

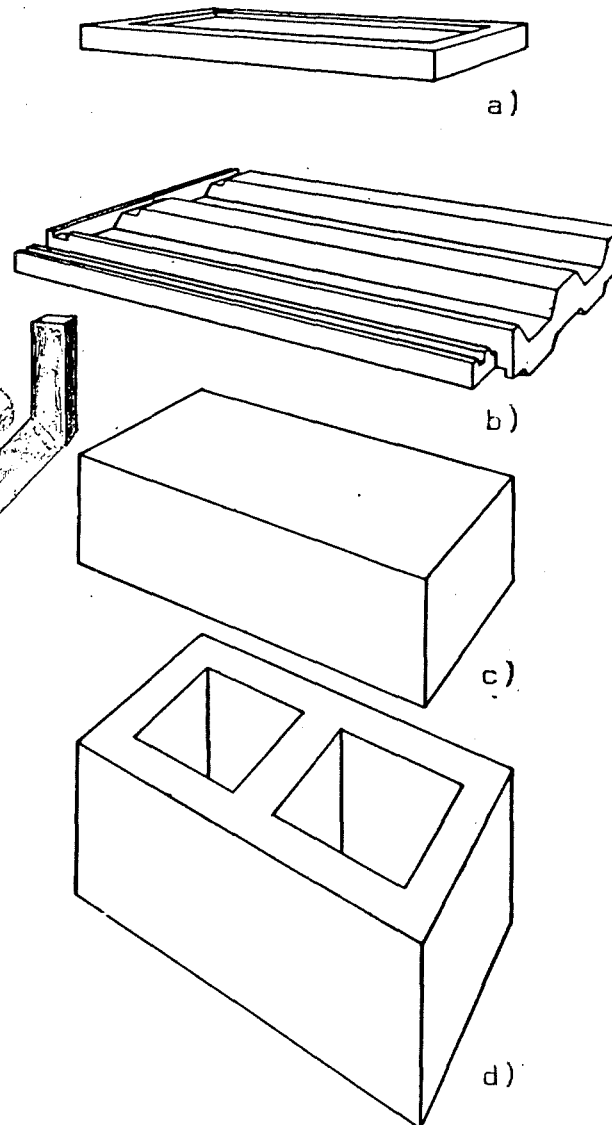
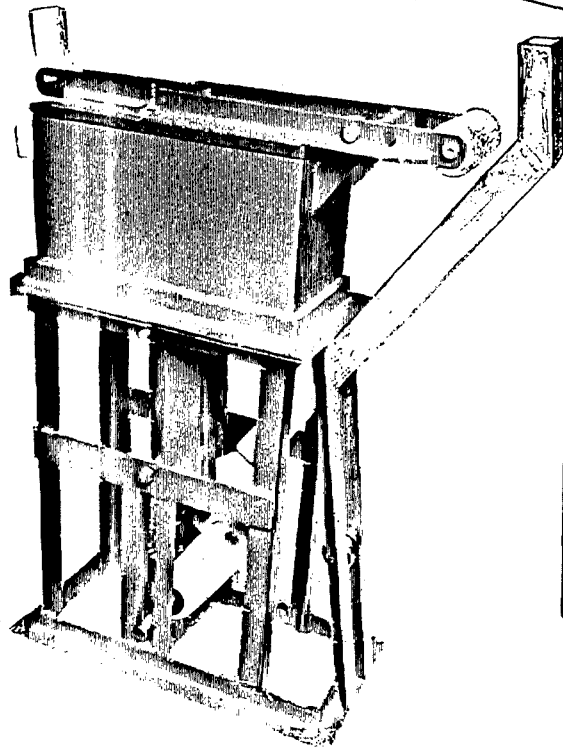
Development Workshop

Box 133
238 Davenport Road
Toronto
Ontario M5R 1J6
Canada

DW - Ram

- a) floor tile
- b) interlocking roof tile
- c) solid block
- d) semi hollow block

Photo shows the DW-Ram with demountable mould box for 30 x 15 x 10 cm. block.



Patent Pending

The DW-Ram is a portable easy to use machine for making low cost blocks, roof tiles and a variety of other building components. The high compression developed by this manual press enables the use of local soils for the production of strong durable blocks with a minimal amount of lime or cement.

Features of the DW-Ram:

- Interchangeable mould box allows fabrication of blocks of different size and shape, interlocking roof tiles, floor tiles, channel sections & other elements.
- One simple action of the lever arm both compresses and ejects block, reducing labour and production time.
- Production rate up to 800 high quality blocks per day.
- Light weight machine (57kg) can be carried by one person in two detachable sections.
- Easily used and maintained with no special skills.
- Enables the establishment of materials production units even in remote locations
- Great savings in transport and material cost.

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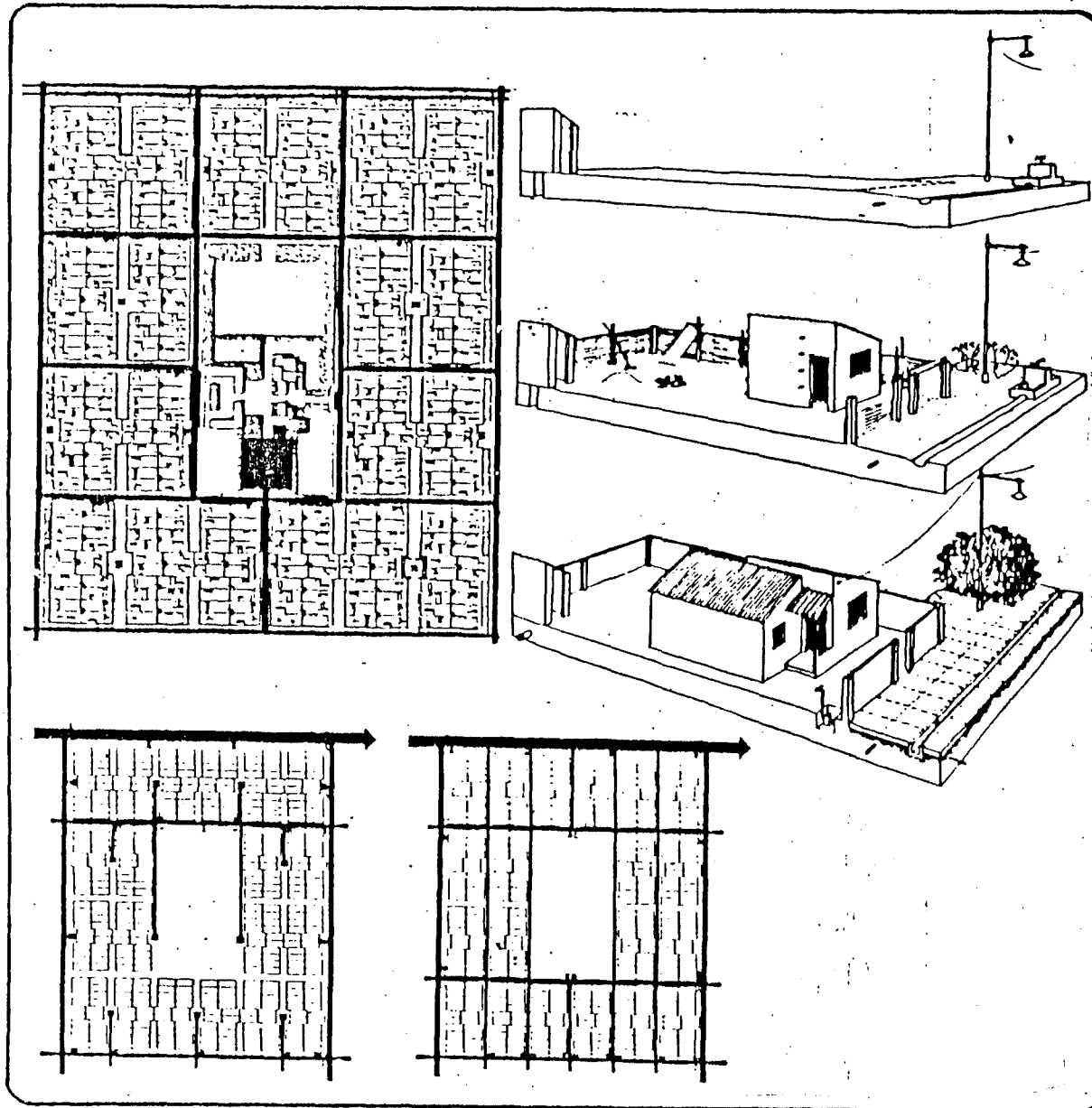
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Toronto, Ontario
Canada M5R 1J8

project

ANGOLA: Development of Site & Service policy and guidelines.
Slum upgrading.

client

National Directorate for Urbanism.



Models have been developed to show the effect of different planning policies, in terms of cost and number of people served.

Various options examined, including showing how services can be installed at a basic level and later upgraded as finance and equipment permit.

This project has been geared to making the existing 'auto-construction' programme more accessible to those who require services.

A parallel project has been also developed for upgrading the existing unplanned areas of the capital zone.

These projects are part of the D.W. programme for setting up a Centre for Popular Construction in Angola for the government.

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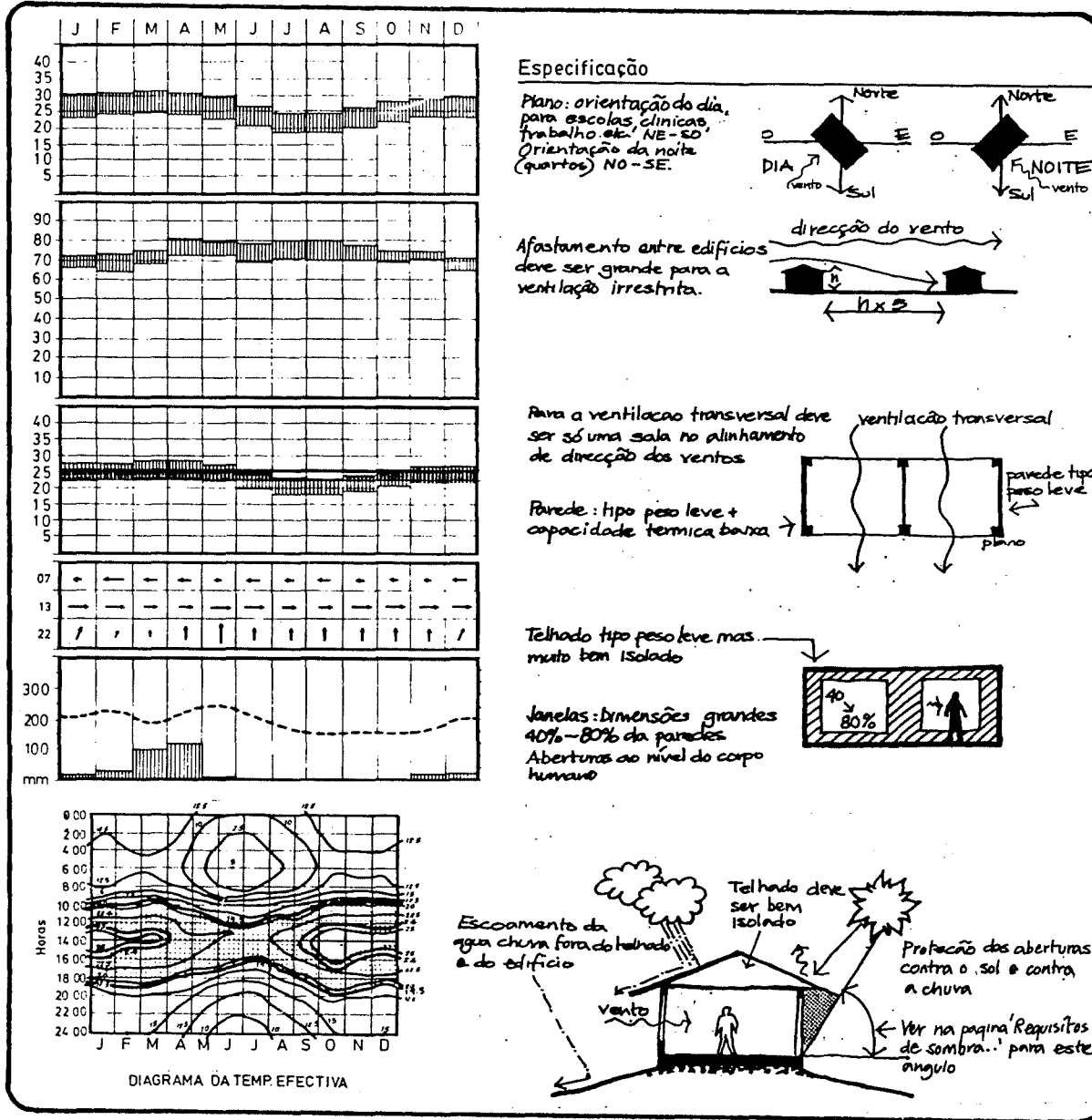
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project

Guide for climatic comfort in small buildings in Angola.

client

Min. of Construction.



This guide indicates basic design principles that need to be followed in order to have buildings which are climatically comfortable to live and work in. 15 different locations in Angola have been analysed, covering the main geographic regions. In preparing the guide we mainly considered small scale domestic & public buildings - houses, schools, clinics and many places of work - which form 90% of rural buildings and probably 75% of urban ones.

The guide is a simple indication of how to use natural methods for achieving climatic comfort, as opposed to mechanical methods. It is not difficult to achieve climatic comfort inside buildings in most parts of Angola. Doing so saves money and reduces maintenance and dependence on expensive equipment.

Many people do not have access to mechanical equipment nor the energy to run it. It is thus sensible to design buildings properly so that they do not need mechanical means to be comfortable.

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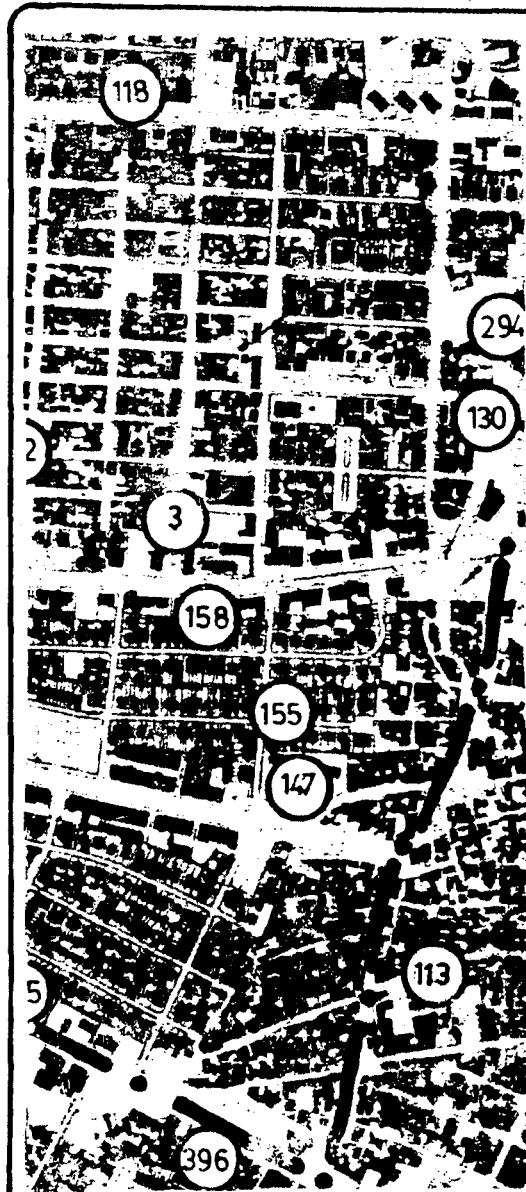
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project

EDUCATIONAL FACILITIES PLANNING
Luanda, Angola

client

Min. da Educação / D.N.U.E.



Training educational planners
in Luanda.

School location map, Luanda. Phase 1.

In 1982 Development Workshop designed & implemented a programme for educational facilities planning in Luanda, Angola

The programme covered:

- 1) Locating all existing school facilities; producing school location map.
- 2) Training municipal educational planners: in map reading; in basic building survey techniques and plan drawing; and how to complete school inventory form.
- 3) Inventory of all existing educational facilities in Luanda.
- 4) Analysis of educational facilities/school population by school & municipality.
- 5) Identification of new building and maintenance requirements.

The programme has been designed to provide a better use of facilities and available resources, and to ensure that new schools are built in the right place

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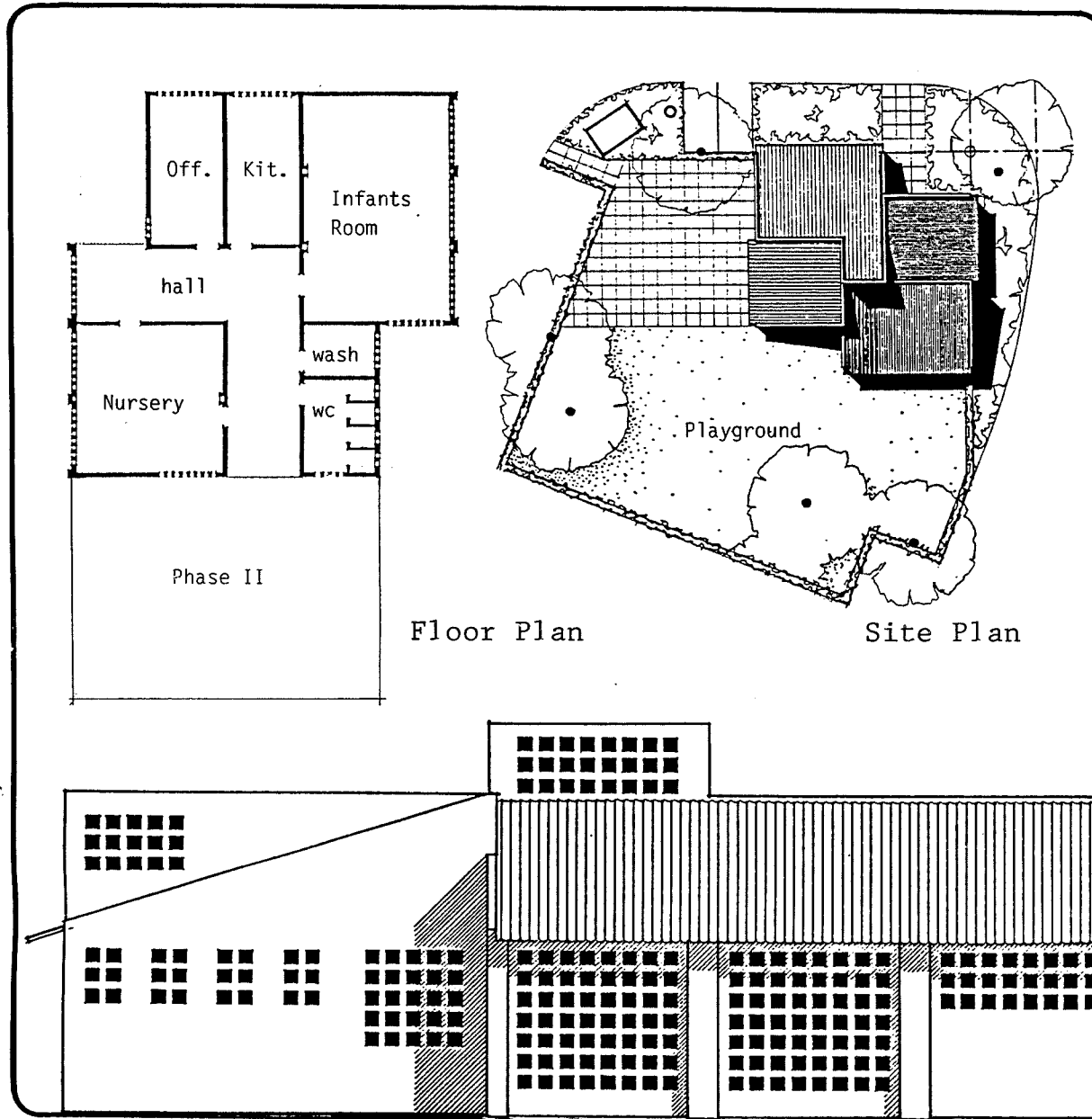
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project

Community Creche, Luanda, Angola

client

National Direct. Urbanism DNUE



Creche (daycare) designed to serve neighbourhoods or production units, offices or factories where there are working mothers. The creche is planned for phased extension as needs increase but the size will remain small enough to maintain its community scale function.

The building is to be constructed of soil-cement blocks. The design incorporates a natural ventilation system using a wind trap and lattice screens.

Elevation

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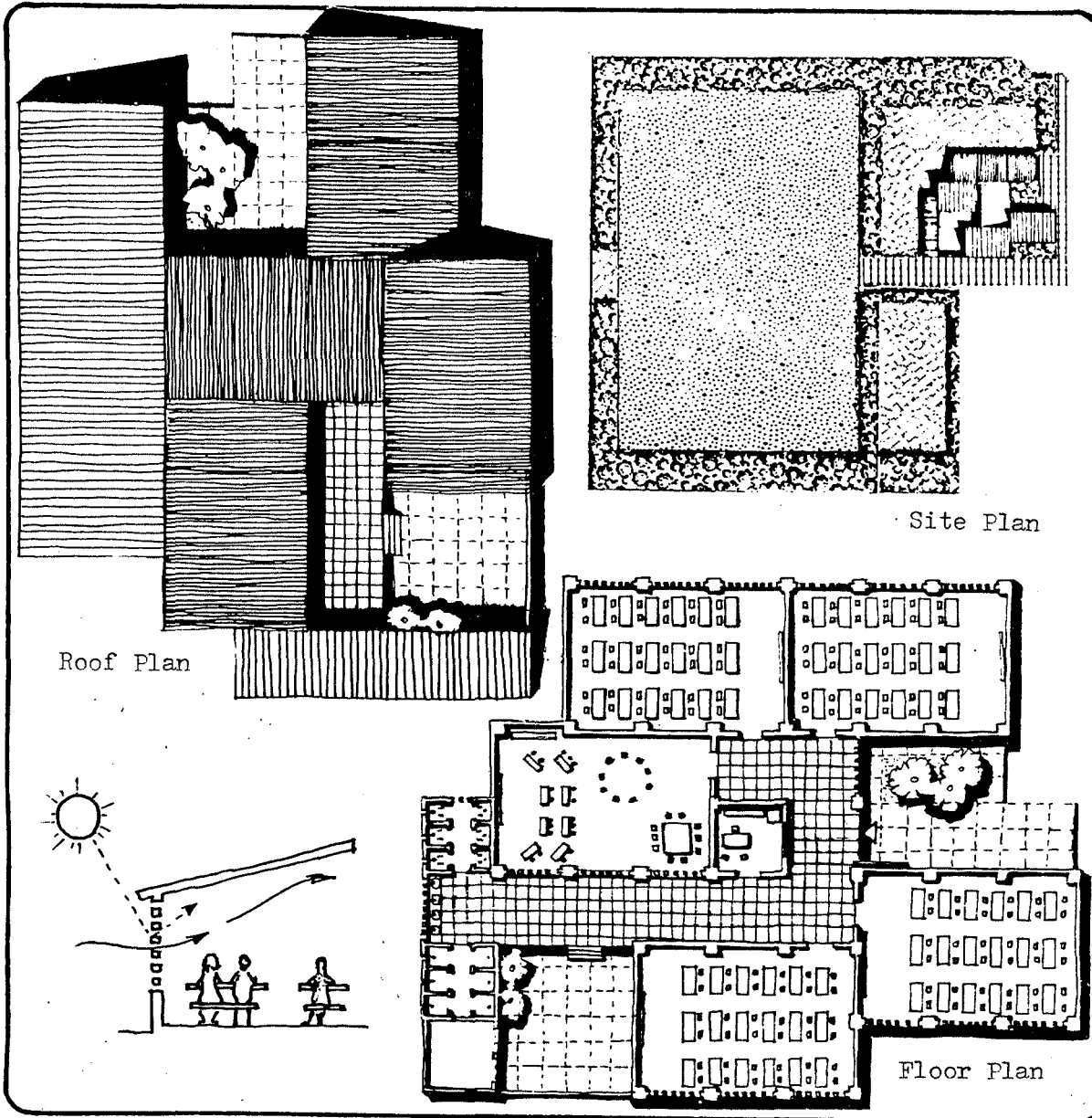
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project

PRIMARY SCHOOL - LUANDA

client

Ministry of Education - R.P. Angola



Prototype primary school designed to be built with local labour and materials. The school accommodates four regular primary classes, an office, reception and sanitary block as well as a pre-school class and adjacent outdoor free-play courtyard.

The construction technology is simple and low cost. The basic material being soil cement blocks which can be produced on site with a portable manual press. Climate, security and economic considerations lead to the design of lattice windows which provide optimum levels of ventilation and lighting.

The project is partially financed by the Canadian International Development Agency.

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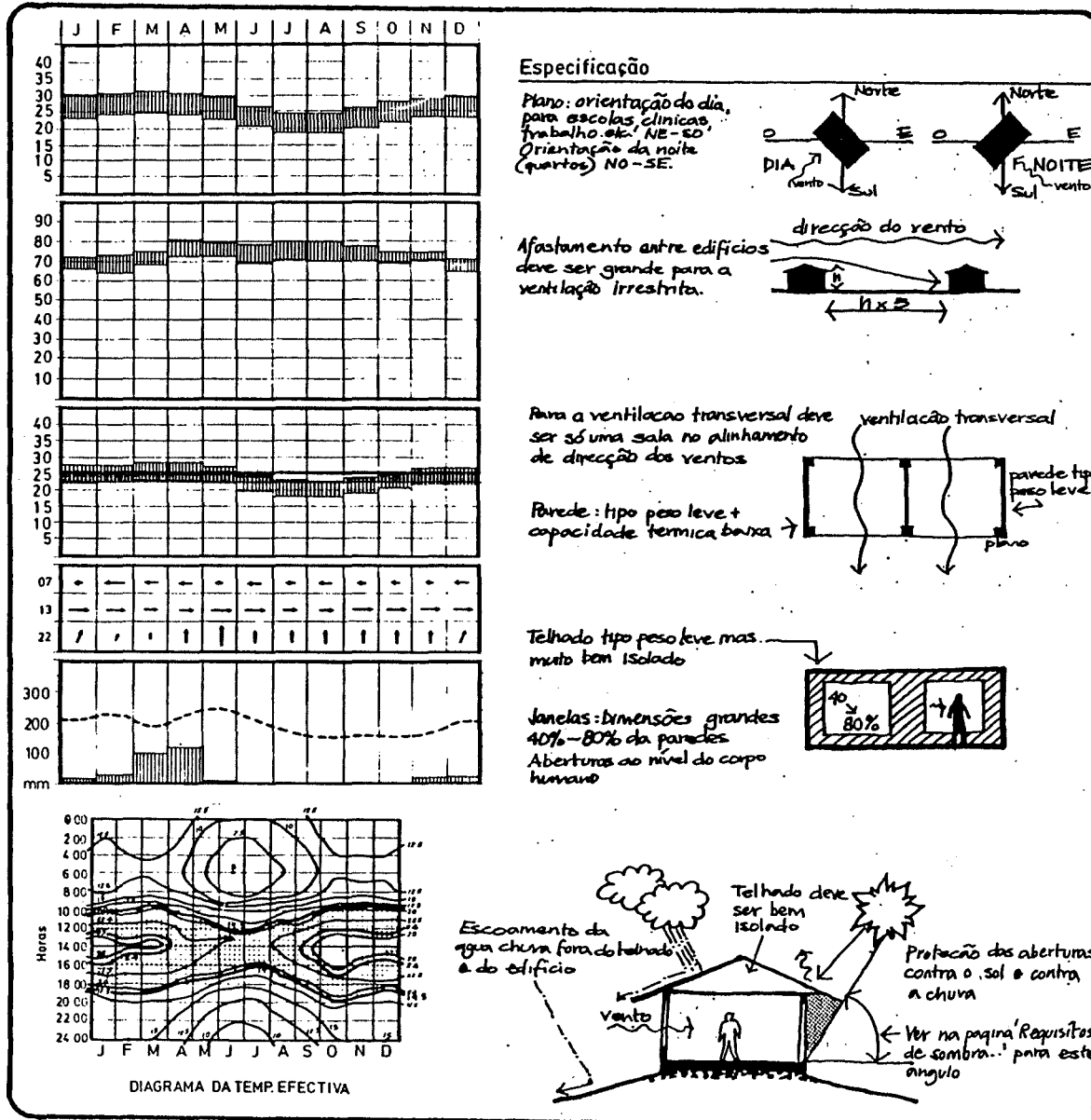
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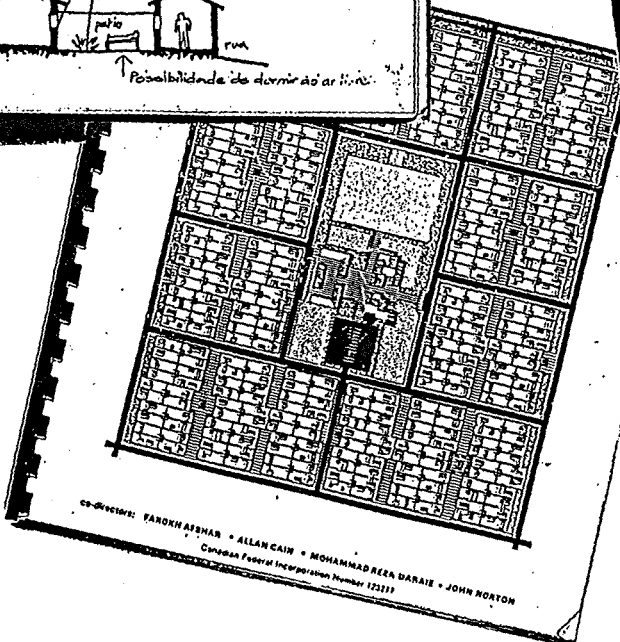
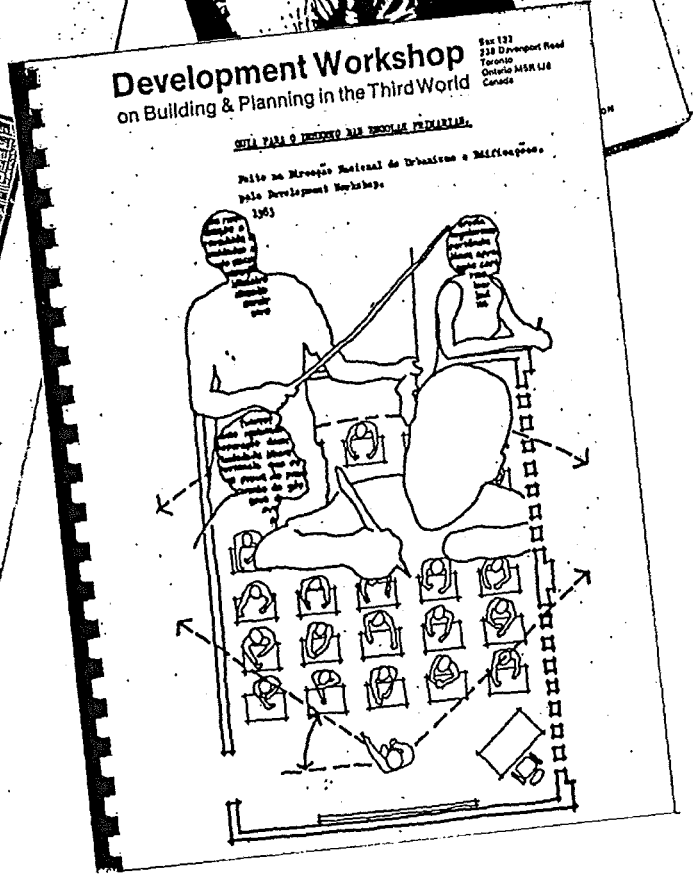
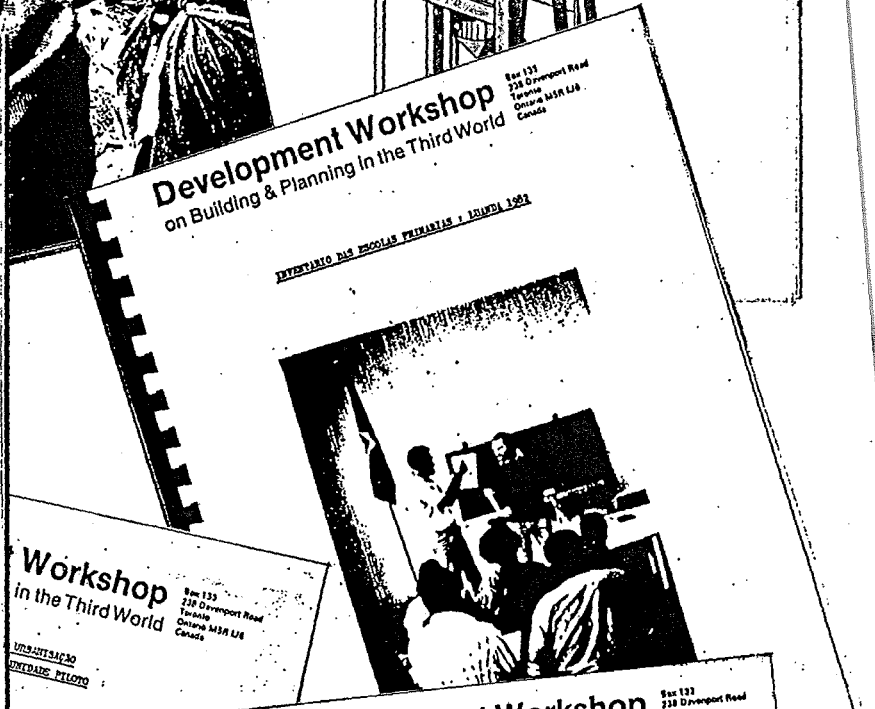
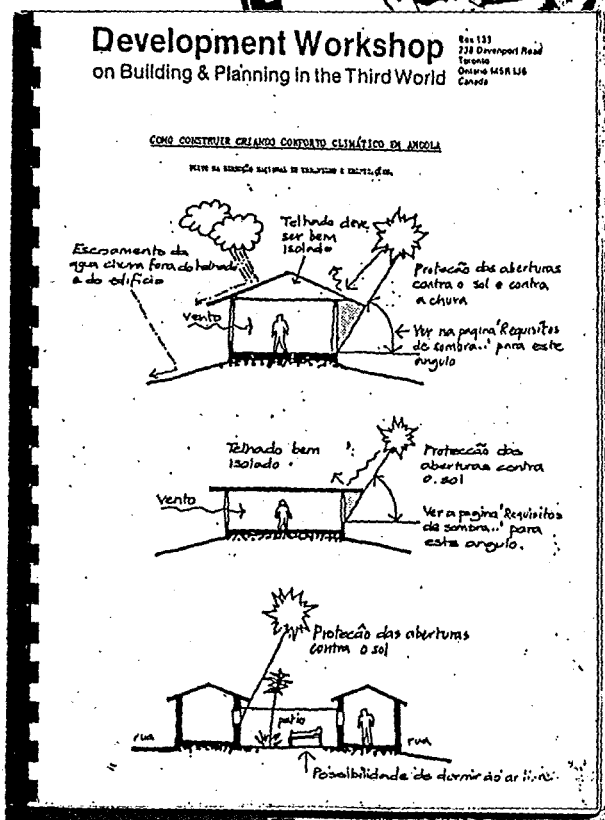
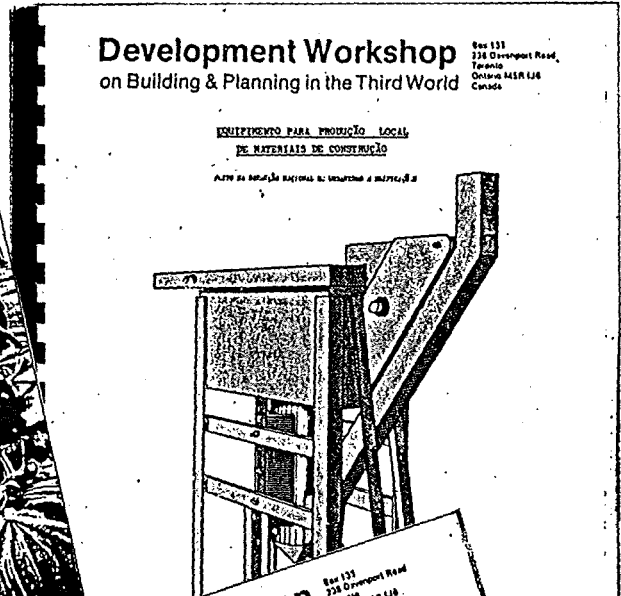
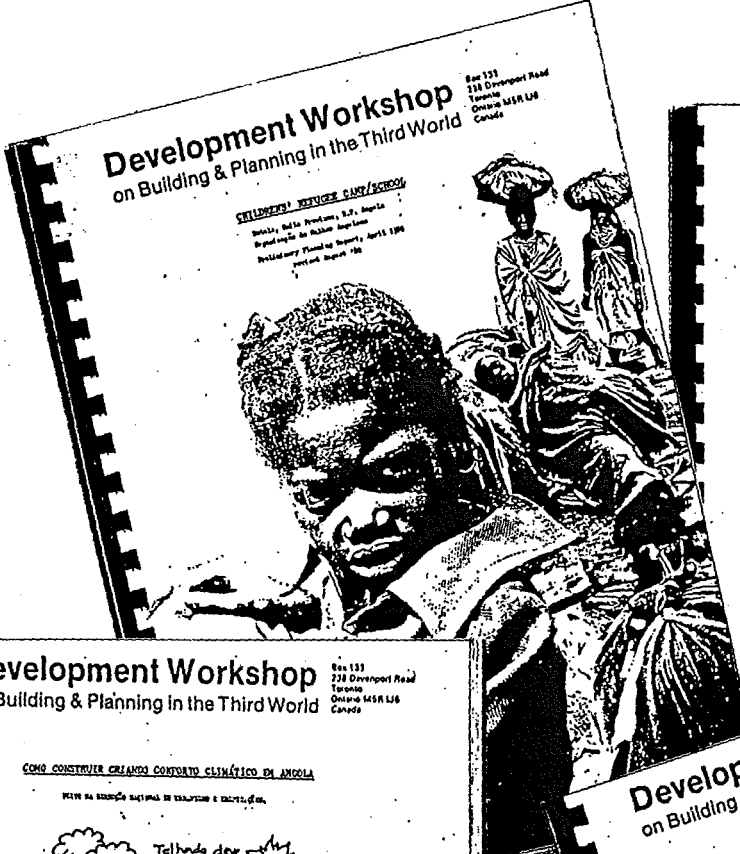
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Alguns documentos e manuais técnicos realizados pelo Development Workshop com os seus colegas Angolanos.

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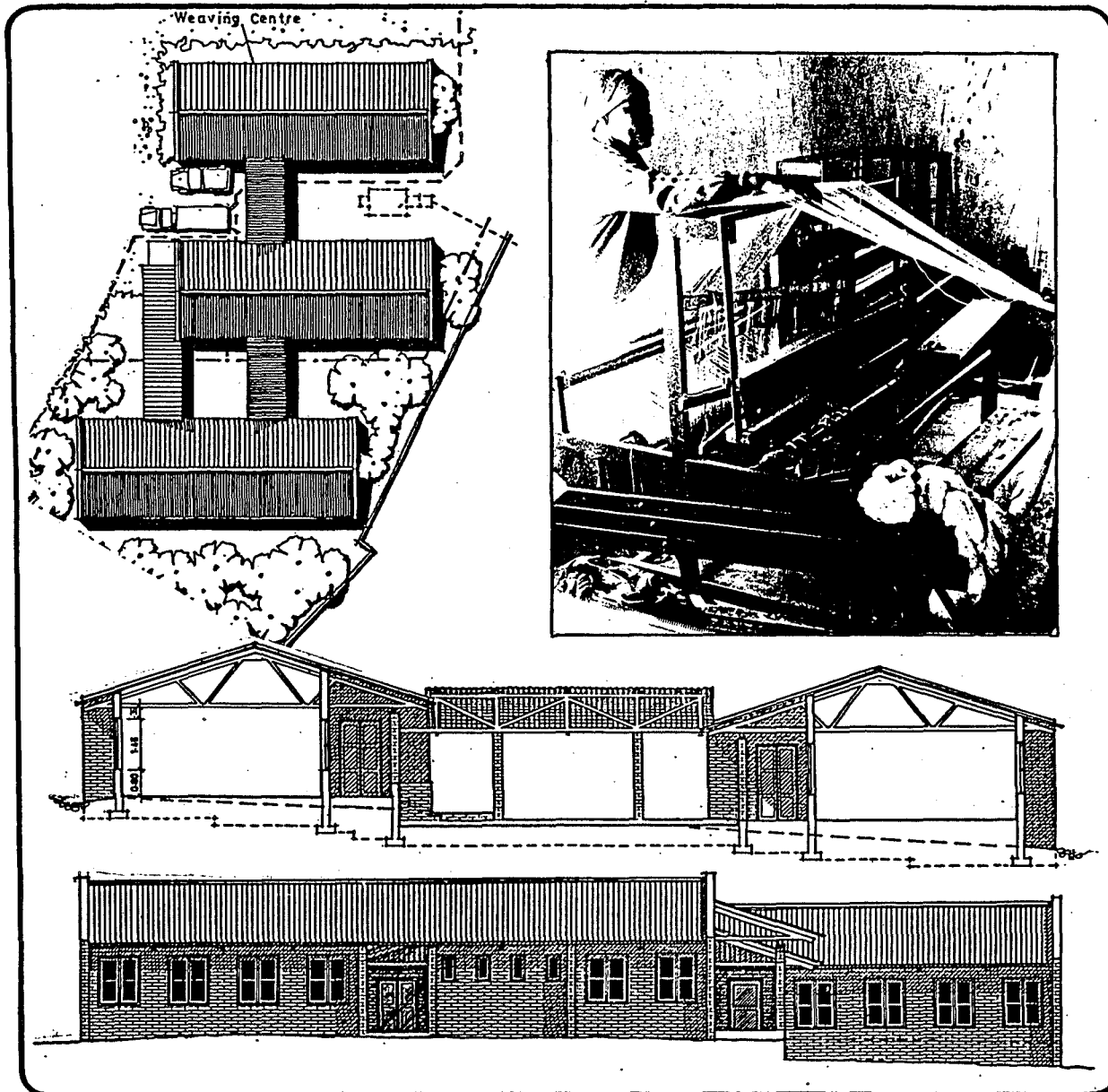
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project

WEAVING TRAINING CENTRE
Namibian Refugees

client

Holland Committee on Southern Africa
South West Africa Peoples Organization



The Weaving Training Centre is part of the vocational training program for Namibian Refugees in Angola. The centre contains classrooms, workshop and administration facilities. The project is planned to accommodate up to 160 women plus staff in each training session.

Weaving may prove to be an important alternative source of employment for rural women in independent Namibia; large sectors of the Namibian population having been engaged in animal husbandry particularly sheep raising. The participants of the program are trained in all aspects of textile production from spinning and dyeing to weaving and machine knitting.

The training centre covers about 1,300 square meters. The construction is in phases geared to the expansion of the program. Building materials are produced on site whenever possible and local timber is used for the roof structure.

Building Brigades organized from the refugee community are responsible for construction with close collaboration on planning and design and technical assistance from Development Workshop.