

Home (1918) Department.
Education

Ordinary SERIES.

G.O. No. 1332

DATED 10-10-18

[Despatch Abstract.]

School and College hygiene.

Recording endorsement of the Government of India forwarding reports on the action taken by the Governments of Burma and Bengal in regard to the investigation of certain questions connected with the

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Papers of the department to which the current belongs.

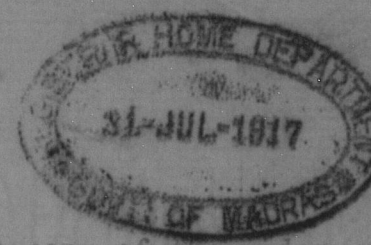
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No. 642

Government of India,
DEPARTMENT OF EDUCATION.
(Education.)



Simla, the 20th July 1917.
H. U. 24/7/17

A copy of the undermentioned papers is forwarded to the
Government of M A D R A S for information, in
continuation of this Department endorsement no. 1820
dated the 17th November 1915.

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By order, *Bona*
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C. H. ... 1820 34/7/17

Asst. Secretary to the Government of India.

Letter from the Government of Burma no. 839-14E-17,
dated the 17th January 1917 and enclosures.

2. Letter from the Government of Bengal no. 456, dated
the 23rd February 1916, and enclosures.

3. Letter to the Government of Bengal no. 76, dated the
18th January 1917.

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No. 839—14E.-17.

GOVERNMENT OF BURMA.

EDUCATION DEPARTMENT.

FROM

THE HON'BLE MR. C. M. WEBB, I.C.S.,
Secretary to the Government of Burma,

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,
DEPARTMENT OF EDUCATION.

Dated Rangoon, the 17th January 1917.

SIR,

80 394
1-5-13

In reply to the correspondence ending with letter No. 235, dated the 6th February 1915, from the Joint Secretary to the Government of India, Department of Education, I am directed to say that the Report of the Sub-Committee appointed to consider items (i) and (ii) of paragraph 7 of Resolution 301 C.D., dated the 21st February 1913, was not received till the 5th May 1915. Of the four original members of the Sub-Committee two had by that time left the province and no fresh members were appointed in their stead. A third had left the Education Department temporarily for service in the Indian Army Reserve of Officers, and was no longer in daily contact with the problems under consideration. The Report which forms Enclosure 1 to this letter contains a valuable survey of the sanitary and hygienic conditions of the school houses and hostels of the province. This was prescribed as the first of the seven subjects for enquiry in the Resolution cited above. It now remains for the Education Department as far as funds permit to supply the deficiencies, to remedy the defects, and to ensure that the same faults are not repeated or allowed to arise in the educational buildings which will be erected in future.

2. The Report is not so successful in dealing with the second issue with which it was concerned,—the professional examination of building plans from the hygienic point of view. Its acceptance of one standard type plan for each class of schools is open to question, in view of the widely varying conditions of site and climate experienced in the Province of Burma. A still more doubtful point is the exceptionally high standard of floor space per pupil which has been recommended in the Report. The minimum of 22.3 square feet per pupil assumed is nearly double the allowance in existing type plans, and is far in excess of the minimum floor space per pupil of 10 square feet for lower elementary schools, 12 square feet for higher elementary schools, and 16 square feet for secondary schools, which are the standards adopted by the English Board of Education. In consequence of the large amount of floor space assumed to be necessary, the estimated cost of a High School (including a hostel and quarters for a resident master) built on the standard plan furnished with the Report, amounts to Rs. 1,90,000, and that of a Middle School to Rs. 62,000. The Local Government was not prepared to adopt the recommendations of the Report in this respect, and the matter was further considered at a conference, the members of which were Mr. Aikman, Chief Engineer, Mr. Foster, Consulting Architect to the Local Government and Mr. Covernton, Director of Public Instruction. The outcome of this conference was the Report by the Consulting Architect (Enclosure II) proposing the abolition of type plans for school buildings and the adoption in its stead of a system of class room units. This proposal has received the support of the Director of Public Instruction.

3. Sir Harcourt Butler concurs with the suggestion that a uniform type plan for all schools of a certain class is unsuitable for the widely varying conditions of the Province of Burma. He entirely agrees with Mr. Foster as to "the danger attaching to the all too prevalent type plan." His experience in India and Burma is one long illustration of this danger. The system of class room units proposed by the Consulting Architect will enable schools to be designed with reference to special conditions of site and climate at a minimum of expense and delay. The units as proposed satisfy all reasonable hygienic requirements as to floor space, lighting and ventilation. His Honour agrees with a suggestion of the Director of Public Instruction that the type units should not be permitted to become rigid and uniform standards. They have been designed to meet the conditions that will most frequently be experienced and in many cases will no doubt be adopted. But it is essential that departures from the type unit should be encouraged, otherwise the danger of the type plan will be reproduced. In addition to the class room unit already designed, the Consulting Architect is being asked to prepare a dormitory unit to be used in the preparation of plans for hostels and boarding schools.

4. As regards paragraphs 3 and 4 of your letter, the question of the class of medical inspectors to be appointed for the medical inspection of schools is not at present of pressing importance, owing to the impossibility of obtaining medical officers of any class for this purpose during the war. A system of medical and sanitary inspection of schools has been in force in Burma since 1912. Details will be found in Circular No. 17317-5G.-49, dated the 22nd October 1912 and Notification No. 260, dated the 18th September 1912, issued by the Director of Public Instruction, Burma, and reproduced on pages 89 to 93 of Volume II, Part III of the Departmental Instructions of the Educational Department, Burma (Enclosure III). The Director of Public Instruction and the Sanitary Commissioner have been in consultation with reference to the best method of supplementing the existing system as soon as circumstances permit. After considering what has been proposed and accomplished in other provinces the Director of Public Instruction has suggested a scheme of Medical Inspection for schools in Burma (Enclosure IV). Sir Harcourt Butler is advised that the proposals here outlined are generally suitable for Burma. It is however impossible at present to foresee the conditions under which action will ultimately be taken, and it will be convenient to defer further consideration of this question until normal conditions of administration return.

5. There remains the question of the utilization of the services of the St. John Ambulance Association to assist in the improvement of the teaching of Hygiene in Colleges and Schools. It is explained in your letter that it was not the intention of the Government of India to propose to utilise the Association for the training of teachers alone, but that it is thought by the Government of India that this organization can usefully give lectures both in first aid and also in domestic Hygiene. I am to say that there has recently been a marked revival of increase in the activities of the St. John Ambulance Association in Burma and as a result classes are being held in connection with schools at—

(1) Mandalay ...	... 2 classes.	(5) Toungoo ...	... 1 class.
(2) Thaton ...	... 1 class.	(6) Tharrawaddy ...	... 1 class.
(3) Pegu ...	... 1 class.	(7) Henzada ...	... 1 class.
(4) Maymyo ...	... 1 class.	(8) Bassein ...	... 1 class.
(9) Moulmein ...	... 2 classes.		

It is proposed to issue supplementary Instructions to Head Masters somewhat on the lines of the Instructions issued by the Deputy Director of Public Instruction, Bombay, in September 1914. If feasible, arrangements will be made for classes for the training of teachers and for teaching domestic Hygiene as well as for teaching first aid to the injured.

I have the honour to be,

SIR,

Your most obedient Servant,

C. M. WEBB,

Secretary to the Government of Burma.

REPORT

ON THE

SANITARY CONDITION OF SCHOOLS AND SCHOOL HOSTELS IN BURMA



RANGOON

OFFICE OF THE SUPERINTENDENT, GOVERNMENT PRINTING, BURMA

1916

REPORT

ON THE

• SANITARY CONDITION OF SCHOOLS AND SCHOOL HOSTELS IN BURMA



RANGOON

OFFICE OF THE SUPERINTENDENT, GOVERNMENT PRINTING, BURMA

1916

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b

Fourth (final) Meeting held on 1st April 1915 of the Special Sub-Committee convened at the instance of the Sanitary Committee of the Educational Council, Burma, by the Sanitary Commissioner, Burma for the purposes of reporting on—

- (a) The sanitary condition of school premises and hostels.
- (b) The professional examination of plans for school buildings from the hygienic point of view.

PRESENT.

Convener.—Lt.-Col. C. E. WILLIAMS, I.M.S.,
Sanitary Commissioner, Burma.

Member.—A. C. J. BALDWIN, Esq., B.A., I.E.S.,
Principal, Government High and Normal Schools,
Rangoon.

Resolutions.

1. Only two members, including the Convener, remain of the original Sub-Committee convened in 1913 to report on the subjects detailed above. There have been three successive appointments of a Sanitary Engineer, Burma, since the date of the first meeting, and Major Good, I.M.S., who attended all previous meetings, has recently been reverted to military service.

The Sub-Committee record with deep regret the loss suffered by this Sub-Committee by the death in January last of the late Mr. H. Seton Morris, Consulting Architect to the Government of Burma, to whom they have been indebted for much valuable advice and assistance in preparing plans for school buildings.

2. The Sub-Committee proceeded to consider a report drafted by the Convener from data supplied in a large number of subsidiary reports received by him from Civil Surgeons of districts in Burma. These reports relate to rather more than half the Government Schools and a large number of private, aided, and Mission schools, but a considerable number of schools have not yet been reported on. The Sub-Committee consider however that sufficient material has been obtained to illustrate the subject under investigation and to justify them in presenting their report without waiting for fuller information, which would delay the issue of the report indefinitely.

3. The Sub-Committee desire to put on record their sense of obligation to those officers of the Civil, Gazetted and Subordinate Medical Services who have supplied the information upon which this report is based, and venture to recommend for the consideration of the Educational Council that these officers should receive some allowance or other monetary compensation for the work entailed by the duty (which has been newly imposed upon them) of having to report annually upon the sanitary condition and health of schools and school children in their districts. In return for such an allowance these officers might be required to medically examine the scholars at stated intervals throughout the year. Although the general health of nearly all schools reported on is described as "good," it is the opinion of this Sub-Committee that this term is used in a general sense and that it would be advantageous to the physical interests of the scholars and indirectly to the progress of their studies, if medical inspection and advice were made available at frequent intervals, through the agency of either the Provincial Medical Department, or by a special staff of medical inspecting officers.

4. After discussing the report the Sub-Committee agree to adopt it and forward it without material amendment to the Educational Council.

(a) The Sub-Committee desire to draw the attention of the Educational Council to the generally prevalent state of insanitation in connection with school latrines, kitchens, servants' quarters and drainage, which this report shows to exist and to the occasional overcrowding of dormitories and class rooms, instances

of which are narrated in the report. They also consider that the subject of lighting and ventilation deserves much closer consideration by school managers and builders, and that it is desirable that the Educational Council should place certain restrictions upon the building of schools by private persons with a view to meet the requirements of hygiene in these particulars.

(b) The Sub-Committee considered the line plans prepared by the officiating Government Architect in accordance with the instructions conveyed in the resolution passed at the last meeting of the Sub-Committee.

The plans presented to their inspection require alterations in some of the subordinate features, a note on which is appended. The Consulting Architect will be asked to kindly have these alterations made, and the plan will then be forwarded through the Director of Public Instruction to the Sub-Committee of the Educational Council dealing with school hygiene.

The Sub-Committee has been under some uncertainty as to what provision should be made for the housing of the master residing in a school hostel. They feel some doubt as to whether it is the view of the Educational Department that a junior master will usually be fitted to exercise adequate supervision of a school boarding establishment; if so whether provision should be made for a married man with a family, or for a bachelor only, it being the general experience that schoolmasters in this country marry while comparatively young and while still fairly junior; if it is intended to restrict the appointment to bachelors, the Sub-Committee consider that provision should be made in the Resident Master's Quarters for a separate dining room, and sitting room and two bed-rooms. If for a married man, it is probable that a third bed-room should be provided, to accommodate a guest on occasions. It is thought that in the case of many boarding schools the Head Master himself will elect to reside in or near the school hostel. He would probably be a married man with a family. In this case either a separate bungalow should be provided for the Head Master in the school compound, or the quarters attached to the hostel should be made more commodious than they are shown in the type-plan for hostels approved by this Sub-Committee.

The Sub-Committee record a vote of thanks to the Consulting Architect to the Government, Mr. E. G. Pullar, for the prompt and careful manner in which he has prepared the plans closely in accordance with the Sub-Committee's instructions.

(Signed)—C. E. WILLIAMS, M.D., D.P.H., D.T.M., Lt.-Col., I.M.S.

Sanitary Commissioner, Burma, Convener.

(Signed)—A. C. J. BALDWIN, B.A., I.E.S.

Principal, Govt. High and Normal Schools, Rangoon.

Member.

Note on the draft type line plans prepared under the Sub-Committee's direction for High and Middle School Buildings, and School Hostels.

The Sub-Committee note that in the plan for a High School building the "Examination Hall" has been placed in the upper storey of the right wing; it may just as readily be placed in the upper floor of the main building if desired. This will not increase the cost of the building.

It is observed that in the plan for High School buildings only ten class-rooms are provided. There is however a "games room" on the ground floor, which is not necessary at this spot. A store room for games can very well be constructed under the sanitary annexe to the Dormitory of the Hostel.

The "visitors' room" on the ground floor is not actually necessary and accommodation can be found for the visitors in the central hall. The Sub-Committee recommend that the Head Master's Office should be placed on the opposite side of the central hall to the "marking room" and that the site shown on the draft plan for the Head Master's Office together with the "games room" site be converted into the site of a class-room of the standard dimensions, viz. $24' \times 32'-6"$.

The site proposed for the "marking room" in the draft plan for Middle schools is not approved by the Sub-Committee. They propose that what is marked as "Masters' common room" be converted into "marking room." This will provide 48 square feet floor area for each of ten masters. A "Masters' common room" should be provided as a separate one-storeyed building situated to the left and slightly in rear of the main building with which it may be connected by a covered passage way.

A cloak-room and lavatory should be provided for in the Middle school plan—in the same position and of the same type as in the High school plan.

Hostel (High School Plan).—The "boarders' day room" may be reduced from 82 feet to 52 feet in length. This will still afford a floor area of 31 square feet for each of 40 boarders, which is a very liberal allowance. The dormitory is estimated for 40 boarders with an allowance of 100 square feet floor area per boarder. The site-area removed from the "day room" should be divided between "boarders' box-room" ($24' \times 12'$) and a spare bed-room for Resident Master ($24' \times 18'$). The site shown in draft plan for the "boarders' box-room" should be converted to that of "Resident Master's dining room" ($24' \times 20'$). The "Resident Master's sitting room" (ground floor) should be increased in width by 10 feet (from $16' \times 24'$ to $26' \times 24'$) and the bed-room on upper floor should be similarly extended. A "Resident Master's box-room" should be constructed under the "Isolated ward" or "sick-room for boarders." The "Resident Master's sitting room" should have a 10 feet deep verandah on the East side, which will give access to the box-room. His dressing room and bath-room may be above this verandah. It is considered that the boarders' kitchen will suffice for use of the resident master and family (if any).

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REPORT

ON THE

SANITARY CONDITION OF SCHOOLS AND SCHOOL HOSTELS IN BURMA

This report is based upon materials contained in a large number of subsidiary reports submitted by Civil Surgeons of districts in all parts of Burma to the Sanitary Commissioner, in conformity with the scheme introduced as a tentative measure in April 1913, and officially sanctioned by the Director of Public Instruction, Burma, in his Notification No. 260, dated the 16th September 1912. The rules published in that circular provide for the inspection once annually of all schools directly controlled by Government, and also for any aided school and schools under private management at the option of the management.

The schools in which inspection is compulsory are those described in this report as belonging to Class "A." The schools in which inspection is voluntary are those in Class "B."

In the list of schools published by the Educational Department, Burma, there are 95 schools of the "A" Class, of which 64 are in Lower Burma, and 31 in Upper Burma. There are 107 schools of the "B" Class, 71 being in Lower Burma, and 36 in Upper Burma.

2. This report deals with 58 schools in Class "A" and 33 in Class "B." These are all from which reports have been received up to date.

In Lower Burma 38 out of 64 "A" Class schools have been reported upon, and in Upper Burma 20 out of 31.

No reports have been received from Akyab, Amherst, Hanthawaddy, Myingyan or Bhamo Districts. In all districts but those specially mentioned above Civil Surgeons have inspected and reported upon some or all Government Schools, and a number of aided schools and other schools under private management.

Although sanitary inspection under the rules of the Education Department quoted above is compulsory only in Government Schools, the managing directors and resident masters of all schools under the management of Religious Communities have given every facility for the inspection of their schools and scholars by sanitary officers appointed for the purpose. In Municipalities and notified areas schools, in common with all other buildings, are of course liable to inspection by the local sanitary staff for the detection of sanitary defects as a matter of routine, but inspection of the scholars is not an ordinary duty of the local sanitary authority.

3. For the purposes of this report enquiry was made under the following heads:—

(a) Health of the pupils, with special reference to the prevalence of malaria and conditions of ill-health resulting from this disease, of tuberculosis, ophthalmia, and common skin diseases such as itch, and ringworm. The state of vaccination among the pupils was also enquired into.

(b) In boarding houses and hostels attached to schools enquiry was made into the conditions as to general sanitation, methods of scavenging, cleanliness of buildings and pupils, the dimensions of dormitories, mode of arrangement of beds, number of occupants, floor area and cubic space per pupil, ventilation and lighting, provision of lavatories and sanitary conveniences. The sanitary construction and maintenance of kitchens, diet of pupils, latrines, accommodation provided, their construction, and sanitary maintenance, provision for bathing, recreation, etc., drainage, water supply.

(c) In all schools more or less complete information was acquired on the subjects of number and dimensions of class-rooms, floor and cubic space per pupil,

lighting and ventilation, overcrowding, provision of latrines, lavatories, cloak-rooms, cleanliness of pupils and premises, provision of drinking water.

4. In one school only, the Government Anglo-Vernacular School at Sagaing, was a careful medical inspection of all the pupils carried out by the then Civil Surgeon, Dr. Crow, who took a great deal of trouble to examine all the scholars as to their condition of health, including the state of their eyesight.

The following is an analysis of the sanitary conditions observed in the schools reported upon. It will be best to treat the subject under the successive heads detailed in the preceding paragraph.

A. 5. *Health of the pupils.*—In all 13,638 pupils were inspected, out of 15,104 on the rolls of the schools visited. These were all who were present on the occasion of the inspecting officer's visit. In nearly all cases the general health was described as "good."

In Lower Burma, among 10,616 pupils inspected, 99 or 9.70 per mille were found to have enlarged spleens, the result of malaria, 25 were suffering from ophthalmia, 47 from itch. There was 1 case of ringworm and 1 of tuberculosis.

In Upper Burma 3,022 pupils were examined. Of these 79 or 26.14 per mille had enlarged spleens, 68 itch, 26 ophthalmia, 2 ringworm and 1 tuberculosis.

It may be noted that the cleanliness of person of pupils inspected in Government Schools was generally satisfactory. Malaria is not common in towns, and the class of pupils sent to these schools are generally free from skin diseases. It is probable that a reasonable state of cleanliness of clothing and person is insisted upon in Government Schools and those under European management, and this in turn decreases the tendency to common skin diseases, which are very prevalent among village children, especially in the dry zone of Upper Burma. Tuberculosis was detected in only one instance in Lower Burma, in a school in Toungoo District. It is evidently an uncommon disease in school children, but of course children seriously affected by this complaint would not be sent to school, while mild cases of the disease would not be detected during the very superficial examination which alone was possible under the circumstances of the inspecting officer's visit. The percentage of pupils on the rolls who were not present at the date of inspection may have included a considerable number who were absent on account of ill-health from any one of the causes enumerated above.

6. *Protection from Small-pox.*—The state of vaccination of the pupils was enquired into in nearly all of the schools visited by inspecting officers. Most of these schools are situated in areas where the Vaccination Act is in force, and where vaccination is consequently compulsory.

Out of 13,638 school children examined as to their state of health, 9,347 are stated to have been successfully vaccinated once, and 1,149 successfully revaccinated, making 10,496 or 76.95 per cent. protected by vaccination. Of the remainder 972 or 7.13 per cent. are said to bear marks of natural or inoculated small-pox, and 1,175 or 8.62 per cent. to be wholly unprotected. The condition in 955 children was not stated (7 per cent.). Of these 955, some 611 were in Maymyo schools, and it is probable that all or nearly all of these have been vaccinated. As a result of the school inspections the greater number of unprotected children then discovered have, with the consent of their parents, subsequently been vaccinated. Vaccination, it should be stated, is never performed at the school, but at the child's home or at the public Vaccination Station. The generally satisfactory condition of protection of school-children in towns in Burma by vaccination is a valuable asset on behalf of the work of the Educational Department, for it is seldom necessary to close a school on account of the prevalence of small-pox in the neighbourhood. A number of school children come however from areas where vaccination is not compulsory and thus escape the operation in early childhood, and it is important to the interests of the unprotected townspeople that such children from other localities shall be sought out and subjected to vaccination.

B. 7. *Sanitary conditions in Hostels.*—Total number of boarding schools reported on is 36. Of this total the number of schools to which boarding establishments are attached is 25 in Lower Burma with 1,030 boarders, and in Upper Burma 11 with 201 boarders.

In many cases the number of boarders is not stated in the report, the inspecting officer merely saying that the dormitories are commodious and well-ventilated.

8. *Dormitories.*—These are generally reported to be well-lit and ventilated and only in a few cases has any serious degree of overcrowding been observed. These instances were all in Mission schools. The ideal floor area per head of boarders is 100 square feet, and this is approached in a few hostels, as much as 60 to 85 square feet being afforded per boarder at Thandaung, 75 in a Moulmein Mission school, 75 in one building of a school at Tharrawaddy, 62 in a Government school at Moulmein. Most Government and Mission schools provide an average of 50 square feet, but in one of the latter no more than 13 square feet for boys and 15 square feet for girls was allotted, and in this case it appears that the children slept in rows upon the floor. (This was a Karen school.) In other Mission schools 23 and 25 square feet were allotted, and in a Boys' High school at Toungoo only 18 square feet.

The worst case of overcrowding in a dormitory was observed by myself in a large Mission school, where there were 70 or 80 boys in a room with just space to move between the beds, allowing about 12 to 15 feet to each boarder. In this case there were five or more rows of beds down the length of the dormitory, and as most of them were provided with mosquito curtains the inner rows obtained very little fresh air and the occupants must have been very uncomfortable on hot nights. In one instance, in a girls' school, the children were made to sleep two in one bed as a general practice.

While 50 square feet of floor area may be sufficient for very little children, older children should never have less than from 75 to 100 square feet. The larger figure should always be adopted when a new building has to be erected for use as a dormitory. One of the difficulties met with in arranging accommodation in dormitories so as to give the boarders the very necessary allowance of fresh air at night, is due to the great width of many of the older school buildings built by Missionary bodies. This leads to a great loss of space if the beds are arranged as they should be in two rows along the walls, and where the number of boarders is large there is an apparently irresistible temptation to crowd as many as possible into one room in defiance of hygienic rules, the importance of which is no doubt not fully appreciated by the school managers. There are several obvious objections to allowing two children to sleep in the same bed, one of which is the risk of skin or more dangerous infectious diseases being spread by this practice, which fortunately is rarely followed.

In at least one school in Rangoon there are dividing walls and a corridor which run east and west the whole length of the building. This arrangement prevents through ventilation of the dormitories, and those on one side or the other of the corridor get no breeze at certain seasons of the year. The impure air from one row of dormitories passes by ventilation shafts into the corridor and thence into the opposite row of dormitories. In this climate dormitories should be constructed to obtain light and air from both north and south sides of the building.

The use of mosquito curtains for the protection of the children from mosquito bites and the danger of malarial infection is certainly not universal, but the information received on this point is rather scanty. This protection should always be afforded to the boarders in all malarious localities, and generally everywhere during the season when mosquitoes are prevalent.

It is also desirable that all boarders should be provided with bedsteads. Some classes will no doubt prefer to sleep upon the floor, but a raised bedstead, even if of planks, is more hygienic.

9. *Provision of night urinals and latrines.*—These are sometimes not provided at all, but there is usually some such provision. It has to be on the same floor as the dormitory, and usually opens directly from the latter, which practice is objectionable on sanitary grounds. The ideal practice is to have these conveniences arranged at a little distance from the dormitory with provision for a cross current of air between the two rooms. The latrine or urinal should not be placed above any downstairs room used as a living room or for any other purpose than a store, since the floors of the upstairs rooms not infrequently leak, to the great discomfort and hygienic disadvantage of persons using the lower floor.

For the same reasons the floors of all urinals and latrines should be well cemented, or protected from leaking and made cleansable by the use of some other suitable material.

10. *Cubic space in dormitories.*—This must be to a great extent dependent upon the floor area allowed per pupil. As to the height of dormitories, there is little complaint to be made on this score. Nearly all dormitories inspected of which the dimensions are given are 12 feet and upwards in height. In one case only, a Mission school in Toungoo, the height of a dormitory was only 8 feet. In this case the inspecting officer was informed that it was intended to build another dormitory, as the deficiency in height of the existing room was recognized by the management.

11. *Ventilation and lighting.*—Tall windows reaching to the ceiling or wall-plate not less than 12 feet from the floor should be provided, with a minimum of 12 square feet of ventilation and light openings per pupil; permanent ventilation openings should be provided close to the ceiling, or the top light of windows should open separately or on pivots on the "hopper" principle, so that they may remain open when the larger windows have to be closed on account of tempestuous weather. In this climate the minimum height of dormitories should be fixed at 12 feet.

12. *Living rooms in boarding schools.*—Very little information is given on this point in the reports received. Special day-rooms and recreation rooms do not appear to be provided in any of the schools inspected. It is to be presumed that the class-rooms, and the assembly room where there is one, are used for the above purposes.

This Sub-Committee has provided a separate "day-room" for use of boarders in its revised type plan for hostels, and considers that all schools should have a similar provision.

13. *Dining rooms.*—Inspecting officers have generally failed to state where the boarders eat their meals. All boarding establishments which I have personally inspected have dining rooms for the boarders as well as for the masters. In Government Hostels the lower floor of the Hostel is used for this purpose, and the upper as the dormitory. The only instance where a dining room came under adverse sanitary criticism was that of the Sagaing Government school where it was found by the Civil Surgeon that it had been erected and for long in use close to some cess-pits in a neighbouring compound. These cess-pits were eventually filled up and disused.

Dining rooms are doubtless used in some cases as overflow class-rooms—a practice which this Sub-Committee deprecates—and in any case should always be commodious, well ventilated and well lit, a minimum floor area of 20 square feet per pupil being provided for. They should be conveniently situated with reference to the kitchen, and well removed from the neighbourhood of drains, sinks, and latrines.

14. *Kitchens.*—In some cases these are well built and properly paved and drained. But usually the paving and drainage are inadequately attended to, the workmanship and materials employed are of an inferior character, and sometimes a masonry plinth is wholly omitted. In particular, drainage is very generally neglected and slops are flung out upon the ground around the kitchen. In one instance the inspecting officer remarks that there is "an abominable smell in the vicinity of the kitchen," associated with the absence of drains. In another it is stated that the drainage from the kitchen is discharged towards and runs down to the well, which is on lower ground. In several cases it was observed that the kitchen was kept in an uncleanly state.

Drainage of kitchens, and domestic drainage generally, is a weak point in sanitary organization in this Province. Even the Government Building Departments seem to have no clear ideas on the subject, and the disposal of the slops from kitchens attached to Government buildings is usually effected by allowing it to flow out upon the ground surface after passing along a few feet of masonry drain. Too often these kitchens are improperly paved, and the plinth with deep foundations omitted, so that the burrowing of rats and bandicoots around and under the floor of these kitchens is facilitated; similar rat and bandicoot burrows

are described as being noticed in connection with school kitchens. The presence of rats in such localities is always associated with insanitary habits on the part of cooks, and usually with faulty construction of the kitchen. The presence of rats constitutes a danger to the health and lives of the residents of the school on account of these rodents being carriers of plague infection, which is unhappily disseminated through most large centres of population in this Province, at which centres boarding schools are usually situated.

The Sub-Committee now engaged in revising the type plans for school buildings is giving attention to plans for kitchens and other out-buildings attached to hostels, and in future there will be no excuse for faulty construction or ill-drained and insanitary kitchens in boarding schools.

Such adverse criticisms as "no provision for smoke escape or drainage; walls and ceiling dirty; floor below a swamp;" or "walls covered thick with soot, badly need cleaning and lime-washing," etc., are of not infrequent occurrence in the reports. One report states "kitchen clean, but there is a piggery attached to it," (a Mission school). Another report says "Kitchen is only 35 feet from a latrine."

Chimneys or other suitable means of smoke escape are very often omitted in the construction of kitchens; such provision should always be made. The kitchen should always be placed at a distance of at least 100 yards from any latrine or urinal on its own or neighbouring compounds, and from any other insanitary locality.

15. *Latrines.*—The sanitary condition of latrines attached to schools is generally most unsatisfactory throughout the Province. Even in large well-conducted and generally well-found schools, the latrines are often described as neglected, very insanitary, or dilapidated. Supervision by the school authorities is too often neglected, and in most cases the accommodation is quite insufficient for the number of scholars in the school.

Such reports as—"latrine in a filthy condition and grossly neglected;" "7 out of 8 seats useless, for 207 scholars and boarders;" "only 5 seats for 361 pupils" (one seat for 72 scholars), and so on, recur with monotonous frequency. Out of 20 residential schools of all classes in which the latrines are described, 10 are reported to be in a good or fairly sanitary condition, and 10 as insanitary or very insanitary. In most instances the accommodation is insufficient. The cess-pit pattern of latrine is used in some of these residential schools. In the others some pattern of masonry latrine with buckets is provided. The drainage of the latrines is generally imperfect though they may otherwise be well constructed. In not a few instances the latrine is placed too near the hostel or the kitchen. In one instance no latrine is provided, a neighbouring municipal latrine being used by the scholars.

The conserving of the bucket latrines is usually performed by the municipal staff, and the maintenance of the latrine in a cleanly state is left in their hands, and is too often neglected or performed in a very perfunctory manner. Here the municipal staff are primarily to blame, but there may also be some lack of supervision on the part of the school manager.

Where the type of latrine is that adopted by the Municipal or Town Committee it must be maintained, but for all schools not now provided with a sanitary up-to-date latrine the aerobic filter pattern is to be strongly recommended, used on the dry earth system with either earth or paddy husk. Type plans of this pattern of latrine are under preparation by the Sub-Committee for the revision of school plans.

Accommodation should be provided at the rate of one seat per 20 pupils for boarding establishments. Possibly one seat per 30 or even 50 pupils would suffice for day schools.

16. *Urinals.*—Separate urinals should always be provided. They are provided in only a few schools, and are generally described as being offensive. The aerobic filter pattern is recommended for general use. It is inoffensive, sanitary, and cheap.

The provision of latrines for non-residential schools is, if anything, less satisfactory than in the case of residential schools. The cess-pit pattern is in general

use; where masonry latrines are provided they are usually in a neglected and insanitary condition. Drainage is non-existent or incomplete. Conservancy is indifferently performed. In all these cases the dry earth system in connection with a filter trench would remove these insanitary features.

Provision should always be made to enable the scholars to wash their hands after every visit to a latrine. This provision is not commonly made in existing schools.

17. *Drainage*.—General surface drainage of the school site and compound does not usually receive sufficient attention. In the case of recently erected schools I have found the compound to be badly levelled and swampy in parts, and often no pains are taken to improve matters. This feature of the sanitation of a school does not appear to come under the purview of the building authority, whether a Government Department or a private agency. One also finds the latrines and servants' quarters, sometimes the kitchen of the establishment, placed in these low-lying parts of the school grounds, and the drainage from these buildings adds to or creates standing pools or swamps. It is essential for the health of the scholars that every new school site shall be properly levelled and drained before the school is opened for use.

Drainage of slops, sullage water, spillage from wells, and the washings from bathing places and latrines is badly provided for in most cases, and when masonry drains and catch-pits are provided they are not always maintained in a state of repair or properly cleaned. The general impression gained from perusing the reports and from personal inspection is that too often the drainage of school premises is deplorable.

Type plans are under preparation for domestic drainage for schools, in which use is made of the aerobic filter and absorption trenches. The use of these plans will do away with the nuisance and insanitation which so commonly exists in school premises at present.

18. *Lavatories, bathing places, and cloak-rooms*.—The information contained in the reports received on the subject of the provision of accommodation for bathing, washing the hands, etc., and of cloak-rooms for keeping outer clothing, shoes and umbrellas during school hours, is extremely scanty. It would appear that day schools are rarely furnished with a lavatory or other bathing accommodation. Cloak-rooms are not provided except in some of the larger residential schools.

This Sub-Committee is of opinion that every school should have attached to it a lavatory where the scholars can wash their hands and faces before going into school, and that a special room or shed should always be provided for use as a cloak-room, so that the scholars will not have to bring wet clothing or umbrellas, and their shoes, into the class-rooms. Five hundred and eleven boarding establishments should be provided with properly constructed bathing place for the scholars.

19. *Recreation*.—Enquiry on this point has generally been neglected by inspecting officers, and generally such information as the area of play-ground the existence of a playing or drill-shed, or of a gymnasium, does not find a place in the reports. It is not stated either whether swimming baths are anywhere provided in a school. It is believed that a liberal provision as to area of play-ground has been made in the case of most of the residential schools. The Committee record here their opinion that sites for future schools should be selected with a view to providing at least an acre of unbuilt-upon ground for every 50 scholars, and that the school buildings should be so placed within the enclosure as to ensure that no one of the school buildings, nor any building on an adjoining property can obstruct the entry of light into class-rooms, living-rooms, or dormitories, nor interfere in any way with the free movement of air within or around the buildings.

The Committee also consider that for all schools where the day-scholars bring their midday meal with them to consume it on the school premises, or where itinerant vendors of sweetmeats, etc., are allowed to sell their goods to the scholars between school hours, a properly paved shed should be provided, with seats, in which the meals may be eaten and the vendors have their stalls. At present the practice of allowing such vendors to have a "pitch" anywhere in the compound,

and the scholars to eat their food all over the school premises, tends to produce untidiness and insanitation and attracts rats, the burrows of which are not infrequently seen near the school buildings as a consequence of the above-mentioned practices.

The Sub-Committee also wish to draw attention to the necessity of making ample provision for menial staff, especially in boarding schools; the constant maintenance of cleanliness is essential to the health of the boarders, and is a valuable object-lesson to them of the way sanitary measures should be carried out in their own homes. Reports have reached us of the inadequacy of the menial staff in some important boarding schools in Burma, and of the resulting insanitary state of the premises, especially of the latrines, servants' quarters, etc.

C. 20. *Class-rooms*.—The proper designing of class-rooms with reference to their affording ample floor and cubic space for the maximum number of scholars in the class, with sufficient and correctly placed openings for light and ventilation, is one of the most important functions of a school architect. As the succeeding notes will disclose, success has rarely been attained in all the above details of construction by those whose duty it has been, in the past, to plan existing schools in Burma.

21. *Accommodation*.—Numerical strength of classes.—For convenience of teaching this can rarely exceed 40. The Director of Public Instruction, Burma, has laid down 35 to be the maximum to be provided for in class-rooms which may be constructed in future according to revised type-plans. It may be assumed that this limit was adopted for the purposes of preparation of the present standard type-plans for High and Middle school buildings in Burma. It is however not infrequently exceeded in practice.

An analysis of the returns of numerical strength of classes, contained in those reports in which this fact is specially noted shows that in 23 schools there were 146 classes. The largest number of classes in any one school was 14, and the average lies between 6 and 9 classes, while in some schools there are as few as three. In aided vernacular schools the whole school often forms a single class. In several schools it was observed that more than one class was held at the same time in one room.

22. *Numerical strength of classes*.—In a total of 138 classes in 23 schools of all kinds the numerical strength of the classes may be tabulated as follows:—

Over 35	27	Over 15 to 20	16
„ 30 to 35	20	„ 10 to 15	21
„ 25 to 30	18	„ 5 to 10	13
„ 20 to 25	22	Under 5	1

Total 138.

The classes which contained over 35 pupils had respectively the following numerical strength:—

106, 79, 63, 56, 46 (twice), 45 (three times), 44 (twice), 43 (twice), 42 (three times), 41 (twice), 40, 39 (twice), 38, 37 (twice), 36. Thus 27 classes out of 146 or 17·8 per cent. of the whole number investigated had a numerical strength of over 35. The larger figures—106, 79, 63, etc., probably represent the whole number of scholars being taught at one time in a single room. There may have been two or more classes.

Classes numbering 35 and under = 120 out of 146 = 82·19 per cent.

23. *Floor area and cubic space per pupil*.—We now have to discuss the class-room accommodation with reference to the individual pupil.

There are three factors for consideration, all of which are of first importance to the hygienic interests of the scholar. These are (a) free air space per pupil, (b) ventilation of the class-room, (c) the lighting of the class-room and of the scholar's desk.

The free air space per pupil is determined by the allotted share of floor space, the height of the room, and the arrangement of the desks.

The area of floor-space to be provided in a class-room must be estimated for the maximum numerical strength of a class. We have adopted the limit laid down by the Director of Public Instruction, Burma, in this connection, viz. 35, for the calculation of the minimum permissible area of a class-room floor. We

have tried to arrive as nearly as possible at the ideal minimum, *i.e.*, one which, without compromising the scholars' hygienic interests in any way, shall involve no unreasonable outlay on building construction.

We shall first examine the provision made in the existing standard type plans for Government school buildings, in accordance with which numerous schools are at the present moment being erected or have recently been erected.

The type plan for a High school building provides for nine class-rooms, six on the ground floor and three on the first floor, where there is also an examination hall.

The floor-area of the ground floor class rooms is the same throughout, *viz.* 27 feet $\times$ 15 feet = 405 square feet.

For a class of maximum strength, *viz.* 35 pupils, the floor area per pupil is just 11.59 square feet.

The rooms are 13 feet high. It is an axiom of sanitary practice to include for calculation of cubic space the height of a room up to 10 feet only. I am not convinced that there is full justification for this attitude, at any rate in this country, and especially in rooms which have permanent openings close to the ceiling, but, as will be seen later, it is in any case necessary to have every class-room over 10 feet high for lighting purposes, so that it will be convenient to adopt the 10 feet limit of height in all our calculations for comparing the cubic space per pupil provided in existing schools with the ideal minimum.

The standard type plan therefore gives an allowance of cubic space per pupil of $11.59 \times 10 = 115.9$ cubic feet up to 10 feet of height of class-room.

How does this provision of floor space and cubic space in Government standard type schools compare with that made in older-type school buildings, and in those of private or Mission schools?

(Note.—On the upper floor of the standard type-plan school buildings there are 3 class-rooms. Two of these have a floor area of 24 feet $\times$ 15 feet = 360 square feet, allowing 10.3 square feet of floor area per pupil, and the third measures 30 feet $\times$ 15 feet = 450 square feet, allowing a floor area of 12.84 square feet per pupil. The cubic space in these class-rooms is, respectively, 103 and 128.4 cubic feet up to the 10 feet level per pupil).

We have examined the class-room accommodation per pupil as stated in the reports for 49 schools of all classes. In several instances the number of class-rooms, and in others the number of pupils in each class, has not been recorded, and it has been necessary in such cases to take the average floor area for the whole of the scholars on the books. In the majority of instances however both the floor area of the class-rooms and the number of pupils in each class are recorded.

In 49 schools the minimum floor area per pupil in any class-room was as follows :—

In 12 schools = 6 to 10 square feet.

In 16 schools = 11 to 15 do.

In 10 schools = 16 to 20 do.

In 2 schools = 21 to 25 do.

In 3 schools = 26 to 30 do.

In 2 schools = 31 to 35 do.

In 4 schools = over 35 do.

In 16 schools (*i.e.* 32.65 per cent.) the floor area per pupil was under 12 square feet, approximating closely to the allowance made in the standard plan.

In 9 schools (= 18.36 per cent.) the floor area per pupil was over 22 square feet.

In 11 schools (22.45 per cent.) the floor area per pupil was 22 square feet or over.

In 33 schools (*i.e.* 67.34 per cent.) the floor area per pupil was over 11 square feet, *i.e.* above the allowance in the standard plan.

The above figures are for the minimum allowance in each school investigated. In nearly all the schools there were class-rooms which provided a much larger floor-space per pupil than the minimum quoted for the same school. Thus in 21 of the schools out of the 49 studied the following extremes of floor area allotted to each pupil were noted :—

7 and 32 sq. ft., 8 and 46 sq. ft., 18 and 35 sq. ft., 11 and 42 sq. ft., 16 and 22 sq. ft., 11 and 40 sq. ft., 12 and 135 sq. ft., 10 and 40 sq. ft., 15 and

44 sq. ft., 20 and 47 sq. ft., 11 and 24 sq. ft., 19 and 41 sq. ft., 12 and 82 sq. ft., 18 and 48 sq. ft., 30 and 70 sq. ft., 10 and 46 sq. ft., 17 and 50 sq. ft., 10 and 45 sq. ft., 10 and 37 sq. ft., 14 and 86 sq. ft., 15 and 44 sq. ft., 17 and 51 sq. ft.

As will be seen later on, the Sub-Committee has adopted as a minimum floor area per pupil in class-rooms 22.3 square feet, or nearly double the allowance in the standard plan. Any area below this minimum may be considered as indicating overcrowding.

24. The following instances of overcrowding within the limits of this definition are observed in the reports :—

Number
in list.

(2) Anglo-Vernacular Railway School, Insein—
28 pupils have 11.4 sq. ft., floor area.

42 do. 7 do.

32 do. 10 do.

25 do. 14.5 do.

(3) Anglo-Vernacular School, Strand Road, Insein—
41 pupils have 8 sq. ft., floor area.

(4) European Railway School, Insein—
25 pupils have 15 sq. ft., floor area.

21 do. 18 do.

(9) Y. M. B. A. Anglo-Vernacular School, Pegu—
106 pupils have 19 sq. ft.

23 do. 11 do.

21 do. 12 do.

61 do. 14.7 do.

(12) Anglo-Vernacular High School, Prome—
Average of all class-rooms : 453 pupils have an average of 10.4 sq. ft.

(15) Aided Lay School (170, High Street, Prome)—
1 room. 190 pupils have 11 sq. ft. average.

(16) Aided Lay School, Paungde—
230 pupils have 10 sq. ft. average (includes verandah).

(17) Aided Lay School, Paungde—
187 pupils have 13 sq. ft. average (1 class-room and a shed).

(14) Government Anglo-Vernacular School, Paungde—
63 pupils have 15 sq. ft.

29 do. 14 do.

36 do. 11 do.

(15) Aided Lay School, Paungde—
50 pupils have 12 sq. ft. (open room 7 ft. high. No desks).

(16) Aided Lay School, Paungde—
130 pupils have 19 sq. ft.

(18) Town Committee School, Shwedaung—
115 pupils have 9 sq. ft. (class-room 9 ft. high, window = 1/44th of floor area).

(Note.—There is one and perhaps more doors which afford additional superficial area for light and ventilation).

(19) King George's Buddhist School, Shwedaung—
97 pupils have 10 sq. ft., (1 room and one shed. Window = 1/92nd of floor area)—*vide* note to (18).

(21) Government School, Kyaiklat—
12 sq. ft. per pupil in one of the two class-rooms—(the other class-room allows 135 sq. ft. per pupil).

(23) Government High School, Henzada—
29 pupils have 10 sq. ft.

34 do. 12 do.

21 do. 19 do.

St. Patrick's Anglo-Vernacular High School, Moulmein—

87 pupils have 11 sq. ft.

60 do. 14 do.

100 do. 15 do.

60 do. 16 do.

57 do. 17 do.

(28) Government High School, Tavoy—

429 pupils have an average of 12 sq. ft. floor area per pupil (ground floor only 7 feet high. Ill-lighted).

(30) St. Luke's Anglo-Vernacular School, Toungoo—

399 scholars have an average of 17 sq. ft. of floor area per pupil, in two halls. The lower hall is divided by partitions into a number of cramped class-rooms.

(32) Government Practising School, Toungoo—

102 pupils have 12 sq. ft. floor area.

21 do. 19 do. do.

(24) St. Luke's Vernacular Girls' School, Toungoo—

79 girls have 10 sq. ft. per pupil, in one hall.

(33) Government Normal School, Toungoo—

24 pupils have 18 sq. ft.

(35) Government Anglo-Vernacular School, Maymyo—

45 pupils have 8 sq. ft. of floor area.

42 do. 10 do.

31 do. 12.5 do.

21 do. 19 do.

(36) Government Anglo-Vernacular School, Katha—

18 pupils have 12 sq. ft.

24 do. 17.5 do.

(38) Government Anglo-Vernacular School, Alon, Lower Chindwin District—

"Class-room crowded, light bad."

(39) Government Anglo-Vernacular School, Thayetmyo—

Class-room floor area per head of 213 pupils = 13.5 sq. ft.

(40) Government Vernacular Middle School, Minbu—

25 pupils have 10 sq. ft. floor area per pupil.

63 do. 15.3 do.

(41) Government Anglo-Vernacular School, Minbu—

25 pupils have 12 sq. ft. floor area per pupil.

90 do. 10 do.

Out of 36 schools in which overcrowding was specially noted.—

(42) Aided Vernacular School, Pakôkku—

140 pupils have 17 sq. ft. floor area per pupil. One room.

(43) Government Vernacular Primary School, Mindat-sakan, Pakôkku Hill Tract—

54 pupils have 6.6 sq. ft. floor area per pupil. One shed.

(44) Aided Vernacular School, Pakôkku—

150 pupils have 13.5 sq. ft. floor area per pupil.

(46) English Wesleyan Mission School (Anglo-Vernacular), Pakôkku—

45 pupils have 14.2 sq. ft. per pupil.

35 do. 14.6 do.

33 do. 17.6 do.

32 do. 17.31 do.

(47) Aided Vernacular Middle School, Myaing—

76 pupils have 10.4 sq. ft. floor area per pupil.

(48) Government Vernacular Middle School, Mahlaing—

24 pupils have 15 sq. ft. per pupil.

(49) Government Anglo-Vernacular School, Yamèthin—

160 pupils have an average floor area of 13.6 sq. ft. per pupil.

(50) English Wesleyan Mission Anglo-Vernacular School, Kyaukse—

20 pupils have 17 sq. ft. floor area per pupil.

Out of these 36 schools in which overcrowding was specially noted no less than 17 were Government schools and one was under a town committee. The overcrowding in some of these schools was extreme, from 8 to 13 sq. ft. of floor area only being available per pupil in schools at Maymyo, Insein, Henzada, Paungde, Thayetmyo, Minbu, Yamèthin. The crowding of the primary school at Mindat-Sakan (6.6 sq. ft. per pupil) was a rather exceptional case, the class-room being an open bamboo shed.

Of the remaining 19 schools, 10 were Aided schools, 2 were Railway schools, and 7 Mission schools. In many of the schools the overcrowding was confined to one or a few classes, and was not general.

As a rule the Mission schools afford a very liberal floor-area per pupil. The Government Standard plans, owing to the curtailment of floor area in all the class-rooms, render overcrowding inevitable, if the class exceeds half the maximum of 35.

25. *Cubic space per pupil.*—In the great majority of schools the height of the class-rooms is 10 feet or over. Increase in height above 10 feet does not greatly minimize the evil effects of deficient lateral space where this deficiency is very marked, so that a detailed consideration of the relative cubic space afforded in the schools under analysis appears unnecessary. A large number of Mission schools provide adequate height to class-rooms and in some the provision is extremely liberal (16 feet). But it must be recognised that no part of the room above the top level of the ventilation openings, *i.e.*, usually the doors and windows which will open, can be considered in the calculation of cubic space per pupil which is susceptible of ventilation. Thus the advantage of great height in a class-room is often negated by the low level of the ventilation openings.

A few instances of grave deficiency in this respect came to light. Thus the ground floor rooms of the Government Anglo-Vernacular school, Tavoy, are said to be only 7 feet high. The average floor area being only 12 sq. ft. per pupil, the cubic space per pupil is only 84 c. ft. against a desirable minimum of 220 cubic feet or over. In several other schools the height of some class-rooms was only 8 or 9 feet.

For purposes of lighting and ventilation 14 feet is a desirable minimum height for rooms 24 feet wide. For wider rooms the height of the room must be proportionally increased.

26. *Lighting of class-rooms.*—This is no less important a consideration than that of floor area, cubic space, and ventilation. Not only should the room be well illuminated, but care must be taken that the light falls in the right direction on the desks, *i.e.*, from the left and left rear of the pupil. We must be careful to prevent light falling directly in his face or diagonally from the right or left front. We must avoid all cross lights such as are created by having windows both on right and left, clerestory windows in the wrong position, and light from a lower level than that of the top of the desk. The position of the light with reference to the teacher or lecturer must also be properly arranged for.

The lighting of class-rooms has therefore to be considered from the points of view of (a) the superficial window area in relation to floor area and to the number of pupils in the class, (b) the direction from which the light reaches the desk (*i.e.*, the position of the windows, etc.), (c) the height of top of window and of window-sill, (d) the number of windows, and their width in relation to intervening wall-space.

The problem of lighting is intimately connected with that of ventilation, since the openings for light fulfil in this climate the function of ventilation openings. The number and spacing of the desks must also be considered with reference to the lighting arrangements.

A personal inspection of a number of schools in which the scholars were at work, combined with the inspection of standard type plans for school buildings in Burma and of plans of schools in Europe, America and India, and an analysis of the data supplied in the reports of inspecting officers, makes it very obvious that this important subject of the lighting of class-rooms is little understood by school builders in this Province, and has received quite inadequate study by those responsible for drawing up the plans for the buildings.

Unfortunately the data as to lighting of class-rooms supplied by inspecting officers is in most cases incomplete in one or more particulars, or the impression conveyed is not sufficiently definite for exact analysis. Thus, such important particulars as the height of windows, the level of the sill, the direction from which the light reaches the scholar's desk, are not stated in many instances, while in a large number the inspecting officer has contented himself with stating "lighting good," "sufficient" or "insufficient," or "bad," without stating the standard upon which he estimates the requirements of the room.

Nevertheless there is sufficient evidence of faulty arrangements for lighting the class-rooms in many schools to support the opinion arrived at by this Sub-Committee that this problem of lighting class-rooms is one that demands the close attention of the Educational Department, in view of the defective arrangements brought to light; and that some sort of legislative restrictions are desirable to ensure that all future builders of private schools shall make adequate provision in this connection.

The superficial area afforded for lighting class-rooms in the prescribed type-plans of the Educational Department, Burma, is inadequate. It is as follows:—

Ratio of superficial lighting area to floor area = 1 : 8

Lighting area per pupil = 1.43 sq. ft.

[Calculated on the maximum number in class (35).]

The provision made in the revised type-plans prepared by this Sub-Committee is as follows:—

Ratio of superficial lighting area to floor area = 1 : 3.5

Lighting area per pupil—

To the desks = 5.14 sq. ft.

To the whole room = 6.4 sq. ft.

(The latter figure includes the window lighting, the master's dais and black-board, which assists in the general illumination of the room.)

27. *Source of entry of light.*—In many of the schools inspected for this report the illumination is to a very large extent afforded by open doors, with, in most cases, the addition of windows. A large proportion of the light entering through the doors reaches the pupils at a level below that of the top of the desk, and is thus useless for the direct illumination of the book or writing surface in use, although affording indirect illumination from walls and ceiling. It has the effect of producing confusing cross-lights and an upward glare from the ground or verandah outside, and is for this reason wholly disadvantageous to the scholars. The upper part of the doors is usually glazed, but if the doors are shut, ventilation is seriously interfered with. This is the position in many schools, and it is one of the conditions which this Sub-Committee considers as demanding correction. Some improvement could be effected in existing schools by making the upper part of every door required for lighting and ventilation capable of being opened separately from the lower part. In other cases a rearrangement of the desks with reference to the source of light would modify the evils arising from faulty direction of illumination.

Many of the class-rooms in even the largest and best provided schools suffer by cross-lighting, there being doors and windows on opposite sides of the room. This is a great advantage to ventilation, but it is damaging to the eyesight of the pupils, owing to the excessive illumination of the right side of the desk when writing when vision should be concentrated upon the written part of the line and the blank part should be illuminated by subdued light only. Owing also to the numbers of these doors and windows, light reaches many of the scholars from in front as well as from behind, and has a dazzling effect, especially when he is looking up and towards the master or blackboard.

Another disadvantage under which many large class-rooms are placed with reference to lighting is that the windows are insufficiently high in proportion to the width of the room. Expert writers on this subject affirm that (in temperate latitudes) a room 24 feet wide requires windows 14 feet high to properly illuminate the whole width. Many of the class-rooms in Burma are wider than 24 feet, and do not have their windows high in proportion. And it is light from a high level which is chiefly needed for reading and writing, so that the rays may be reflected with as little obliquity as possible from the book or paper to the scholar's eyes. The window

then should reach as nearly as possible to the ceiling, and the higher the ceiling, within limits, the better for the illumination of the room, and especially of the desk.

Other conditions frequently met with, especially in the older school buildings, which interfere with the effective illumination of the room are (a) the absence of a ceiling; (b) the presence of girders, tie beams, etc., in the roof, which break up and obstruct the rays of light and sometimes cause confusing reflections and cross-lights, especially if there are clerestory windows at a higher level than the girders, etc.; (c) clerestory windows if wrongly situated, as is often the case; these produce most inconvenient cross-lights, often directly in the eye of the student and from several directions at once. Such windows should be used only to afford diffused light by reflection from the ceiling, or to give direct light from behind and over the head of the student.

Too much stress cannot be laid upon the importance of avoiding multiplicity of sources of entry of light to the individual pupil. The mere breaking of the field of light by interposing clumsy frame-work in the window, or dividing the window area transversely by intervening areas of less transparency, produce such multiplicity and consequent cross-lights and confusing shadows. The mode of construction of the window-lights in the standard type-plans now in use is disadvantageous for the above reason, there being a double-valved window below, reaching from about 3 feet above floor to 9 feet; above this an area of brick-nogging 18 inches wide, and above this some 2 feet of open wired-in space. The door, when open, affords direct light from the ground up to 7 feet, then comes a cross framing above which is 16 inches of fixed glazing, then 18 inches of brick-nogging, and above that the wired open area. The fixed glazed-light tends to become somewhat obscured by dust, and the general result of the arrangement just detailed is to produce light of several degrees of intensity coming from the same direction but at different angles. The framing of the panes in doors, windows and fixed lights is coarse.

In the upper rooms the clerestory windows produce much confusion as the result of numerous cross-lights from all sides from above, while this is added to by the side light entering through the door from floor level up to the limit allowed by the sloping roof of the verandah outside, about 6 feet from the floor. The lighting of the examination hall on the upper floor is similarly confused by the entry of light through numerous doors, windows and clerestory lights.

Guided by the experience gained by the study of the lighting conditions which result from faulty construction of buildings and incorrect arrangement of lights in existing schools, this Sub-Committee has adopted a scheme for lighting class-rooms which it considers affords advantages over any of the methods presented in the plans of European, American, and Indian School-buildings which have been available for inspection. In the best of these plans it is found that single windows are provided to illuminate several rows of desks, with the result that in some of the rows the light falls upon the desk from in front or laterally so that the reflection from the paper to the eye of the student is more or less oblique and lacking in intensity, while at certain angles it may even be dazzling. Although all these effects of light admitted at the wrong angle are recognized and deprecated by European writers on this subject, none of the latter appear to have arrived at a design for the lighting of school-rooms which wholly meets the needs of the case. Possibly the much less intensity of the light in temperate climates to some extent mitigates the disadvantages arising from light admitted from a source more on less in front of the student's desk. However that may be, the plan adopted by this Sub-Committee has the effect of protecting the eyes of the student from glare while admitting it to the desk from the correct direction, i.e., from over his left shoulder. This end is attained by providing a single window to each row of desks, and cutting off front light by the use of shutters projecting outwards at a suitable angle from the front margin of each window. The windows are as tall as the structural requirements of the building will permit, reaching from 3 feet above the floor to near the ceiling, which is 14 feet high. The width of the window may be 3 feet or less, narrow windows lending themselves better than broad ones to this system of lighting, which requires that the alignment of the desks shall be

constant for each class-room, i.e., opposite to the vertical strip of wall between each pair of windows, while the student's seat is in the line of the front vertical of the window frame behind him.

The wall-piers between the windows are about 12 inches wide, and since, with six rows of desks, there will be six 3 feet wide windows, the superficial lighting area of this part of the class-room bears a high ratio to the floor-area occupied by the desks and intervening passage-ways (588 sq. feet floor area and 189 sq. feet window area) = 1 : 3.11. If possible the windows should be 10 feet 6 inches in total height from a level of 3 feet above the floor. While the desks nearest to the window will receive light from one window only, those farther away will be illuminated by all the windows behind them, except in the case of the hindermost row of desks, which can get light from the back window only. Though receiving light from a number of separate openings the students in the front rows will not suffer from cross-lights or shadows, since the light received from all the windows will be of equal intensity and from the same direction.

28. *Direction from which light is obtained.*—In temperate climates the favoured quarter of the heavens from which to effect the illumination of class-rooms is the south. In this latitude however the north quarter must be selected, for not only is the glare from the southern sky too intense for the illumination of class-rooms during the middle hours of the day in the hot season, but the students must be protected from the heating effects of the sun's rays by the provision of a wide verandah on the south aspect of the building, and by screens in the arches or between the pillars of the verandah. In the monsoon season the doors and windows on the south side must be closed to keep the rain from beating into the class-rooms. In either season such protective measures will seriously diminish the illumination of the class-rooms which are lit from the south.

In the school buildings erected according to the standard plans, several of the class-rooms have their windows and doors facing the south, and these rooms are most uncomfortably hot in the hot season, while the light is extremely bad in the monsoon when windows and doors have to be shut, and on account of the fixed wooden screen hung from the outer edge of the verandah to cut off the direct rays of the midday sun. The verandah also is only six feet wide, and the screen in question reaches to within 7 feet or even less of the verandah floor, so that the open space for the admission of light is only about 4 feet in height from the level of the window-sill (3 feet above the floor). This is a constant subject of complaint by all schoolmasters; and the students who use these class-rooms are said to detest them, and to clamour for accommodation in those on the north side of the building.

29. *Instances of inadequacy of lighting of schools.*—In support of the opinion formed by this sub-committee that the lighting of schools in Burma is on the whole generally inadequate or faulty the following specific instances may be quoted.

The cases quoted include instances where the total light openings bear too small a ratio to the floor area; others in which the height of windows or other openings for light is inadequate with reference to the width of the class-room, height of desks, etc.; or where light is admitted from several directions, causing cross lights and shadows; or again where the direction of entry of the light with reference to the position of the desks and scholars is wholly wrong.

1. Government Vernacular High School, Prome—
All class-rooms 35 feet wide.
Light enters from two sides up to 8 feet from floor.
Ground floor—window area = 1/24th floor area.
Upper floor—window area = 1/8th floor area.
2. A. B. M. Girls' School, Paungde—
Class-room 36 feet wide, 11 feet high.
3. King George's Buddhist School, Shwedaung—
Class-room 27 feet wide.
Light enters up to 7 feet from floor by doors on west, south, and east.
4. District Cess Anglo-Vernacular School, Pyapôn—
Class-rooms 35 feet wide and 10 feet high.

5. Municipal Anglo-Vernacular School, Pyapôn—

Class-rooms 30 feet wide, 10 feet high.

Lighted from doors and windows 6½ and 7 feet high.

6. Government High School, Henzada—

In this school there are a large number of class-rooms, of which only one has a width of over 20 feet. The class-rooms are 16 feet high. Lighting is by windows reaching 9 or 10 feet high, and by doors 7 feet high. The ratio of lighting area to floor area is too low in all except VI and IIIB class-rooms, ranging from 1/6th to 1/12th. The direction of the entry of light is wrong in several of the class-rooms, thus—

Class-rooms VI and IIIB. "Light enters through 10 doors, 5 on the north, 5 on the south."

Class-room VII. "Light enters from east towards right."

Class-room V. "Light enters from west towards back and right, by two doors (7 feet high)."

Class-room IVB. "Light enters from north towards back and right."

Class-room IIIA. "Light enters from south towards right."

7. Government Anglo-Vernacular High School, Moulmein—

Width of class-rooms = 25 to 47 feet. Height = 14 feet.

Lighting area to floor—1 : 5 and 1 : 10 in some class-rooms.

"Fairly lighted from east and west."

"Light openings (doors and windows) = one-fifth to one-tenth of floor area."

This is too low a ratio.

8. Government High School, Tavoy—

Class-rooms—

Upper floor (1) 20 feet wide, 12 feet high.

Ground „ (2) 25 „ 7 „

Light from both east and west. The lighting is described as "deficient," especially on the ground floor.

9. A. B. M. Primary School, Toungoo—

Class-rooms 1 and 4 = 39 feet wide, 10 feet high.

10. A. B. M. Anglo-Vernacular Mixed Middle School, Toungoo—

Light enters class-rooms "from all sides" above 3 feet from floor.

11. St. Luke's Vernacular Girl's School, Toungoo—

Class-room is 30 feet x 50 feet, height = 13 feet single hall. Light enters from east and west.

12. St. Luke's Anglo-Vernacular Boys' High School, Toungoo—

Class-rooms 30 feet x 50 feet. Height = 30 feet—"some of the classes in lower storey are not properly lighted."

13. Government Normal School, Toungoo—

Class-rooms 23 feet and 18 feet wide, 14 feet high.

Height of windows and doors = 7 feet and 9 feet.

14. Government Anglo-Vernacular School, Thayetmyo—

Class-rooms = 26 feet wide and 20 feet high—"very dark," "light not from left," "Desks not properly arranged."

15. Government Anglo-Vernacular School, Minbu—

Class-room VI. 30½ feet wide, 11½ feet high. "Lighting defective."

Class-rooms III, IV, VIII. "Lighting poor" (4 doors and windows).

"Light in all rooms enters below 7 feet from floor."

In rooms where the lighting area is to floor area as 1 : 2, the light is described as "fair;" where it is 1 : 3.2 the light is described as "poor," and in another class-room of same dimensions (No. V) as "good;" where it is 1 : 4.23 the light is described as "defective."

16. Government Anglo-Vernacular Middle School, Mahlaing—

Class-rooms Nos. II, III, IV. Light area is to floor area as 1 : 3.

Class-rooms Nos. I, V, VI, VII. Light area to floor area as 1 : 1.5.

The superficial area available for entry of light in this case is liberal but it includes open doors. The height of the class-rooms is not stated. The faulty arrangement of lighting in this school depends upon the light being admitted from

the wrong direction and from too low a level. The window-sills are 2 feet from the floor, and light from the doors enters from floor level.

In the case of certain of the class-rooms it is stated (II, III, IV) "Light from north and south enters from *right* and left."

(I, IV). "Light from south and west enters from back and left."

(VI, VII). "Light from north and west enters from *right* and left."

(Normal Training Class) "Light from north and east enters from *right* and left."

The above extracts, which could easily be multiplied from the reports, will suffice to indicate that faulty arrangements for lighting are fairly universal among schools of all classes in Burma. Some of the worst instances (not quoted) occur in "aided schools," some of which are housed in ordinary dwellings not intended to be used as schools. But in the buildings built expressly for use as schools the arrangements made for lighting the class-rooms is, as shown above, not infrequently faulty or inadequate. It seems probable that in the majority of schools the entry of light is limited to 7 feet above the floor for doors, and 8 or at most 9 feet for windows. A suitable height for the window-sill, *viz.*, 3 or $3\frac{1}{2}$ feet, is generally adopted.

30. The effects on the scholars of such faulty lighting of the class-rooms and desks are, in instances where we have inspected the schools while the pupils were engaged on their studies, very obvious. In drawing and writing classes we observed children contorting their bodies into the most uncomfortable and ungainly attitudes in the effort to bring light of sufficient intensity upon the paper. In some cases they had turned till facing almost directly away from the desk, at the same time sprawling along the seat when the best illumination was from in front or from the right. In other cases the attitude adopted was selected in order to take advantage of a more intense light from a clerestory window, or from some other irregularly situated opening. Curiously enough the masters in charge of such classes seemed quite unconscious of the injurious effect of these attitudes and of what should be the correct relation of the desks towards the light openings.

The result of these unsatisfactory conditions must be serious eye strain, and in the worst cases the twisting of the frame of young and growing children will result, as has so frequently occurred in European schools, in permanent deformity of the spinal *vertebrae* and other bones.

One of us when inspecting the Government Anglo-Vernacular school at Sagaing found the lighting arrangements in the old buildings particularly bad. The eaves were low and the light entered at too low a level, and sometimes through doors behind the scholars. In one large class-room there were openings for light on all four sides, doors, windows, and clerestory lights. The desks were arranged facing the master's table from three directions, so that every scholar was facing a window or door, and the clerestory lights were an additional vexation.

31. *Ventilation*.—The provision made for ventilation of class-rooms in the present type-plans for school-buildings is inadequate, both as to total superficial area of openings available for ventilation in proportion to superficial floor area and cubic contents of the rooms, and in relation to the maximum number of pupils in the class.

The ground floor rooms have however a permanent open space with a superficial area of 13.7 sq. feet below the ceiling, which is advantageous when doors and windows have to be closed during school hours, on account of rain.

The maximum ventilation opening when doors and windows are all open together is in superficial area 70.7 sq. feet.

The ratio to floor area is as 1 : 5.7.

The area of opening per head of pupils in class of 35 = 2 sq. feet.

When the door is shut the total available opening for ventilation is 49.7 sq. feet = 1 : 8 of floor area, and 1.4 sq. feet per pupil. When both window and door are shut the remaining opening is 13.7 sq. feet or 1 : 29 of floor area and 0.4 sq. feet of ventilation opening per pupil.

The ratio of superficial area of ventilation openings to cubic contents of the room is, when door and windows are all open, 1.34 sq. feet to every 100 cubic feet.

The ventilation opening in the upper floor class-rooms is very similar to that in the ground floor rooms so long as the doors and windows are open. When all, including the clerestory windows, are shut, there is no ventilation, for there are no permanent openings in these upper rooms.

The ground floor class-rooms communicate with each other over the top of a ten foot high partition, which leaves three feet vertical space up to the ceiling. Since the windows on one side or other of the building are certain to be open this device adds something to the ventilation possibilities of these rooms; but the partition practically cuts off all perflation of air in the lower levels of the rooms and this communication does not materially benefit the students. In the class-rooms facing to the south there is little movement of air in the hot season when the prevailing breeze is from the north, or at other times when the air is stagnant, and these narrow class-rooms (they are only 15 feet wide) become heated up in a manner which must be deleterious to the health of master and pupils, and antagonistic to the process of intellectual activity.

This Sub-Committee has decided in favour of ventilating class-rooms from both sides, *i.e.*, from north and south, thus providing through ventilation when necessary, and affording facilities for getting full advantage of the breezes from either quarter. The ventilation openings on either side are similar, those on the north being the windows, which can be fully opened throughout their full extent. The upper part of each window revolves on a pivot and thus can remain open in spite of driving rain.

On the south side are corresponding windows and a door. All the openings on this side can be closed with venetian shutters to keep out light and heat. There are in addition screens in the 10 or 12 feet wide verandah.

The total ventilation opening on either side of the room = 220 sq. feet the ratio of ventilation opening to floor area being for one side as 1 : 3.5 and the superficial area per pupil in a class of 35 = 6.4 sq. feet. If both sides be estimated together the ratio to floor area is 1 : 1.7, and superficial ventilation opening per pupil = 12.8 sq. feet. This can be considerably increased by opening the venetians below the windows.

The ratio of ventilation opening to cubic contents of the room is 4.96 sq. feet to every 100 cubic feet, for one side, and up to 10 sq. feet per 100 cubic feet for both sides.

The ventilation of most of the schools inspected was fair, and in many cases excellent. The provision of doors and windows on opposite sides of the class-room, while it has disadvantages from the point of view of lighting the room, is wholly advantageous to ventilation.

The only serious fault in this connection is found in the low level of the door and window openings which often are not higher than 7 or 8 feet from the floor while the class-room is much higher, from 11 to 16 feet. Thus there is a "dead" space some feet in depth above the doors and windows in which there is no movement of air which forms a cushion of hot and impure air above the heads of the students. In some cases there are fixed lights above the doors and windows which do not admit of ventilation at their level. All such lights should be made to open, and where they are protected by the eaves they might remain unglazed and protected by wire netting only.

In the few instances where the class-room was only from 7 to 9 feet high ventilation was imperfect.

In a large number of instances in which the ratio between ventilation openings and floor area and cubic contents has been calculated out it has been found to vary within the following limits :—

Ventilation opening to floor area = from 1 : 3 to 1 : 13.

Windows only (doors shut) = 1 : 6 to 1 : 12.

Superficial ventilation opening to cubic contents = 2 or 3 sq. feet to 100 cubic feet.

In this connection the most important principles to be observed are (a) the avoidance of cross partitions between the north and south aspects of the building, (b) to afford ventilation from both aspects, (c) to carry the windows up to the

ceiling and make them to open up to the top, (d) to provide ventilation openings in the ratio of 1 : 2 of floor area and not less than 10 sq. feet to every 100 cubic feet of contents of room.

The ventilation opening per pupil should be not less than 12 sq. feet.

32. *Drinking water.*—The provision of a supply of drinking water for the use of scholars appears to be a general practice. But in many schools reported upon the source of the water and the method used in storing it offer many facilities for its pollution, and in no case is it recorded that the water is either boiled or filtered before the scholars are permitted to drink it. The water is usually obtained from a well in the school compound where it is open to the usual risks of pollution from dirty buckets and ropes and from infected material which may fall into the water. Some of the school wells reported on are said to be in a state of disrepair so that polluted water can drain back into the well. The washing of clothes and bathing of the person by scholars and servants is carried on at the same well.

It would be neither a difficult nor costly measure to arrange for a protected source of water supply in every school in the "A" and "B" classes, and to store the water under conditions which would render it impossible to pollute it. A special well should be set apart for use as the source of the drinking water for the school, and this well should be covered over and fitted with a pump. If the water is sweet and the surroundings such as to guarantee freedom from all risks of pollution from the surface of the surrounding land, it will not be necessary either to boil or filter the water before use. Otherwise it should be boiled, and, if necessary owing to the presence of sediment or discolouration, it should subsequently be filtered. Filtration alone is not to be relied upon, since unless regularly and carefully cleansed and sterilized, the best filters become choked with bacteria and may subsequently infect all water which passes through them.

After purification the water should be stored in a galvanised cylinder with a well-fitting lid with overhanging vertical flange, and this should be kept locked. The water is to be drawn off by a tap. A standard pattern of water-cylinder might with advantage be prescribed for all schools by the Educational Department.

The present common practice of storing the water in an open bucket or earthen "chatty" from which it is ladled by a dipper, the user's hand often being dipped into the water, cannot be too forcibly deprecated. Successive scholars drink from the edge of the dipper which is dipped unwashed again into the chatty.

REPORT

ON THE

SANITARY CONDITION OF SCHOOLS AND SCHOOL HOSTELS IN BURMA



RANGOON

OFFICE OF THE SUPERINTENDENT, GOVERNMENT PRINTING, BURMA
1916

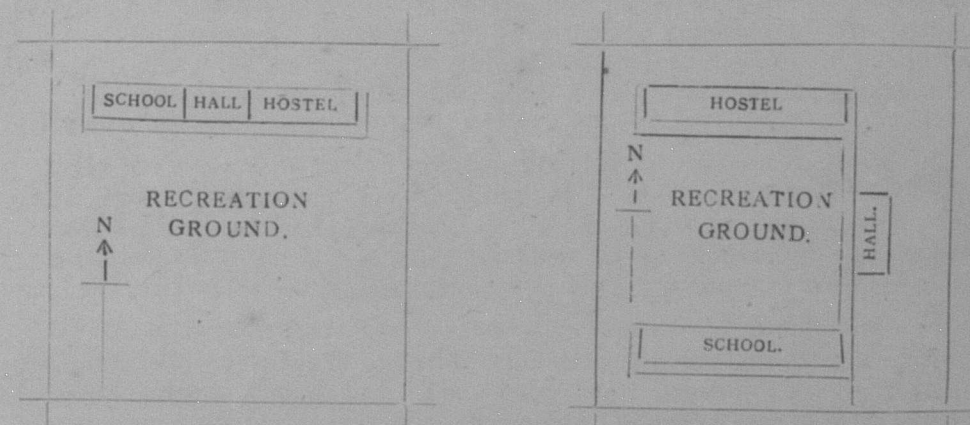
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ENCLOSURE II.

Report by the Government Architect, dated the 3rd May 1916, to go with the drawing showing the unit system.

Knowing the danger attached to the all too prevalent Type Plan, and at the same time realizing the necessity of some definite idea being placed on record as a guide to all future schools to be erected, I have come to the conclusion that if a drawing could be prepared and approved by all parties concerned, showing in plan, elevation and section the best method of meeting the various requirements of a modern school room, it would answer our present needs, and prevent the mistakes made in many of the badly designed schools sent up for approval and incidentally put a stop to the discussion that has been going on for so many months.

With this end in view I have prepared a drawing showing two school rooms, one Ground floor, and one First floor. These rooms are comprised of three bays, each 7' 3" centre to centre, the idea being that a larger room may be obtained by taking in an extra bay or unit of 7' 3", or if a room of smaller dimensions be required, then a bay or unit may be taken off, and so on. The same principle will apply to all the rooms whether for masters or for dormitories. I propose a width of 20 feet throughout, therefore a room of three units will be 20' x 21' - 3", while a room of four units will be 20' x 28' - 6", that is when allowing a 6" division wall. It will be noticed that cross ventilation has been obtained everywhere. Glass is almost entirely eliminated from the design, being retained only in the clerestories. In all other cases venetians will alone be required.

It is proposed that a number of these drawings be supplied to the Authorities interested as a guide. I see no harm in this being done. I am however strongly opposed to any further drawings such as an imaginary school for an imaginary site being issued, as such type plans invariably lead to the worst faults being unwittingly committed. Each scheme must be separately considered and the ever varying problems worked out in each case. There would, however, be no objection, as far as I can see, to some conditions being authorized such as suggested by Mr. Potter, *viz.*, the ideal siting of a school, his two cases as under would be sufficient.



As I am the only Government Architect for the whole of Burma I see little hope of being able to cope successfully with the many school schemes which will be coming on, I hope however the Government will see their way to giving me a staff of qualified European assistants and then I think we may reasonably hope to approach the ideal.

3rd May 1916.

W. FOSTER.

ENCLOSURE III.

Education Department Circular No. 17317-5G.-49, dated the 22nd October 1912, from the Director of Public Instruction, Burma, to the Superintendents of Aided Schools.

Attention is invited to the rules notified in the *Burma Gazette*, vide Notification No. 260, dated the 18th September 1912, and School Managers are specially referred to paragraph (viii) thereof. In the case of aided schools inspection is optional. A copy of the instruction issued to Headmasters of Government, Municipal and District Cess Schools is attached for information.

INSTRUCTIONS.

These regulations are experimental and tentative and therefore liable to revision or withdrawal. The special attention of Headmasters of Schools on list A is drawn to paragraphs (v) and (vi). They should facilitate the medical or sanitary officer's inspection by all means in their power. So far as they are able Headmasters should endeavour to give prompt effect to the recommendations of the medical or sanitary officer. If it is found that defects pointed out by that officer and easily remediable on the part of the Headmaster are allowed to continue, and if recommendations made regarding infectious or contagious diseases are neglected, serious notice will be taken by the educational authorities concerned. In cases where the visiting officer's recommendations require the removal and treatment of any pupil the Headmaster should take care to explain to the parents or guardians the exact facts and the reasons for removal, and should urge them to adopt any treatment suggested by the visitor or, if necessary, to send the child to the nearest hospital. All cases of removal under the medical or sanitary officer's orders should be reported to the Inspector of Schools. It is understood that the medical or sanitary officer will in all cases carry out medical inspections of individuals with due respect to the susceptibilities of pupils concerned, especially in the case of girls, and that no compulsion will be put upon the latter to undergo detailed examination if they object. Headmasters should pay particular attention to the instructions regarding vaccination at the end of paragraph (vi) in the regulations. If the visiting officer advises alterations in the buildings or premises, these should be promptly reported to the Inspector of Schools, who, if the matter is not within his competence to deal with, will report to the Director of Public Instruction with such recommendations as he thinks necessary.

By the medical or sanitary officers in these instructions is to be understood either the Civil Surgeon or the Assistant Civil Surgeon or the Sub-Assistant Surgeon acting as medical officer to the Municipal or Town Committee or the Health Officer of the Municipality or Town or rural area. Visits may also be paid by the Dy. Sanitary Commissioner or higher sanitary or medical authorities.

Office of the Director of Public Instruction, Burma, Notification No. 260, dated the 18th Sept. 1912.

The following rules in regard to sanitation of schools in Burma are published for information and guidance. They have been approved by Government as a tentative measure and are liable to be revised or withdrawn if experience shows that such a step is advisable.

(i) Schools will be classified for purposes of medical or sanitary inspection as follows:—

A. *State*, i.e., public institutions under public management, Burma Education Code, paragraphs 4 and 6.

B. *Aided*, i.e., public institutions under private management, Burma Education Code, paragraphs 4 and 7.

Class A will include all Government, Municipal and District Cess schools whether European, Anglo-Vernacular or Vernacular. Class B will include European, Anglo-Vernacular or Vernacular schools belonging to private persons or bodies, which are in receipt of aid from Government or which seek aid from Government and are inspected by the Education Department.

(ii) Schools of Class A* will be visited as often as their other duties permit by the following officers:—

*(The total number of such schools is) —

1. European	...	1
2. Anglo-Vernacular	...	35
3. Vernacular	...	50
4. Normal (Anglo-Vernacular and Vernacular).	...	5
5. Technical (Government Engineering School.)	...	1
Total	...	92

The Sanitary Commissioner.
Deputy Sanitary Commissioner.
The Civil Surgeon.
The Assistant Civil Surgeon (if deputed by the Civil Surgeon).

(iii) Ordinary schools of Class A will be visited by one or other of the officers mentioned above not less than once a year. Usually a medical or sanitary officer proposing to visit a school or Class A will give notice of the date and hour of his intended visit to the Headmaster and to the Inspector of Schools of the circle in which the school is situated.

(iv) A copy of his inspection notes will be forwarded by the visiting medical or sanitary officer, as early as possible after his visit, to the Director of Public Instruction* through the Inspector of Schools of the circle concerned. Assistant Surgeons will forward copies of their notes to the Inspector of Schools through the Civil Surgeon. The officer will also record a note of his visit in the School Visitors' Book. Copies of inspection notes on Municipal or District Cess schools received by the Director of Public Instruction will be sent by him to Presidents of Municipalities or Deputy Commissioners with such remarks as he may consider necessary.

(v) Inspection notes should contain remarks upon the sanitary condition of the buildings and premises (especially of dormitories, teachers' and servants' quarters, kitchens, bathing places, latrines and urinals), arrangements for removing nightsoil, rubbish, kitchen refuse, etc., and the general health and physique of the pupils. Particular notice should be taken of any pupils found suffering from serious or infectious or contagious diseases. The visiting officer may advise the Headmaster (a) to request parents to remove pupils suffering from such disorders and to put them under suitable medical treatment, and (b) to take such measures to prevent the spread of infection as may be necessary. The visiting officer will include in his inspection notes such recommendations for the improvement either of the sanitary condition of the buildings or premises or of the health or physique of the pupils as he may consider desirable.

(vi) On visiting a school of Class A the medical or sanitary officer will also take note of pupils who have not been vaccinated or who require re-vaccination; and may advise the Headmaster to arrange for the visit of a public vaccinator on a given date. The Headmaster after making such arrangements as may be necessary will inform parents that a vaccinator will visit the school and will urge those whose children require it to permit them to be vaccinated or re-vaccinated as the case may be. He will report to the Inspector of Schools the arrangements made and the number of pupils vaccinated or re-vaccinated on the occasion specified. In no case however shall the Headmaster compel any pupil to be vaccinated or re-vaccinated against the declared wish of his parents or guardians or inflict any penalty on a pupil whose parents or guardians decline to permit him to be vaccinated or re-vaccinated.

(vii) The Education Department will furnish the medical and sanitary officers stated with lists of schools of Class A, showing the situation, class, grade and attendance of each school and the name of the Headmaster. Headmasters of such schools will be furnished with copies of the procedure approved by Government for the medical and sanitary inspection of schools and will be instructed to afford to authorized medical and sanitary officers all facilities for inspection.

(viii) Schools of Class B may be visited by the officers stated under section (ii) above for purposes of medical or sanitary inspection under these rules, only at the request or with the consent of the school managers. Due and precise notice should always be given of proposed visits.

(ix) Sanitary or medical officers visiting schools of Class B will adopt, as regards inspection notes, details of inspection, and vaccination, the procedure laid down under sections (iv), (v) and (vi) above, respectively.

(x) The Education Department will furnish the medical and sanitary officers stated with lists showing the situation, class, grade, and attendance of European and Anglo-Vernacular schools of Class B and names of the Managers or Superintendents. If an authorized medical or sanitary officer wishes to visit aided vernacular schools in a particular municipality, township or village he should apply to the Inspector of Schools of the circle concerned for a list of registered vernacular schools (with addresses and names of managers and numbers in attendance) in the area he desires to visit. Managers will be informed by the Education Department of the procedure approved by Government and desired to afford authorized medical or sanitary officers all facilities.

Scheme of the Director of Public Instruction, Burma, for the Medical Inspection of schools in Burma.

"The Sanitary Commissioner and myself were agreed that it would be preferable to appoint at any rate at the outset one Medical Officer rather than a number of medical inspectors. He should not be allowed private practice. His main duties would be:—

- (a) the training of teachers in Hygiene;
- (b) the inspection of Hygiene teaching;
- (c) the medical inspection of a limited number of schools;
- (d) to advise the Director of Public Instruction generally in regard to school Hygiene.

He should give lectures in Hygiene to Normal students in Rangoon and to teachers in Rangoon schools during a yearly session extending from June to Christmas and should hold an examination annually of the classes to which he lectured. He should also visit schools in Rangoon and (so far as he could) medically inspect the pupils therein and advise on the sanitary conditions. After Christmas the Medical Officer should be free to tour and to visit both Normal schools and a certain limited number of ordinary Anglo-Vernacular and European schools outside Rangoon. It would not be possible for him to undertake a general inspection of schools throughout the Province, but he might visit such centres as Mandalay, Moulmein, Bassein, Toungoo, and advise in regard to the teaching of Hygiene in the Normal schools there. He might also visit one or two schools in each of these places for purposes of medical and sanitary inspection. Possibly also special "holiday classes" might be held by him at Maymyo during April and May at which pupils from district Normal schools might attend. The training of teachers in Hygiene at centres outside Rangoon would have ordinarily to be entrusted to persons who had passed creditably through the Medical Officer's classes in Rangoon and were appointed to outside Normal schools as Instructors in Hygiene. Selected teachers on the staffs of outside Normal schools might be sent up to Rangoon to attend the Training Classes in Hygiene; or successful students from the Rangoon Normal schools might be appointed for the purpose. Either or both of these methods might be adopted according to the circumstances of the school and as occasion might arise.

The Sanitary Commissioner and myself were also agreed that, in view of the work and duties of the proposed Medical Officer detailed above, he should be attached to the Education Department and should be placed on the same footing in regard to pay, pension and status, as an Inspector of Schools in the Indian Educational Service. Otherwise, if he were appointed on the pay already proposed and were attached to the Provincial Educational Service without pension, he would either become discontented with his position or have to be selected from among persons of inferior qualification and experience. We are of opinion that the proposed Medical Officer should be recruited from Home, should have a full medical qualification in addition to a D.P.H. diploma and, if possible, some experience of medical school work elsewhere."

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GENERAL DEPARTMENT.

EDUCATION—No. 456.

CALCUTTA, THE 23RD FEBRUARY 1916.

FROM THE HON'BLE MR. K. C. DE, C.I.E., I.C.S.,

Offg. Secretary to the Government of Bengal,

TO THE SECRETARY TO THE GOVERNMENT OF INDIA,

DEPARTMENT OF EDUCATION.

SIR,

I AM directed to refer to your letter No. 1139, dated the 24th June 1913, regarding the appointment of a committee of medical and educational experts to enquire into questions connected with school and college hygiene. The general lines of the enquiry were indicated in paragraph 7 of the Government of India, Department of Education, Resolution No. 301 C.D., dated the 21st February 1913. In paragraphs 3 and 4 of the letter of the 24th June 1913 the Government of India referred to certain objects which were likely to involve recurring expenditure and stated that, before making any allotments for such expenditure, they would await the deliberations of the committee and the recommendations of the Government of Bengal thereon.

2. The committee appointed in this presidency consisted of 10 members, including the Director of Public Instruction, Bengal, as President. In order that the committee might begin its deliberations on a sound basis, a memorandum (copy enclosed) was drawn up explaining briefly what the Education Department of Bengal had attempted in respect of the specific points enumerated by the Government of India. It was circulated among the members of the committee, who were invited by Government to draw up a scheme, which was to deal incidentally with the distribution of the non-recurring grant of Rs. 3,50,000 made by the Government of India for educational hygiene, gymnasia, play-grounds, swimming-baths, gardens, etc. In view of the peculiar needs of the province, the committee decided to take up the following questions for enquiry:—

- (i) the provision of playing-fields;
- (ii) the inspection of educational buildings and hostels;
- (iii) the responsibility of teachers with regard to the general health of pupils and the regular medical inspection of school children; and
- (iv) the introduction of a practical course of instruction in hygiene for elementary and secondary schools.

They dealt carefully and exhaustively with these points and submitted a report, which has been forwarded to Government by the Director of Public Instruction.

3. I am now to submit for the information of the Government of India the accompanying copy of an important and exhaustive letter, No. 445, dated the 30th June 1915, from the Director of Public Instruction, Bengal, with which he has forwarded the committee's report and which contains his recommendations on all the points dealt with in it.

These recommendations have been accepted by the Government of Bengal, but I am desired to add the following comments on the report, which may serve to illustrate the proposals made.

4. *Chapter III of the report—Provision of playing-fields.*—Owing to the prohibitive cost of land, the committee did not work out any comprehensive scheme for the provision of playing-field space for schools and colleges within the municipal limits of the town of Calcutta. They have offered however three suggestions in this connection, viz.—

- (1) the provision of an open space which would meet the needs of the educational institutions situated in the northern and central sections of the city;
- (2) the establishment of a play-ground in Machua Bazar Street with gynasium, swimming pool, courts for lawn tennis, etc.; and
- (3) the establishment of a central gymnasium for Indian girls and women.

5. As regards the first of these suggestions, I am to say that the Chairman of the Calcutta Improvement Trust has already in view the establishment of a park or recreation-ground in connection with the opening up of the north-east quarter of the city, and the development of the adjoining suburbs for the purpose of rehousing. The Governor in Council further agrees with the Director of Public Instruction as to the expediency of subsidizing the scheme proposed by the Young Men's Christian Association for the provision of a play-ground in Machua Bazar Street. As regards the central gymnasium for Indian girls and women, His Excellency in Council is in agreement with the Director of Public Instruction in apprehending that the proposal for the establishment of such an institution is premature. He considers physical instruction for women teachers to be an indispensable preliminary to the introduction of gymnastic exercises into girls' schools, and the only measure for the promotion of athletics among Indian girls which it would as yet be advisable to attempt. This requirement will not be overlooked in connection with the scheme, which is now under consideration, for a college for secondary women teachers in Calcutta.

6. The recommendations of the committee in connection with playing fields at district and subdivisional head-quarters make adequate provision within the limits of present resources for a reform which, for financial reasons, Government can only deal with in a somewhat unsatisfactory fashion.

The Governor in Council attaches particular importance to the suggestions of the committee for the co-ordination of school games by their location in central playing-grounds, which would be made use of by all the approved educational institutions in the neighbourhood under the control of a local committee, and agrees that the activities of such local athletic committees should be supervised and directed by a General Advisory Committee in Calcutta. At the same time I am to observe that, in view of the benefit which will accrue both to private institutions and the townspeople at large in localities where playing-fields are provided, the Government of Bengal consider that public expenditure on this object should go hand in hand with local support, and, except in the case of exceptionally poor areas, the Government of Bengal will view with special favour proposals for the purchase of land for this purpose which include a local contribution in addition to the allotment from the Imperial grant.

7. The Governor in Council endorses Mr. Hornell's recommendation that, in addition to Dr. Segard, who should be Secretary to the General Advisory Committee in Calcutta, a whole-time officer should be appointed on a salary of about Rs. 900 a month to be Adviser to the Education Department in all matters connected with the physical side of education.

8. *Chapter IV of the report—Inspection of educational buildings and hostels.*—The insanitary condition of educational buildings and hostels is an evil which the comments of the committee and the Director of

Public Instruction in no way exaggerate, and the need for expert supervision is acute. It is not only desirable that the condition of the existing buildings should receive careful scrutiny and that any serious defects that may be brought to light should be removed or remedied, but also that closer attention should be paid than the present staff of the Sanitary Commissioner can afford, to the planning of all school and hostel buildings in future with strict regard to sanitary requirements. The Governor in Council accordingly supports the proposal that a Deputy Sanitary Commissioner should be appointed, as an experimental measure for a period of five years, in order to inspect existing school buildings and hostels from the sanitary and hygienic points of view, to draw up general directions for the lighting, ventilation and sanitation of new school buildings, and to scrutinize all plans for new buildings. This officer would also be in general charge of the medical inspection of school children, would make a special study of the diseases to which children are particularly liable, and suggest suitable measures for their prevention. As at present advised the Governor in Council is of opinion that such an officer should receive a salary of Rs. 1,100 a month.

9. *Chapter V of the report—Responsibility of teachers with regard to the general health of their pupils.*—This question is now engaging the attention of the Director of Public Instruction, Bengal, in connection with the general question of the improvement of training institutions for teachers in Bengal, and the Governor in Council considers that pending the receipt and consideration of his proposals it would be premature to express any definite opinion in the matter at present.

10. *Chapter VI of the report—Medical inspection of school children.*—One of the points mentioned in the resolution issued by the Department of Education on the 21st February 1913, as requiring investigation is the medical inspection, where possible of school boys, with special reference to infectious diseases, malaria, and eye-sight. The committee recommend that a start in this direction be made by the introduction of a system of regular medical inspection of school children in Calcutta, and in municipalities with over 10,000 inhabitants by a properly qualified agency, consisting of the new Deputy Sanitary Commissioner and two qualified assistants (one a man and the other a woman) of the rank of Assistant Surgeon. The Government of Bengal cordially accept this recommendation, which has the support of the Director of Public Instruction, and are of opinion that two medical officers should be specially employed for the purpose, each on a salary of Rs. 224 per mensem.

11. *Chapter VII of the report—Instruction in hygiene and sanitation.*—In connection with the question of the introduction of a simple and practical form of hygiene in school curricula the committee took up two points for consideration—

- (i) the provision of suitable teachers of hygiene; and
- (ii) the revision of the present hygiene syllabus.

The Governor in Council accepts the opinion of the committee that no text-books on hygiene or sanitation should be taught in the lower primary stage, but that from the upper primary stage upwards certain text-books should be used in both vernacular and Anglo-vernacular schools. In the opinion of the Director of Public Instruction there are no suitable text-books which can be used in vernacular schools for the standards above the primary stage. He accordingly suggests that a small committee should be appointed to prepare such a book. The Surgeon-General with the Government of Bengal, who has also been consulted in the matter, is of opinion that three well-illustrated books are required for the senior, the middle and the lower classes of schools. He suggests that the Government of India should be asked to direct their best sanitary officers to prepare the books, and advises as an example that Dr. Lancaster, who has been selected to investigate tuberculosis throughout India, may be asked to write a chapter on phthisis. He adds that, when the books are ready they should be carefully edited so as to

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secure their suitability for the purposes of lay instruction, translated into the vernacular languages and prescribed for compulsory use. The Governor in Council strongly supports the views expressed by Lieut.-Colonel Edwards and considers that without some such scheme of hygiene instruction no real progress can be made in improving the general health of the pupils. His Excellency in Council agrees further with the committee and the Director of Public Instruction that the teaching of hygiene should form an integral part of the secondary school course and that it should form a compulsory subject for any school final examination which may be instituted later on, and he also desires to recommend that the Calcutta University should be invited by the Government of India to consider whether sanitation and hygiene should be recognized as alternative subjects for its Matriculation Examination.

12. *Chapter VIII—Provision of suitable teachers of hygiene.*—Under this head the committee recommend the establishment in Calcutta of a properly equipped school for the instruction of women in domestic hygiene and other subjects, the compulsory instruction of teachers in boys' schools in hygiene, the appointment of a district instructor in hygiene for all training schools in each district, the deputation of selected Sub-Inspectors of Schools to the Sanitary Department for a course of four months' training, the appointment of a Bengali lady doctor to teach advanced hygiene and domestic economy in Indian girls' schools in the Presidency and Burdwan Divisions and the instruction of one teacher in each European girls' school in nursing and in first aid to the injured.

For the reasons stated by the Director of Public Instruction the Governor in Council does not support the committee's recommendations regarding the appointment of district instructors in hygiene and the appointment of a lady doctor to teach advanced hygiene and domestic economy. As explained by the Director of Public Instruction, arrangements have already been made for giving instruction in hygiene and sanitation, with special reference to the prevention and cure of malaria, in high schools and first grade training schools. The Director is of opinion that arrangements can be made to train a limited number of selected Sub-Inspectors of Schools at a cost of Rs. 4,450 per annum. His Excellency in Council accepts this opinion and will also be prepared to consider his recommendation regarding the appointment of a qualified English lady on a salary of Rs. 400—20—500 to teach hygiene and other subjects in connection with the proposal for the establishment of a secondary training college for women teachers.

13. *Chapter IX—Revision of the syllabus, and chapter X—Aids to the teaching of hygiene.*—The views of this Government have already been stated in the preceding paragraphs as to the training of Indian children in hygiene. It has also been stated that the Governor in Council will reserve his opinion as to the instruction of teachers till he has had an opportunity of learning the Director's views on the subject of the reorganization of the Training Institutions. As regards European boys' and girls' schools, His Excellency in Council accepts the Director's recommendation that instruction in hygiene on the basis of the general syllabus drawn up by the committee should be made compulsory in European schools, and that proper provision for such teaching should be made an indispensable condition for grants-in-aid. His Excellency in Council also accepts the Director's recommendation that a sum of Rs. 52,000 should be allocated for the provision of lanterns, charts, pictures and diagrams.

14. *European schools.*—The deliberations of the committee have been concerned primarily with the problem of hygiene in Indian schools. In the majority of European schools there exist already the traditions of healthy exercise, and the knowledge and observance of the common principles of hygiene which it is the object of Government to promote, while, at the same time their arrangements differ in many respects from those of Indian schools. The committee's report however deals incidentally with certain questions which especially concern European schools. In

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the first place the committee rightly observe in connection with the question of playing-fields, that though the needs of European boys' schools in the matter of physical education are reasonably well provided for, they desire to record the view that the whole question of the physical training of girls in European schools, both in Calcutta and in the mufassal, requires careful consideration, with a view not only to the provision of greater facilities, but also with a view to its better organization and improvement. As regards the question of providing suitable teachers for European girls' schools, the committee recommend that in each school arrangements should be made, where necessary for the training by the St. John Ambulance Association of one member of the staff in nursing and in first aid to the injured. It is understood that the Association will assist and co-operate in the scheme. For boys' schools the committee propose that every teacher should qualify in hygiene. The question of the syllabus in European boys' and girls' schools has already been discussed. Another recommendation made by the committee is that girls in higher elementary schools should be encouraged to take the full supplementary domestic course after they have passed standard VI, and that in lower secondary schools they should be encouraged to form supplementary classes in domestic economy after a certain stage of general instruction. The Governor in Council accepts these recommendations.

It is also contemplated that pupils in both day and boarding schools for Europeans should undergo regular medical examination, and the Government of Bengal agree with the Director of Public Instruction that both classes of schools should be required, as a condition of receiving grants, to arrange for the regular medical examination of their pupils and to submit returns. It is possible that Government will have to meet the additional charges in the case of the day schools, and it will certainly be necessary to employ a European medical officer for the examination. The Director of Public Instruction has estimated the expenditure at Rs. 5,342 per annum.

15. The annual recurring expenditure involved in the preceding proposals amounts to Rs. 50,000, as shown in the statement appended to the Director's letter. The Governor in Council cordially appreciates the generosity displayed by the Government of India in making the non-recurring grant of 3½ lakhs for educational hygiene, gymnasia, playgrounds, swimming baths, etc., but substantial progress will be impossible without an allotment of funds for recurring expenditure, and His Excellency in Council hopes that when normal financial conditions are restored, the Government of India will be pleased to make the necessary grants to this Government for the introduction of the reforms indicated.

I have the honour to be,

SIR,

Your most obedient servant,

K. C. DE,

Offg. Secretary to the Govt. of Bengal.

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No. 445.

FROM THE HON'BLE MR. W. W. HORNELL, M.A. (OXON.),

Director of Public Instruction, Bengal,

TO THE SECRETARY TO THE GOVERNMENT OF BENGAL,

GENERAL (EDUCATION) DEPARTMENT.

Calcutta, the 30th June 1915.

SIR,

I HAVE the honour to invite a reference to Mr. Milne's letter No. 1972 T.—G., dated the 22nd September 1913, appointing a committee of ten members, with the Director of Public Instruction as President, to inquire into school and college hygiene on the lines generally indicated in paragraph 7 of the Government of India's Resolution No. 301 C.D., dated 21st February 1913.

2. This resolution states that the claims of hygiene are paramount not only in the interests of the children themselves, but also as an object lesson to the rising generation, and comments on the comparatively small attention paid to it at present. The Government of India suggest that the Local Governments should institute a thorough inquiry into the subject by means of a small committee on which both medical and educational experience should be represented.

3. The committee above referred to have completed their survey, and I have now to submit their report to Government.

4. Before dealing with the recommendations of the committee, I may explain briefly the steps which were taken by my office to concentrate and facilitate the work of the committee. The first step was to analyse in some detail the scope of the inquiry as indicated by the Government of India, and to examine and set out what had already been done or attempted in Bengal to regulate and improve the conditions of school and college hygiene. The results of this preliminary work were set out in a printed memorandum and circulated among the members of the committee.

A copy of this memorandum is appended to this letter for the information of Government.

5. The memorandum indicated that while the importance of general and educational hygiene was to some extent appreciated in theory, the present arrangements to ensure that the subject should not be neglected were more the result of occasional and spasmodic efforts than part of a well conceived and comprehensive system of educational work. It showed what was being attempted by the Education Department of Bengal, and how, and thus enabled the committee to see the defects of the existing arrangements, to judge on what lines a comprehensive scheme of improvement could be drawn up, and to consider what machinery would be necessary to give practical effect to their recommendations.

6. Bearing in mind the peculiar needs of the Presidency of Bengal, the committee decided to concentrate on what appeared to them to be the most pressing requirements of the situation, and, with these requirements in view, to consider how the non-recurring grant of Rs. 3,50,000 could best be employed.

7. *Playgrounds.*—The committee instituted a careful inquiry not only into the needs under this head, but also into the means which should be adopted for the proper organization and management of such facilities in the matter of improved and extended playground provision as it might be possible to make on the basis of the additional funds which the Government of India had made available.

8. The committee did not extend their inquiries to the question of the provision of playing-fields in Calcutta. This seemed to the committee to constitute a distinct problem, the solution of which requires special and separate treatment.

9. The problem of playing-fields of Calcutta is, as the committee have stated (*vide* paragraph 14 of their report), one of great difficulty. Even if the whole of the capital grant made available by the Government of India could be spent in Calcutta, little would be achieved owing to the prohibitive cost of suitable land. The committee were, however, informed that the Chairman of the Calcutta Improvement Trust is anxious to include in the operations of the Trust a scheme which he has under his consideration for the provision of an open space which would meet the needs of the educational institutions situated in the northern and central sections of the city. The Committee desired me to invite the attention of Government to this suggestion, and to emphasize the view recorded in their report (*vide* paragraph 14) that the problem of playing-field space for the colleges and schools of Calcutta cannot be tackled in any other way. I am to express the hope that the occasion afforded by the operations of the Calcutta Improvement Trust should not be allowed to pass without a real attempt being made to do something towards the solution of the playing-field problem in Calcutta, and to add that in any attempt of this kind the needs of schools for European boys and girls should not be overlooked.

10. There is one scheme for the provision of a playground in Calcutta which the committee recommend should be financed from the capital grant made available by the Government of India. I refer to the scheme which the Young Men's Christian Association is now maturing for the establishment of a playground in Machua Bazar Street. The necessary land has been obtained by the Association; and as soon as the grant recommended by the committee is paid, they will provide on it a gymnasium, a swimming pool, and courts for lawn tennis, basket-ball, hand-ball, fives, badminton and volley-ball. This playground will be under the personal direction of the Adviser to the Government of Bengal on Physical Education, who has assured the committee that within the hours of an ordinary working day which are normally available for physical exercise it will be possible to exercise from 300 to 500 students. The committee attach the greatest importance to the carrying out of this scheme not only on account of the benefit which will accrue therefrom to the students of Calcutta, but also because of the object lesson which this playground, when it is in proper working order, will provide. The committee also point out that the proposed playground when properly equipped and fitted out will provide facilities for training school and college teachers in the organization of gymnastics, drill and games. I endorse the committee's views, and desire to express the hope that at least this amount of the capital grant of 3½ lakhs will be made available next year at the latest. It is not possible for me to finance even this recommendation of the committee out of the 8 lakhs made available in the current year's budget out of the balance of the Imperial capital grants.

11. There is one other of the recommendations of the committee which affects Calcutta. I refer to the proposal set forth in paragraph 17 of the report. The question of the provision of playgrounds for Indian girls was considered by the committee, but in their opinion the problem is a special one and cannot be met by any general scheme for the provision of facilities. The committee decided to recommend to Government that a sum of Rs. 45,000 should be set aside from the Imperial grant for the establishment of a central gymnasium for Indian girls and women in Calcutta. The idea is an attractive one, and at the meetings of the committee I did not question the soundness of the proposal; but as the result of further consideration I incline to the view that such a proposal is somewhat premature. If a gymnasium were constructed in the grounds of the Bethune College, it would probably be made good use of, provided that the Lady Principal of the college was a capable European woman, and that a European woman who knew something of physical training was in charge of the gymnasium. Even under these conditions and so far as the *clientèle* of the Bethune College was concerned, the establishment of the gymnasium would

probably arouse a good deal of comment, and I am very doubtful indeed whether it would be used by any but students of the Bethune College and School. I am of opinion that the first step in the direction desired should be to organize physical instruction classes in connexion with the proposed training college for women secondary teachers in Calcutta. If these classes were successful, we should be sending out annually into the scholastic world a number of Bengali women teachers who not only knew something of physical training, but who appreciated the benefits to health which such a training confers. No estimate of the cost involved in organizing these classes has been worked out. This could scarcely be done with any accuracy, as arrangements for housing the proposed training college are not yet complete. The sum of Rs. 45,000 which the committee proposed to assign to the central gymnasium would certainly meet all the initial charges in the matter of construction and equipment which it would be necessary to incur in connexion with the organization of the classes, and I would suggest that instead of assigning this amount to a central gymnasium for girls and women in Calcutta, Government should allocate this amount provisionally to the initial charges involved in organizing physical instruction classes in connexion with the proposed Women's Secondary Training College in Calcutta. Any expenditure necessary to provide adequate and suitable facilities for physical exercise at the Bethune College should be met from provincial revenues.

12. The satisfaction of all the requirements of the various district officers in the matter of the provision of playing-fields for district and subdivisional headquarters would cost far more than the total grant available; and although the whole of this sum could be profitably spent on the provision of playing-fields, the committee were unable to recommend that more than 2 lakhs should be devoted to this purpose. The proposals received from the district officers have been submitted to Inspectors of Schools, who have been asked to pick out the most urgent projects, so that they may be financed from the suggested assignment of 2 lakhs. The Inspector of European Schools and the Inspectress of Schools in the Presidency and Burdwan Divisions were asked by the committee to submit proposals for the acquisition of land for playgrounds for schools for European boys and girls outside Calcutta. These proposals have now been resubmitted to the Inspector of European Schools, who has been asked to select the most urgent schemes with a view to their being materialized. There will be no difficulty in spending these 2 lakhs as soon as Government can make them available. There are no funds in the current year's education budget which could be devoted to the acquisition of playgrounds under this scheme.

13. Before leaving the subject of playgrounds, I desire to invite the attention of Government to the views recorded by the committee in paragraphs 12 and 13 of their report. The committee feel that college students and school boys do not under present conditions derive such benefits as they should from the games which are now played by them. In their opinion there is far too much individualism and far too little organization and co-operation in connexion with college and school games, and they observe that a great deal of the time devoted to games is spent in competitions for cups, in which a few picked players can alone take part. To meet the exigencies of the present situation as they see it, the committee have proposed a system of local committees controlling the playing-fields at district and subdivisional headquarters, these committees being supervised and directed by a small general advisory committee in Calcutta, of which the Adviser to Government for Physical Education would be the secretary. The committee would give the local committees control over all school playing-fields at district and subdivisional headquarters even in those stations in which the various playgrounds were detached, some of them perhaps being contiguous to particular institutions.

14. I entirely agree with the views recorded by the committee, and in saying this I desire to anticipate an objection which will probably be raised and which would appear at first sight to possess a certain amount of validity, viz., that such an arrangement would interfere with the proper exercise of a function which a good head master would most certainly not be willing to

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delegate to, or even to share with, others, namely, the general control of the school athletics and the ultimate responsibility for the conduct and behaviour of his boys, whether they are in the school class-rooms or on the playing-fields.

15. The committee suggested that each school and college concerned should be represented on the local committee. In putting this forward they contemplated that in all normal circumstances the head master of each school and the principal of each college would be a member of the local committee. Moreover, it was clearly the intention of the Hygiene Committee that the local Playing-fields Committee would not interfere with the internal athletics of any institution, though they would supervise and control all external and inter-school and inter-college competitions.

16. My own experience is that the organization of school and college athletics is at present very unsatisfactory. It is very rare to find a head master or a principal who has a real grip of the situation. The determining factor in the athletic arrangements of any headquarters station, as it is also of Calcutta and Dacca, is as a rule the number of cups which ill-advised enthusiasts have offered for competition. There is no individual or body to supervise these competitions, and they are frequently not confined to educational institutions. Local clubs are started, and these bribe the best players in schools and colleges to play for them instead of for the institutions to which they belong. Unseemly squabbles and sometimes riots are by no means unknown in connexion with these competitions. Indeed I have no hesitation in saying that, unless effective measures are promptly taken to deal with the existing state of affairs, a pernicious form of athletic professionalism may establish itself so securely throughout the Presidency that it may be difficult to eradicate it. The committee's proposals represent a practical attempt to deal with an admitted and increasing difficulty.

17. I should, however, like to go further than the committee. I do not believe that the committee system contemplated by the Hygiene Committee, though undoubtedly a step in the right direction, will result in the realization of the reforms which are so urgently needed, unless the Education Department has at its disposal at least one whole-time officer of the necessary knowledge, enthusiasm and experience, who while he would be a general adviser to the department in all matters connected with the physical side of education, would be in a position to supervise and direct the work of the committees. Dr. Segard is admirably qualified and is in every way an effective officer; but he is only able to devote a certain portion of his time to the work which he does for this department. I endorse the committee's proposal that he should be Secretary to the General Advisory Committee in Calcutta, for the proposal is excellent so far as it goes; but I do not anticipate that he will be able to deal with the work which will be involved, especially when the committee system is being inaugurated, unless, as is, I understand, impossible, he devotes less time to the work of the Association which employs him. I would urge on Government the desirability of appointing at least one man of Dr. Segard's qualifications to be Adviser to the Education Department on all matters connected with the physical side of education. A start might be made with one man, but I do not think that this agency will be really sufficient. I should like to see as soon as possible one such officer for Calcutta and the Presidency and Burdwan Divisions, and another such officer for Dacca and Eastern Bengal; the latter might be attached to the Dacca Training College. In connexion with this last suggestion I would remind Government that I have already suggested that when the reorganized training college is working in its new home in Ramna one of the functions of its staff will be the control of the playing-fields of Dacca town which will be contiguous to the training college.

18. It would be beyond the scope of this letter to enter into details with reference to the appointment of Physical Directors. If Government consider that the proposal is one which is worth further consideration, I shall be happy to elaborate it. Meanwhile I would emphasize not only the importance of the question of exercise for students—if one of the results of the present educational system is not to be the physical deterioration of the rising generation—but also the danger of allowing an alien system of school and college athletics to develop unchecked and uncontrolled. It must never

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be forgotten that the Bengali student has not got behind him the generations of British sportsmanship which are behind every boy of British birth.

19. *Inspection of Educational Buildings and Hostels.*—The committee have expressed the view that the existing regulations in this regard are sufficient, but they have suggested that the inspecting officers of the Education Department are not really in a position to insist on the maintenance of a reasonable standard of sanitation in the institutions which they visit. The committee realize that the only weapon in the hands of an inspecting officer is the grant-in-aid, the removal of which he can if necessary either effect himself or try and secure in the event of his demands not being complied with; but they observe that this is an extreme step which it may not always be desirable to take. They feel, however, that greater stringency should be applied in the first instance, and they remark that under present conditions schools which are hopelessly insanitary obtain provisional recognition by the University and even pecuniary assistance from the Education Department, and that such a state of affairs is often allowed to continue for an indefinite period.

20. The committee's criticism are in my opinion entirely justified. Indeed I have no hesitation in saying that the sanitary condition of schools in Bengal is a disgrace to all concerned. The District Administration Committee reported that "almost all the private schools were overcrowded," and that their rooms, "often mere sheds, were dirty and shabby." "We have seen," the report says in another place, "sanitary arrangements which were clearly inadequate, and in the case of one Dacca school they were absolutely indescribable." "Only in the case of newer hostels," writes Dr. Segard in his first annual report, "was there anything like an attempt at keeping the sanitary arrangements in good condition. In the older hostels the fact that anyone could live there at all is little short of a miracle: that is, live there and continue their course of study at school and college." After describing the overcrowding of high and middle schools, Dr. Segard remarks that the conditions are such that "the physical vitality is simply sapped out of the students," and this in a country in which according to his diagnosis "the physique of the average schoolboy is far below that of boys elsewhere."

21. It is now some seven years since the Government of India issued the new regulations of the University of Calcutta, and these regulations, so far as the conditions which are supposed to regulate the recognition of schools are concerned, insist on school buildings being generally in a proper sanitary condition, on adequate and satisfactory latrines and urinals being provided, and on arrangements being available for a supply of pure drinking water. In spite of these regulations the recognized high schools of the University, especially the unaided high schools, continue to defy almost every principle of sanitation and hygiene. The officiating Sanitary Commissioner came to me, for example, the other day on his own initiative, and asked why nothing was done to ensure that the drinking water which was supplied to the pupils of these schools was free from contamination. He said that he himself had visited high schools, the masters and boys of which habitually drink the water of filthy tanks and streams, and he emphasized the farce of hygiene lessons given under such conditions. Dr. Bentley added that at many schools at which some attempt to purify the drinking water was being made, the most dangerous form of filter was being employed, and he told me of one case in which to his knowledge the school drinking water had become infected with cholera bacilli in its passage through the school filter. Such a simple precaution as boiling the water is apparently seldom if ever restored to. I understand that the cost of this is regarded as prohibitive, even in Government schools.

22. While the Calcutta University had undoubtedly failed to raise the general standard of sanitation in its recognized high schools, Government and the Education Department have little ground for self-congratulation in this matter. It would in fact be difficult to convince anyone who was shown, for example, over the office of the Director of Public Instruction in Calcutta that the protestations of Government in the matter of hygiene were serious. Dr. Segard recently went through my office on my request. I did

not ask him to record anything, but in his annual report I find the following:—

Most of the rooms are overcrowded as bad as, if not worse than, many of the factories which were long since condemned by the Boards of Health. In most of these offices, where there is a great deal of writing and other work that necessitates eye strain, there is far too little natural light. In most there is little or no ventilation by reason of the vast number of files that must be kept in the room.

As to overcrowding, in some rooms there were not only twice as many clerks as the room should healthily accommodate, but the rooms were also filled with almirahs holding books, files, etc., till there was little, if any, room to move around. The Bengal Library is typical of the general condition.

The light in nearly all the rooms is bad. This is partly due to windows and doors being blocked up by almirahs. It is also due to a poor arrangement of the offices. This also affects the ventilation.

This condition exists in the offices of the department from which the best thought and example are to come and make for that progress in hygiene and sanitation that is so much desired.

23. The hygienic standard of Government schools and colleges is certainly higher than that which obtains in the other institutions, but Government has still a great number of educational buildings which are exceedingly unsatisfactory. It would, for example, be difficult to find a worse school building than that which now accommodates the Hindu School—a school which not only educates the sons of many leading families in Bengal, but on which Government makes an annual profit. Some of the worst of the Government school buildings were constructed some years ago, and their replacement by more suitable structures must obviously be a matter of time; but there are many ways in which the Education Department might in connexion with the administration of Government schools do a great deal more than it is doing at present to impress upon the public and especially the rising generation the importance of health and physical development. No attempt is made, for example, to secure even that such new school and college furniture as is purchased is constructed in accordance with hygienic principles. The most unsuitable desks and benches are used in leading Government schools. It is seldom that I find a Government school or hostel really clean, and this is frequently due in part to the fact that an inadequate number of insufficiently remunerated servants are employed. The latrine accommodation at Government schools is frequently inadequate, and the latrines are not properly looked after, the servant difficulty being partly responsible for this.

24. What is needed, if any real advance is to be made, is a real attempt to rouse the popular conscience. If only the rising generation could be taught, while at school, to appreciate the value of healthy habits of life, there might be some hope; but at present even in the best schools precept is always being belied by practice, and there is an air of unreality about the whole matter. I realize that educational policy in India has been formulated in almost entire disregard of the necessary financial basis, and that while we in Bengal are busy devising new developments, we are faced with defects in our existing arrangements so deep-seated that real remedies are, even on financial grounds, far beyond the bounds of practical politics. I feel, however, that we should at least insure that such public money as we are able to spend on educational buildings should be spent to the best possible advantage; and that we should do our best by means of expert inspection to give to the public generally, and especially the authorities of non-Government educational institutions, the best possible advice in all matters relating to health. Above all it is the obvious duty of Government to be incessantly emphasizing that it is a crime to prostrate to neglect the health of the rising generation. At present we are not only meekly acquiescing in an educational scheme which crowds young men and boys into unhealthy buildings, there to inflict upon them all the strain inseparable from a senseless system of cramming for external examinations unrelieved by any of the healthy influences which characterize school conditions in Europe and America, but we are also working in some of our best schools—institutions of considerable reputation and tradition—in disregard of many of the principles which we proclaim as fundamental.

25. The committee have recommended the addition to the Sanitary Department of a Deputy Sanitary Commissioner, who would work under the Sanitary Commissioner, his duties being to inspect existing school buildings and hostels from the sanitary and hygienic point of view; to draw up general directions for the lighting, ventilation and sanitation of new school buildings;

to scrutinize from the sanitary point of view all plans for new buildings. The committee refer to the work now done by the Sanitary Commissioner in this respect, as also to the fact that under existing conditions Dr. Segard is in the habit of reporting on the sanitary condition of the buildings of such institutions as he is able to visit.

26. The committee have stated that they consider Dr. Segard's activity in this matter is valuable, and have recorded the view that he cannot advise Government effectively with reference to the physical side of education unless he knows something of the conditions under which school-boys and college students live. In the opinion of the committee there would be ample work for the whole time employment of an officer of Dr. Segard's qualifications, and the utility of the proposed additional Deputy Sanitary Commissioner would in their opinion be enhanced if he could work in consultation with an officer who had specialized in the problem connected with the physical side of education.

27. I have suggested in paragraph 17 above that there should be appointed as soon as possible one whole-time officer to act as Adviser to the Education Department on all matters connected with the physical side of education. I now desire to endorse the recommendations of the committee with regard to the appointment of a Deputy Sanitary Commissioner. Both these officers are needed, and they should work in mutual co-operation. The Deputy Sanitary Commissioner would be more specifically a medical expert. He would advise on all matters connected with educational buildings and equipment; he would make a special study of diseases to which children are particularly liable, and direct such prophylactic operations against disease as it might be possible to conduct through the agency of schools. I shall deal later with the proposals of the committee in the matter of the medical inspection of school children, and I shall then expand and complete my suggestions as regards the medical staff which Government should in my opinion employ in connexion with the administration of their educational system. It is sufficient to say here, with reference to this phase of the problem, that the Deputy Sanitary Commissioner would be in general charge of the medical inspection of school children. The Adviser on Physical Education on the other hand would be in general charge of all the organization for athletics and physical development. With the statistics collected by the Deputy Sanitary Commissioner at his disposal, he would be in a position to direct a system of physical exercise specially directed towards the elimination of certain defects and the arrest of unhealthy tendencies. He would inspect school buildings partly for his own information and partly for the information of the Deputy Sanitary Commissioner.

28. *The responsibility of Teachers with regard to the general Health of their Pupils.*—I agree with the committee in thinking that the responsibility of teachers with regard to the general health of their pupils is a matter the importance of which has not yet been sufficiently realized. The question is occupying my attention in connexion with the general question of the improvement of training institutions in Bengal. The matter is one regarding which it is not practicable to make definite suggestions in the present letter. I shall address Government separately on this subject, as soon as I have been able to draw up detailed proposals in consultation with the Principals of the Dacca and David Hare Training Colleges. Those proposals will include a scheme for the organization of first-aid classes at training institutions in co-operation with the St. John's Ambulance Association.

29. At this point I desire to emphasize again the importance of Government setting an example and, above all, of acting up to the principles which they proclaim. It is difficult, nay impossible, except by degrees to substitute good healthy buildings for bad ones. I do not advocate extravagance. Let all the new educational buildings which Government may construct be as simple and unostentatious as possible; but let them be such as to make it clear to all that the health of those who are going to use them has been considered at every point. I have stated above that I am trying to deal with the problem of increasing the sense of responsibility in teachers in consultation with the principals of the training schools. I need scarcely emphasize the importance to the teachers of being trained under conditions calculated

to impress upon them the paramount importance of health. At present both the Dacca and the David Hare Training Colleges are miserably housed, and practically no secondary school teacher in this Presidency has any chance of seeing a secondary school working in a good healthy building. Schemes for the re-establishment of both the secondary training colleges in new and suitable buildings are now being worked out. The schemes will be costly; this cannot be avoided; but my hope is that Government will take the view that the re-establishment of these institutions in healthy buildings is an indispensable preliminary to the inauguration of an era in which the people of Bengal will refuse any longer to allow the health of their children to be sacrificed to the supposed exigencies of an unsound educational system.

30. I am in complete agreement with the committee in their view that while teachers should be made to realize their responsibilities with regard to the general health of their pupils, the medical examination of school children should be entrusted to properly qualified medical men only; but this brings me to the next section of the Hygiene Committee's Report.

31. *The Medical Inspection of School Children.*—The committee have recorded the view that the regular medical inspection of school children is one of the most important school problems with which those who are interested in education in Bengal find themselves faced. The committee have also observed that the proper medical inspection of school children involves the capacity to test eyesight and to diagnose morbid conditions which can alone be possessed by those who have received an adequate medical training. By way of making a start the committee propose that upon the new Deputy Sanitary Commissioner should be imposed the task of organizing the medical inspection in Calcutta and municipalities with over 10,000 inhabitants of all school children in recognized schools for Indian pupils, and of recording the results of such inspection in accordance with a form which shall be prescribed by the Sanitary Commissioner. The committee further recommend that to enable the Deputy Sanitary Commissioner to carry out this work two qualified assistants, one a man and the other a woman, should be appointed. The Bengali members of the committee assured me that there would be no objection to the medical examination of girls, provided of course that it was carried out by a woman.

32. I endorse most heartily the recommendations of the committee in this respect. As I have said above, the first step in the direction of any real improvement is to rouse the popular conscience. Nothing will do this so effectively as a statement of facts brought to light by the medical examination of all the children of certain areas. I quite realized that Bengal has not yet attained to that stage of general development which characterized, say, England, when the compulsory medical examination of children in public elementary schools was introduced; but I do not think that the suggestion of the committee can be regarded as in any sense premature. The health conditions of Bengal are not normal. The prevalence of malaria throughout a considerable area of the Presidency is in itself a tremendous problem, and one the solution of which is being sought partly through the agency of the schools. Already Government have agreed, for example, to distribute quinine *gratis* to all the schools of a particular district. When an epidemic, such as small-pox, breaks out in a town, it is the student population, living as it does, which is the source of the greatest danger and difficulty. An expert agency is required to assist the Education Department not only in the prevention of disease among school-boys and college students, but also in establishing conditions which will make for health; and the latter object cannot possibly be attained except on the basis of a knowledge of the facts.

33. If the recommendations of the committee as regards the medical inspection of school children are accepted, and their other suggestions for the employment of a medical staff to be employed in connexion with the administration of education be approved, the following staff will have to be recruited:—

- (a) A Deputy Sanitary Commissioner.
- (b) An Adviser on Physical Education.
- (c) Two medical assistants (one man and one woman) to be employed in connexion with the medical inspection of school children.

34. The committee have suggested that the new Deputy Sanitary Commissioner should be appointed in the first instance tentatively and for a period of five years, and that he should work under the Sanitary Commissioner of Bengal. I agree with these proposals, the adoption of which will mean that the Deputy Sanitary Commissioner and the two medical assistants will really be additions to the Sanitary Department, though they will work in close touch with the Director of Public Instruction. The Adviser on Physical Education, though he will work in consultation with the new educational officers of the Sanitary Department, should be directly under and indeed part of the staff of the Director of Public Instruction. This arrangement, though not ideal, will serve to make a start. The future organization of the medical educational staff will depend on the lines on which the general administration of education is worked out. If a real self-dependent education department is evolved, it would probably be desirable that there should be a medical branch of this department; but as things are now, when education is administered partly in the office of the Director of Public Instruction and partly in the General Department, it would be impossible to inaugurate any such development. I have not yet consulted the Surgeon-General, Bengal, as it did not seem desirable to trouble him with these suggestions until I had some indication whether Government would accept them or not. If Government is inclined to view these proposals favourably, the Surgeon-General should, I think, be consulted not only as to the general lines of organization, but also as to details, e.g., the salaries which should be offered to, and the qualifications which should be required of, the proposed medical assistants. My idea is that both these officers should be Bengalis. I shall also make definite proposals for the recruitment of the Adviser on Physical Education.

35. *The Teaching of Hygiene.*—There were two points before the committee for consideration—

- (i) the provision of suitable teachers of hygiene;
- (ii) the revision of the present hygiene syllabus.

The committee appointed a sub-committee to consider the whole question.

Major W. W. Clemesha, I.M.S., *Chairman*.
 Dr. J. H. Gray.
 Rai Dr. Kailash Chandra Bose Bahadur.
 Dr. Smith Allan.
 Miss Lilian Brock.
 Shams-ul-ulama Maulvi Abu Nasr Wahid.
 Babu Sarada Ranjan Ray.
 Mr. H. A. Stark, *Secretary*.

The constitution of the sub-committee is shown in the margin. Their report is attached as Appendix B to this letter. All the recommendations of this sub-committee were endorsed by the committee, and I need not do more in this letter than deal with certain salient points which emerge in connexion with them.

36. As regards the existing syllabuses for schools for Indians, the sub-committee were generally of the opinion that the provision made for hygiene teaching in the vernacular standards was sufficient, but that what was required was better teaching and better text-books. They were careful to observe—and quite rightly—that no text-books, however simple, should be used in the lower primary stage, but that from the upper primary stage upwards certain text-books should be used for vernacular schools. The text-book recommended for standards above the lower primary stage is Dr. Kamakhya Charan Banerji's "Village Sanitation," and for the four top classes of high and middle English schools the committee recommend the use of Wren's "Health Reader." As regards the former, the sub-committee undertook and carried out the revision and improvement of the book, and recommended that it should be the only book used in all the standards above Standard III of vernacular schools. I am not at all sure that the action of the sub-committee in revising and improving the book was altogether sound, inasmuch as it will secure for the book a monopoly which on its own merits it most certainly did not deserve. From the point of view of other authors the course of action taken was not fair, and from what I have heard in the course of my tours in Eastern Bengal and from other sources there will be an outcry if we give to Dr. Kamakhya Charan Banerji's book a practical monopoly. Further, I am also doubtful whether even as revised by the sub-committee the book is sound on all points. My own view is that there is not at

present any really suitable book, and I would suggest that Government should appoint a small committee, say of three men, to prepare a suitable book. Each member of this committee should receive a fixed sum, and the book would either become the property of Government or of such publishers as contracted to publish the book on terms agreed upon between them and Government. This procedure, which has precedents, would not preclude the subsequent acceptance of suitable books by private authors. The book selected for use in the four highest classes of Anglo-Vernacular schools was in the opinion of the committee the most suitable book. The matter was very carefully considered, and the selection was made from a large number of books on health teaching. The use of this book should, I think, be recommended, but the use of other suitable books should not be precluded.

37. In this connexion it may be noted that under present arrangements there is no provision for teaching hygiene in the four upper classes of Anglo-Vernacular schools, and while recommending the use of Wren's "Health Reader" for these classes, the committee felt strongly that there should be a course of sanitation and hygiene for these standards. The matter was considered with reference to sub-section (iii) of paragraph 7 of the Government of India's Resolution No. 301 C.D., dated the 3rd February 1913, and the committee's views are recorded in paragraph 28 of their report. I entirely agree that the practical teaching of this subject should form an integral part of the secondary school course, and that in any system of a school final examination, which it may be thought desirable to introduce, provision should be made for a proper test in this subject. On the other hand, I feel with the committee that a test does not fall within the scope of the University Matriculation Examination as such, and share their apprehension that the reintroduction of such a test as used to form part of the old University Entrance Examination is not likely to lead to a real and effective study of the subject in the high school classes. The committee are, however, undoubtedly right in thinking that "under present conditions, unless sanitation and hygiene are included as subjects of examination in the Matriculation Examination, the subject will not, however good a course is prescribed, receive any serious attention either from teachers or pupils in the four upper classes of high schools." I have already emphasized the failure of the University regulations to secure a reasonable standard of sanitation and hygiene in its schools. It seems to me that the attention of the University should be invited to the views of the committee, and they should be asked to insist, as a condition of recognition, not only on the maintenance of a reasonable standard of sanitation and hygiene, but also on the provision of efficient practical instruction in the subject. If necessary, the Government of India might be addressed. As regards Government and aided secondary schools, the Education Department is in a position to insist on this instruction being provided.

38. The provision of syllabuses and text-books will not achieve any real advance, unless we can produce efficient teachers. This question was considered by the committee, who, while they recognized that the question was not one which they could deal with in a comprehensive manner, have made certain definite suggestions which I consider to be eminently practical. Briefly they recommend that a working knowledge of hygiene should be a *sine qua non* of every trained teacher, and that special hygiene teachers should be appointed to every district. It has also been suggested by the Sanitary Commissioner that a limited number of selected sub-inspectors of schools might be deputed to the Sanitary Department for a course of four months' training. This suggestion can be given effect to without difficulty. I have referred to the question of the training of teachers in paragraph 29 above, and I shall deal specifically with the question of the inclusion of hygiene in the course for all training schools.

39. The appointment of district instructors is not a matter which I am prepared to press at the present juncture, for it seems to me that very little will be effected by these officers, unless and until an agency has been created for organizing, directing and supervising their work. I have already made suggestions for the creation of the nucleus of such an agency.

40. In terms of Government letter No. 1383 T.—G., dated the 26th July 1913, arrangements have been made for the giving of instruction in hygiene and sanitation, with special reference to the prevention and cure of malaria in high schools and first grade training schools. This instruction takes the form of illustrated lectures delivered by assistant surgeons, the lectures being based on a synopsis prepared by the Sanitary Department. This department was also good enough to prepare the requisite slides and to give the lecturers some preliminary instruction in the work. I am awaiting reports from inspectors as to the working of the scheme, but I anticipate it will be found that, although a step has been taken in the right direction and some good is likely to result, there is no available means by which the success of the experiment can be truly gauged. I feel, for instance, that isolated attempts of this sort in which a lecturer is required to cover a large area can hardly be expected to produce any real effect, and that to be successful the scheme should not only be directed by competent authority, but be clearly correlated to a definite course of instruction in schools. On receipt of the inspectors' reports I shall address to Government a separate communication on the working of the scheme. For the present I shall confine myself to recording the view that the area of work for each lecturer is too large, and that there should be one lecturer for each of the Rajshahi and Chittagong Divisions and two for each of the Presidency, Burdwan and Dacca Divisions.

41. The committee recommend the appointment of a fully qualified medical woman (Indian) on a salary of Rs. 300—500 a month to each advanced hygiene and domestic economy in the schools for Indian girls in the Presidency and Burdwan Divisions. My present feeling is that this proposal is premature, and I do not see any prospect of securing a really suitable woman for the work. Moreover, if such a teacher were appointed we could not confine her work to Western Bengal, and it would not be practicable to try and make one woman cover the whole presidency. In modification of the committee's recommendation I would suggest the addition of a properly qualified woman teacher of the subject to the proposed training college for secondary teachers in Calcutta. In the matter of hygiene for girls and women, as in the matter of their physical exercise which is closely connected therewith, the first step is clearly to influence those who are going to be teachers. The duties of this proposed teacher could be so arranged that she could visit all Government training schools for Indian mistresses. It might be possible to combine this appointment with that of the instructor in physical exercises, who would work in the gymnasium, the creation of which in connexion with the proposed training college is advocated in paragraph 11 above. It would not be possible at present to appoint an Indian woman to this post, nor should I consider such an appointment either necessary at this stage or desirable. It would be necessary to provide for this post at least the pay offered to an Inspectress of Schools.

42. The committee drew up a special syllabus for adoption in European boys' and girls' schools in Bengal. The course, which is divided into three parts, viz., (a) Physiology, (b) Hygiene, (c) Prevention of common and dangerous diseases in this country, is intended to indicate generally the ground to be covered. I recommend that instruction in hygiene on the basis of the general syllabus drawn up by the committee shall be made compulsory in all European schools, and that proper provision for such teaching should be made an indispensable condition of Government grants-in-aid.

43. The conference which sat at Simla in July 1912 drew the special attention of Government to the necessity for the inclusion in the curricula of European schools of courses of instruction in general hygiene and physiology, including special instruction in temperance and the effects of drugs and intoxicants on the human body. It is unnecessary for me to say more at present than that the matter will receive the attention it deserves and that instructions will be issued emphasizing the necessity for the detailed syllabuses on physiology and hygiene, which will be drawn up on the basis of the general syllabus indicated above, being devised so as to lay special emphasis on this aspect of the subject.

44. The Simla Conference of 1912 also recommended the appointment of medical officers to examine the pupils of European schools at least once a year, and that these medical officers should have certain powers. With regard to the latter part of the recommendation I have expressed my views in my letter No. 111 T., dated 20th May 1915, and it is unnecessary for me to repeat them here. The majority of boarding schools for Europeans do make adequate arrangements for the medical supervision of their pupils. It would not be difficult for these schools to hold regular medical examinations of their pupils, and to submit to the special medical officer of Government appointed for the purpose the results of these examinations on prescribed forms and at stated intervals. I think that boarding schools should be required as a condition of receiving Government aid to hold regular medical inspections of all their pupils, whether boarders or day scholars, and to submit the necessary returns to Government. As regards day schools for European pupils, it will be necessary to insist that, as a condition of receiving Government assistance, they shall arrange for the periodical medical examination by a competent authority of the children under their charge and the submission to the Education Department of the required information in the prescribed form. The finances of European schools generally are not such as to enable them to undertake the whole of the additional charges which such arrangements will involve, but I should be prepared to recommend to Government that they should agree to bear the whole of the additional cost involved in the regular medical examination of children in European schools. It has not been possible to arrive at any estimate of the additional charges involved, as this could not be done without approaching the various institutions concerned, which would not be advisable until the views of Government with reference to this suggestion are known. I would add that the regular medical examination of children in European schools would seem to be involved in the acceptance of the proposals set forth in paragraphs 31—34 above, but the actual examination could not be carried out by the staff proposed in those paragraphs. It would not be desirable to impose upon Indian assistants the task of examining European boys and girls.

45. The committee have recorded two special recommendations in respect of European schools for girls, viz.—

- (a) that educational authorities should encourage pupils of higher elementary schools for Europeans to take the full supplementary domestic course after they had passed Standard VI, and that in lower secondary schools they should be encouraged to form supplementary classes in domestic economy after a certain stage of general instruction; and
- (b) that arrangements should be made to have on the staff of each girls' school a lady who is duly qualified to inaugurate and conduct classes in nursing and first-aid to the injured.

I endorse both these recommendations, and I have no doubt that school authorities will do what they can to meet the department with reference to them. As pointed out in paragraph 22 of the committee's report, the Secretary to the St. John's Ambulance Association has very kindly promised to secure the assistance and co-operation of the association in any endeavour which Government might decide to make for the adoption of work in which the association are interested. The wording of the second resolution is a little vague. It would not of course be necessary for each school to employ a whole-time member of the staff to do this work. In centres like Calcutta and Darjeeling it should be possible for the schools either to make arrangements for a system of visiting teachers, or possibly they might combine in the organization of some central classes.

46. In chapter X of their report the committee deal with the matter of the provision of equipment for the teaching of hygiene. The committee have suggested that a sum of Rs. 52,000 should be allocated for the provision of lanterns, charts, pictures, and diagrams. I agree with the recommendation of the committee.

47. In the concluding chapter of the report of the committee will be found a summary of the recommendations with regard to the distribution of

the Imperial non-recurring grant for hygiene, playgrounds, etc. The various items have been referred to in the course of this letter, and it only remains for me to ask Government to accord their formal approval of the proposed distribution. It will be observed that Rs. 8,000 have already been spent. The expenditure of this sum was incurred with the previous consent of Government. Had condition been normal the whole of the unexpended balance would have been available for utilization during the current year; but as Government are aware, it has been practicable to grant only a very small portion of the total sum of the unspent balances of Imperial non-recurring grants of previous years. Out of the 8 lakhs provided under this head in the current year's budget, it has been found practicable to allot only Rs. 34,500 for the provision of playgrounds. Should any unexpected savings accrue during the course of the year, I shall endeavour to set them aside for purposes connected with the improvement of the hygienic aspect of school education and the organization of games, etc. I have stated in paragraph 10 above that I shall be unable to make the requisite grant towards the playground scheme of the Young Men's Christian Association, but I think that if Government approved the proposal, the Young Men's Christian Association authorities would be prepared to proceed with the scheme on the understanding that Government would be prepared to regard the proposed grant as a first charge on any funds that may be at their disposal in the near future. As anticipated by the Government of India in their letter No. 1139, dated 24th June 1913, there has been no difficulty in finding suitable objects for the expenditure of the sum of 3½ lakhs assigned for non-recurring purposes in connexion with "hygiene, gymnasia, playgrounds, etc." I have tried to show that no real advance will be possible along the lines indicated in the communications from the Government of India on the subject unless an allotment of funds for recurring expenditure is made. The non-recurring grant can be spent without difficulty and with good effect. The Education Department and all concerned are very grateful indeed for the grant made by the Government of India, and I personally venture to express my appreciation of the views expressed by the Government of India on the subject of the vital importance of emphasizing the hygienic aspect of the education problem. I feel certain that the Government of India will agree that we shall only have touched the fringe of the problem, and that no radical improvement is possible unless and until sufficient funds are provided for recurring expenditure on this branch of education.

48. I append a statement showing the estimated cost of giving effect to the recommendations of the committee. As I have explained in this letter, I do not think that it would be practicable to do at once all that the committee recommend, and I would suggest that for the present a sum of Rs. 50,000 should be provided annually for the encouragement and improvement of physical education. This sum has been roughly calculated to include the cost of the appointments recommended in this letter and the cost of the provision of the regular medical inspection of school children.

49. In conclusion I desire to express regret for the delay which has attended the submission of this report. The report of the committee was ready in its final form on the 25th February 1915, and it has not been possible for me owing to other urgent work to deal with the matter earlier.

50. Finally I beg to record an expression of appreciation of the valuable work done by the committee. The committee was composed of officials and non-officials whose ordinary duties and business permit of little time for extraneous work, and that they have devoted themselves assiduously to the inquiry entrusted to them is evidenced by the very practical report which they have submitted.

I have the honour to be,

SIR,

Your most obedient servant,

W. W. HORNEILL,

Director of Public Instruction, Bengal.

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Statement of Recurring Expenditure proposed by the Hygiene Committee.

	Rs.
(1) Appointment of a new Deputy Sanitary Commissioner tentatively for a period of 5 years— Rs. 1,100 × 12.	13,200
(2) Appointment of a whole-time officer of Dr. Segard's qualifications (Physical Director)—pay calculated at the rate of that of a Deputy Sanitary Commissioner (Rs. 1,100) <i>minus</i> his staff allowance of Rs. 200 — Rs. 900 × 12.	10,800
(3) Appointment of two qualified assistants (one a man and the other a woman) to the Deputy Sanitary Commissioner of the rank of Assistant Surgeons— Rs. 224 × 12 × 2.	5,376
(4) Appointment of a special teacher trained in hygiene for each district, to be called the District Instructor in Hygiene. These officers will be selected from among the sub-inspectors of schools, whose places will be filled by new recruits— Rs. 71-4 (average pay of a sub-inspector) × 26 (district) × 12.	22,230
(5) Appointment of two lady doctors (under the two inspectresses of schools) for Indian girls—pay Rs. 350 — 500— Rs. 450 × 2 × 12.	10,800
Total	62,406

Statement of Recurring Expenditure as proposed in this letter.

	Rs.
(1), (2) and (3) as above	29,376
(4) Lump provision for travelling allowance for (1), (2) and (3).	5,000
(5) Training of a selected number of sub-inspectors of schools each year.	4,450
(6) Appointment of a qualified lady teacher of hygiene and physical exercise to the Secondary Training College for Women, on Rs. 400—20—500.	5,832
(7) Medical inspection of European schools, etc.	5,342
Total	50,000

Statement of Research Expenditure proposed by the Hygiene Committee.

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COMMITTEE ON SCHOOL AND COLLEGE HYGIENE.

SCOPE OF ENQUIRY.

	PAGE.
1. Supply of playing fields	1
2. Inspection of school houses and hostels	1
3. Examination of building plans from hygienic point of view	1
4. The training of teachers so that they may be competent to teach hygiene practically and further to inspect scholars—eyesight, etc.	3
5. The preparation of a practical course of instruction in hygiene in elementary and secondary schools	4
6. To devise a system under which the organization of the St. John Ambulance Association may be co-ordinated with the measures employed by the Department of Public Instruction to impart instruction in school and home hygiene	7
7. The appointment of Directors of Physical Training who may be whole-time officers or peripatetic	7
8. The appointment of "games" masters, and instructors in physical exercises, for particular schools or groups of schools	7

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STATEMENT OF WHAT HAS BEEN DONE SO FAR IN RESPECT OF THE
POINTS ENUMERATED UNDER "SCOPE OF ENQUIRY".

1. SUPPLY OF PLAYING FIELDS.

Provides that special grants may be given for the purchase, levelling and improving of playing fields. Want of funds has restricted the employment of this rule.

Rules and Orders, page 516, section 23 (c).
Rules and Orders, page 156, section 13 (c). Rule 10 (a) sanctioned by Bengal Government in its No. 95T.—G. of 10th May 1901.

Inspectors are required to note whether schools have any play-ground or gymnasium.

2. INSPECTION OF SCHOOL HOUSES AND HOSTELS.

Inspection officers are required by rule 9 to examine the nature and state of the school buildings and their sanitary arrangements, and whether the latter are looked after: by rule 10(b) to examine the sanitary condition of the school surroundings; whether there are any open drains, etc., near, and whether there are heaps of rubbish or sweepings in the school compound.

Inspection rules sanctioned by the Government of Bengal in their No. 95 T.—G. of 10th May 1901.

In respect of hostels, rule 12 requires an examination of whether they are fit places of residence for pupils with regard to sanitation, discipline and morality.

3. EXAMINATION OF BUILDING PLANS FROM HYGIENIC POINT OF VIEW.

(a) Plans of Educational buildings.

1. Before a building can be taken in hand by the Public Works Department, the plans must have received the approval of the Sanitary Department. In case of larger buildings the same department has to inspect the site and its immediate surroundings.

Circular No. 176 of 23rd Decem-
ber 1905.

For the purpose of the Sanitary Department later orders require that the plans put before the Sanitary Commissioner should among other things show (1) a rough sketch of the compound, indicating the drainage arrangements, position of latrines, etc., and (2) the number of occupants for whom the house is intended. In Calcutta cases the distance of the nearest sewer is to be shown in the site plan.

Circular No. 125 of 5th July 1906.

2. In hostels the minimum area to be allowed for each student is 60 square feet, and in dormitories 50 square feet. In dormitories there should be arches between the rooms to allow of free perfilation of air. Damp-proof courses must be provided.

Director of Public Instruction's
Circular No. 51 of 26th February 1906.

(b) Accommodation lighting and ventilation of class rooms.

This circular gives detailed instructions regarding the size of class rooms, the number of square and cubic feet necessary to each pupil, the position of desks and benches in relation to the direction from which light enters the room, and miscellaneous directions for securing proper ventilation and lighting.

Circular No. 129 of 19th July 1904.

European Code, art. 37 (b) and (d). Grants are given to European schools on condition—

(a) That the school premises are properly drained and healthy in other respects, that the buildings are well constructed and safe, that the rooms are properly lighted and (if need be) warmed, and that they are as far as possible well arranged for teaching; that in the case of boarding schools proper arrangements are made for boarders, that the school is provided with all necessary offices, and that these and the premises generally are kept clean; that it contains sufficient accommodation for the scholars attending school.

(b) That sufficient provision is made for physical training, which shall in boys' schools fit pupils to join a cadet corps.

THE UNIVERSITY AND HYGIENE.

As conditions upon which depend the affiliation of colleges and the recognition of High schools, the Regulations of the Calcutta University required—

- (a) That the buildings are suitable, and in proper sanitary condition.
- (b) That the neighbourhood and surroundings are free from objection.
- (c) That the arrangements for furniture, lighting and ventilation protect the eyesight and the general health of the pupils.
- (d) That the sanitary conveniences are adequate and are kept in good order.
- (e) That arrangements are made for the supply of good drinking water, and that facilities are provided for refreshments during recess.
- (f) That the class-rooms are not overcrowded.

N.B.—Before the University Regulations of 1906 came into operation, for the Entrance and First Arts examinations, chapters on Hygiene, including Malaria, Small-pox, etc., formed part of the text-books in the subject of English. This was useful, as in the days under reference Hygiene was not being taught in Primary and Middle schools. As things now are, instruction in Hygiene is not imparted in any of the classes proper to a High school or college. Peripatetic lecturers on malaria have just been appointed for High Schools as an experimental measure.

OTHER SANITARY MEASURES.

(a) Drinking water.

(a) Ordered that samples of drinking water in Government High schools and colleges should be periodically submitted for analysis by the Chemical Examiner to the Government of Bengal. In cases where the quality of the water is suspected to be the cause of an epidemic disease, samples of it should be sent also to the Sanitary Commissioner, Bengal.

(b) Communicated to the authorities of schools and colleges in which lectures were being given on Sanitary Science the request of the Inspector-General of Civil Hospitals, Bengal, that they should arrange for the delivery of one or two lectures on Tuberculosis, setting very clearly before the students the fact that the disease is contagious, and is often communicated by the habit of spitting indiscriminately.

(c) In 1903-04 the Inspector of Schools, Orissa, distributed to all schools a leaflet in Oriya setting forth the claims of vaccination, and the danger incurred by inoculation by village doctors.

(d) On the outbreak of plague in Calcutta in 1896-97 educational authorities were requested to encourage students to be inoculated as a precaution against plague.

(e) Bengal Act No. VI of 1906 gives any Magistrate power to remove a house of ill-fame from the vicinity of a hostel or mess.

(b) Sale of Quinine.

The Government of Eastern Bengal and Assam, in their Resolution No. 9152F. of 30th August 1906, required all District Officers to urge village school-masters of Board schools or class I Lower Primary schools and Circle schools to undertake the retail sale of quinine in powder or tablets under the advance system. Most teachers refused to undertake the sale, as the profits were not commensurate with the trouble involved.

To popularise the use of quinine, the Sanitary Commissioner of Eastern Bengal and Assam in 1911, through Departmental Inspecting Agents, distributed to schools 100,000 copies of an almanac in the vernacular, in which were interpolated simple sentences regarding the benefit to be gained from the use of quinine.

(c) Religious classes.

In the nineties there were held at the Calcutta Madrasah "religious classes" in which instruction was given in Muhammadan ritual and socio-religious ceremonial. The sanitary and hygienic bearing of such instruction has its merits.

4. GENERAL SYLLABUS FOR SANITATION AND HYGIENE IN FIRST GRADE TRAINING SCHOOLS IN WEST BENGAL.

FIRST YEAR.

Hygiene.—The health and physiques of children as affected by school conditions. Common physical defects and ailments, and their treatment at school.

SECOND YEAR.

Course of lectures by Medical officer.—One lecture to be given each alternate week, and to be revised by the tutor in the following week.

THIRD YEAR.

Course of lectures by Medical officer.—One lecture to be given each alternate week, and to be revised by the tutor in the following week.
(Special inclusion of Malaria, its prevention and cure.)

N.B.—The course of lectures by a Medical officer have been arranged for with effect from the current month. The Peripatetic Lecturer on Malaria referred to in "N.B." page 2 will lecture also to the students of first grade Training schools.

HYGIENE FOR GURU-TRAINING SCHOOLS IN WEST BENGAL.

[Summarised from the Senior Teachers' Manual.]

Germes or bacteria. Disease bacteria. The healthy body resists bacteria. Disinfectants. Disinfection. Drainage. Filtration of water. Vaccination and inoculation. First Aid for cuts. Artificial respiration. Drugs. Intoxicants.
Composition of air. How air is polluted. Importance of fresh air.
Home sanitation. What conditions are sanitary.
Essential parts of food eaten. Importance of variety in diet. Rice. Unripe fruit.
Food to be taken at regular intervals.
Village sanitation
Malaria: its causes, prevention and cure.
Cholera.
Bites by rabid animals, snakes and insects.
Plague communicated by fleas and bugs.
Small-pox. Consumption.

HYGIENE AND DOMESTIC ECONOMY FOR WOMEN TEACHERS.

[Summarised from the Senior Teachers' Manual.]

Bacteria.
Rice. Food, natural and artificial, for infants.
Sick nursing.
Treatment of ordinary ailments.

IN GURU AND FIRST GRADE TRAINING SCHOOLS IN WEST BENGAL.

1. Drill as in Sharp's Book.
2. Easy gymnastic exercises.
3. Games as a factor of school life.

SYLLABUS OF GURU-TRAINING SCHOOLS, EASTERN BENGAL AND ASSAM.

Physical training.—Deshi Kasrat.—4 Nihurs, 6 Baitaks, 10 Dons. Games.
Sanitation and hygiene.—As in the Middle Vernacular Science Reader.

5. HYGIENE FOR BOYS IN WEST BENGAL.

[Summarised from the Syllabus of Studies under the Vernacular Scheme for Schools.]

Standard I.—Age about 8 years.

The object is to acquaint children with some simple rules of health, by talks about (a) the necessity of personal cleanliness; (b) of keeping rooms clean; and (c) of pure water, fresh air, sunlight and ventilation; the danger of shutting up sleeping-rooms, of insanitary and dirty habits, e.g., spitting; the necessity of exercise.

Standard II.—Age about 9 years.

An expansion of the subjects taught to standard I; instruction in how simple complaints, wounds, snake-bites, burns, etc., should be treated; how a drowning person should be handled; how infection and contagion may be avoided, etc.

Standard III.—Age about 10 years.

- (a) A rapid revision of the course arranged for standards I and II.
- (b) *Air.*—Its composition. Sources of impurity. Respiration. Combustion. Danger of foul air. Ventilation of rooms.

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(c) *Water*.—Natural waters: rain water, wells, tanks and rivers. Sources of impurity. Methods of purifying—filtering; boiling. Characters of good drinking water. Danger of drinking impure water.

(d) Abuse of drugs and intoxicants.

Standard IV.—Age about 11 years.

(a) *Dwelling house*.—The situation of the dwelling-house. Position of the kitchen, privy, stables and cow-sheds. Importance of clearing the ground of *jungle*, and filling in stagnant pools round about the house. Drainage round house. Avoidance of insanitary acts in the vicinity of the house. Disposal of refuse and night-soil. Disposal of the dead.

(b) *Exercise*.—Need for. Hours of exercise. Effects on tissues of the body. Excessive exercise to be avoided.

(c) Abuse of drugs and intoxicants.

Standard V.—Age about 12 years.

(a) *Food*.—Need for. Organs of digestion; enzymes. Different kinds of food-stuffs (proteids, oils and fats and carbo-hydrates and salts and their respective values). Milk as typical food. Various articles of food commonly used in India: cereals and pulses, potatoes and other vegetables; fruits (unripe and over-ripe) and spices. Quantity of food. Average diet scale for a native of Bengal. Regularity. Effects of over-feeding. Cooking; cleanliness of cooking vessels.

(b) *Village sanitation*.—Causes of the insanitary condition of a Bengal village, and their influence on the prevalence of malaria, (1) *jungles*; (2) filthy tanks and too numerous surface collection of water; (3) too close proximity of cultivated lands to dwelling-houses; (4) bad drinking water; and (5) inefficient drainage, etc. Measures for improved sanitation.

(c) A brief account of malaria and cholera; their causes, treatment and prevention.

(d) Abuse of drugs and intoxicants.

Standard VI.—Age about 13 years.

(a) *First aid to the injured*.—Treatment of a case of drowning. Burns. Bites by rabid animals and poisonous insects. Snake-bites.

(b) *Insects and pests*.—Mosquitoes and fleas; common diseases caused by them. Preventive measures.

(c) Brief account of plague, small-pox and phthisis; their causes and prevention. Isolation of patients. Vaccination and inoculation. Transmission of disease. Disinfection.

(d) Abuse of drugs and intoxicants.

N. B.—The work throughout these standards should be made as practical as possible. Hardly any value attaches to this subject, unless it is taken in a practical manner. This will only be possible in respect of all branches of the subject in boarding schools, but day schools may nevertheless do much in this way.

HYGIENE AND TEMPERANCE IN EASTERN BENGAL AND ASSAM.

CLASS IV.

Use of pure water in prevention of cholera. Fever and its prevention. The mosquito (*Culex* and *Anopheles*). Use of quinine. Small-pox and vaccination.

CLASS V.

Simple oral lessons on temperance.

CLASS VI.

Hygiene.—To be taught orally from a short book on the subject.

Temperance.—Oral lessons, indicating the evils of greediness, alcoholic drink, and the abuse of tobacco and drugs.

CLASS VII.

Hygiene.—Completion and revision of work of class VI.

Temperance.—As in class VI.

HYGIENE AND DOMESTIC ECONOMY FOR GIRLS IN WEST BENGAL.

[Summarised from the Syllabus of Studies under the Vernacular Scheme for Schools].

Standard I.—Age about 8 years.

Bathing, clothing, necessity for cleanliness. Simple laws of health, such as those relating to rest, exercise, sleep, etc.

Standard II.—Age about 9 years.

The whole method of keeping the hut or house and its surroundings clean.

Food.—Cleanliness to be observed. Cleaning of utensils. Supply of good water for cooking food. How to ascertain when fish, vegetables, etc., are fresh. The cooking of rice, and the advantage of eating it warm.

Sleep.—Regular hours of sleep. Disadvantages of excessive sleep in the day-time. Use of mosquito curtains. Airing and sunning of bedding and blankets.

Standard III.—Age about 10 years.

Kitchen.—The cleaning of utensils, preparation of vegetables and rice for cooking.

Washing of clothes.—Ventilation and sunlight. Sunning and airing of bedding, mats, etc.

Abuse of drugs and intoxicants in districts in which the consumption of drugs and intoxicants prevails among women.

Standard IV.—Age about 11 years.

Kitchen.—Full preparation of rice in all stages from the paddy.

Water.—Danger of drinking impure water. Importance of boiling and filtering water.

Care of infants.—Bathing: use of mustard oil; cleanliness of clothing; preparation of food; sleep. Proper treatment and handling of infants.

Abuse of drugs and intoxicants in districts in which the consumption of drugs and intoxicants prevails among women.

Standard V.—Age about 12 years.

(a) *Village sanitation*.—Causes of the insanitary condition of a Bengal village, and their influence on the prevalence of malaria—(1) *jungles*; (2) filthy tanks and too numerous surface collection of water; (3) too close proximity of cultivated lands to dwelling-house; (4) bad drinking water; and (5) inefficient drainage, etc. Measures for improved sanitation.

(b) A brief account of malaria, its causes, treatment and prevention.

(c) *Sick-nursing*.—The sick-room: necessary furniture, cleanliness, ventilation, bedding, washing of patients. Food of patients.

Details of nursing, such as the giving of medicine, use of the thermometer, changing of sheets, the use of disinfectants, etc.

(d) Abuse of drugs and intoxicants in districts in which the consumption of drugs and intoxicants prevails among women.

Standard VI.—Age about 13 years.

Treatment and symptoms of ordinary ailments, such as coughs, colds, fevers, etc.

Where no medical aid is forthcoming, treatment of cholera, plague, etc.

Treatment of accidents: Burns, bruises, scalds, cuts, snake-bites, etc.

Sick-diet.

Abuse of drugs and intoxicants in districts in which the consumption of drugs and intoxicants prevails among women.

N. B.—The work throughout these standards should be made as practical as possible. Hardly any value attaches to this subject, unless it is taken in a practical manner. This will only be possible in respect of all branches of the subject in boarding schools, but day schools may nevertheless do much in this way.

HYGIENE FOR GIRLS IN EASTERN BENGAL.

CLASSES I TO IV.

Nil.

CLASSES V TO VII.

To embrace such subjects as cleanliness, ventilation, exercise, filtered water, drains, care for the sick, and care of children.

CLASSES VIII AND IX.

Some such work as "Susrusha" or "Santanpalan."

SYLLABUS OF DOMESTIC ECONOMY AND HYGIENE IN EUROPEAN GIRLS' SCHOOLS.

- European Code, Appendix III (article 7). *Elementary schools*—As a supplementary subject for girls Cookery and general house management, sick-nursing and dispensing.
- European Code, Appendix III (article 8). *Secondary schools*:—Elementary Physiology, including Hygiene; the elements of housewifery.

PHYSICAL CULTURE FOR BOYS.

- I.—Drill | II.—Gymnastics.
III.—Organized outdoor games.

I.—DRILL.

Drill is not to be Military drill. It is to consist of such exercises as call into play all the muscles and limbs of the body. It is to be taught daily after school hours (in winter during the recreation interval) for half-an-hour. It is a subject compulsory on all, and it is to be taught from Sharp's Drill Book, Part I, of which is for standards I—III; Part II, for standards IV—VI; and Part III, for the IV to I classes of high schools.

In Director of Public Instruction's office file No 5, page 9 of 1911, it was contemplated that Dr. Gray should prepare a drill book to supersede Sharp's Drill Book.

In infant classes there is no set drill. The physical exercises for them are found in action songs connected with games. In Standard I the exercises aim at counteracting such habits as sitting with the shoulders rounded and the chest contracted. In Standard II there are more advance exercises than in Standard I.

In Eastern Bengal and Assam the following is the scheme for drill:—

Class.	Course.	Number of hours a week.
I	Deshi-Byayam—Nihurs and Baithaks ...	1½
II	Deshi-Byayam—Nihurs, Baithaks and the first four Dands...	2
III	Deshi-Byayam—The whole ...	2
IV	Deshi-Byayam—The whole ...	2
V	Deshi-Byayam—The whole ...	2
VI	Deshi-Byayam—The whole. Marching ...	1
VII	Deshi-Byayam—The whole. Marching, extension motions	1
VIII	Deshi-Byayam—Marching, extension motions ...	1
IX	Extension motions (compulsory), and either Deshi-Byayam	
X	or English gymnastics ...	1

* Where good action-songs can be taught, they may, with the Inspector's permission, be included as alternative with Deshi-Byayam for one hour a week in this class and upwards.

II—GYMNASTICS.

Arrangements were made for two non-commissioned officers of British regiments to instruct at the Dinapore Regimental Gymnasium and at the Calcutta Madrasah Gymnasium, native drill masters in Indian schools. These were to come in for training in two batches, and the course of instruction was to be for six weeks.

The Dinapore Centre is now removed from the influence of the Director of Public Instruction, Bengal, and the arrangements made for the Calcutta Madrasah Centre have been revised in so far as instruction is given by Dr. Gray at the Young Men's Christian Association Gymnasium attached to Overtoun Hall. Very few non-Government schools have sent their drill masters for instruction.

In Dacca and Rajshahi there are four peripatetic teachers of Deshi-Kasarat who are now maintained by District Boards.

In several Government High schools and in a percentage of Aided and Unaided High schools there are gymnasiums—some in the open and others under cover. In the average the apparatus is unsuitable and in inefficient condition.

III.—ORGANIZED GAMES.

In a large number of schools and practically in all colleges there are Athletic Clubs. They are maintained by subscriptions and by Athletic Club fees levied on pupils. In Government High schools these fees are fixed by the Department, and failure to pay them may cause the defaulter to be struck off the rolls.

Government subsidises Athletic Club funds in Government schools to the extent of the Government letter No. 2872 of amount raised in a year from Athletic Club fees. In some cases—but rare—a master has charge of the games.

In many mufassal places playing-grounds are not obtainable, or are too small for football. Under the grant-in-aid rules—rule 28(a)—money assistance can be given for the purchase, levelling or enlarging of playing-grounds. Of late years it has become the fashion to have football league games and tournaments at which successful teams are awarded trophies or prizes.

Encourages indigenous games; but they have gone out of fashion, and it is doubtful whether Inspecting officers pay sufficient attention to the recreations of school children.

Sanctioned a games mistress for the Government Dow Hill School for Girls, Kurseong.

6. AN ALLIANCE BETWEEN EDUCATIONAL INSTITUTIONS AND THE ST. JOHN'S AMBULANCE ASSOCIATION.

In 1901 a class was opened at the Calcutta Madrasah (Anglo-Persian department) under the auspices of the St. John's Ambulance Association. Forty pupils joined it, and 36 of them obtained the First Aid certificate of the Association.

7. THE APPOINTMENT OF DIRECTORS OF PHYSICAL TRAINING.

Since 1908 in Bengal there has been a Director of physical training. He is on the staff of the Young Men's Christian Association. His duties are to advise the Director of Public Instruction in a general way in matters relating to physical culture, and to inspect drill, gymnastics and games in the course of tours of inspection.

8. THE APPOINTMENT OF "GAMES" MASTERS, AND INSTRUCTORS OF PHYSICAL EXERCISES FOR PARTICULAR SCHOOLS OR GROUPS OF SCHOOLS.

Games masters are very rare. A games mistress and instructress in physical exercises was appointed to the Dow Hill School for Girls, Kurseong, under sanction of Government letter No. 770, dated 31st January 1913.

In all Government High schools and in Aided High schools there is a drill and gymnastic master. Some drill masters have been through a course of instruction in Drill and Gymnastics under a non-commissioned officer of a European regiment or under Dr. Gray at the Gymnasium attached to Overtoun Hall, Calcutta. In Primary and Middle schools drill is taught according to Sharp's Drill Book, or by teachers who have received instruction in drill at Guru-training and first grade Training schools, or by teachers who have instructed themselves by studying Sharp's Drill Book. It is generally admitted that the drill classes are particularly ineffective.

SUBJECTS SUGGESTED FOR CONSIDERATION BY THE COMMITTEE.

1. *The supply of Playing Fields.*—Inspectors may be asked to look into the requirements of their Divisions and report to the Director of Public Instruction, Bengal, roughly what sum of money is called for to supply playing fields in their respective jurisdictions. Much depends on what allotment the Imperial Government is prepared to make for the purchase, or the enlargement, or the levelling, of playing fields.

2. *The medical inspection of schools, hostels and pupils.*—On the warranted assumption that professional knowledge is essential to the efficient inspection of the sanitary condition of schools and hostels, and of the eyesight and general state of health of pupils, the questions for settlement are:—

- Who is to do the inspecting?
- Who is to take the action that should be taken upon inspection reports, and by what means may he enforce obedience to the orders issued as a result of the report.
- What headings should there be in the chart to be used in recording the medical examination of pupils?
- Should not physical measurements be recorded?

3. (a) *The examination of building plans from the hygienic point of view.*—The departmental rules are ample, but of course do not affect school-houses that were built before the rules were framed. It is notorious that a large number of schools are overcrowded. It is suggested that when grants-in-aid are given the maximum number of pupils to be on the rolls of the school should be stated, and that it is not exceeded should be imposed as a condition of the grant. If a larger number of boys is to be admitted, a corresponding increase in class-rooms must first be provided.

(b) Persistent efforts should continue to be made to secure the regular submission for analysis of samples of drinking water of doubtful purity; to encourage the use of quinine; and to instruct pupils on the contagious character of tuberculosis, &c.

(c) Special attention should be paid to the conditions under which pupils study at night, whether at home or in a hostel.

4. *The training of teachers to enable them to impart practical knowledge of hygiene, and finally the inspection of scholars.*—The curriculum and equipment of training schools may be improved so as to give a more practical turn to the instruction now given in them in Sanitation, Hygiene, and Physical Culture.

5. *Instruction on Hygiene and Sanitation in Elementary and Secondary schools.*—The present syllabuses of progressive studies in Hygiene and Sanitation are well schemed; but it is doubted whether the teaching imparted by untrained and possibly ill informed teachers is efficient. It is regrettable that in the classes (IV to I) proper to high schools, Sanitation and Hygiene have ceased to be taught.

6. The Committee might consider which promotes the physical well-being of pupils in primary schools—sitting on benches, or sitting on the floor. It is suggested that it is better that they should sit on the floor, and use low benches for desks.

7. Generally it is conceded that the people of the country are particular in the matter of personal cleanliness, but that they have very inadequate notions of communal cleanliness. Commonly they wash their mouths and bathe in fouled water, and are insensible to the necessity of segregation in the case of contagious diseases. Steps should be taken to counteract their ignorance in these important matters.

8. It is most desirable that advantage should be taken of the organization of the St. John Ambulance Association, although its operations are mainly restricted to the larger towns.

9. The importance of an expert adviser in physical education cannot be over-rated, and there should be such an expert to give the direction to physical culture in each Province.

10. The activities of the Young Men's Christian Association in the departments of Physical Culture and Technical Instruction may be assisted by grants-in-aid from Government.

REPORT

OF THE

COMMITTEE OF ENQUIRY

INTO

SCHOOL AND COLLEGE HYGIENE.



CALCUTTA :

BENGAL SECRETARIAT PRESS

1916.

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TO

SCHOOL AND COLLEGE HYGIENE



CALCUTTA

BEHAL SECRETARY

1918

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The Hon'ble Mr. W. W. HORNELL, M.A., Director *President.*
of Public Instruction, Bengal.

Major W. W. CLEMESHA, I.M.S.	...	...	...	} <i>Members.</i>
Dr. J. H. GRAY*	...	...	...	
Rai Dr. KAILASH CHANDRA BOSE Bahadur, C.I.E.	...	...	...	
Col. B. H. DEARE, I.M.S.	...	...	...	
Dr. SMITH ALLAN	...	...	...	
Miss LILIAN BROCK, B.A.	...	...	...	
Babu SARADA RANJAN RAY, M.A.	...	...	...	
Mr. H. A. STARK	...	...	...	... <i>Secretary.</i>

* On the retirement of Dr. J. H. Gray from the post of Advisor for Physical Education to the Government of Bengal, his place on the Committee was taken by his successor Dr. Christian P. Segard.

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REPORT
OF THE
COMMITTEE OF ENQUIRY
INTO
SCHOOL AND COLLEGE HYGIENE.

CHAPTER I.

Introductory.

THE orders under which the committee were appointed are contained in letter No. 1972 T.—G., dated 22nd September 1913, from the Government of Bengal in the General Department. The Government of Bengal desired the committee to investigate the conditions of school and college hygiene on the lines generally indicated in paragraph 7 of the Government of India's Resolution No. 301 C.O., dated 21st February 1913.

2. In the resolution referred to above the Government of India dwelt among other things on the importance of the study of hygiene to the rising generation and commented on the comparatively small attention paid to the subject. They suggested that Local Governments should institute a thorough enquiry by means of a small committee of men with some practical experience and insight into educational problems both from the physical and intellectual standpoints.

The Government of India's Resolution.
A Committee of Enquiry.

3. In the scope of the enquiry generally indicated by the Government of India, the following items were included as important matters for investigation :—

The scope of the enquiry.

- (i) The sanitary condition of school houses, hostels and other places where pupils reside.
- (ii) The professional examination of building plans from the hygiene point of view.
- (iii) The introduction of a simple and more practical course of hygiene ; whether it should be a compulsory subject in the various curricula leading to school-leaving certificates, and whether it should be recommended to universities as part of their matriculation examination.
- (iv) The inspection, where possible, of male scholars, with special reference to infectious diseases, eye-sight and malaria.
- (v) The length of the school day, home studies, and the effect upon health of the present system of working for formal examinations.
- (vi) The requirements in the way of recreation grounds, gardens, gymnasia, reading-rooms, common-rooms, etc.
- (vii) The inspecting and administration agency required, the possibility of co-operation with existing organisations and the provision of funds.

4. The committee were furnished with a printed memorandum explaining briefly what the Education Department of Bengal had attempted in respect of the points enumerated by the Government of India.

A memorandum of the present position.

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5. The committee were informed that the Government of India had made a non-recurring grant of Rs. 3,50,000 for educational hygiene, gymnasia, play-grounds, swimming baths, gardens, reading-rooms, common-rooms, etc., and they were invited to draw up a scheme for the distribution of this grant.

CHAPTER II.

6. In deciding the programme of work, the committee kept in view the peculiar needs of the Presidency of Bengal. After a careful consideration of what the Department of Education had already attempted with reference to the questions for investigations indicated by the Government of India and in view of the limited funds sanctioned by the Government of India, the committee decided to take up the following matters for enquiry and report :—

- Programme of work.
- (a) The provision of playing-fields.
 - (b) The inspection of educational buildings and hostels.
 - (c) The responsibility of teachers with regard to the general health of their pupils and the regular medical inspection of school children.
 - (d) The preparation of a practical course of instruction in hygiene for elementary and secondary schools.

CHAPTER III.

Provision of play-grounds.

7. The committee have made a survey of the requirements in respect of play-grounds for educational institutions at district and subdivisional headquarters. The restriction on the scope of enquiry. restriction of the scope of their enquiry in this respect was necessitated by the limited funds at their disposal. It was obviously impossible to include Calcutta in their proposals, and it would be Utopian to suggest the provision of play-grounds for villages. On the other hand, while district and subdivisional headquarters claim a considerable number of students, they are mostly wanting in open spaces of land which may conveniently be utilised as play-grounds.

8. The committee decided to address the District Magistrates on the subject. Their enquiry related to (1) the requirements in the way of recreation grounds; (2) estimates of cost for meeting the requirements; (3) whether there should be common playing-fields; (4) how Government should proceed in the matter of the acquisition of land; and, lastly, (5) how playing-fields should be organised and managed.

9. The committee have prepared a consolidated statement embodying the views of the District Magistrates. The statement is incomplete, as some of the Magistrates have not favoured the committee with their reports, and some of those who sent in their reports did not express their views on all the points on which enquiry was made. The statement, however, gives a rough idea of the requirements of the institutions at district and subdivisional headquarters in the Presidency. The statement is reproduced as Appendix A to the report.

10. The Magistrates' reports confirm the view that the present provision for playing-fields at the district and subdivisional headquarters is inadequate and that, except in a few cases, all the institutions are in great need of playing-field space. In a very few cases do schools or colleges possess playing-fields of their own. The *maidans* are frequently used with the permission of the Collector; but there is an almost entire lack of organization. In some towns the play-grounds are under water during the rains and cannot be used for many months in the year. The committee have suggested that

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efforts should be made to have these grounds raised at the earliest possible date. In subdivisional headquarters the condition of things is worse. Open spaces are few and far between, and in many cases there is practically no ground on which school boys can exercise.

11. After a careful consideration of the requirements of the institutions in respect of play-grounds and of the claims of the other items included in the programme, the committee have decided to recommend the assignment of a sum of Rs. 2,00,000 for the provision of playing-fields. The committee recommend that this sum should be distributed over the five divisions of the province and utilised in providing playing-fields. The committee have asked the Director of Public Instruction to consult Inspectors of Schools and to draw up with them a statement showing how the more urgent requirements in the matter of playing-field space might be met within their respective jurisdictions on the lines above advocated.

12. The committee do not consider that the provision of separate playing-fields for each school or college is either necessary or desirable. In this they do not endorse the views of some of the District Magistrates. The committee hold that the most satisfactory arrangement would be that there should exist at district and subdivisional headquarters a set of playing-fields which would be controlled by a strong local committee and be at the disposal of all the educational institutions of the place. The committee feel that in this way a foundation might be laid of a system of mutual co-operation in the field of school athletics, as between the educational and other authorities of a locality which might have far-reaching consequences in increasing the capacity for organisation and discipline which it is so necessary to develop. They realise that at present there is far too much individualism and far too little organisation in connexion with college and school games. A great deal of the time which is devoted to games is spent in competitions for cups in which a few picked players can alone take part. In this way not only does the physical development of the majority of the pupils remain unaffected, but the whole spirit of school games is missed. The committee hold that at the present stage these competitions are apt to engender a spirit which is inimical to the physical development and moral welfare of the scholars concerned; further, these competitions not infrequently give rise to unseemly squabbles and disputes. The view of the committee is that a scheme of headquarters playing-fields under a strong local body might do something to check what is to be deplored in the present system of school and college athletics, and by securing local interest might do something towards the inauguration of a sounder and more altruistic view of what college and school games should be. The committee recommend that when the system of local athletics committee has been inaugurated it should be supplemented by the establishment of a small general advisory committee, which should be situated in Calcutta, and should supervise and direct the activities of local committees. The Advisor for Physical Education should be the secretary to this headquarters committee, which should not only deal with all general questions connected with the use of the district and subdivisional headquarters playing-fields, but should advise on the purchase of apparatus, etc.

13. It has been pointed out to the committee that at some district and subdivisional headquarters stations there is not sufficient place available to permit of a general playing-field area being established in one block. This, however, would not in the view of the committee justify the assignment in such places of separate playing-fields to separate institutions. The committee feel that all school and college games, in so far as they do not lie exclusively with the school and college concerned, should be controlled by a local committee in which each institution would be represented with a view to securing among other things that all external competitions should be ordinarily confined to matches between educational institutions. The fact that the various play-grounds in a particular place are detached and possibly contiguous to certain institutions does not in the opinion of the committee affect the necessity for the existence of a local committee. All schools

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whether Government aided or unaided should be given an opportunity of participating in the local playing-field schemes.

14. The committee have not attempted to work out any comprehensive scheme for the provision of playing-field space for schools and colleges within the municipal limits of the town of Calcutta. In the opinion of the committee this problem is of such paramount importance and of such great complexity that it should be separately considered by the Local Government acting in co-operation with the Corporation. The funds at the disposal of the committee do not admit of any attempt on their part to deal with the problem, but they have decided to recommend that the Local Government should make a grant of Rs. 45,000 in support of a scheme which is being matured by the Young Men's Christian Association for the establishment in the students' quarter of Calcutta of a play-ground which will be worked under the personal direction of the Advisor on Physical Education and will aim at giving a reasonable amount of recreative physical exercise to a maximum number of students. The play-ground in question is in the Machua Bazar Street, and, if the grant now advocated is made available, the Young Men's Christian Association will provide in it a gymnasium, a swimming pool, courts for lawn tennis, basket-ball, hand-ball, fives, badminton and volley-ball. It is estimated that within the hours of an ordinary working day available for physical exercise it will be possible to exercise from 300 to 500 students. Both the play-grounds and the instructors will be available for training the ordinary school and college teachers in the organisation of gymnastics, drill and games. The committee feel that by making this suggested grant Government will secure a good deal at a very reasonable cost, and they strongly recommend that the grant should be made.

15. The committee realise that this suggestion only touches the fringe of what is required in the matter of facilities for physical exercise for school boys and college students in Calcutta. As regards the general problem which should, as suggested above, be specially investigated, they desire to observe that they have heard of a scheme outlined by the Calcutta Improvement Trust for the provision in the northern quarter of the city of a large open space, part of which would be available for games. The committee desire to record their view that this suggestion is on the right lines and that the problem of the provision of a reasonable amount of playing-field space for the colleges and schools in Calcutta cannot be tackled in any other manner. They hold that any attempt to provide separate institutions in Calcutta with playing-fields of their own is not only undesirable for the general reasons given above, but also ridiculously extravagant.

16. In considering the general problem of the provision of playing-field space for the colleges and schools in Calcutta the need of schools for European boys and girls should not be overlooked. As regards this particular aspect of the problem, the committee understand that the needs of European boys' schools in the matter of physical education are reasonably well provided for, but they desire to record the view that the whole question of the physical training of girls in European schools both in Calcutta and the mufassal requires careful consideration with a view not only to the provision of greater facilities, but also with a view to its better organisation and improvement.

17. The committee considered the question of the provision of play-grounds for Indian girls and women students. They fully realise the extreme importance of not overlooking the physical needs of Bengali school girls and college students. These students are now subjected to a curriculum which is practically identical with that followed by boys and the mental strain unrelieved by physical activities is bound to prejudice their health. At the same time the committee consider that it would be impracticable, even if the funds at their disposal permitted, which they do not, to put forward any general scheme for the provision of playing-fields for girl students. They have decided, however, to recommend that a sum of Rs. 45,000 should be set aside from the Imperial grant for the provision in the students' quarters of a suitable gymnasium for girls and women. The

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committee feel that such a gymnasium might be constructed in the grounds of the Bethune College; but it should certainly be somewhere in that locality.

CHAPTER IV.

• Inspection of Educational buildings and hostels.

18. The committee note that under the present arrangements sanctioned by the Government of Bengal in the General Department No. 95 T.—G., dated 10th May 1901, inspecting officers are required to satisfy themselves as to the sanitary condition of the school buildings and their surroundings. Inspecting officers are also required to look into the hostels attached to the school or any school messes attached thereto with a view to decide whether they are fit places for the residence of pupils from the point of view of sanitation, discipline and morality.

19. The committee think that the departmental regulations in this regard are sufficient, but they are doubtful whether inspecting officers are in a position to insist upon their recommendations being carried out even if they are urgently necessary. The committee realise that the only weapon in the hands of an inspecting officer is the removal of the grant-in-aid, and they quite understand that it is frequently undesirable to take this step. What the committee feel is that greater stringency should be employed in the first instance. At present, schools which are hopelessly insanitary obtain provincial recognition by the University and even pecuniary assistance from the Education Department, and this state of affairs is often allowed to continue for an indefinite period.

20. In view of the above circumstances as also of the fact that the Sanitary Department is too busy generally to deal efficiently with the work, the committee recommend that a new Deputy Sanitary Commissioner may be appointed tentatively for a period of 5 years. This officer will work under the Sanitary Commissioner for Bengal, and part of his duties will be to inspect existing school buildings and hostels from the sanitary and hygiene point of view and to draw up general directions for the lighting, ventilation and sanitation for new school buildings. He will also be required to scrutinise from the sanitary point of view all plans for new buildings. The committee think that the reports of this officer should come to the Director of Public Instruction through the Sanitary Commissioner, and the Director's instructions and wishes with regard to the work of the officer should be submitted in the first instance to the Sanitary Commissioner. It will be noticed that part of the above work, *e.g.*, scrutiny of plans for new buildings from the sanitary point of view, is at present done by the office of the Sanitary Commissioner. The committee think that nothing short of the exclusive attention of a Deputy Sanitary Commissioner can bring the work to that level of efficiency which is desired by the Government of India. The committee understand that the present incumbent of the post of Advisor to the Government of Bengal on physical exercise, who is not a full-time servant of Government, but a fully qualified medical man, is in the course of his visits to educational institutions in the habit of reporting on the sanitary condition of school and hostel buildings. The committee do not consider it desirable that the proposed appointment of an additional Sanitary Commissioner should in any way affect this arrangement. They consider Dr. Segard's activity in this matter to be valuable, and they realise that he cannot advise Government effectively with reference to the physical side of education, unless he knows something of the conditions under which school-boys and college students live. They think that there would be ample work for the whole-time employment of an officer of Dr. Segard's qualifications, and that the utility of the proposed additional Deputy Sanitary Commissioner would be enhanced if he could work in consultation with an officer who had specialised in the problems connected with the physical aspect of education.

CHAPTER V.

The responsibility of teachers with regard to the general health of their pupils.

21. The committee note with regret that there has been little, if any, serious attempt to give to teachers a due sense of their responsibility with regard to the health and physique of their pupils. The committee are strongly of opinion that the importance of the subject should be impressed upon teachers. The committee are unable to make any detailed suggestions on this point, but they think that something might be done if the authorities of all training institutions set themselves seriously to consider how due and effective emphasis might be laid on this aspect of a teacher's work. At the request of the committee the Director of Public Instruction addressed the principals of training colleges, asking them to submit a statement showing what is being done at present in this report and embodying suggestions for the attainment of better results in this direction in future.
22. Dr. Smith Allan, Secretary to the St. John Ambulance Association, has very kindly consented on behalf of the association to try to organise instruction and to hold tests at the training institutions, if a reasonable scheme can be submitted to him.
- Importance of the problem :
The Committee's recommendation.
Promised co-operation of the St. John Ambulance Association.

CHAPTER VI.

The Regular Medical Inspection of school children.

23. The regular medical inspection of school children appears to the committee to be one of the most important school problems in Bengal. The committee note that nothing has hitherto been done in this direction. It has been suggested that teachers might undertake the task of examining the general physical condition of their pupils. The committee have already recorded the view that the physical condition of their pupils is a matter in which teachers should interest themselves, but they consider that the proper medical inspection of school children involves the capacity to test eyesight and to diagnose morbid conditions, which can alone be possessed by those who have received an adequate medical training. By way therefore of making a start, the committee have decided to recommend the introduction of the following system of regular medical inspection of school children by a properly qualified agency.

24. The committee propose that upon the new Deputy Sanitary Commissioner the task may be imposed of organising the medical inspection in Calcutta and municipalities with over 10,000 inhabitants, of all school children in recognised schools for Indian pupils and of recording the results of such inspection in conformity with a form which shall be prescribed by the Sanitary Commissioner. To enable the Deputy Sanitary Commissioner to carry out this work, two qualified assistants, one a man and the other a woman, should be appointed. They will work under the Deputy Sanitary Commissioner.
- The committee's recommendations.

CHAPTER VII.

Instruction in Hygiene and Sanitation.

25. On this subject there were two points before the committee for consideration :—
- (1) The method of providing suitable teachers of hygiene.
(2) The revision of the present syllabus.
- Points of consideration.

Formation of a sub-committee to examine the points.

26. The whole question was referred to a sub-committee consisting of the following :—

Major W. W. Clemesha, I.M.S., *Chairman*.
Dr. J. H. Gray.
Rai Dr. Kailash Chandra Bose Bahadur.
Dr. Smith Allan.
Miss Lilian Brock.
Shams-ul-Ulama Maulvi Abu Nasr Wahid.
Babu Sarada Ranjan Ray.
Mr. H. A. Stark, *Secretary*.

27. The sub-committee held six formal and two informal meetings and have submitted a report : a copy is attached as Appendix B. The committee endorse all the recommendations of the sub-committee.
- The sub-committee's report.

28. In paragraph 7, sub-section (iii) of their Resolution No. 301 C.D., dated the 3rd February 1913, the Government of India enquire whether a practical course of hygiene should be a compulsory subject in the various schemes of school-leaving certificates, and whether it should be recommended to universities as part of their Matriculation examination. The committee realise the main object of a university matriculation examination is or should be to test the intellectual fitness of the candidates for attempting university courses of study. A test in hygiene seems to the committee scarcely to fall within the scope of the University Matriculation Examination as such. The committee are aware that a paper on hygiene used to be included as an obligatory in the old Entrance examination, and they are doubtful whether the readoption of such a test as that was is likely to lead to a real and effective study of the subject in the high school classes. The committee are, however, constrained to record their conviction that under present conditions, unless sanitation and hygiene are included as subjects of examination in the Matriculation examination, it will not, however good a course is prescribed, receive any serious attention either from teachers or pupils in the four upper classes of high schools. The committee invite the attention of the Education Department to the importance of the practical teaching of this subject with reference to the proposed school final examination.
- Introduction of hygiene into the Matriculation course.

CHAPTER VIII.

The method of providing suitable teachers of hygiene.

1.—GENERAL REMARKS.

29. The committee feel that in the matter of providing suitable teachers of hygiene and as regards the method of imparting instructions to teachers themselves, it is not possible at present to make such recommendations as will cover the whole ground. The committee put forward below certain recommendations in connexion with teachers both at boys' schools and at girls' schools. They also consider that the establishment in Calcutta of a properly equipped school in which women could study domestic hygiene and other allied subjects is an essential condition of any real progress in the direction of making the lives of the inhabitants of the presidency healthier. The committee are aware that there is little or no demand at present for such a school; but they think that an attempt should be made to create such demand.
- A comprehensive scheme impossible.

2.—TEACHERS OF BOYS' SCHOOLS.

30. As a practical means of meeting some of the most urgent of the present needs on the basis of existing resources the committee recommend that every teacher, whether Indian or European, should in the course of his or her training curriculum be required to qualify in the subject of hygiene, and that unless and until such qualification had been obtained no certificate should be
- Recommendations :
(1) Knowledge of hygiene—a passport to teachership.
(2) Special teachers of hygiene for every division.

awarded. The committee also recommend that there should be appointed for every district a special teacher trained in hygiene, who should be associated more particularly with all grades of training schools in the district.

31. The committee recommend that a special teacher of this type should be designated the "District Instructor in Hygiene."

Training of District Instructors. The Sanitary Commissioner has suggested that a limited number of intelligent sub-inspectors of schools might be sent every year to the Sanitary Department for a course of four months' training with a view to their subsequent employment as district instructors in hygiene. The committee are of opinion that as an initial measure at any rate the suggestion of the Sanitary Commissioner should be adopted.

3.—INSTRUCTION OF INDIAN GIRLS.

32. The committee gave careful consideration to the subject of the instruction in hygiene of Indian girls, and they decided to endorse the recommendation of the sub-committee, viz., that a fully qualified medical woman, preferably a Bengali with European qualifications, should be appointed on a progressive salary of Rs. 350 to Rs. 500 a month to teach advanced hygiene and domestic economy in Indian girls' schools within the jurisdiction of the Inspectress of Schools of the Presidency and Burdwan Divisions. It is recommended that this officer should be attached to the office of the Inspectress of Schools, Presidency and Burdwan Divisions.

4.—INSTRUCTION OF EUROPEAN GIRLS.

33. The committee recommend that in the case of each European girls' school arrangements should be made, where necessary, for the training by the St. John Ambulance Association of one member of the staff in nursing and first-aid to the injured.

CHAPTER IX.

Revision of the syllabus.

1.—BOYS' SCHOOLS.

34. The subject of the revision of the syllabuses occupied much of time of the sub-committee as also of the committee. After a careful consideration of the syllabuses of lessons on hygiene in Eastern and Western Bengal, the committee have concluded that in the case of lower primary schools no text-books on hygiene need be prescribed. The committee note that under the present arrangements a certain amount of oral instruction is given by the teacher, and some lessons are incorporated in the readers. The committee are decidedly of opinion that in primary schools up to standard III lessons on hygiene should be entirely oral and that no text-book, however simple, should be used.

35. For all vernacular schools from standard IV and upwards, the committee recommend the use of the revised edition of Dr. Kamakhya Charan Banerji's "Village Sanitation."

36. For all those classes of Indian schools in which English is the medium of instruction the committee recommend the use of Wren's "Health Reader."

2.—TEACHERS OF INDIAN SCHOOLS.

37. As to text-books necessary for training the teachers of Indian high and middle schools, the committee think that there should be two text-books, one in Bengali and the other in English. The committee recommend the use of the following books:—

- (1) Dr. Banks' Manual of Hygiene (Revised Edition).
- (2) "Swasthya Tattwa," Parts I and II, by Dr. Hari Nath Ghose.

3.—INDIAN GIRLS.

38. With reference to the instruction in hygiene of Indian girls above the primary standards, the committee think that if the lady doctor is appointed as recommended in paragraph 32 above, it would not be desirable to lay down any prescribed course of instruction for her. It would be better to leave the matters entirely to this lady's discretion.

• As regards the general problem of the instruction in hygiene of girls—both Indians and Europeans—the committee feel strongly that great deal more than is now attempted in the way of advanced teaching in domestic hygiene in the management of children and invalids and in matters relating to maternity, is possible and even necessary.

4.—EUROPEAN SCHOOLS.

39. In considering the question of the text-books on hygiene for European schools, the committee were assisted by Mr. G. D. O. Maclear, Inspector of Europeans Schools. They examined a large number of books, but not one of them appeared to be really satisfactory with the exception of Dr. Banks' Manual of Hygiene. The committee are of opinion that in European schools it is neither necessary nor desirable to provide each child with a text-book, but that the teaching should consist of a series of oral lessons accompanied by demonstrations, if possible. The committee approve of the syllabus drawn up by the sub-committee as an appendix to their report and recommend its adoption by all the European schools of the presidency. It will be noticed that for each particular section at least one suitable text-book has been mentioned, but the committee desire that it should be distinctly understood that these books are intended for the use of teachers only. The actual handling of the syllabus should be directed by the discretion of the Inspector of European Schools and the Inspectress.

40. The committee recommend that the educational authorities should, as far as possible, encourage pupils of higher elementary schools for Europeans to take the full supplementary domestic course after they have passed standard VI, and that in lower secondary schools they should encourage the formation of domestic science supplementary classes to be attended either by pupils who have completed their sixteenth year or who have taken the Junior Cambridge Certificate.

CHAPTER X.

Aids and additions to the teaching of hygiene.

41. In the opinion of the committee magic lanterns and slides are the best means of attracting the attention of Indian children. The committee therefore recommend that each district instructor in hygiene should be equipped with the following:—A magic lantern, slides bearing on malaria, plague, water, life history of the house fly, simple physiology, etc. The committee think that the larger and more prosperous schools should be encouraged to provide themselves with magic lanterns. The Educational Department might with advantage own some suitable slides which it could lend; if this is not possible, it might arrange with firms to stock suitable slides and indicate where such slides could be procured.

42. The committee approve of and recommend the use of the following charts and diagrams for teaching hygiene:—

Supply of charts and diagrams.

- (a) W. & A. K. Johnson's Physiological Diagrams, Series I, II, etc.
- (b) St. John Ambulance First-aid Diagrams.
- (c) Thomas Nelson & Sons's Royal Portfolio of Pictures and Diagrams for Object Lessons.
- (d) Practical Physiology.
- (e) Arnold's Diagrams.

43. The committee also recommend that the schools should be provided with a series of six wall hygiene maxim cards and also with suitable publications and pictures published by the Provincial Malaria Committee.

44. The committee recommend that a sum of Rs. 52,000 out of the Imperial grant of Rs. 3,50,000 should be earmarked for the purchase of magic lanterns, charts, diagrams, maxim cards and the publications of the Provincial Malaria Committee.

CHAPTER XI.

Disposal of the Imperial grant.

45. The committee propose that the Imperial grant of Rs. 3,50,000 should be assigned as follows :—

	Rs.
(i) For the provision of playing-fields	2,00,000
(ii) For a women's gymnasium in Calcutta (possibly at the Bethune College)	45,000
(iii) For Young Men's Christian Association Gymnasium play-ground	45,000
(iv) For the purchase of charts, diagrams, magic lantern and slides, hygiene maxim cards, and the publications issued under the auspices of the Provincial Malaria Committee	52,000
Total	<u>3,42,000</u>

The balance Rs. 8,000, has already been spent in connexion with certain other schemes.

46. In conclusion the committee desire to convey their thanks to Mr. H. A. Stark who acted as secretary to the committee.

Conclusion.

W. W. HORNELL.
W. W. CLEMESHA.
BEN. H. DEARE.
K. C. BOSE.
S. RAY.
C. P. SEGARD.
R. SMITH ALLAN.
LILIAN BROCK.
HERBERT A. STARK.
ABU NASR WAHEED.

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*Statement of requirements in respect of Play-
grounds for Educational Institutions in
District and Subdivisional Head Quarters.*

Statement of requirements in respect of Play-grounds for Educational Institutions in District and Subdivisional Head Quarters.

N. B.—The Statement embodies the views of District Magistrates.

1	2	3	4	5	6	7
Serial No.	Name of District or Subdivision.	Requirements.	Whether these requirements could best be met by means of general playing-fields or otherwise.	Estimate and acquisition of land.	Organization and management of playing-fields.	REMARKS.
1	Bogra Sadar ...	There is no play-ground for the Zilla and other schools.	A common play-ground for all the educational institutions in the town of Bogra is absolutely necessary.	A site has been selected, to be acquired under the provisions of the Land Acquisition Act, costing about Rs. 16,550. An additional sum of Rs. 2,500 will be required to fence and level the ground and to construct a shed for the care-taker.	No remarks.	
2	Chittagong Sadar ...	Nothing stated	Nothing explicitly stated; but the Magistrate seems to recommend a common playing-field.	Proposals are being submitted through the Commissioner for acquisition of land for a playing-field.	Playing-fields acquired by Government should be in charge of a suitable local officer, such as the Principal of a College, the Sub-divisional Officer, or District Magistrate. A small Committee should be formed of the representatives of the institutions permitted to use the playing-fields.	
	Cox's Bazar Subdivision.	Has got a good playing-field.				

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1	2	3	4	5	6	7
Serial No.	Name of District or Subdivision.	Requirements.	Whether these requirements could best be met by means of general playing fields or otherwise.	Estimate and acquisition of land.	Organization and management of playing-fields.	REMARKS.
3	Noakhali Sadar ...	There are six schools in the town. A plot of land has been acquired by Government, and is being raised and levelled and will soon be ready. There will be accommodation for three football grounds: one for the Zilla School, one for the Raj Kumar Jubilee School, and one for League Matches. The Ahmadiya Madrassah compound affords sufficient accommodation for play. Arun Chandra High English School will be finally located near the railway station, and there will be sufficient accommodation for games. The Indra Chandra Middle English School has no play-ground. The Guru Training School has a ground for drill. It has been proposed to remove the school to a site near the railway station, where sufficient accommodation will be available for play.	No remarks ...	The present site occupied by the Zilla School may be made over to the Indra Chandra Middle English School. If that is done, land may be acquired south of the plot already acquired for the Zilla and Jubilee School boys.		

Feni ...

There is only one play-ground attached to the Feni High School, but this is not sufficient for all the students who reside in the town.

A common playing-field is recommended.

The extensive ground to the north of the Feni High School, bounded on the north by the Local Board road to the railway station, and on the west by the District Board road, may be acquired; the cost of acquisition and preparing the ground is estimated to be about Rs. 5,000.

4 Comilla

... No proper play-ground for the town schools.

There should be a common playing-field for the High Schools. Small boys attending Middle English schools should play in other places. The Madrassah should have a separate playing-field.

The Magistrate has selected a plot of land, the acquisition and preparation of which will cost Rs. 36,000.

The play-ground should be made over to a Committee composed of—
 (1) The District Magistrate—*President*.
 (2) The District Judge.
 (3) The Superintendent of Police.
 (4) The Head Master, Zilla School.
 (5) The Head Master, Victoria School.
 (6) The Head Master Yusuf School.
 (7) The Inspector or Additional or Assistant Inspector of Schools.
 (8) An Assistant or Deputy Magistrate as Secretary, to be nominated by the District Magistrate.

No suggestions regarding schools at Subdivisional Head-quarters.

1	2	3	4	5	6	J
Serial No.	Name of District or Subdivision.	Requirements.	Whether these requirements could best be met by means of general playing fields or otherwise.	Estimate and acquisition of land.	Organization and management of playing-fields.	REMARKS.
5	Malda Sadar	The compound in the present Zilla School is not big enough for a play-ground for all the boys.	Except in congested areas, each school should have a play-ground of its own. In Malda there is plenty of open space available, and the question of providing one play-ground does not arise.	The Magistrate makes two alternative suggestions:— (1) The local hospital, which is immediately to the east of the school, may be removed elsewhere. It would provide a fine play-ground for all the boys, and would also contribute to the health of the school. The acquisition would cost between Rs. 25,000 to Rs. 30,000. (2) A play-ground may be provided for the Zilla School boys in the <i>khas mahal</i> lands. With regard to the other schools, the <i>khas mahal</i> lands in the head quarters will be sufficient. A small sum of money will be required to drain out a portion of them which goes under water during the rains. A master should be appointed by Government to supervise and organize the games. A <i>mali</i> should be maintained to keep the grounds in order. A roller, lawn mowers and other accessories should be provided. A corrugated iron shed should be erected at one end of the field for the <i>mali</i> and the apparatus. The master will keep stock of these things and be directly responsible for the proper condition of the playing-fields and their use as decided by the Committee.	The management of the playing-fields should be vested in a Committee consisting of— (1) The District Magistrate—<i>President</i>. (2) Head Master Zilla School—<i>Secretary</i>. (3) Head Masters and Secretaries of other schools—<i>Members</i>. (4) Superintendent of Police—<i>Member</i>. (5) Civil Surgeon—<i>Member</i>.	There is no subdivision in the district.

The non-recurring cost will be Rs. 31,250, and recurring cost is estimated at Rs. 33 a month; the pay of the master being Rs. 25 and of the *mali* being Rs. 8 a month.

No remarks.

An estimate amounting to Rs. 3,233 for raising the play-ground of the Zilla School was submitted by the President of the School Committee to the Inspector of Schools. The Magistrate recommends that the amount of the estimate be sanctioned and work put in hand immediately.

The Magistrate is not in favour of general playing-fields. He thinks it best that each High English School should have its play-ground. The management of a general playing-field will probably lead to friction.

The Faridpur Zilla School has a large play-ground, but it is low and goes under water in the rains. The Ishan School uses part of the Government maidan as a play-ground. This land is also low and requires raising.

The Gopalganj High English School has a good play-ground on Government land. No further improvements are required.

The Magistrate has asked the Subdivisional Officer of Rajbari to prepare an estimate of the cost of acquisition, &c.

The Raja Surja Kumar Institution requires a play-ground.

.....

Rajbari Subdivision

Gopalganj Subdivision

6 Faridpur Sadar

1	2	3	4	5	6	7
Serial No.	Name of District or Subdivision.	Requirements.	Whether these requirements could best be met by means of general playing-fields or otherwise.	Estimate and acquisition of land.	Organization and management of playing-fields.	REMARKS.
	Madaripur Subdivision	The High English School and Madrassah at Madaripur have no playing-fields.	.....	There is a scheme, and Government sanctioned it unofficially, for the removal of all the educational institutions of the town to a new site along the Barisal road. The Collector has been asked to take steps for acquisition of land. That scheme allows for playing-grounds for the High English School and the Madrassah. The Magistrate suggests that the cost of raising the playing-grounds be met out of the 3½ lakhs placed at Director of Public Instruction's disposal. Each play-ground will cost Rs. 4,253. The total amount required is therefore Rs. 8,306.		
7	Dacca Sadar	Excepting the Dacca College, which has a good ground, none of the schools are provided with suitable playing-fields.	It would not often be practicable to provide separate grounds for each institution. The playing-fields should therefore be provided generally for the use of educational institutions.	The scheme for acquiring a piece of land near Sadar Ghat at the expense of 3 lakhs of rupees does not commend itself to the Magistrate. In his opinion the improvement of the old Cantonment land will meet the needs of the educational institutions in Dacca town.	The play-grounds at headquarters of districts and subdivisions when acquired at Government expense should be treated as <i>khas mahals</i> , and should be in charge of the District Magistrate or the Subdivisional Officer, as the case may be.	

Manikganj Subdivision.	There is a play-ground which is suitable only during the dry season.	.....	The Subdivisional Officer has proposed the acquisition of additional land with a view to providing a raised play-ground. The Magistrate will submit a definite report on further examination.	.....		
Narayanganj Subdivision.	No play-ground. Provision of a play-ground is urgently required.	.....	The Magistrate will examine the subject and submit proposals.	.....		
Munshiganj Subdivision.	There is a public play-ground which goes under water during the rains. It requires extension and raising.	.....	Commissioner, Dacca Division, has made a grant of Rs. 500 for acquiring more land. The District Magistrate has applied to Government for an additional grant of Rs. 4,000 with a view to providing a ground of larger size and raised above flood level.	.....		
Mymensingh Sadar	Schemes for the improvement of the Ananda Mohon College and the Zilla School, including the acquisition of land for a recreation ground, are pending, and no further special provision on their account is necessary. The City Collegiate and the Mrityunjoy School, which have about 1,700 students on the rolls, have no recreation grounds of their own. They play football and hockey on the maidan with the permission of the Collector.	.....	By going a little way out of the town land could be purchased at Rs. 300 or Rs. 400 per bigha. Each school should need about 8 bighas.	.....		The Magistrate is of opinion that in the case of a private school the cost of the playing-fields should be met by the school authorities and that Government need not accept the responsibility of providing a recreation ground for the school.

1	2	3	4	5	6	7
Serial No.	Name of District or Subdivision.	Requirements.	Whether these requirements could best be met by means of general playing fields or otherwise.	Estimate and acquisition of land.	Organization and management of playing-fields.	REMARKS.
	Netrakona Subdivision	No proper playing-field. The maidan is insufficient.	...	About 8 bighas of land at Rs. 200 or Rs. 250 per bigha could be obtained in the outskirts of the town, half the cost of which Government might pay.	.....	.....
	Tangail Subdivision...	Excepting the Tangail Bindubashini School, which has got the Coronation Park as a recreation ground, no other schools in the subdivision have got any proper play-ground.	.....	.....	.....	.....
	Kishoreganj Sub-division.	It is highly desirable that there should be a play-ground for the schools in Kishoreganj. The High English School has no play-ground.	There is not much open land available in Kishoreganj. The cost of acquiring land is fairly high. There should therefore be one play-ground for all the schools.	7 bighas of land should be acquired for the purpose. The cost will roughly be at least Rs. 2,100. The High English School Committee should pay half of the cost.	The play-ground should be left under the management of a Committee. The Subdivisional Officer should be President, and there should be representatives on the Committee from all the schools which will use the play-ground.	
	Jamalpur Subdivision	There are two schools—one High English and one Middle English. There is one football ground for town and school team alike, and one small ground near the hostel.	A general playing-field would be best. The Middle English School is too small and the High English School too large for the use of one field each.	The Jamalpur High English School is a departmental institution. The question of a recreation ground is engaging the attention of the Department, but nothing definite is likely to be done until the question of the partition of the district has been decided.		

9	Jalpaiguri Sadar	A plot of Government land adjoining the former office of the Commissioner has been selected for a play-ground.	.....	.....	The play-ground may be managed by a Committee composed of— (1) Deputy Commissioner, Jalpaiguri— <i>President</i> . (2) Inspector of Schools, Rajshahi Division. (3) Deputy Inspector of Schools, Jalpaiguri. (4) Head Master, Zilla School, Jalpaiguri. (5) Head Master, Middle English School, Jalpaiguri.	Recommend a small compulsory game fee.
10	Alipur Duars	One Middle English School only. A new school will soon be built, when the question of a play-ground will be considered.	.....	.....	A Committee may be formed, with the District Magistrate as President, the Principal of the Rajshahi College as Vice-President, and a Professor as Secretary. The Committee will consist of 12 members including the Civil Surgeon and Head Masters of several schools. An officer may be placed in charge of each field, who will be responsible to the Committee for the proper upkeep of the field.	
	Rajshahi Sadar	The Collegiate School has a play-ground, only it requires levelling. The private schools have no playing-fields. The compound in the Lokenath Academy may, if properly prepared, serve as a playing-field for the boys of those schools.	.....	About 8 bighas of land contiguous to the east of Rani Hemanta Kumari of Putia's premises may be acquired.		
	Nator Subdivision	The Maharaja's High English School has no playing-ground.				The matter may be left to the Maharaja.

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1	2	3	4	5	6	7
Serial No.	Name of District or Subdivision.	Requirements.	Whether these requirements could best be met by means of general playing fields or otherwise.	Estimate and acquisition of land.	Organization and management of playing-fields.	REMARKS.
11	Naugaoon Subdivision	The Naugaon High School has got a football ground; only the ground should be raised, as it goes under water during the rains. Three more institutions will soon be established.	It would be very desirable to have a common playground.	The raising of the football ground will cost Rs. 694. For the proposed common play-ground, about 10 bighas of land may be acquired at a cost of Rs. 1,200.	.....	
12	Rangpur Sadar	There is no requirement for play-grounds either at the district or subdivisional head quarters at present.	.....	.....	.....	No report.
12	Pabna Sadar	.....	.....	.....	.....	
	Thakurgaon Subdivision.	The High School at Thakurgaon has got a good and spacious play-ground adjoining it.	There is no need of a general playing-field.	There is a large area of open land to the south of the Nilphamari road. This may be utilized for the purpose of a play-ground when necessary.	.....	
	Balurghat Subdivision.	The High English School has a play-ground of its own, but it is low and requires levelling. The Girls' School has no play-ground, but the want of it is not very keenly felt. The local gentry are too conservative to allow their girls to take part in any out-door game.	It is not necessary in a place like Balurghat to have a common playing-field.	The cost of levelling the playing-field of the High English School boys is put at Rs. 500 roughly.	The High English School play-ground is under the management of the School Committee.	

13	Dinaipur Sadar	The boys of the Dinaipur Zilla School have been using for many years as play-grounds two large plots of land in the extensive maidan adjoining the school. The boys play tennis in the school compound, which is large enough for the purpose.	.....	.....	.....	.....
14	Jessore Sadar	No play-grounds	The requirements could best be met by means of general playing-fields.	The Jessore Zilla School would require 3 bighas of land. The Sammilani Institution requires a play-ground. No acquisition is necessary. There are spacious fields in the Outcherry compounds which the boys can utilize as play-grounds with advantage.	No remarks	.....
	Bangaon	There is already a proposal for acquiring a plot of land, and some money has been raised for the purpose.	.....	.....	.....	.....
	Jhenida	The Jhenida High English School has a good play-ground of its own.				

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1	2	3	4	5	6	7
Serial No.	Name of District or Subdivision.	Requirements.	Whether these requirements could best be met by means of general playing-fields or otherwise.	Estimate and acquisition of land.	Organization and management of playing-fields.	REMARKS.
	Magura	There is a play-ground, but hardly sufficient.	.....	A piece of land may be acquired at a cost of Rs. 500 to Rs. 700.	.....	The Magistrate thinks that the owners of the school may be induced by the Subdivisional Officer to make a fresh grant for the purpose of play-grounds only.
	Narsail	A play-ground of an area of $\frac{1}{2}$ an acre has already been acquired.	.....	The Secretary, Narsail High English School, recommends the acquisition of $2\frac{1}{2}$ acres of land. The Magistrate thinks $1\frac{1}{2}$ acres more is sufficient for the purpose.	.....	.....
15	Murshidabad Sadar	.....	No remarks ...	.....	.....	The Magistrate promises to send a report.
	Kandi Subdivision	No additional play-grounds are needed.	.....	.....	.....	.....
	Lalbagh	Ditto	.....	.....	.....	.....
	Jangipur	One playing-field is necessary.	.....	2 acres of land may be acquired at Raghunathganj at a cost of Rs. 200 to Rs. 300. Levelling, &c., would cost about Rs. 500.	A Committee consisting of the Subdivisional Officer, the Chairman of the Municipality and the Head Master of the local school, and two other gentlemen of the locality may form a Committee of Management.	.....

16	Nadia Sadar	Nothing said	The Magistrate seems to recommend a common playing-field.	5 bighas of land may be acquired from the old College compound at a cost of Rs. 5,000 for providing a common play-ground for all the schools at the district head quarters.	There may be a Committee composed of the Head Teachers of the several schools, the Deputy Inspector of Schools, the District Magistrate as President, and the Principal of the Krishnanagar College as Vice-President.	.....
	Ranaghat Subdivision	Ditto	A common play-ground ...	The Subdivisional Officer has selected a plot of land measuring 17 bighas for the common play-ground of all the schools in the subdivisional head quarters of Ranaghat. The probable cost of the acquisition of land will be Rs. 1,000.	The playing-field areas may be organized and managed by a small Committee headed by the Subdivisional Officer.	.....
	Chudanga Subdivision	.....	.....	A plot of land measuring about 7.5 bighas has been selected by the Subdivisional Officer for a common play-ground for all the schools at subdivisional head quarters. The cost of acquisition is about Rs. 1,500.	The organization and management of the playing-field area will be made by the Managing Committee of the High English School at Chudanga.	.....
	Meherpur Subdivision	.....	.....	A plot of land measuring about 5 bighas 13 cottahs near the present Municipal Office has been selected as a common play-ground. The cost of acquisition and levelling the ground is estimated to be Rs. 1,857-8.	The Municipality at Meherpur will undertake the organization and management of the play-ground.	.....

1	2	3	4	5	6	7
Serial No.	Name of District or Subdivision.	Requirements.	Whether these requirements could best be met by means of general playing-fields or otherwise.	Estimate and acquisition of land.	Organization and management of playing-fields.	REMARKS.
	Kushia Subdivision	.....	.....	A plot of land measuring 6 bighas 7 cottahs may be acquired as a common playing-field for all the schools at the subdivisional head quarters except the High English School, which has a playing-field of its own, and the authorities of which are not willing to share a common playing-field with the other schools. The cost of acquisition will amount to about Rs. 1,270.	The organization and management of the playing-field area may be made by a Committee composed of the Subdivisional Officer as President, the Sub-Deputy Collector, the Munsif, and two Teachers of each of the schools that will have the right of play. The Sub-Deputy Collector or the Munsif will be the Secretary.	.....
17	Midnapore Sadar ...	A big, open field of at least not less than 20 bighas in area.	The scheme for providing a common play-ground is a good one.	The cost of acquisition is estimated at Rs. 10,000, and that of levelling the ground at Rs. 500.	There should be a local Committee consisting of at least one member elected from among the Managing Committees of the schools, and one senior boy selected from each school with the Subdivisional Officer or the second officer as an <i>ex-officio</i> Chairman to organize and manage the common play-ground. In Midnapore town the Principal of the College and the Chairman of the Midnapore Municipality may also be added to the Committee as members. The Committee will elect its own Chairman.	.....

18	Contai Subdivision ...	A field comprising 11 bighas, 12 cottahs, 8 chitaks is necessary for a common playing-field.	.....	No estimate is given. The Subdivisional Officer has selected a plot of the area described in column 3.	.....	.....
	Tamluk Subdivision...	A plot of land measuring 11 bighas 10 cottahs is proposed.	.....	The cost of acquisition, including the cost of levelling the ground, is estimated at Rs. 5,900 roughly.	.....	.....
	Ghatal Subdivision ...	No play-ground. 12 cottahs of land are required to be divided into four plots.	.....	The cost of acquisition is estimated at Rs. 460.	.....	...
18	Birbhum Sadar ...	It is necessary to take on lease for 10 years an enclosed land of 7.78 acres.	The play-ground should be general.	The cost will be about Rs. 900.	The playing-field area may be organized and managed by a Committee which would include the Head Masters of the Zilla and Middle English Schools.	.....
	Rampur Hat Subdivision.	3 acres of land should be reserved for a common playing-field.	Ditto ditto	The paddy-fields lying to the south of the town may be acquired at a cost of about Rs. 2,000.	The play-ground may be organized and managed by the Managing Committee of the High English School.	.....
19	Hooghly Sadar ...	Four full-sized grounds and ten small grounds, i.e. 58 bighas of land.	No suggestions	The cost of acquisition will be about Rs. 35,000.	No suggestions	.....
	Serampore Subdivision	The Serampore College and the Collegiate School do not require play-grounds. It is proposed to move the Weaving School from its present site. The other institutions require playing-fields measuring about 20 or 25 bighas of land.	.....	The cost would not be more than Rs. 5,000.	.....	.....

1	2	3	4	5	6	7
Serial No.	Name of District or Subdivision.	Requirements.	Whether these requirements could best be met by means of general playing-fields or otherwise.	Estimate and acquisition of land.	Organization and management of playing-fields.	REMARKS.
20	24-Parganas Sadar ...	.....	There should be one common play-ground for educational institutions at district and subdivisional head quarters.	.....	Where the play-ground area is Government land, it should remain in the hands of the Collector. Where the area is not Government land, the local Committee must be chiefly official and under the control of the District Magistrate.	The existing arrangements at Alipore (district head quarters), Barasat, and Barrackpore are suitable.
	Diamond Harbour ...	Land would have to be acquired and raised.	.....	No suggestions	.....	.....
	Besirhat ...	There is a very large area which can easily be acquired.	.....	.....	.....	.....
	Howrah ...	No play-ground. Boys use the Howrah Maidan.	.....	.....	.....	Land acquisition would be very costly at Howrah. The Magistrate asks to be informed of the areas required for schools of different sizes.
	Ulubaria ...	No play-ground required for the Ulubaria High English School. The Amta High English School requires a ground.	.....	A plot of 6 bighas of land is to be acquired. The cost of acquisition, levelling, and fencing is estimated at Rs. 2,000.	The management may rest in the hands of a local Sub-Committee consisting of the Secretary, Head Master, and some other local gentlemen with the Subdivisional Officer as President.	.....

21	Khulna Sadar ...	No play-grounds are needed.	Does not recommend a common playing-field.	.....	The management should be vested in a Committee composed of— (1) The District Magistrate or Subdivisional Officer. (2) Head Masters of Schools using the ground. (3) Deputy Inspector of Schools.	.....
	Bagerhat Subdivision.	A play-ground is wanted, measuring about 5 or 6 bighas.	.....	The land may be acquired. The cost of acquisition will be Rs. 600. The cost of levelling is estimated at Rs. 300. Rs. 25 a year would be sufficient for the upkeep.	.....	.....
	Satkhira Subdivision.	No play-ground is needed	.....	.....	.....	.....
	Bankura ...	.....	.....	.....	.....	No reply.
	Bakarganj ...	.....	.....	.....	.....	Ditto.

APPENDIX A.

Statement regarding the Play-grounds of Educational Institutions.

N. B.—The Statement embodies the views of Principals of Colleges.

GOVERNMENT COLLEGES.

Serial No.	Name of College.	WHETHER THERE IS A PLAY-GROUND ATTACHED TO THE COLLEGE: IF SO, WHAT IS THE AREA?		In case there is no play-ground attached to the college, the information as to whether there are any public grounds which are utilized for the purpose.	REMARKS.
		Yes or no.	Area of the play-ground attached.		
1	Presidency College	No	.....	The College has the half use of a ground for football, cricket, and hockey on the Calcutta Maidan.	There is a temporary open air gymnasium attached to the College. There is also a space for the playing of games within the Eden Hostel quadrangle, but the use of this is confined to the boarders.
2	Sanskrit College	No	.....	The Mirzapur Park is utilized for the purpose.	.....
3	Bethune College	Yes (2 grounds)	One —204' x 29' Other —172' x 54'	.....	.....
4	Krishnagar College	Yes (2 plots)	One for football measuring about 30 bighas, and the other for tennis measuring about 4 bighas.	.....	.....
5	Hooghly College	No	.....	The students are permitted by the Collector of Hooghly to use only on certain days in the week at his discretion a portion of the Public Maidan at Ohinsura for playing purposes.	.....
6	Dacca College	Yes	About 42 bighas		
7	Rajshahi College	Yes	About 8 bighas		

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8	Chittagong College	No		The students of the College play on a public ground called the "Parade Ground," which is very near to the College.	
9	Civil Engineering College, Sibpur.	Yes (3 fields)	Area not supplied	.....	.....
10	Calcutta Madrassah	No		A suitable plot on the Maidan has been allotted for the students of this Madrassah.	

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APPENDIX B.

Statement of Play-grounds of Educational Institutions.

N. B.—The Statement embodies the views of Head Masters.

GOVERNMENT HIGH SCHOOLS.

Serial No.	Name of Institution.	WHETHER THERE IS A PLAY-GROUND ATTACHED TO THE INSTITUTION: IF SO, WHAT IS THE AREA?		In case there is no play-ground attached to the institution, the information as to whether there are any public grounds which are utilized for the purpose of playing.	REMARKS.
		Yes or no.	Area of the play-ground.		
1	Hindu School	No	.....	No	A small piece of land 57' x 35' within the school compound is used for gymnastic exercises.
2	Hare School	Yes	A very small plot (area not supplied).	.....	.....
3	Sanskrit Collegiate School	No	.....	The Mirzapur Park is utilized for playing one hour in a week under the permission of the Chairman, Calcutta Corporation.	.....
4	Calcutta Madrasah (Anglo-Persian Department).	No	.....	A plot on the Maidan is utilized two or three times a week.	.....
5	Barrackpore Government School.	No	.....	A plot of ground in the Viceregal Park is utilized under certain conditions.	.....
6	Barasat Government School	Yes	1-165 acres	.....	.....
7	Taki Government School	Yes	48 yards x 44 yards	.....	.....
8	Jessore Zilla School	No			A part of the local circuit-house compound contiguous to the school is used by boys of the upper classes; those of the lower classes make use of a small plot in front of the school for the purpose.

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9	Nawab Bahadur's Institution, Murshidabad.	Yes (2 play-grounds)	One—200 yards x 170 yards Other—107 yards x 57 yards		
10	Khulna Zilla School	Yes	160 yards x 98 yards	.....	.....
11	Krishnagar Collegiate School.	No	.....	.....	A small plot of the College compound measuring 110 yards x 80 yards is utilized for the purpose.
12	Howrah Zilla School	No	.....	A portion of the Howrah Maidan which is very near to the school is utilized for the purpose.	.....
13	Hooghly Branch and Model School.	No	.....	.....	A piece of ground measuring 80 yards x 65 yards belonging to the Public Works Department in front of the school house is utilized for the purpose.
14	Hooghly Collegiate School	No	...	.....	A narrow strip of land on the western side of the field extending to the south of the Chinsurah Court is utilized for the purpose.
15	Uttarpara Government School.	Yes	About 4 bighas	.....	.....
16	Bankura Zilla School	Yes	80 yards x 50 yards	.....	.....
17	Birbhum Zilla School	No	.....	No	Two plots of land in the Collector's court compound, one of which is uneven, measuring 100 yards x 55 yards, and the other measuring 80 yards x 42 yards in front of the school house, are utilized for the purpose.
18	Dacca Collegiate School	Yes (2 grounds)	One—238' x 124' Other—234' x 83'	There is a play-ground known as the Government High School Sports Ground about a mile away from the School which is reserved for the use of these schools and the Armanitola High English School.	

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Serial No.	Name of Institution.	WHETHER THERE IS A PLAY-GROUND ATTACHED TO THE INSTITUTION: IF SO, WHAT IS THE AREA?		In case there is no play-ground attached to the institution, the information as to whether there are any public grounds which are utilized for the purpose of playing.	REMARKS.
		Yes or no.	Area of the play-ground.		
19	Dacca Madrassah ...	No	.....	.....	.....
20	Armanitola High School	Yes	70 yards x 50 yards	.....	There is also another small plot of land near the play-ground. This land may be added to the field.
21	Barisal Zilla School ...	No	.....	.....	.....
22	Pirojpur High School ...	No	.....	Nil	.....
23	Bhola High School ...	Yes	15 bighas	Nil	.....
24	Jhalakati High School ...	Yes	110 yards x 75 yards	Nil	There are public grounds in the neighbourhood; but these are used by the various Clubs of the town to the exclusion of the Zilla School boys.
25	Mymensingh Zilla School	No	.....	Nil	.....
26	Jamalpur High School ...	No	.....	Nil	.....
27	Faridpur Zilla School ...	Yes	300' x 200'	Nil	.....
28	Rajshahi Collegiate School	No	.....	Nil	.....
29	Dinajpur High School ...	No		The boys play foot-ball and cricket in two pieces of large grounds in the maidan, which is very close to the school.	

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30	Bogra Zilla School ...	No		In the neighbourhood of the school there is a public ground called the Altafnessa Park, in which the boys play.	
31	Malda Zilla School ...	Yes	120' x 270'	The exhibition ground in the neighbourhood of the school is also utilized for foot-ball and cricket play.	.....
32	Rangpur Zilla School ...	Yes (2 grounds)	Each measuring 450' x 250' ...	.....	.....
33	Pabna Zilla School ...	No	.....	The boys of the school are allowed to play three days in a week in a small plot of a public ground which is also used by the Technical School and the Police Club.	.....
34	Jalpaiguri Zilla School ...	No	.....	Nil	With permission of the Divisional Commissioner a plot of land within his office compound is utilized for playing four days in a week.
35	Darjeeling High School ...	Yes	2 roods and 30-76 poles	.....	.....
36	Chittagong Collegiate School.	No	.....	Nil	.....
37	Chittagong Madrassah ...	Yes	2 acres and 40 rods	.....	.....
38	Comilla Zilla School ...	No	.....	Nil	.....
39	Rangamati High School...	No		A public ground called the "Parade Ground", measuring 550' x 250', about 6 furlongs from the school, is utilized for the purpose.	

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APPENDIX C.

GIRLS' INSTITUTIONS.

No. 637, dated Dacca, the 30th January 1914.

From—Miss M. E. A. GARRETT, Inspectress of Schools, Dacca Circle,
To—The Director of Public Instruction, Bengal.

WITH reference to paragraph 2 of your letter No. 56, dated the 2nd January 1914, I have the honour to say that girls' schools' play-grounds should be adjacent to the school buildings and close to the mistresses's quarters. They must be surrounded with a high wall. I recommend that land adjacent to the six sites already acquired for girls' schools at—

Lalbagh,
Narinda,
Wari,
Posta,
Bhagalpur, and
Armanitola,

be acquired for this purpose. Plans of proposed sites showing area, boundaries, and owners may be called for by you from the Chairman, Dacca Municipality, with rough estimate of cost.

No. 222, dated the 14th January 1914.

From—Miss LILIAN BROCK, B.A., Inspectress of Schools, Presidency and Burdwan Divisions,
To—The Director of Public Instruction, Bengal.

I HAVE the honour to forward to you the enclosed statistics which I have collected from Indian and European girls' schools in Calcutta. At the meeting of the Hygiene Committee in your office on 22nd October 1913 I was asked to make certain inquiries of these institutions with a view to ascertaining what play-ground accommodation was available in each case and what arrangements were made for games.

I have included practically every European girls' school, but in the case of Indian schools I have restricted my inquiry to Brahmo and Christian institutions. I think it useless at this stage to attempt to provide common play-grounds for Hindu girls' schools. My own feeling is that when they get accustomed to the idea by seeing such play-grounds used by Christian and Brahmo schools, they will later on be glad to avail themselves of opportunities for play if offered.

INDIAN SCHOOLS.

Name of School.	Type.	Number.	Play-ground.	Games played.	Would the school join another?	School suggested.
Diocesan Collegiate School	High School	181	Large and adequate	Organized games	.....	Only with the Pratt Memorial School.
Christ Church School	Ditto	94	110' x 57'	Badminton; bean bags	Yes, if near.	With the United Free Church High School and Victoria Institution.
London Mission Society Girls' High School.	Ditto	113	1/2 acre and a tennis court	No organized games	No	.....
United Free Church School	Ditto	152	Very small play-ground on the roof.	Badminton	Yes	Christ Church High School, Bethune Collegiate School, and Victoria Institution.
Baptist Zanana Mission High School, Entally.	Ditto	173	4 bighas	No organized games	No	.....
Wesleyan Mission High School, Barrackpore.	Ditto	86	Very large and adequate	No games	No	.....
Brahmo Girls' School	Ditto	198	115' x 55'	Badminton; annual sports. No organized games.	No	.....
Victoria Institution	Ditto	187	74' x 41'	No organized games. Badminton.	Yes	United Free Church High School and Bethune Collegiate School.
Gardiner Memorial School	Ditto	44	Hardly any play-ground	No organized games	Yes	Lee Memorial School.
Lee Memorial School	Middle English, Boarding.	250	11,580 square feet	No organized games	Yes	Gardiner Memorial School.
Milman Memorial School...	Middle English, Day.	126	Good play-ground	No organized games	No	.....
Church of Scotland Mission School, Cossipore.	Middle Vernacular, Boarding.	78	363' x 66'	No organized games	No	.....
United Missionary Training College.	Training College	26 students. 35 school girls. 116 small boys.	63' x 42'	No organized games	.....	Not in the case of the girls: would be willing that the boys should join.

EUROPEAN SCHOOLS.

Name of School.	Type.	Number.	Play-ground.	Games played.	Would the school join another?	School suggested.
La Martinière School ...	High School ...	141	1½ acres ...	Hockey, tennis, and badminton.	No	.....
Pratt Memorial High School.	Ditto ...	164 girls; 55 boys	118' x 140'	Hockey, basket ball, and tennis.	No	.....
Calcutta Girls' High School	Ditto ...	241	Practically no play-ground	No organized games ...	Yes	Calcutta Free School.
Loreto House High School	Ditto ...	250	3 bighas ...	Tennis, rounders, and basket ball.	No	.....
Jewish Girls' School ...	Secondary School	78	No play-ground except a yard; hardly sufficient for a badminton court.	Organized games. In spite of lack of space, hockey is encouraged among the boys, and basket ball among the girls.	Yes	School in Bow Bazar and the Welland Memorial School.
St. Teresa's School ...	Ditto ...	68	Three parts— (a) 180' x 60' (b) 52' x 30' (c) 40' x 40'	Basket ball ...	No	.....
Welland Memorial School...	Ditto ...	59	1,000 square yards	No games ...	Yes	Gouldsmith Free Day School and St. Paul's School at Scott's Lane.
Calcutta Free School ...	Higher Elementary School.	176	Four plots— (a) 200' x 130' (b) 144' x 100' (c) 130' x 76' (d) 95' x 65' (covered shed)	Hockey, badminton, skittles, croquet, sports.	No	.....
St. Paul's School, Scott's Lane.	Ditto ...	69	¾ of an acre	Badminton ...	Yes	Gouldsmith Free Day School.

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Loreto School, Dharamtala	Ditto ...	252	No adequate play-ground	None	No	
Loreto Day School, Bow Bazar.	Ditto ...	142	Ditto	None	No	
Loreto School, Lower Circular Road.	Ditto ...	179	Ditto	None	No	.....
Loreto Boarding, Entally	Ditto ...	449	31,918 square yards. One-third is given to the boarders (75), and the rest to the orphans.	Badminton and basket ball	No	.....
St. Agnes's School, Howrah	Elementary School	112	None. Negotiations are on foot for the purchase of an adjacent property for play-ground.	None	No	.....
St. Elizabeth's School, Howrah.	Ditto ...	8				
St. Thomas's School, Howrah	Ditto ...	23	No adequate play-ground. Request has been put up for funds to buy adjacent property for play-ground.	None	Yes	None
Gouldsmith Free Day School	Ditto ...	120 girls; 120 boys.	150' x 80'. Quite inadequate.	No organized games	Yes; provided other schools use the play-ground on different days.	

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No. 4410, dated Calcutta, the 21st April 1914.

From—MAJOR W. W. CLEMESHA, M.D., D.P.H., I.M.S., President of the Hygiene Sub-Committee,

To—The Director of Public Instruction, Bengal.

WITH reference to the resolution contained in paragraph 5 of the proceedings of the first meeting of the Special Committee convened under Government Order No. 1972 T.—G., dated the 22nd September 1913, to inquire into school and college hygiene, I have the honour to submit a copy of the report of the Sub-Committee appointed thereunder to consider the whole question of the instruction in sanitation and hygiene in schools with special reference to the present syllabuses.

REPORT OF THE HYGIENE SUB-COMMITTEE.

AT the first meeting of the Special Committee appointed by the Government of Bengal (General Department No. 1972 T.—G., dated the 22nd September 1913) to inquire into school and college hygiene, it was resolved to refer the whole question of the instruction in sanitation and hygiene with special reference to the present syllabus to a Sub-Committee whose business it should be to submit to the Committee definite recommendations about this instruction in general and the present syllabuses in particular. The Sub-Committee commenced work shortly after their appointment and held six formal and two informal meetings. Major W. W. Clemesha, I.M.S., Sanitary Commissioner, Bengal, was appointed as Chairman, and Mr. H. A. Stark, Officiating Inspector of Schools, Burdwan Division, Secretary. On the whole the Committee meetings were well attended, and a large number of difficult and complex points relating to the education of school children in hygiene were carefully considered and discussed. The labors of the Sub-Committee naturally fall under two or three main heads.

The first of these to be taken up was the method of providing suitable teachers of hygiene and the best method of imparting instruction to the teachers themselves. Under this head the following resolutions (though not necessarily covering the whole of the ground) seemed to be all that is required for the time being, and it will be observed that they are fairly comprehensive in themselves:—

- “(1) Resolved that every certificated teacher, whether Indian or European, should be required to satisfy the examiners in the subject of hygiene.
- “(2) Resolved that for the purpose of imparting instruction in hygiene in Government training colleges and schools, there should be for each district a special teacher trained in hygiene; that he should be associated more particularly with all grades of training schools in the district. As a rider it was recommended that, to begin with, smart Sub-Inspectors might be sent up for training by the Sanitary Department preparatory to their being employed as District Instructors in Hygiene. The term of their instruction in hygiene should be four months a year, until further development of the scheme be found necessary.”

During the discussion on the above resolutions it was felt that eventually a fully equipped school of hygiene for training teachers would probably be required, but that it would be premature to recommend this at the present juncture. The Sanitary Commissioner was prepared to undertake the training of a limited number of members of the educational staff (*viz.*, one Sub-Inspector for a district) as teachers of hygiene until such time as a more permanent arrangement was felt to be necessary.

The third resolution, *viz.*—“That in the case of grown up women and girls in the higher classes of schools, an advanced course of hygiene is essential, and that a thoroughly qualified medical woman should be appointed to teach hygiene in the schools under the jurisdiction of the Inspectresses of Schools”—was subsequently made the subject of discussion at a special meeting.

In dealing with the subject of hygiene in European schools, it was felt that the Committee had not at their command sufficient information. Mr. Maclear, the Inspector of European Schools, was accordingly invited to attend the Sub-Committee meetings, and he was able to render much assistance in dealing with this subject.

The second and subsequent meetings were largely taken up in dealing with the subject of suitable text-books. Large number of these in both

Bengali and English were circulated amongst the members of the Sub-Committee. Practically all the available books used by the education authorities in England and in this country were received and studied by the various members of the Committee. Two or three books in Bengali were also duly considered. As far as one is able to ascertain, no likely book on hygiene, written either in English or in Bengali, was excluded from the careful study of the members of the Committee.

In dealing with lower primary schools, the Committee were distinctly of opinion that no further attempt should be made than is now being made to teach hygiene up to Standard III. A certain amount of oral instruction is given by the teacher, and some is already incorporated in the readers; but the Committee were strongly of opinion that no text-book on hygiene, however simple, was required earlier than Standard IV in vernacular schools.

It was, therefore, resolved—

“That ‘Village Sanitation’ by Dr. Kamakhya Charan Banarji be used in Standard IV to supplement the departmental books and syllabus appointed for that standard in hygiene.”

The Sanitary Commissioner with his officers undertook to carefully revise, correct and improve the above work, as there appears to be a large number of errors in the present edition. This work is now actually being carried out. The members of the Educational Service sitting on this Committee were strongly opposed to the multiplication of text-books, and emphasized the desirability of keeping the price as low as was consistent with quality. The Committee were also strongly of opinion that the book mentioned in the resolution should be the only one used for all vernacular schools above Standard IV, and the same book would be used year after year.

In dealing with middle English schools, high schools, &c., and for all Indian schools where English is the medium of instruction, it was decided that Wren's Health Reader was the most suitable for the pupils from class 4th and upwards.

Turning now to text-books necessary for training teachers of Indian high schools, it was thought desirable to have text-books, both in Bengali and in English, for this purpose. Consequently after much careful consideration it was resolved that—

“Dr. Banks' Manual of Hygiene, Revised Edition, and Dr. Harinath Ghosh's ‘Swasthya-Tattva,’ Parts I and II, be used by teachers in Indian high schools.”

The subject of the text-books on hygiene for European schools was also very carefully considered. Although a very large number of suitable books were submitted to, and examined by, the Committee, it was felt that, with the possible exception of Dr. Banks' book, none were really satisfactory. Many very excellent books are in use in English schools, but these all omitted matters dealing with life in the tropics.

It was, therefore, resolved—

“To draw up a syllabus in hygiene suitable for European boys' and girls' schools to be divided into three parts—A, B, C. The teaching of this syllabus to be largely at the discretion of the Inspector and Inspectress of European Schools and suitable text-books for each part being suggested.”

In the appendix to this report will be found a copy of the syllabus approved by the Committee and at least one suitable text-book for each particular section. The Committee were of opinion that in European schools it was undesirable to provide each child with a text-book, but that the teaching should consist of a series of lessons accompanied by demonstrations, if possible. The text-books mentioned in the appendix are only intended as suitable for the teacher to prepare his or her series of lectures. This concludes the subject of text-books.

The next subject that was discussed was the general arrangement for the teaching of hygiene in European schools.

It was resolved—

“That for each girls' school (European) an intelligent and suitable lady teacher should be trained by the St. John Ambulance Association in First Aid to the Injured and Nursing.”

The next subject to be taken up was that of the various aids and additions to the teaching of hygiene which were at present feasible. It was felt that magic lanterns and slides were best suited to attract the attention of Indian children.

It was, therefore, resolved—

“That in each district there would be a District Officer to teach hygiene in all Government schools in the district. He should be equipped with the following: a magic lantern, slides bearing on malaria, plague, water, life history of the house-fly, simple physiology, &c.”

The larger and more wealthy schools should certainly be encouraged to provide themselves with magic lanterns. The Education Department should be in a position to supply or to indicate where suitable slides on the subjects mentioned in the resolution above can be procured.

The Committee also wish to place on record their approval of the following charts and diagrams for teaching hygiene as far as the funds of the individual schools permitted:—

Schools should provide themselves with W. & A. K. Johnson's Physiological Diagrams, Series I, II, &c., and St. John Ambulance First Aid Diagrams, Thomas Nelson & Son's Royal Portfolio of Pictures and Diagrams for Object-lessons, Practical Physiology, Arnold's Diagrams.

Some members of the Committee were strongly in favour of making use of short sanitary maxims to be hung up in the school rooms.

The following resolution was passed:—

“That schools should further be provided with a series of six wall hygiene maxim cards, to be published by the Baptist Mission Press of Calcutta.”

It was felt that while these suggestions cannot be considered to be in any way complete, they would be sufficient for the present time.

Finally, the subject of instruction in hygiene of girls, both Indian and European, received very careful and special consideration. The subject had already been dealt with fairly fully in the consideration of the syllabus and text-books necessary for European schools; but the Committee were strongly impressed with the fact that a great deal more of advanced teaching in purely domestic hygiene and in the management of children and invalids and of matters relating to maternity was possible in a country like India.

As regards Indian girls, the following important resolution was passed:—

“In amplification of resolution 5 of 1912-13, it was considered that a fully qualified Bengali medical woman, preferably with European qualifications, should be appointed at a pay of from Rs. 350 rising to Rs. 500 to teach advanced hygiene and domestic economy in Indian girls' schools within the jurisdiction of the Inspectress of Schools, Calcutta.”

It was felt that no prescribed course of instruction should be laid down, but with a highly trained and tactful teacher it was better to leave matters entirely in her hands.

For teaching of a similar nature in European girls' schools, the following resolution was passed:—

“That the educational authorities should, as far as possible, encourage pupils of higher elementary schools to take the full supplementary domestic course after Standard VI, and that in lower secondary schools they should encourage the formation of domestic science supplementary classes to be attended either by pupils who have completed their sixteenth year or who have taken the Junior Cambridge Certificate.

“That a thoroughly well equipped school of domestic hygiene and allied subjects should be established in the near future in Calcutta, that the course should be made attractive and useful, and every endeavour should be made to adapt the course of teaching to the requirements of the rising generation of young women in Bengal.”

The educationists on the Committee were of opinion that there is very little demand for a school of this nature at present; but many members of the Committee considered that an attempt should be made to create such a demand.

This closed the work of the Committee.

The printed proceedings of each meeting to be found in the appendix.

W. W. CLEMESHA, M.D., D.P.H., MAJOR, I.M.S.
President, Hygiene Sub-Committee.

CALCUTTA,
The 21st April 1914.

Syllabus for Hygiene for European Schools.

PART A.—PHYSIOLOGY.

- (1) The human body as a whole.
- (2) The skeleton: its uses and names of bones.
- (3) The general distribution of the muscles and their functions.
- (4) The circulation of the blood: the action of the heart.
- (5) Description and function of the lungs with a brief description of the changes which go on in the blood during respiration.
- (6) The digestive organs, including mouth, stomach, intestinal tracts, &c.: a description of the digestive organs with the various secretory glands.
- (7) A short description of the various kinds of food and their uses.
- (8) A brief and simple description of the changes that food undergoes in process of digestion.
- (9) The excretory system, dealing particularly with the kidneys, sweat, glands, &c.
- (10) A description of the nervous system, with simple remarks on the function of the brain nerves, spinal cord, &c.

Text-book.—Physiology—Huxley's Primer.

PART B.—HYGIENE.

- (1) Hygienic conditions, connected with the house, such as ventilation, evils of overcrowding, &c.; proper methods of disposal of kitchen waste, bath water, and sewage, &c.
- (2) Proper arrangements for keeping food.
- (3) Cleanliness of surroundings: sites for building and sites to avoid.
- (4) Water—Necessity for pure water; brief description of good and bad wells; unsuitable sites for wells; necessity for town supply of pure water and where they usually come from; value of river water, lake and tank waters, rain-water; simple method of purifying a doubtful water.
- (5) Milk—Danger of a bad milk supply; proper method of keeping and preserving milk.
- (6) Clothing and bodily cleanliness—Necessity for frequent bathing; proper and suitable clothing; evils arising from tight lacing and from unsuitably-shaped shoes; necessity for adequate supply of clean and suitable clothes and bedding; dangers attaching to dirty clothes; necessity for use of soap.
- (7) Bodily exercises—Necessity for exercises to strengthen muscles in promoting proper and upright carriage and proper respiration; suitable form of exercises for boys, particularly gymnastics, football and hockey, &c., and skipping, gymnastics, &c., for girls.
- (8) For girls only—Description of the various methods of cooking food and their suitability under various circumstances of the home; necessity for special dietary and special cooking for young children and invalids.

Text-book.—Reynolds' Hygiene Primer.

PART C.—PREVENTION OF THE COMMON AND DANGEROUS DISEASES OF THIS COUNTRY.

- (1) Parasites—Dangers of infestation by parasites; a description of the commoner ones and the dangers. Worms—Short description of the ring-worm and the necessity for early treatment.
- (2) Water-borne diseases, particularly cholera, enteric, and dysentery.
- (3) The importance of flies playing in the spread of diseases with reference to cholera, enteric, &c.
- (4) Brief description of the personal and domestic prophylactic measures for plague.
- (5) Brief description of malaria and how it is carried by mosquitoes; very brief description of the parasites and its life cycle in mosquitoes; a description of the life cycle of insects with particular reference to mosquitoes; short description of the habits of mosquitoes and their breeding-places; difference between the anopheles and the culex; importance of treating or getting rid of breeding-places in the neighbourhood of houses; personal prophylaxis: mosquito curtain, quinine, &c.
- (6) Full St. John's Ambulance Course for boys and St. John's Sick Nursing Course for girls in addition.

Text-book.—Dr. Banks' Manual of Hygiene (new edition).

No. 76.

FROM

THE HON'BLE SIR E. D. MACLAGAN, K.C.I.E., C.S.I., I.C.S.,

Secretary to the Government of India,

TO

THE SECRETARY TO THE GOVERNMENT OF BENGAL,

GENERAL (EDUCATION) DEPARTMENT.

Simla, the 19th January 1917.

Department of Education.
Education.

SIR,

I am directed to acknowledge the receipt of your letter no. 456, dated the 23rd February 1916, submitting the Governor in Council's recommendations in connection with school and college hygiene, and to say that, subject to the reservations below, the Government of India approve generally of those recommendations.

2. The Government of India feel considerable doubt as to the advisability of the proposal to supplement the system of local athletic committees by a small general advisory committee at Calcutta for the purpose of supervising and directing the activities of the local committees. They apprehend that the existence of such a committee is calculated to encourage representations and grievances from rural institutions and interests, with the probable result that it would rapidly devolve into a sort of arbitration committee. With assistance and advice from the Physical Adviser in the matter of the purchase of apparatus, etc., the local athletic committees should, it is thought, be able to manage their own affairs, and the Government of India are of opinion that at any rate it would be well to ascertain by experience how far they can do so before instituting a central committee.

3. It is observed with satisfaction that, in formulating their proposals in connection with the provision of playing-fields, the committee appointed by the local Government to enquire into school and college hygiene have taken special care to guard against the extravagance which would be entailed by a system of assigning separate playing-fields to separate institutions and against the growing evil of individualism in games, and that they have also endeavoured to ensure that mutual co-operation which is so essential for the purpose of organization and discipline. The committee do not, however, appear to have looked into the question as to the class of games suitable for, and therefore to be encouraged in, schools in India. For example, cricket, football, hockey, etc., are games which are very expensive to maintain from the point of view both of money and space, and as only a comparatively limited number can at any one time take part in them, the result is that there is an unfortunate tendency for the playing-fields to become the preserves of the few instead of the many. The Government of India trust that the Physical Adviser will give this question his consideration.

4. It does not appear to the Government of India to be necessary to lay down a hard and fast rule that the post to be created at the proposed secondary training college for women teachers, in order to provide for a qualified woman teacher of hygiene and other subjects, should be filled by a European. It may be found necessary to appoint a European lady in the first instance, but the post should be open to Indians as well as to Europeans, and the question of the selection of an incumbent, whenever a vacancy occurs, should be left to the discretion of the local Government.

5. The Government of India regret that they are unable to accept the suggestion that selected sanitary officers should be directed by them to prepare books on hygiene for use in senior, middle and lower classes of schools throughout India. They believe that there are already in existence admirable books dealing with the subject with sufficient variety to ensure their suitability for practically every grade of instruction in hygiene. Moreover, they feel that it would hardly be possible to prepare a book which would have anything like universal application in vernacular schools in India.

6. In the Government of India Resolution no. 301-C.D., dated the 21st February 1913, local Governments and Administrations were invited to consider the questions whether hygiene should be made a compulsory subject in the various school leaving certificate schemes, and whether it should be recommended to Universities for prescription as part of their Matriculation examination. Subsequently the Government of India admitted that there were reasons why it might be desirable to make the course in higher institutions voluntary (*vide* paragraph 2 of this Department letter no. 636, dated the 10th April 1913, to the Honorary Secretary of the Executive Committee of the St. John Ambulance Association, Indian Branch, a copy of which accompanied this Department letter no. 1139, dated the 24th June 1913). All local Governments and Administrations have not intimated their opinion on this point in their replies to this Department circular of the 24th June 1913, but of those who have done so the majority are not in favour of the teaching of hygiene as a separate subject for examinations. The Government of India are prepared to accept this conclusion, for, as a result of further consideration, they are themselves inclined to the opinion that insistence on the instruction of pupils in hygiene with a view to an examination test would probably only lead to a somewhat formal and superficial course of instruction. They are disposed to think that a preferable alternative would be to give teachers a practical course of instruction in the subject. In these circumstances and having regard to the fact that a test in hygiene does not properly fall within the scope of the University Matriculation examination as such, the Government of India are not at present prepared to invite the Calcutta University to consider whether sanitation and hygiene should be recognised as alternative subjects for its Matriculation examination.

7. From a perusal of paragraph 17 of the Director's letter no. 445, dated the 30th June 1915, the Government of India understand that in proposing a new appointment of a Physical Adviser, it is the intention to substitute the whole-time services of this officer for the part-time services of Dr. Segard, and with this proposal the Government of India are in agreement. It is presumed that the annual grant of Rs. 2,760 given to the Young Men's Christian Association in order to secure the part-time services of Dr. Segard will be discontinued when the whole-time Physical Adviser is appointed and that it may be set off against the additional expenditure involved in the scheme. The creation of this appointment and also that of a Deputy Sanitary Commissioner require the sanction of the Secretary of State, and I am to request that, with the permission of the Governor in Council, definite proposals, accompanied by a proposition statement, for the creation of these appointments may be submitted. It is inferred from the fact that the proposed salary of the Deputy Sanitary Commissioner is Rs. 1,100 a month that the intention is to add a new appointment to the cadre of the Indian Medical Service. In submitting their proposals the Government of Bengal will no doubt furnish the reasons which lead them to think that an officer of the Indian Medical Service is necessary, and render it

inadvisable that the appointment should be filled by an officer on Rs. 500 to Rs. 1,000 recruited in India under the terms of the Resolution in this Department nos. 921-36—Sanitary, dated the 23rd May 1912.

8. In conclusion, I am to observe that the Government of India regret that they cannot accede to the request for financial assistance from Imperial revenues in the future for the introduction of the reforms indicated in the letter under reply, and their general approval of the scheme, which is hereby given, is contingent on the condition that the local Government will be able to finance it from provincial revenues when normal conditions are again restored.

I have the honour to be,

SIR,

Your most obedient servant,

E. D. MACLAGAN,

Secretary to the Government of India.

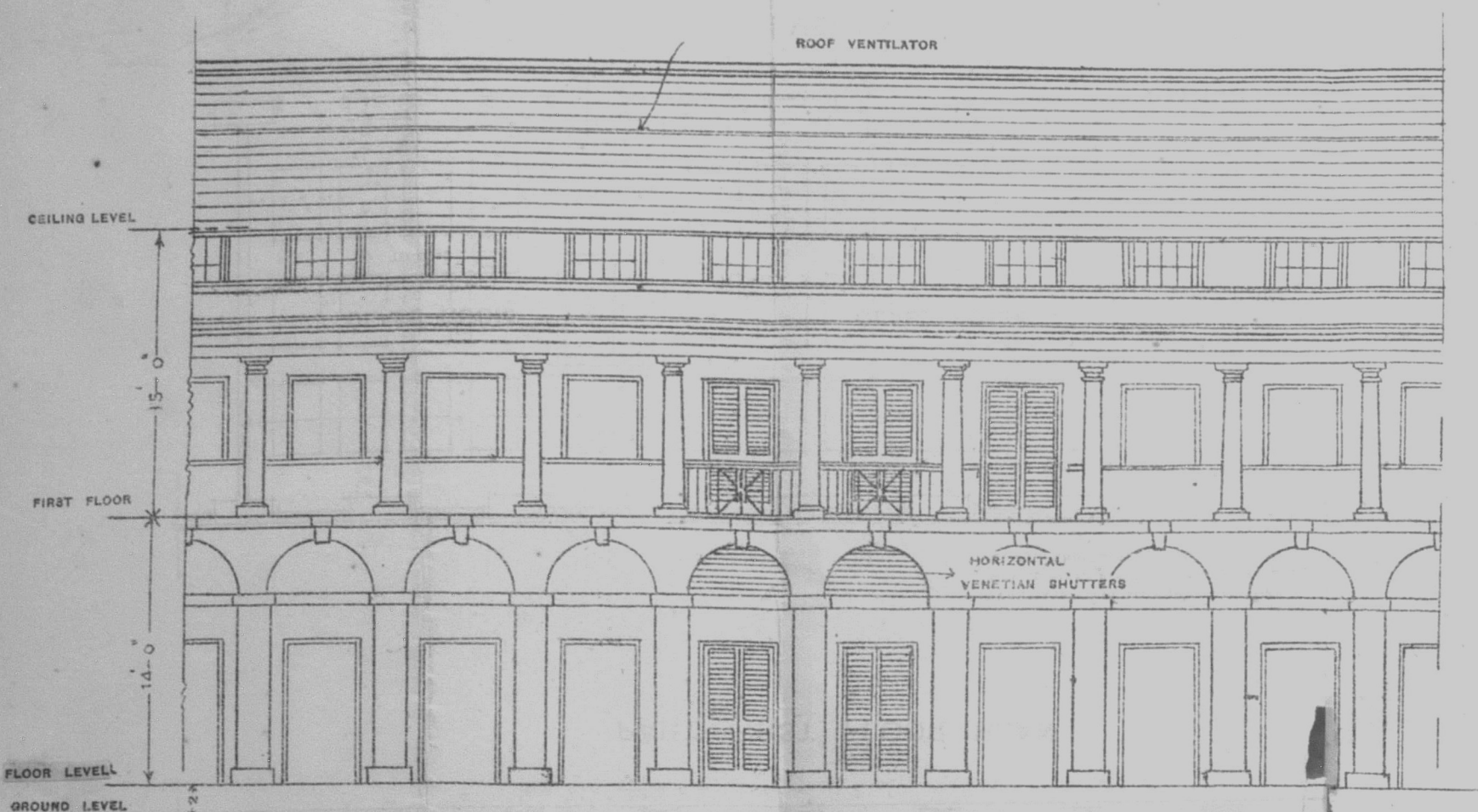
DIAGRAM

SHOWING THE

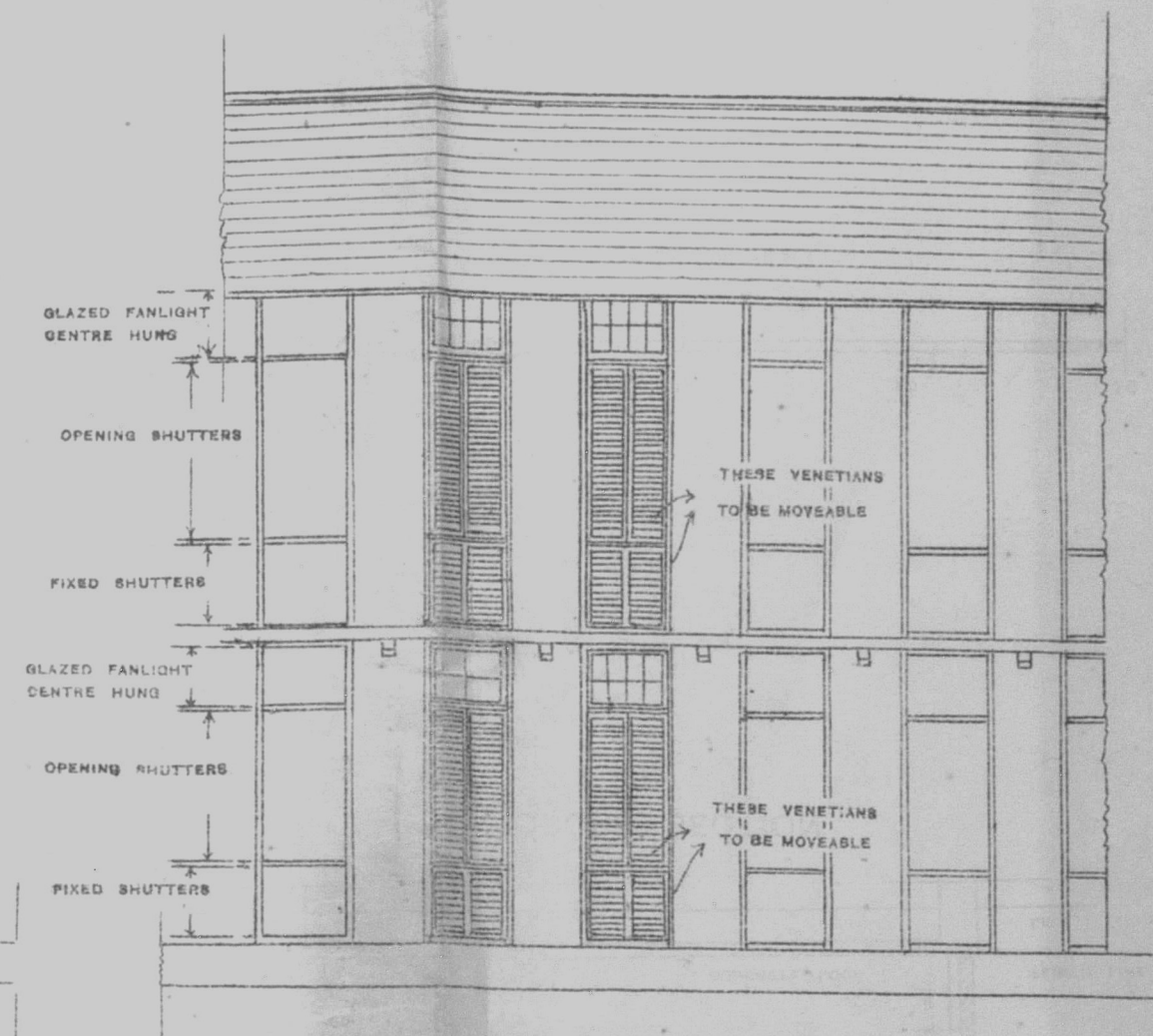
LIGHTING AND VENTILATION OF SCHOOLS ON THE UNIT SYSTEM

NOTE-

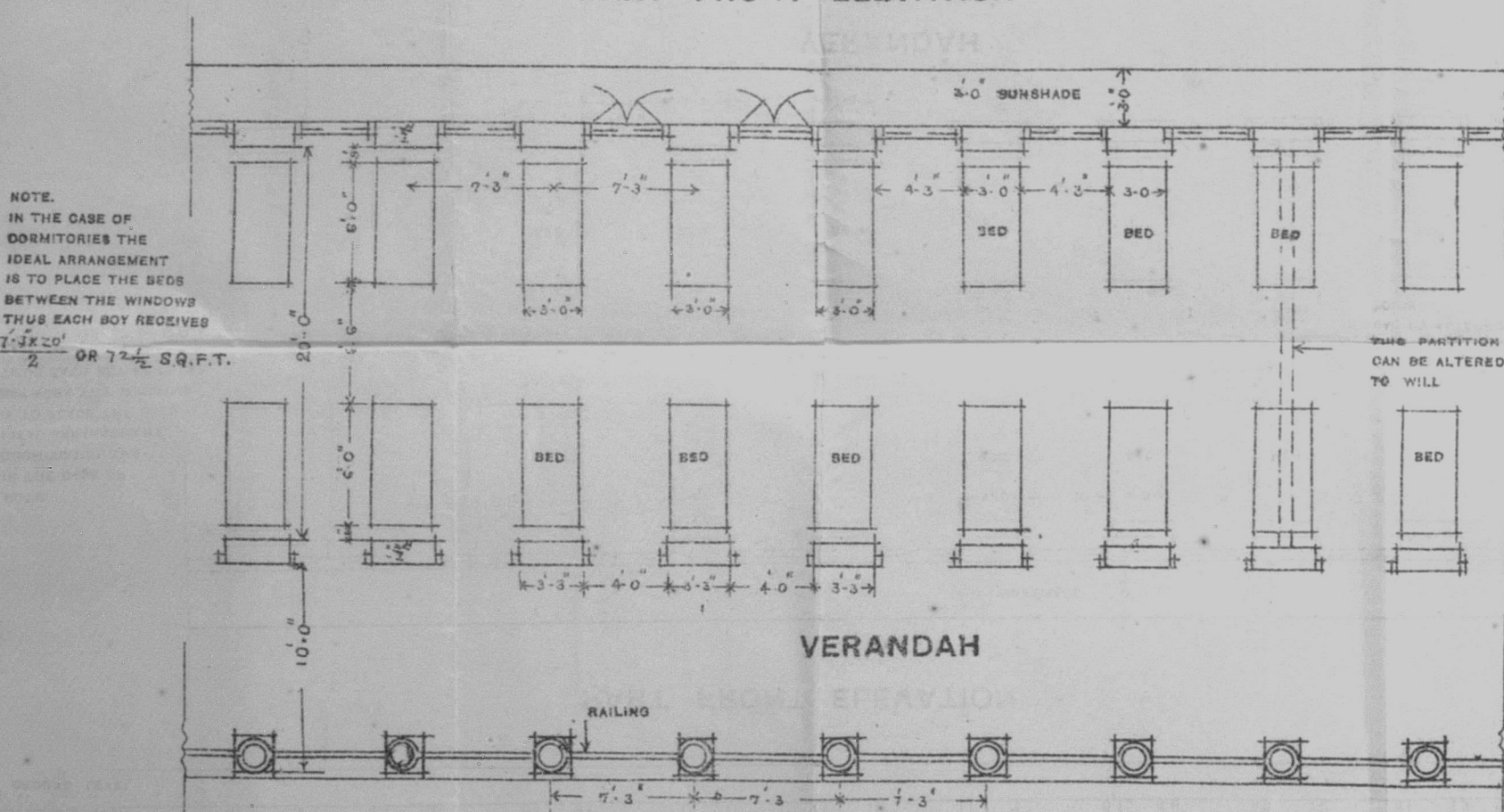
IT MUST BE CLEARLY UNDERSTOOD THAT THIS DIAGRAM IS IN NO WAY MEANT TO BE AN EXAMPLE OF AN ARCHITECTURAL TREATMENT FOR SCHOOLS OR THAT THE DIMENSIONS OF WALLS, ETC., ARE IN ANY WAY BINDING, THESE POINTS TOGETHER WITH THE SELECTION OF MATERIALS ARE ENTIRELY DEPENDENT ON THE SITE AND LOCALITY IN WHICH THE SCHOOL WILL BE BUILT.



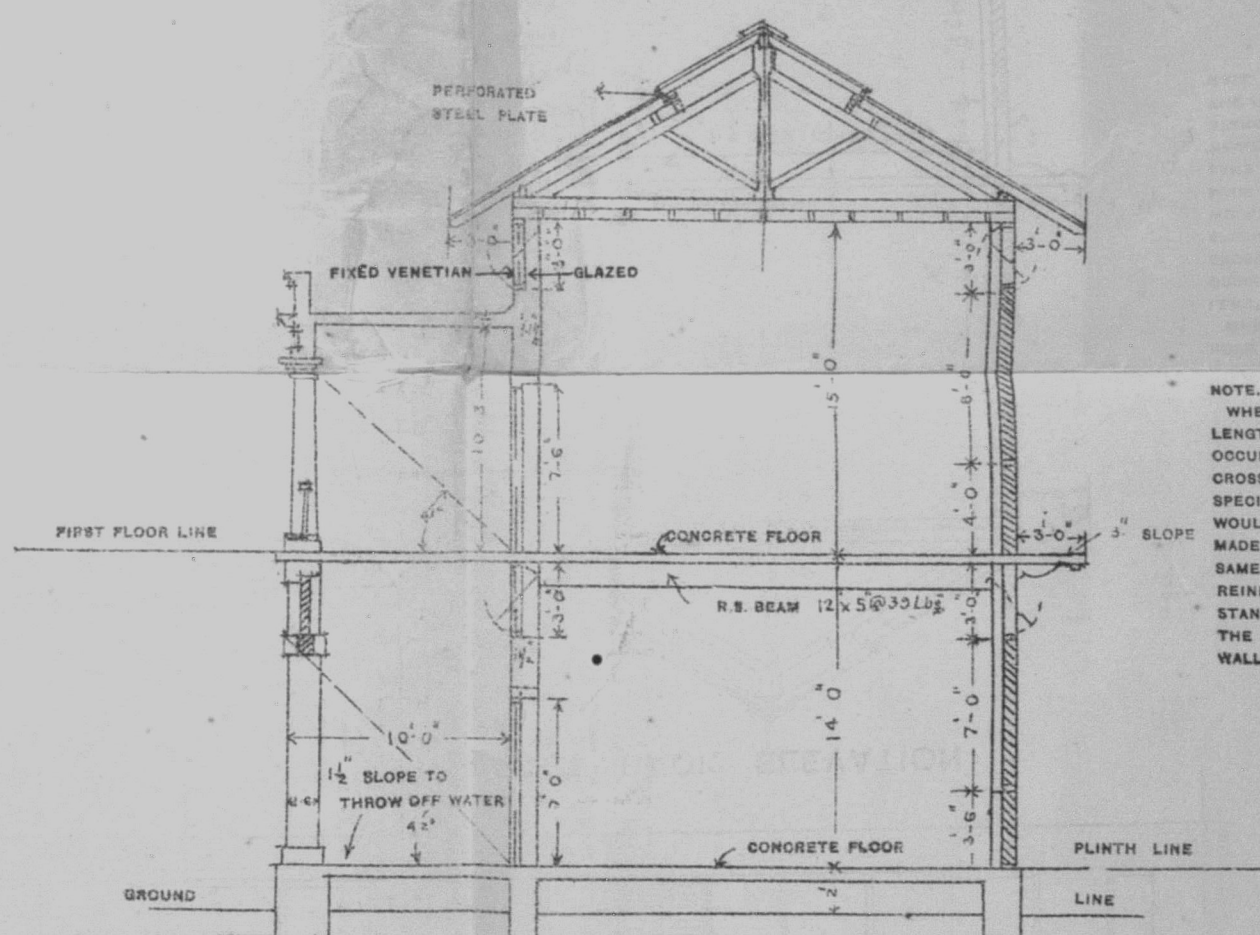
PART FRONT ELEVATION



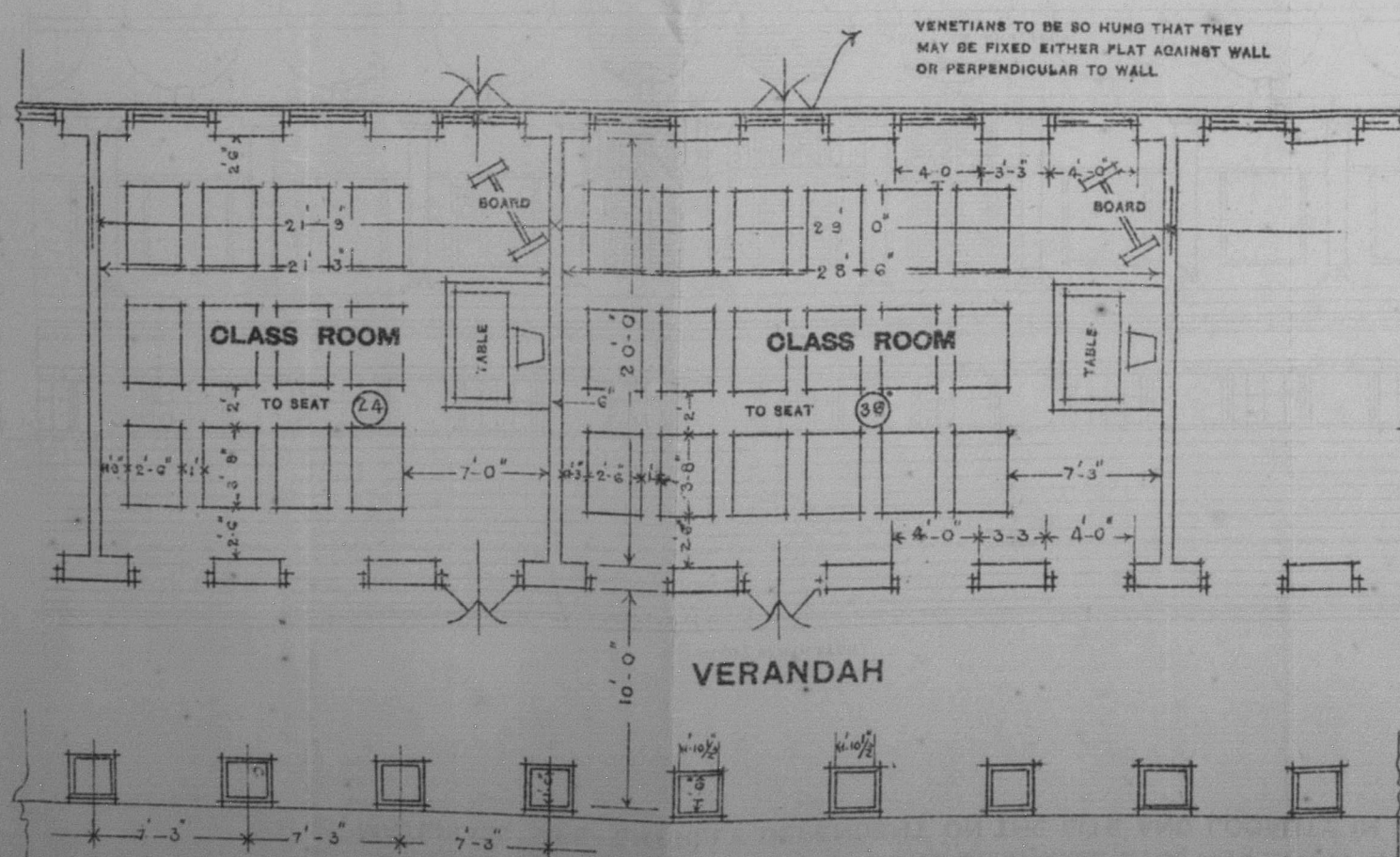
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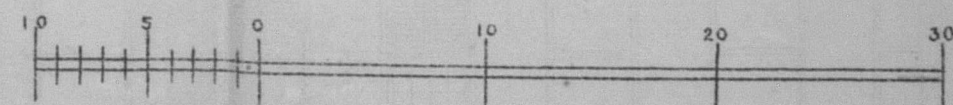
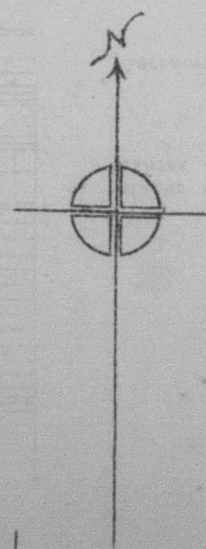
PART FIRST FLOOR PLAN



CROSS SECTION



PART GROUND FLOOR PLAN

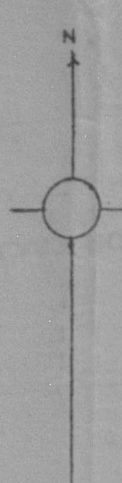
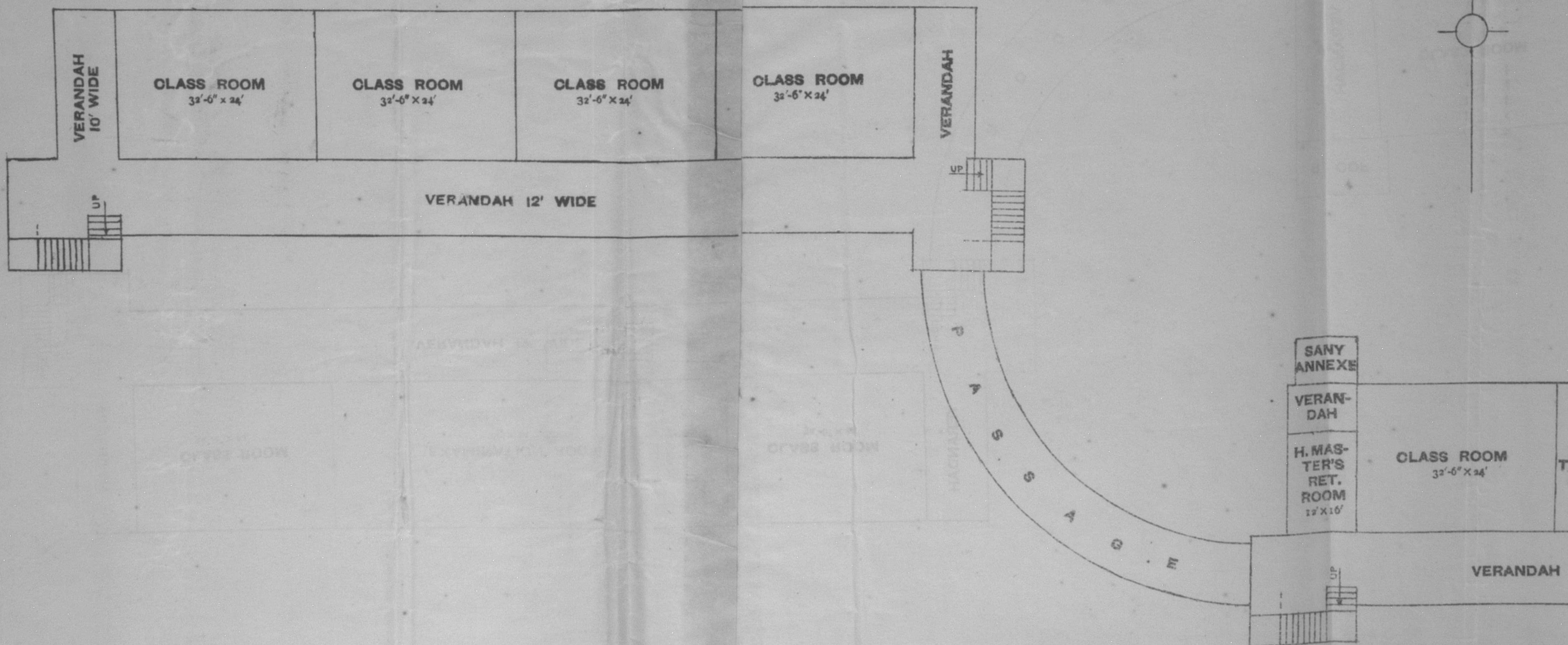
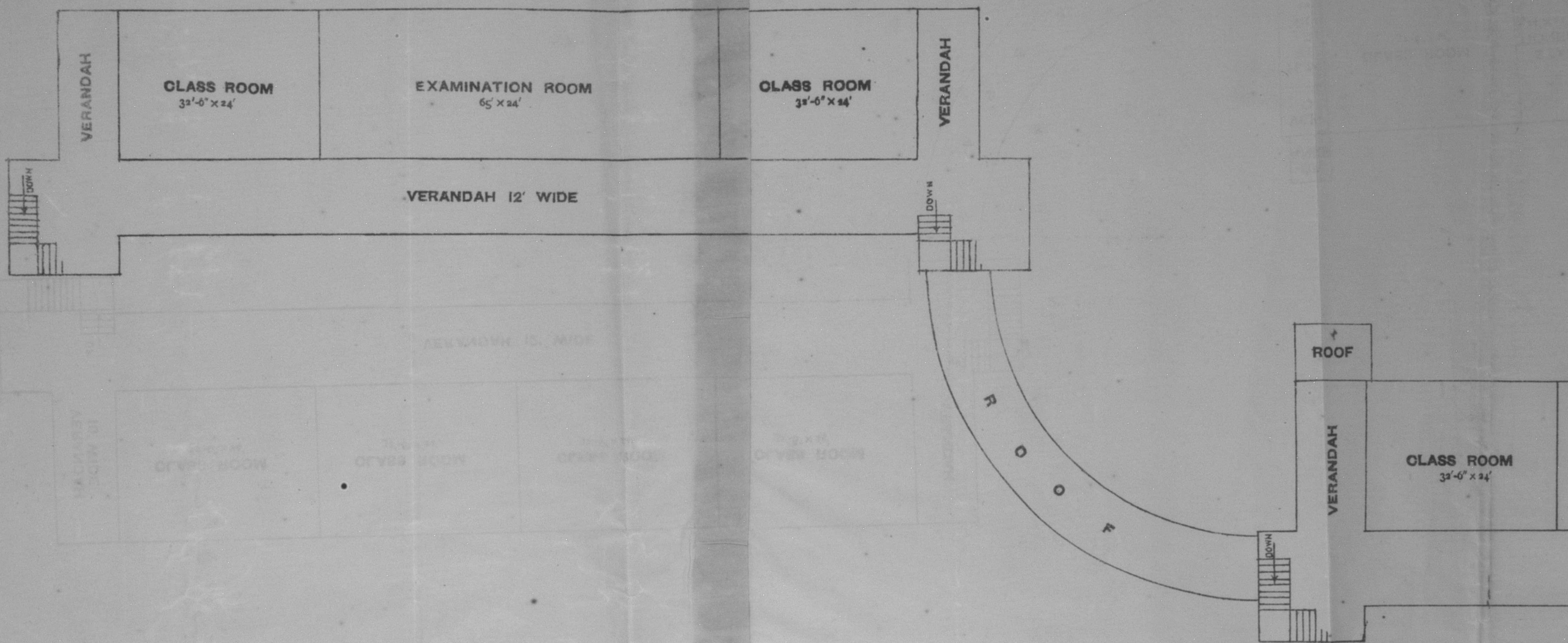


SCALE OF FEET

NOTE. WHERE LONG LENGTHS OF WALL OCCUR WITHOUT CROSS TIE WALLS SPECIAL PROVISION WOULD HAVE TO BE MADE TO STRENGTHEN SAME, EITHER BY REINFORCING OR BY STANCHIONS RUN THE FULL HEIGHT OF WALL.

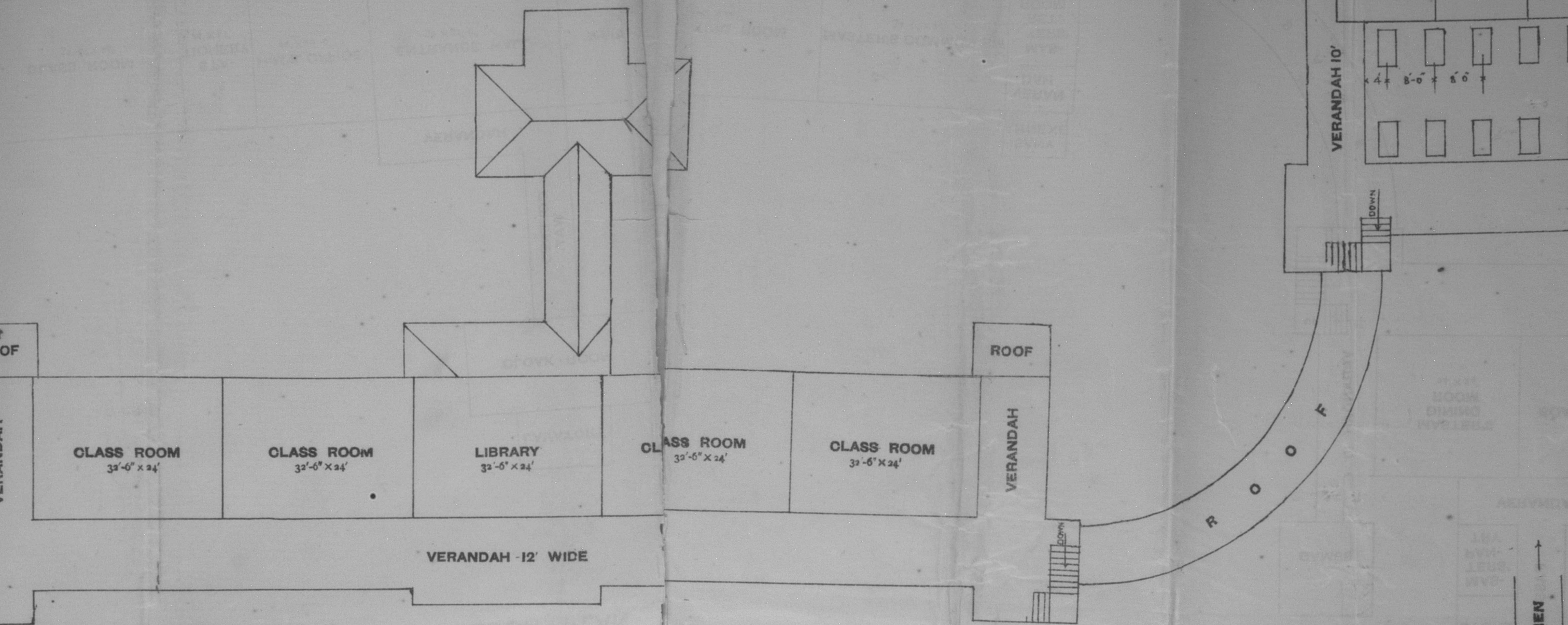
T. O. FOSTER, F.R.I.B.A.,
Consulting Architect
to the Govt. of Burma, P.W.D.,
24th July 1916.

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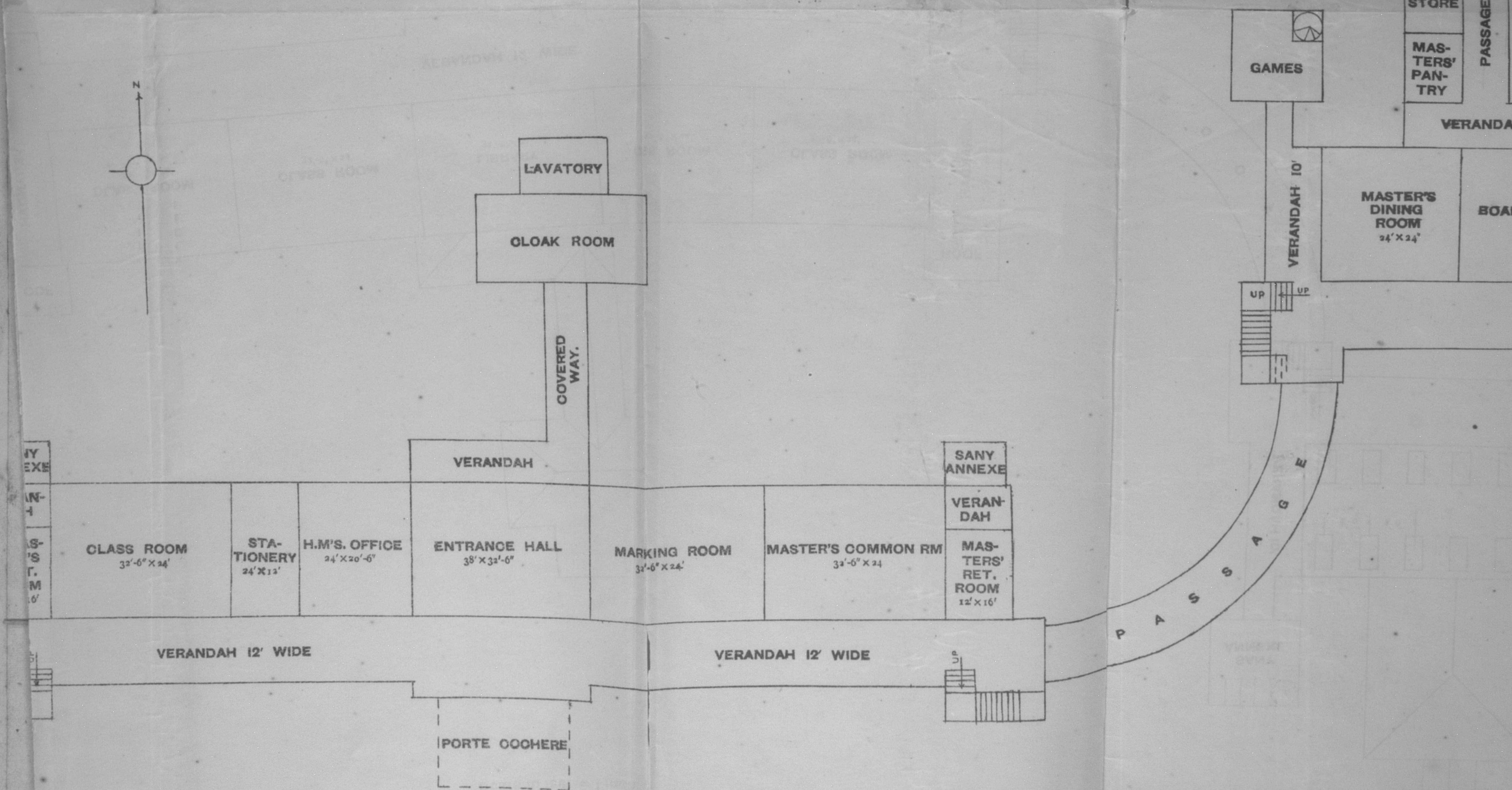


HIGH SCHOOLS TYPE PLAN

Scale 16 feet = 1 inch.



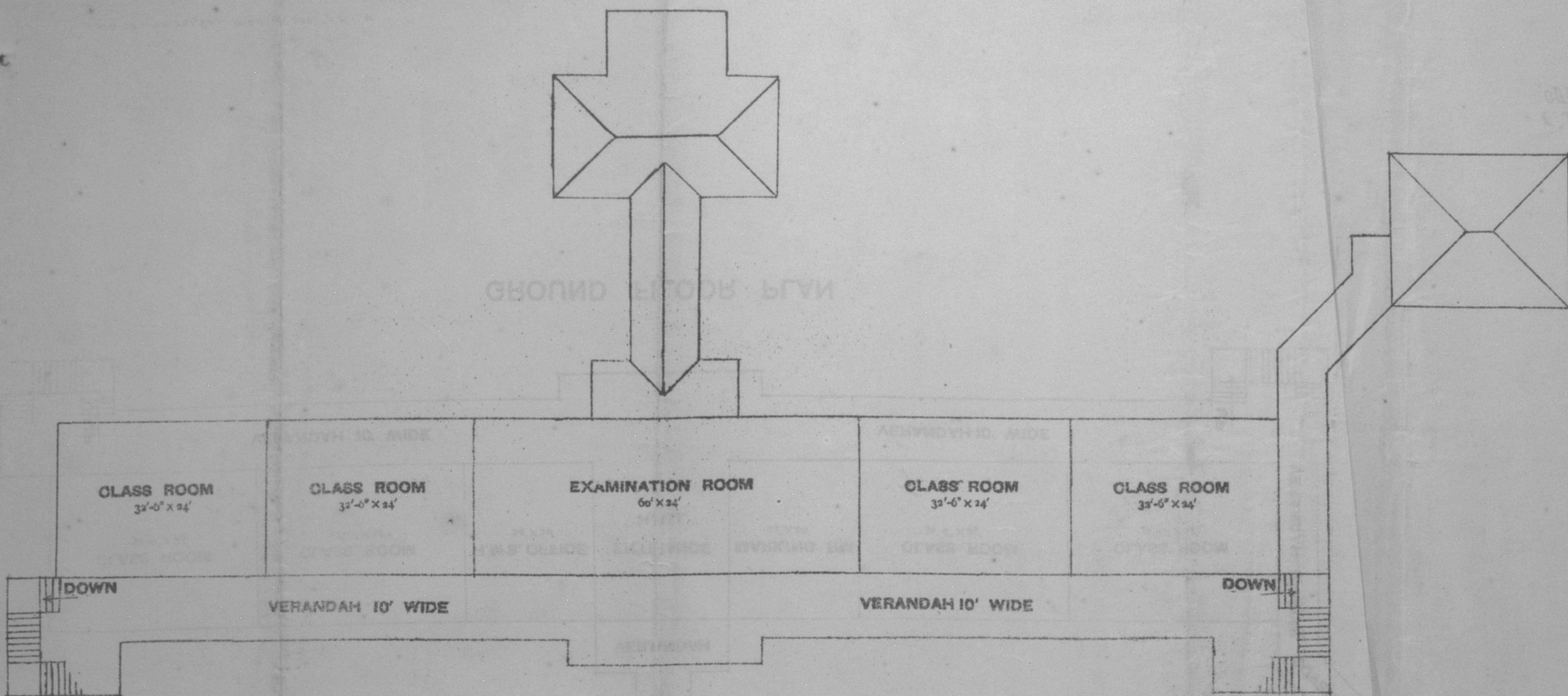
FIRST FLOOR PLAN



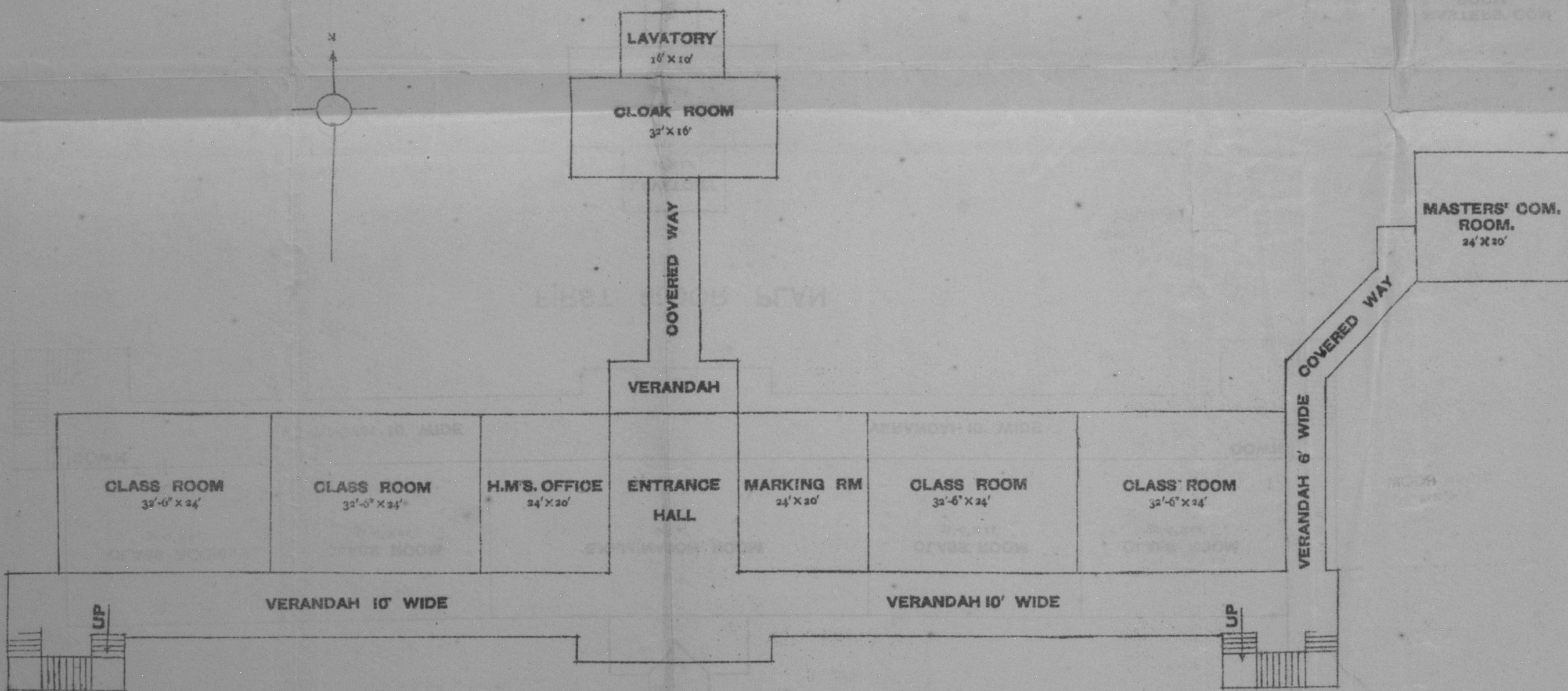
GROUND FLOOR PLAN

MIDDLE SCHOOLS TYPE PLAN

Scale 16 feet = 1 inch.



FIRST FLOOR PLAN



GROUND FLOOR PLAN

E. J. PULLAR, F.R.I.B.A.,
Offg. Consulting Architect
to the Govt. of Burma,
P.W.D.
7-5-

NOTES.

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Home (Education) Department.

C.No.2548A, From the Govt. of India, Dept. of Education No.642, dated the 20th July 1917.

Subject.— Reports on the action taken by the Govts. of Burma and Bengal in regard to the investigation of certain questions connected with school and college hygiene.

Please see paragraph 7 of the Resolution of the Government of India, No.301 C.D., dated the 21st February 1913, on their educational policy (page 4 of G.O.No.394, Educational, dated the 1st May 1913) and their letter No.1137, dated the 24th June 1913 (pages 2 and 3 of G.O.No.632, Educational, dated the 7th July 1913) containing suggestions for the investigation of a number of specific questions connected with school and college hygiene. The action taken by the Madras Government in the matter is described in the letter to the Government of India, No.124, Educational, dated the 9th February 1915.

2. The Government of India have also been forwarding to this Government copies of the reports on the action taken by other Governments. On pages 4 to 6 of the notes to G.O.No.123A, dated the 9th February 1915, the action already taken by the Govts. of Bombay, Burma, Assam and the North-West Frontier Province on certain points is summarised. The report of the Govt. of the United Provinces is contained in G.O.No.413, Educational, dated the 20th April 1915 and the similar reports concerning Bihar and Orissa and the Punjab are ~~are~~ in G.O.No.1423, Educational, dated the 14th December 1915.

3. The Government of India have now forwarded copies of the reports on further action taken in Burma and on the action taken by the Bengal Govt.

4. A brief summary of the action already taken by the Government of Burma with reference to para.7 of the resolution of the Govt. of India printed in G.O.No.394, Educational, dated the 1st May 1913, will be found on pages 4 to 6 of notes to G.O.No.123A, dated the 9th February 1915. The principal points discussed in the letter of the Govt. of Burma dated the 17th January 1917 on pages 2 and 3 of C.F. are noticed below:-

(1) Type designs for school buildings.- The Govt. of Burma consider that a uniform type plan for all schools of a certain class is unsuitable for the varying conditions of the Province. They prefer to adopt a system of class room units to be varied in special cases. The Consulting Architect has also been asked to prepare a dormitory unit for hostels and boarding schools.

(2) Medical Inspection of school children.- A system of medical inspection of schools has been in force in Burma since 1912. The details will be found in the circular on pages 27 and 28 of C.F. The Govt. of Burma have accepted as suitable the D.P.I's suggestion to appoint a special medical officer with full medical qualification and D.P.H. diploma in the cadre of the I.E.S. to perform the following duties:-

- (i) Training of teachers in hygiene;
- (ii) Inspection of hygiene teaching;
- (iii) Medical inspection of a limited number of schools.
- (iv) To advise the D.P.I. generally in regard to

paras 2 + 3 - pages 2 + 3 of C.F.

para 4 - page 3 of C.F.

Page 29 of C.F.

school hygiene.

Further consideration of this proposal has been deferred until normal conditions of administration return.

(3) Teaching of hygiene in colleges and schools.

The Govt. of Burma are taking steps to utilise more largely the services of the St. John Ambulance Association to assist in the improvement of the teaching of hygiene in colleges and schools.

5. The principal measures ~~proposed~~ ^{approved} by the Govt. of Bengal for adoption in that Province and the comments of the Govt. of India thereon are noticed below:-

Item of enquiry.	Measures proposed to be adopted by the Govt. of Bengal.	Remarks of the Govt. of India, if any.
(1) Conditions of school houses, hostels and other places where pupils reside from the point of view of sanitation.	The insanitary condition of many of the educational buildings and hostels is admitted. The Govt. desire to appoint a Dy. Sanitary Commissioner for a period of 5 years on a salary of Rs. 1,100 a month in order to inspect existing school buildings from the sanitary and hygienic points of view, to draw up general directions for the lighting, ventilation and sanitation of new school buildings, to scrutinise all plans for new buildings and to be in general charge of medical inspection of school children. (para. 8 - pages 31 & 32 of C. F.)	The Govt. of India have enquired whether the appointment cannot be filled by an officer recruited in India on a salary of Rs. 500-1000 per mensem. (para. 7 of 102/103)
(2) Professional examination of building plans from a hygienic point of view.	vide remarks above.	

re 5. page 3 of C. F.

Item of enquiry	Measures proposed to be adopted by the Govt. of Bengal.	Remarks of the Govt. of India, if any.
(3) Introduction of a simple and more practical course of hygiene.	No text books on hygiene or sanitation should be taught in the lower primary stage. From the upper primary stage certain text books to be prepared by the best sanitary officers of the Govt. of India to suit the senior, the middle and the lower classes of schools should be used in both vernacular and Anglo-vernacular schools. (para. 11- page 32 of c.f.)	This suggestion is not accepted. There are already in existence admirable books on the subject for practically every grade of instruction. Moreover it is hardly possible to prepare a book for universal use in vernacular schools in India. (para. 5- page 102 of c.f.)
(4) Whether hygiene should be a compulsory subject in the various schemes of school leaving certificates.	The teaching of hygiene should form an integral part of the secondary school course and a compulsory subject for any school final examination which may be instituted later on. (para. 11- page 33 of c.f.)	The Govt. of India on reconsideration, are not in favour of the teaching of hygiene as a separate subject for examination. (para. 6- page 102 of c.f.)
(5) Whether hygiene should be recommended to Universities as part of their Matriculation examination.	The Calcutta University should be invited by the Govt. of India to consider whether sanitation and hygiene should be recognised as alternative subjects for its Matriculation examination. (para. 11- page 33 of c.f.)	The Govt. of India see no necessity for it. In their opinion the preferable alternative is to give teachers practical course of instruction in the subject. (para. 6- page 102 of c.f.)
(6) Provision of suitable teachers of hygiene.	Arrangements are to be made to train a limited number of selected sub-inspectors of schools by deputation to the sanitary dept. for about four months. The Govt. will also consider the recommendation to appoint a qualified English lady on a salary of Rs. 400-20-500 to teach hygiene and other subjects in the proposed secondary training college for women teachers. (para. 12- page 33 of c.f.) <i>The improvement of training institutions in Bengal is under consideration and the training of teachers in Hygiene will be taken up in the next session.</i> (page 41 of c.f.)	+ It need not be laid down that the post should be filled by a European, though a European may have to be appointed as first instructor. The post should be open to Indians as well as Europeans. (para. 4- page 102 of c.f.)

Item of enquiry.

Measures proposed to be adopted by the Govt. of Bengal.

Remarks of the Govt. of India, if any.

(7) Revision of the syllabus, and aids to the teaching of hygiene.

The Government accept the Director's recommendation that instruction in hygiene on the basis of a syllabus should be made compulsory in European schools and that a sum of Rs.52,000 should be allocated for the provision of lanterns, charts, pictures and diagrams for use in all schools. (para. 13 - page 33 of c.f.)

(8) Inspection, where possible, of male scholars with special reference to infectious diseases, eye-sight and malaria.

The Government accept the Committee's proposal to introduce regular medical inspection to start with of school children in Calcutta and municipalities with over 10,000 inhabitants by a properly qualified agency consisting of a Deputy Sanitary Commissioner (on Rs.1,100 a month) and two qualified Asst. Surgeons (one a man and the other a woman) on Rs.224 each per mensem. (para. 10 - page 32 of c.f.)

(9) Requirements in the way of recreation grounds, gardens, gymnasia, reading rooms, common rooms &c.,

The Govt. propose to subsidise the scheme proposed by the Y.M.C.A. for the provision of a play-ground in the town of Calcutta and to consider the question of physical instruction of women teachers, a preliminary to the introduction of gymnastic exercises in girls' schools, in connection with the scheme under consideration to establish a college for secondary women teachers in Calcutta. (para. 31 of c.f.)

The Govt. accept the committee's recommendations in regard to playing fields at District and subdivisional headquarters. They attach much importance to the suggestion for the co-ordination of school games by their location in central playing grounds, to be made use of by all the approved institutions in the neighbourhood under the control of a local committee, the activities of the local committees being controlled by a general advisory committee in Calcutta. Public expenditure on play-grounds should go generally hand in hand with local support except in poor areas. (para. 6 - page 31 of c.f.)

The committee do not appear to have looked into the question as to the class of games suitable for schools in India, from the point of view of funds and space available and the number of pupils who can take part at any one time. The Physical Adviser will give this question his consideration. (para. 31 of c.f.)

A general Advisory Committee at Calcutta to control the local committees does not seem desirable. The Physical Adviser will give the necessary assistance and advice.

Item of enquiry.

Measures proposed to be adopted by the Govt. of Bengal.

Remarks of the Govt. of India, if any.

The recommendation to appoint a whole-time officer on about Rs.900 a month as Physical Adviser to the Educational Dept. in addition to part-time adviser of the Y.M.C.A. is approved. (para. 7 page 31 of c.f.)

It is presumed that the annual grant (Rs.2760) given to the Y.M.C.A. will be discontinued. (para. 7 page 102 of c.f.)

The question of the responsibility of teachers with regard to the general health of their pupils is now engaging the attention of the D.P.I. and pending the receipt and consideration of his proposals the Govt. state that it would be premature to express a definite opinion. (para. 9 page 32 of c.f.)

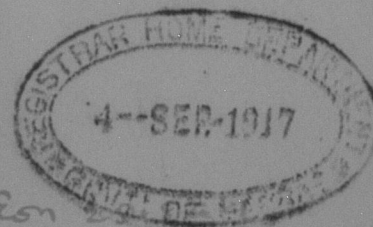
European Schools:—

6. The Nature of the recommendations accepted by the Government of Bengal in connection with the teaching of hygiene in European schools and the medical inspection of pupils in such schools is set out in para. 14 of their letter on pages 33 and 34 of C.F.

7. The Government of India have informed the Bengal Government that they cannot ~~exe~~ accede to the latter's request for financial assistance from Imperial revenues towards the cost of the staff to be newly employed.

8. The reports may it is submitted be sent u.o to the D.P.I. for perusal in the first instance.

para 8 - page 103 of c.f.



25

31.8.17

(The delay in the submission of the file is regretted. It was due to pressure of other work & my absence on casual leave for a week)

29/8/17

29.8.17

30/8/17

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THE OLD COLLEGE,
NUNGAMBAKAM.

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My dear Sir,

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As there are matters
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Home Education Dept

Submitted that the file may be circulated to H.E. for personal

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 a file relating
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For orders whether these papers
 under No. 13328/10/10/18 may be recorded.

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G.O. No.
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DATED

ARREST No.

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ORDER OF GOVERNMENT

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LETTER OF GOVERNMENT

STATEMENT WITH DETTO.

PAPERS NOT FILLED UP, BEING MEANT FOR DISPATCH
IN ORIGINAL.

N.B.—

- A = Copy in full.
- B = Not to be copied.
- P = Copy abstract only.
- Q = Copy heading only.