# SYNTHESIS

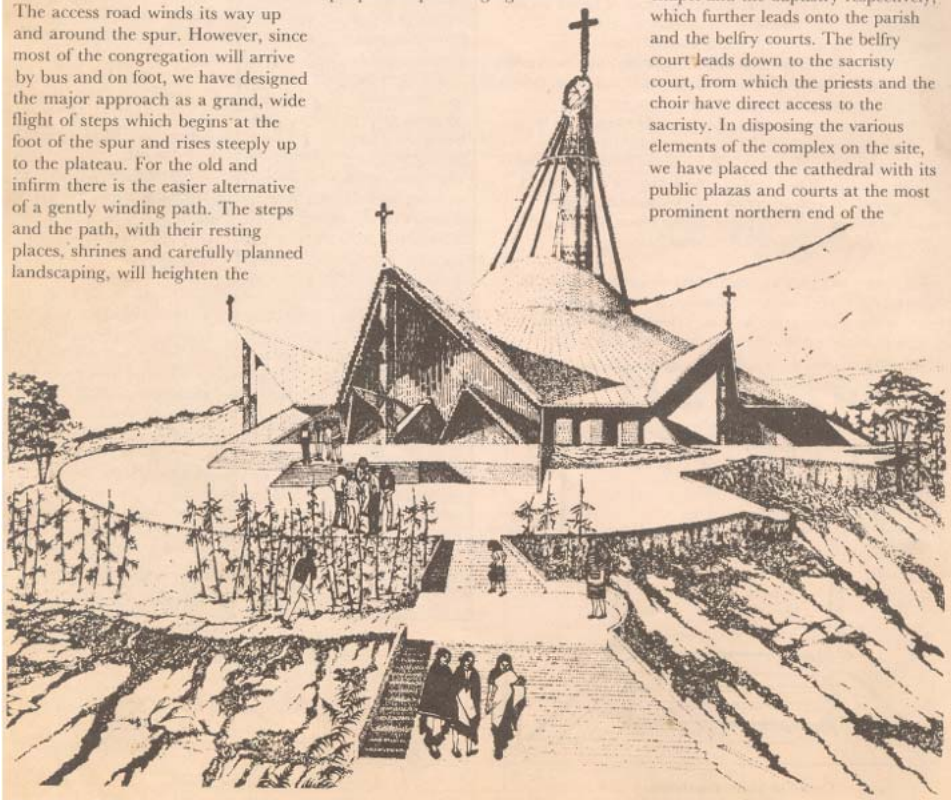
Revathi and Vasant Kamath put together elements from Naga architecture, removing them from their traditional context, and give them a new meaning that adds up to the idea of 'church'.

## THE SITE SOLUTION

The cathedral is situated on a very prominent and beautiful spur to the south west of Kohima town. The majestic location of the cathedral on this ridge, visible from the town, will make it one of the major landmarks of Kohima.

The access road winds its way up and around the spur. However, since most of the congregation will arrive by bus and on foot, we have designed the major approach as a grand, wide flight of steps which begins at the foot of the spur and rises steeply up to the plateau. For the old and infirm there is the easier alternative of a gently winding path. The steps and the path, with their resting places, shrines and carefully planned landscaping, will heighten the visitors' awareness of having entered a place of serenity, without at any time having a view of the cathedral itself. The cathedral will come dramatically into view at the top of the steps, when the visitor finds himself in a large semi-circular plaza. This plaza is meant to accommodate a vast number of people in open congregation on special occasions. Towards the centre of the plaza, a further short flight of steps leads up to an upper podium and the main entry or narthex of the cathedral.

To the left and right of the entrance podium, a series of landscaped courts at different levels lead to the chapel and the baptistry respectively, which further leads onto the parish and the belfry courts. The belfry court leads down to the sacristy court, from which the priests and the choir have direct access to the sacristy. In disposing the various elements of the complex on the site, we have placed the cathedral with its public plazas and courts at the most prominent northern end of the plateau, facing the town. The residential functions, which need privacy and quiet, are located at the upper or southern end.



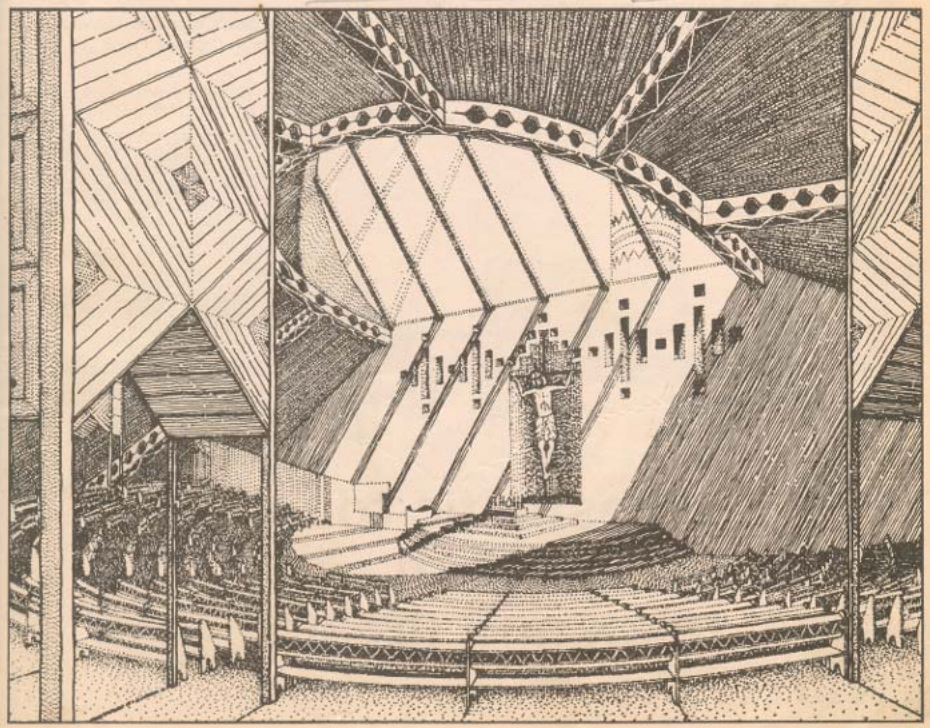


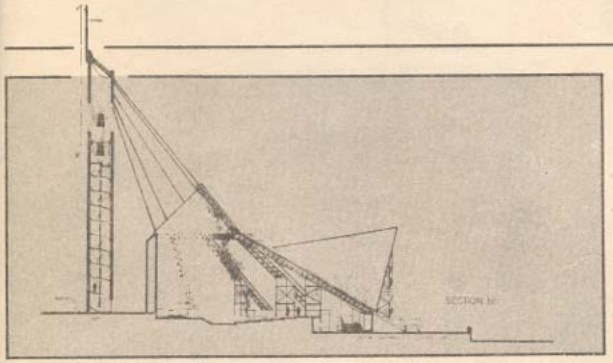
## DESIGN CONCEPT

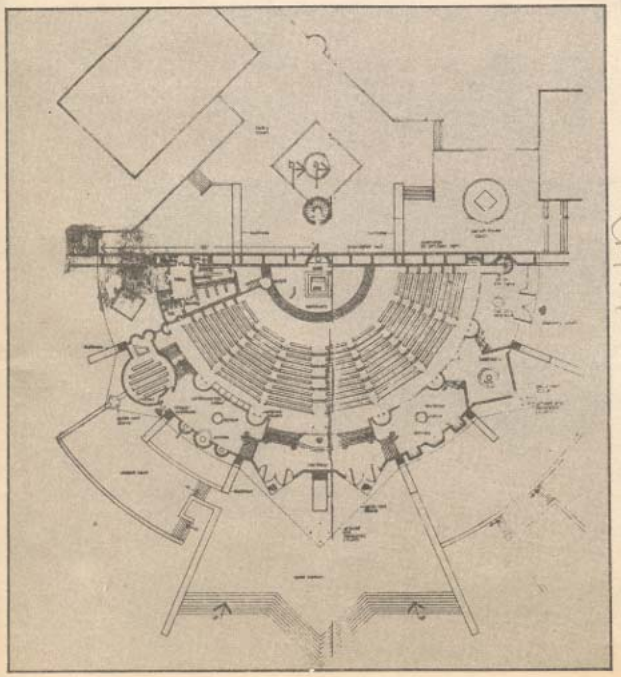
**We hope our synthesis of the needs and components of the Catholic Church with roof forms, architectural elements and decorative motifs derived from Naga tradition, will evoke in the Naga congregation a sense of familiarity and belonging, a feeling that this is not an alien environment. Yet the scale of the building and its spaces, its dramatic lighting and quality and its towering belfry and spire, will in a sense, be new and awe-inspiring, as befits a cathedral.**

## THE CATHEDRAL PLAN AND ELEMENTS

During the last 75 years, there has been a gradual change in the traditional, concepts of the church plan and its function, due to the liturgical revival initiated by Pope Pius X. In our design we have rejected the rectangular and cruciform plans, as they do not meet the currently-felt primary need to integrate the nave with the sanctuary, where the congregation is large. A circular plan on the other hand, provides a closeness between the members of the congregation and the sanctuary, by reducing the depth of the nave, while at the same time accommodating a large number of people. A circle however, lacks a direction, so we have opted for a semi-circular form. The semi-circle establishes both an axis, giving the body of the church a focus, and a rear surface or plane, to serve as a backdrop and highlight the sanctuary and altar. A strong sense of participation in the religious service is induced in the worshippers, with the radial







segments of seating focussed on the central sanctuary.

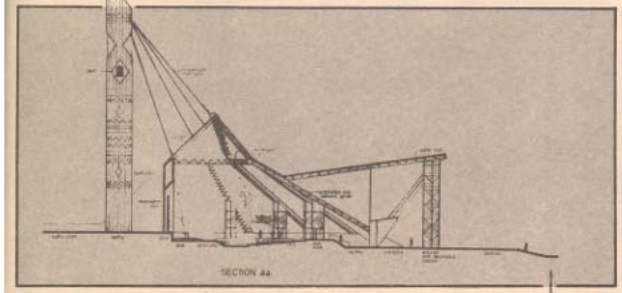
The semi-circle is divided into eight segments, clearly defined by the structural system of trussed columns and girders. The nave comprises of seven segments, which signify the seven sacraments instituted by Christ as a means to everlasting life. The rear wall of the nave in each of the seven segments will be decorated with wooden panels rendered in the tribal art forms of Nagaland. The eighth segment of the semi-circle accommodates the sacristy at the lower level and the choir above. The choir is elevated to ensure visibility from the entire nave area. Spatially however, the choir is an extension of the nave, so that the congregation and choir form a single group and the priest can direct all his attention to it.

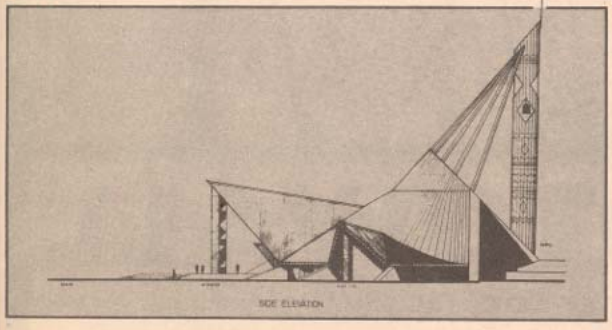
The sanctuary, altar and apse, at the centre of the semi-circle, are raised above the level of the nave by some steps, to ensure visibility and to enable the dialogue between the clergy and the congregation to be carried out with dignity. The pulpit, placed to one side of the sanctuary, is raised to a slightly higher level, thereby facilitating the attention of the congregation to the sermon, and at the same time, shielding the door from the priests' sacristy to the sanctuary from the direct view of the nave.

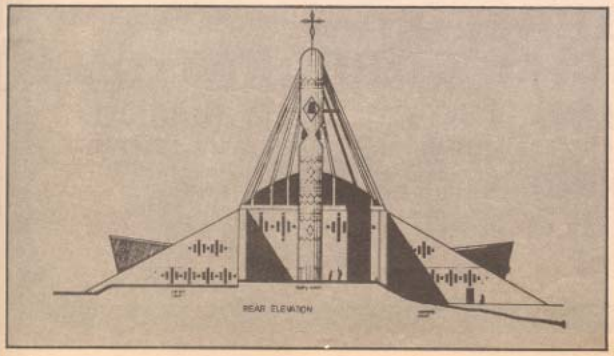
The narthex, baptistry, chapel, confessionals and shrines form the outer ring of the cathedral. The narthex, placed on the central axis of the cathedral, functions not only as











the main entrance hall, but also as a space for ceremonial purposes. On Holy Saturday it is used for the blessing of the new fire. In addition, bulletin boards, the poor box and the holy water stoup are to be placed here.

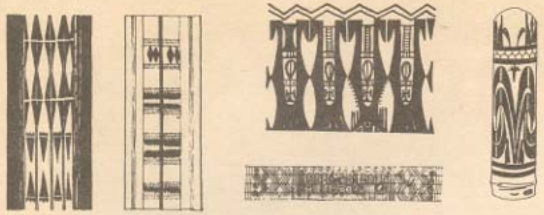
To the right of the narthex is the baptistry. It is an important architectural feature of the cathedral and is housed under a distinctive roof. It is essentially a diagonally placed square in plan and contains the baptismal font in an octagonal depression at its centre. The depression symbolises the early Christian immersion. Around the font there is space to accommodate about fifty people to witness the ceremony.

The belfry is an important element of the cathedral, and an integral part of the overall form and structure. The textured concrete tower soars high (about 160 feet), carrying with it the main roof spire of the cathedral towards the heavens. The tower culminates in a delicate cross.

## LIGHTING

The importance of dramatic natural light effects to highlight functions and create a subjective mood or atmosphere in church design cannot be denied. Variations in the quality and intensity of light are more important here than uniformity of light levels.

In our design we have designed two distinct types of light for the main body of the cathedral. The large, inclined, south-facing skylight in



the roof above the sanctuary will provide a dramatic focus with ever changing shafts of sunlight. The rear, double wall with its small staggered openings on the other hand, will provide a soft, diffused glow to gently light up the nave.

**ROOF FORMS**

The roof configuration to enclose the large volume of the cathedral is perhaps the major architectural element in our design, creating both a powerful, soaring form, and a hierarchy of the importance of the spaces below. The roof slopes gently up over the nave, increasing in height as it approaches the sanctuary. Above the sanctuary the roof pitch changes and rises dramatically and steeply, culminating internally in the enclosing volume of the inclined skylight. On the outside though, the roof form continues further up to form a spire, consisting of slender, steel suspension members, hung from just below the top of the cylindrical belfry.

Roof forms generally play a major part in vernacular hill architecture and the traditional architecture of Nagaland is no exception to this rule. A characteristic form that is observed, with variations is the gable roof with its inclined ridge member supported at its highest point by a richly carved timber column. We have chosen this form for the subsidiary roofs which define and emphasise the baptistry, narthex and chapel. The carved timber column of the Naga house or Morung has been translated, for structural demands of scale and durability, into a trussed steel column, textured in timber with patterns evocative of Naga designs.

**DECORATIVE ELEMENTS**

In a building of this size, what 'reads' from a distance is the strength of the overall form. But as one comes closer to and into the building, there is a need for a richness of finer textures, colours and details to sustain the interest and reinforce the overall conception. It is at this close-up level of decoration that we intend to borrow heavily from the rich Naga heritage of colour and patterns.

**STRUCTURAL SYSTEM AND MATERIALS**

The various elements of the proposed structural system are visible elements of the form and an architectural expression of the cathedral building. The eight segments of the semi-circle form the major structural bays, defined by the main girders of the roof system. These inclined girders which spring from the outer ring of radial, sloping buttresses, over an intermediate ring of latticed columns which define the rear aisle of the nave, are supported at their upper end by a compression ring above the sanctuary. The compression ring is in turn suspended by tension members anchored to the top of the reinforced concrete belfry. The lateral thrust exerted by the semi-circular compression ring is resisted by the two large buttresses on the rear wall of the cathedral. The rear wall is further treated structurally as a diaphragm wall to resist the lateral and wind forces.

The structural requirements of the long span and lightly loaded members have been met by proposing castellated and latticed boxed steel main girders, which will support the secondary frame work for the roof. Materials such as reinforced concrete or timber alone have not been proposed as they would impose excessive dead loads for such long spans.

The cylindrical belfry will be of reinforced concrete to give the necessary rigidity to the structure as a whole. The diaphragm rear gable wall and the buttresses on the other hand, will be of brick-work.

The total structure will thus be a combination of concrete, brick and steel, with a judicious use of timber in conjunction with steel sections.

**CONCLUSION**

What we have attempted to achieve is a total synthesis of form and function, form and structure, form and the evoking of tradition, and form and decoration; all of which are subservient to the ultimate purpose of the cathedral, which must finally speak for itself through the totality of its design conception.

*CLIENT: CATHOLIC CHURCH OF NAGALAND*

*REVATHI AND VASANT KAMATH ARCHITECTS, PLANNERS.*

*PATEL AND ASSOCIATES CONSULTING ENGINEERS*