

MULTI-STORIED SCHOOLS IN HONG KONG

Due to the shortage of building land, especially in the urban areas, and the need to provide an adequate number of school places, it has been necessary to build multi-storied schools in Hong Kong. Sites for schools are calculated on the basis of approximately 1,000 square feet per classroom for a primary school and 2,000 square feet per classroom for a secondary school. As schedules of accommodation are laid down for both primary and secondary schools, the actual design of the school depends upon the shape and contour of the site. It is not possible to give, in a short article of this nature, details of the various designs of all schools which have been built in the Colony. However, a description of the Government standard plan co-educational primary school and the Government standard plan co-educational secondary school may give readers a general idea of multi-storied school design in Hong Kong. These schools were designed by the Government Architectural Office.

Standard primary school

The architect for the project produced a design for a standard primary school which could be accommodated on sites of about 22,000 square feet in area (measuring at a minimum 160 feet by 140 feet clear of any adjacent slope or cutting). The requirement was for a 30-classroom school for 1,350 children and the resultant design is for a six-storey building which, because of the restricted sites, incorporates a playground on its flat roof and an open-sided covered playground and assembly area under the building at ground level. No lifts are provided but climbing to the upper floors is reduced by the roof-level play-areas which enable the upper-floor pupils to enjoy their play-periods without the need to go down to ground level.

The detailed accommodation provided in the 30-classroom standard primary schools is as follows:-

<u>Item</u>	<u>Area</u>
1. 30 classrooms	560 sq. ft. each
2. 3 special teaching rooms as follows:-	
a) woodwork room	730 sq. ft.
b) housecraft room	730 sq. ft.
c) general purpose room	730 sq. ft.
3. Administrative accommodation as follows:- (for operation of the school in 2 sessions)	
a) two headmaster's offices	140 sq. ft. each
b) a general office	215 sq. ft.
c) a stationery store	30 sq. ft.
d) two staff rooms	730 sq. ft.

- e) staff toilet accommodation -
- f) a medical inspection room 270 sq. ft.
- g) a cleaner's store on each floor 30 sq. ft.
- h) quarters for two caretakers -

4. Playground accommodation

- a) Covered playground 2500 sq. ft.

It was considered that this area would be used by two thirds of the 1,350 pupils, i.e. 900 pupils, and that the following facilities should be provided:-

- i) lavatory accommodation and changing rooms for boys and girls
- ii) a games store 200 sq. ft.
- iii) a simple platform/stage at one end of the space in order to make the fullest educational use of the covered playground as a temporary hall for speech days, amateur dramatics etc.

- b) Roof playground 4500 sq. ft.

It was considered that this area would be used by one third of the 1,350 pupils, i.e. 450 pupils, and that the following facilities should be provided:-

- i) lavatory accommodation for boys and girls
- ii) approximately one third of the area i.e. 1,500 sq. ft. to be covered to provide protection against sun and rain for physical education and art lessons.

- c) Open playground

An open playground laid out as a basketball court with floodlighting installation.

5. A car park for 6 cars.

A similar need for economy in the use of land was also an important factor in evolving a design for the standard secondary grammar school. In this case, however, because of the increased facilities called for, the minimum site area necessary to accommodate the school was found to be approximately 50,000 square feet (measuring at a minimum 160 feet by 315 feet). The requirement was for a 24-classroom school for 920 pupils with an additional 10 practical rooms and with adequate assembly and recreational facilities.

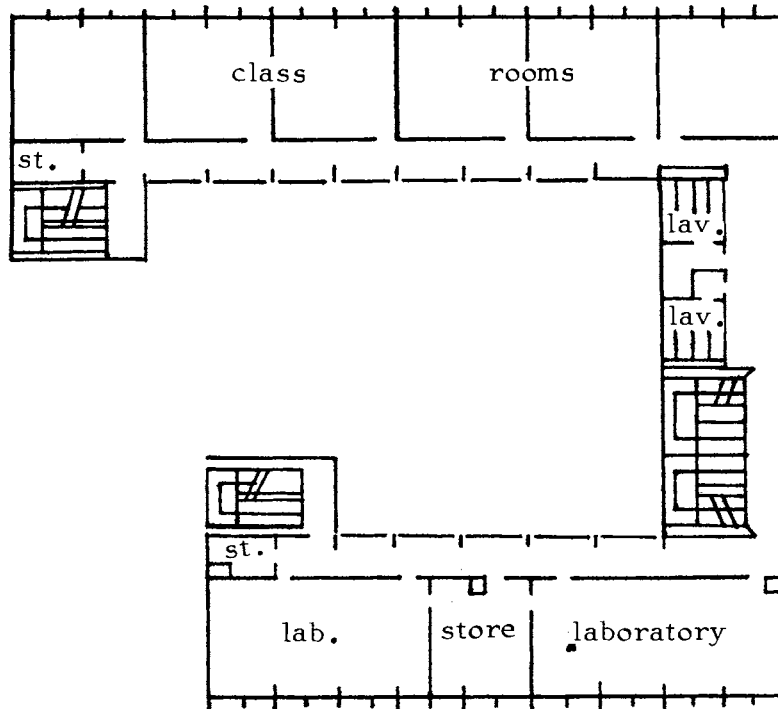
The resultant design comprises a five-storey and six storey classroom block forming three sides of an open courtyard. One wing of this block houses the 24 classrooms on four of the five floors above ground floor level, the other wing the 10 practical rooms on the four floors above ground floor level. Connecting these two wings and enclosing the third side of the courtyard is a corridor wing housing the main staircase and toilets on each floor. An assembly hall to seat 1,000 pupils is raised on columns and forms a separate block linked to the classroom block at first floor and second floor levels, access to the main floor of the hall being from the former level and to the balcony from the latter level. An open-sided covered playground occupies the ground floor area beneath the hall.

The hall is designed for multi-purpose usage with facilities for general school assemblies, meetings, examinations, lectures (with or without visual aids), concerts, stage performances and film shows as well as for gymnastics and games. The maximum amount of cross-ventilation has been provided. Artificial ventilation - necessary during film shows and when natural ventilation is inadequate - has been provided in the form of three large exhaust fans housed within the false ceiling over the balcony at the rear of the hall.

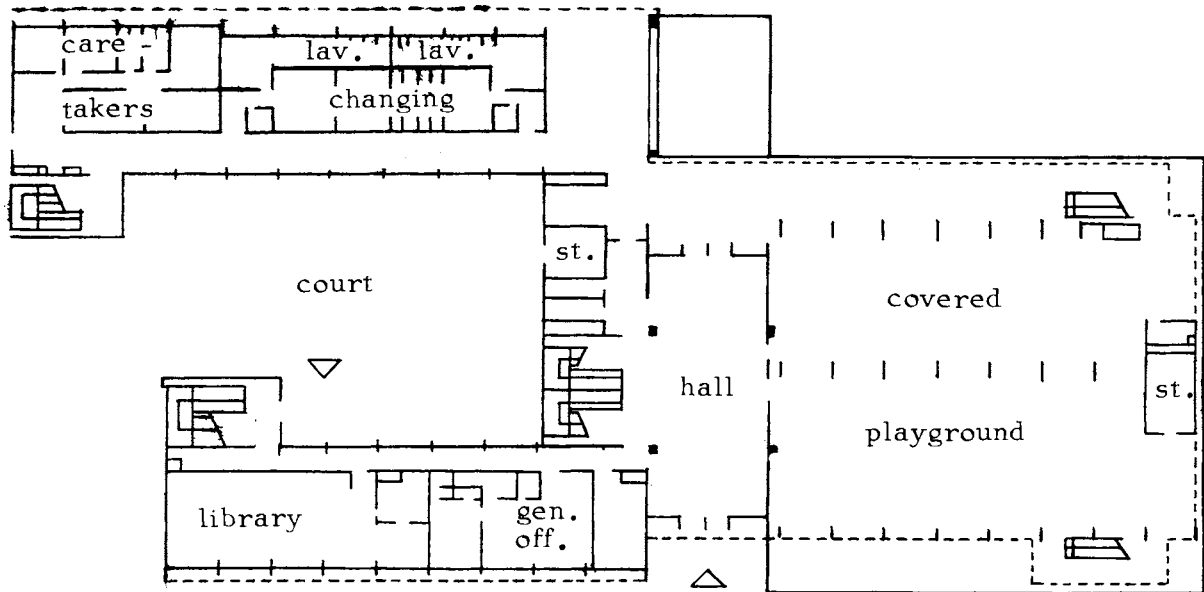
Standard secondary school

The detailed accommodation provided in the 24-classroom standard secondary grammar schools is as follows:-

	<u>Item</u>	<u>Area</u>
1.	24 classrooms	545 sq. ft. each
2.	10 special teaching rooms as follows:-	
	a) 4 laboratories (for chemistry, physics, biology and general science respectively)	1100 sq. ft. (chemistry & physics) 950 sq. ft. (biology & general science)
	b) 2 preparation rooms to serve the laboratories	400 sq. ft. each
	c) domestic science room with model living area and store	1500 sq. ft.
	d) needlework room with store	800 sq. ft.
		120 sq. ft.
	e) woodwork/metalwork room with store	1200 sq. ft.
	f) art room with store	1200 sq. ft.
		200 sq. ft.
	g) geography room with store	800 sq. ft.
		200 sq. ft.
	h) music room	680 sq. ft.
3.	Library with store	1200 sq. ft. 120 sq. ft.
4.	Administrative accommodation as follows:-	
	a) headmaster's office	200 sq. ft.
	b) a general office	470 sq. ft.
	c) two staff rooms	520 sq. ft. each
	d) a medical inspection room	250 sq. ft.
	e) quarters for two caretakers	-
5.	Assembly and physical education accommodation as follows:-	
	a) an assembly hall to seat 800 pupils with balcony accommodation for an additional 200 pupils, together with a stage equipped with a stage-lighting installation adequate for moderately-sized productions.	



4th FLOOR PLAN



GROUND FLOOR PLAN

24 - CLASSROOM STANDARD SECONDARY

GRAMMAR SCHOOL HONG KONG

- b) an open-sided covered playground at ground floor level under the assembly hall, together with a games store.
- c) a basketball court with floodlighting installation.
- d) changing rooms for boys and girls.

6. A car park for 24 cars.

The structural systems used in both types of standard school are similar, as are the types of materials and finishings used and the elevational treatments. The structural system generally is of simple reinforced concrete column, beam and slab construction. In external elevational treatment, the structural frame is painted in white cement paint, while the recessed wall panels between the concrete framework are in coloured cement paint. Internally, the colour scheme is generally a controlled selection of pastel shades as background treatment, punctuated by some stronger solid colours applied in paintwork to the classroom doors. Materials and finishings used were primarily chosen with fitness for purpose and durability in mind but at the same time with due regard for maintaining the overall cost of the standard schools within a reasonable budgetary figure.