I - PLOT PLAN

FIRST FLOOR PLAN

SANCTUARY

CHAPEL

FELLOWSHIP HALL

PARKING FOR CHAPEL

PARKING FOR NURSERY

OUTDOOR PAGEANTS, ETC.

NORTH

PLATE II - FIRST FLOOR PLAN

SECOND FLOOR PLAN

CHURCH LIBRARY

CHOIR PRACTICE ROOM
(IN BASEMENT)

MECHANICAL - EQUIPMENT UNDER CHAPEL

NURSERY N.5

SCALE ⅛" = 1'-0"

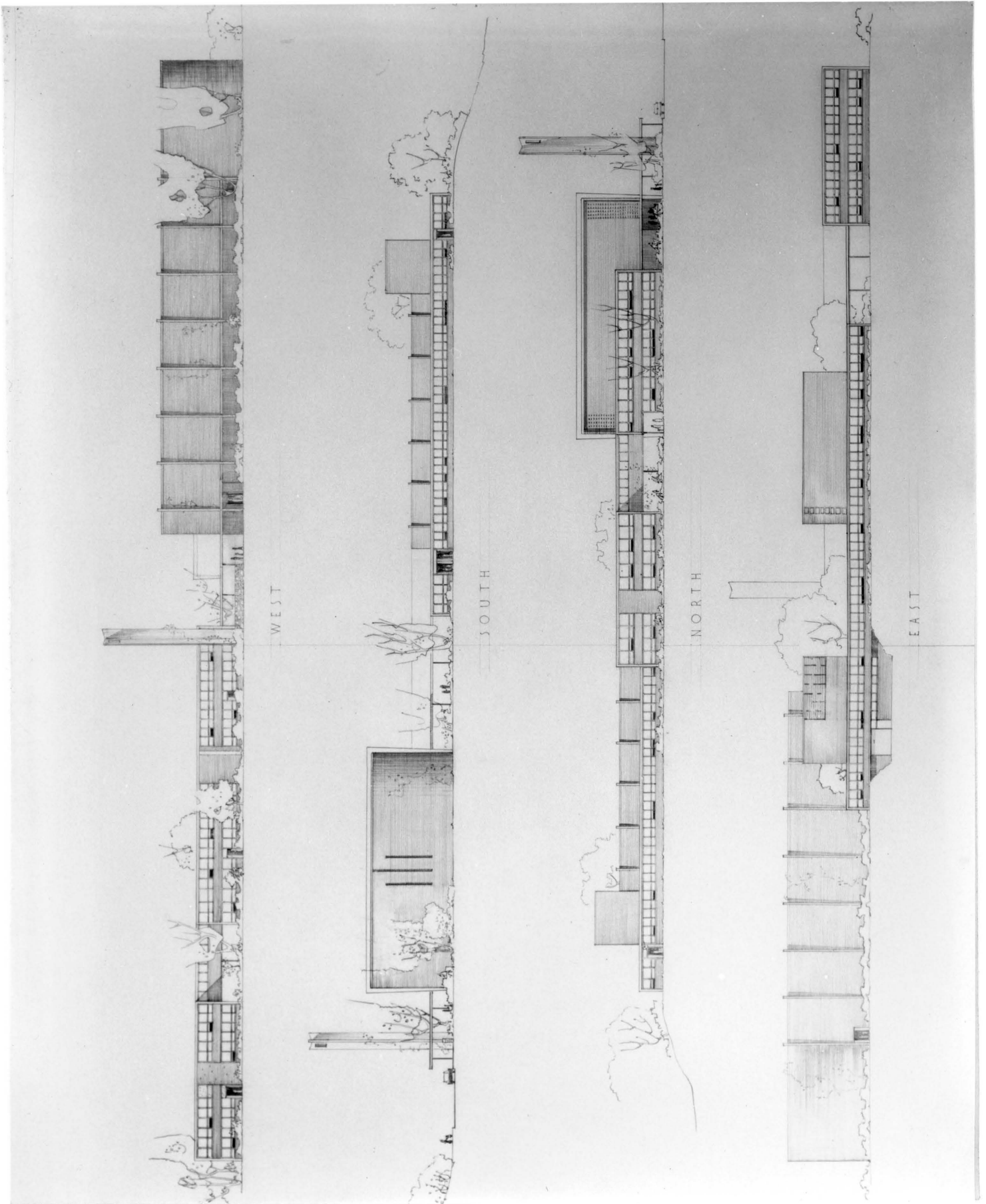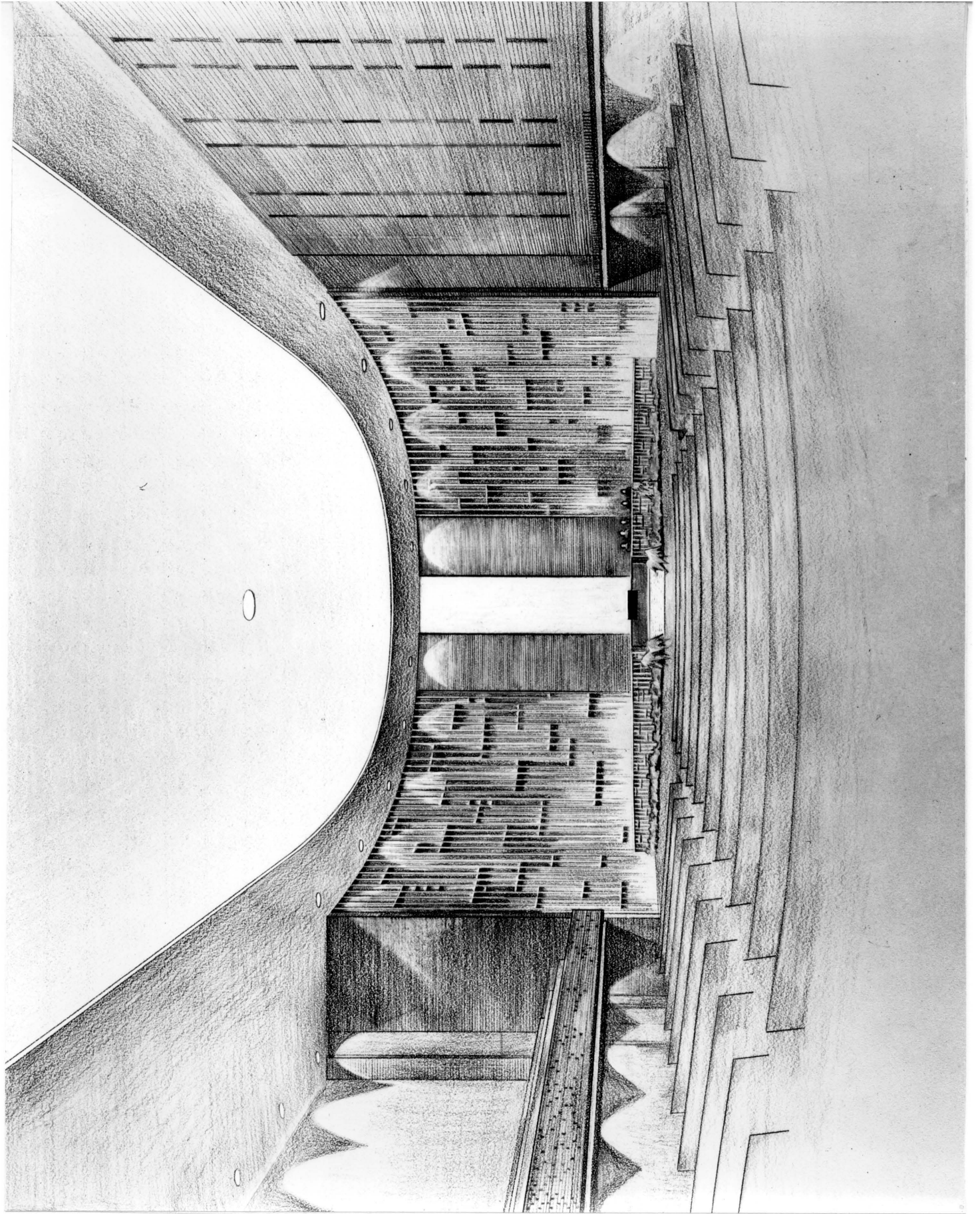PLATE III - SECOND FLOOR PLAN

WEST

SOUTH

NORTH

EAST

PLATE IV - ELEVATIONS

PLATE V - VIEW OF INTERIOR OF SANCTUARY
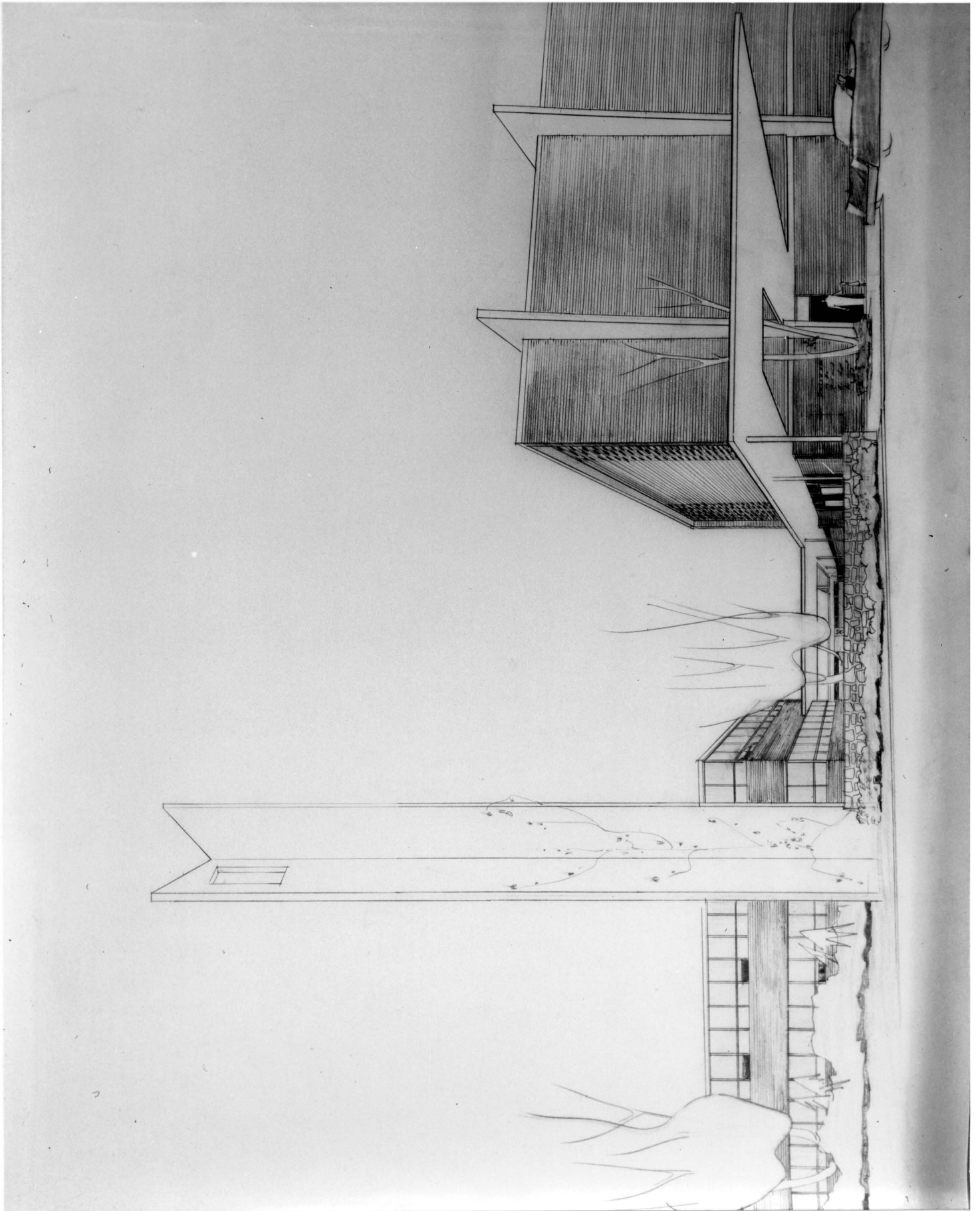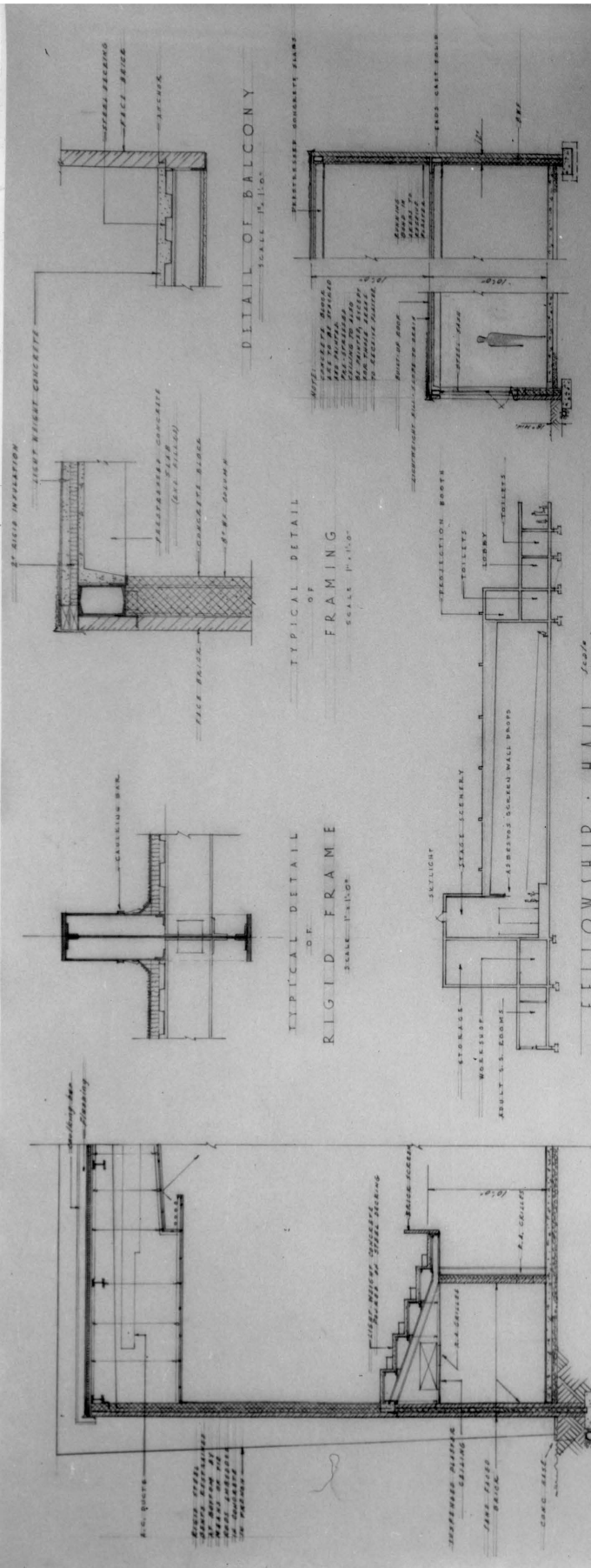
PLATE VI - EXTERIOR PERSPECTIVE

DETAIL OF BALCONY

TYPICAL DETAIL OF FRAMING

TYPICAL DETAIL OF RIGID FRAME

SECTION · THROUGH · SUNDAY · SCHOOL

FELLOWSHIP · HALL

SECTION · THROUGH · SANCTUARY · BALCONY

SECTION · THROUGH · CHAPEL · AND · NARTHEX · OF · SANCTUARY
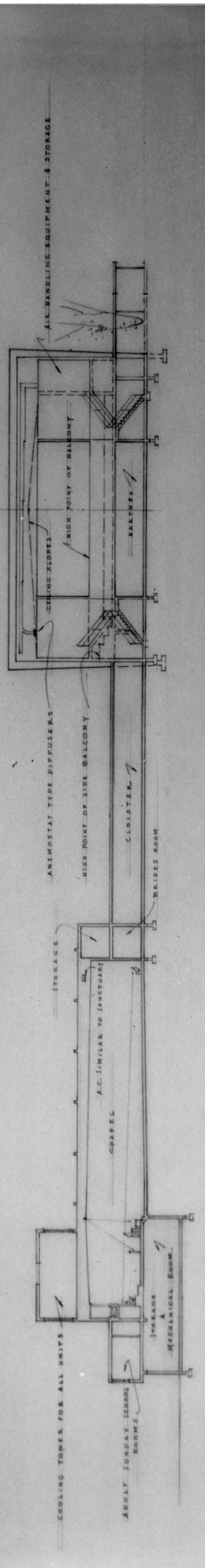
SECTION · THROUGH · SANCTUARY · AND · CHILDREN'S · SUNDAY · SCHOOL · DEPARTMENTS

PLATE VII — SECTIONS
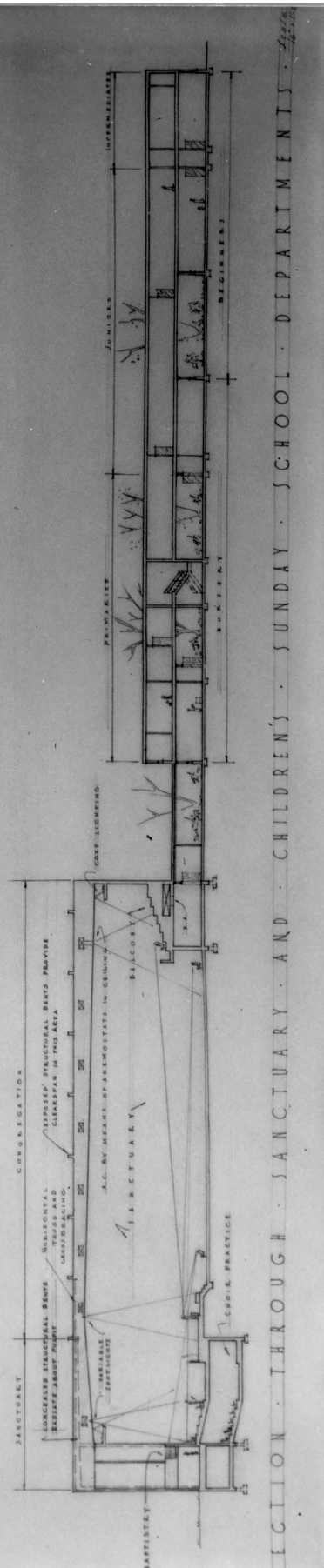
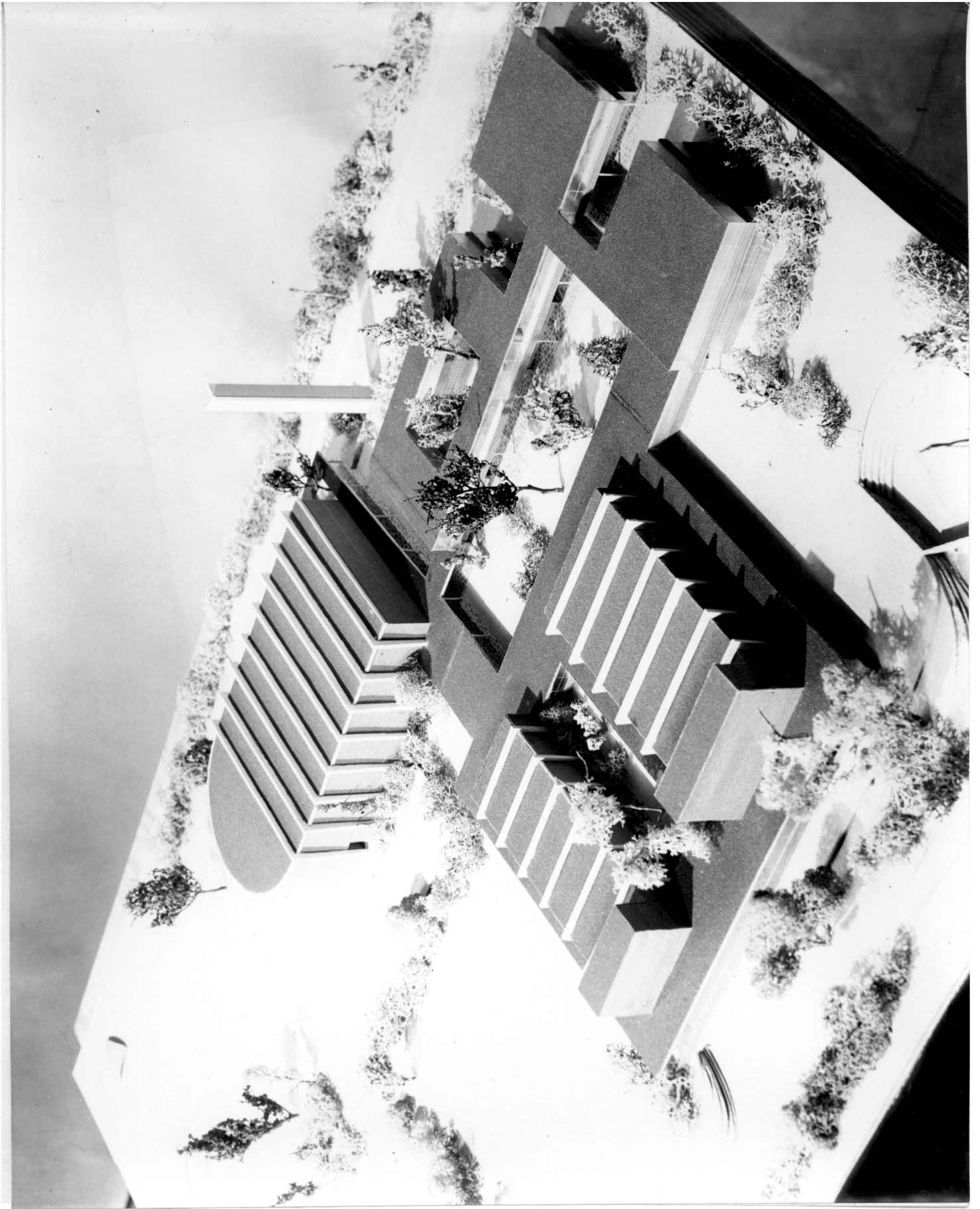PLATE VIII - PHOTOGRAPH OF MODEL FROM SOUTH

PLATE IX - PHOTOGRAPHS OF MODEL FROM WEST

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