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32

[Despatch Abstract.]

leyan Mission High School, Triplicane

Sanctioning, subject to tain conditions, a grant not exceeding Rs 5000 towards cost of extending the building occupied by the —.

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Government of Madras.

EDUCATIONAL DEPARTMENT.

Recd.	1906.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 762, 23rd November 1906.

Wesleyan Mission High School, Triplicane.

Sanctioning, subject to certain conditions, a grant not exceeding Rs. 5,000 towards the cost of extending the building occupied by the —.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

Read—the following papers:—

I

Letter—from the Hon'ble Mr. A. G. Bourne, D.Sc., F.R.S., Director of Public Instruction.
To—the Secretary to Government, Educational Department.
Dated—Madras, the 9th April 1906.
No.—Ref. on Cur. No. 9071 of 1905.

I have the honour to submit the enclosed plan with estimate, amounting with cost of site to Rs. 16,965, for extending the building occupied by the Wesleyan Mission High school, Triplicane, Madras, and recommend that Government may be pleased to sanction a third grant under Rule 118 of the Grant-in-Aid Code.

2. The present building which is a dwelling house with narrow passages and stairs is unsuitable for school purposes and the accommodation provided by it is insufficient for the strength of the school which contains over 300 pupils.

3. The school has been in existence for a period of over 17 years. It was started by Mr. G. Subrahmania Aiyar in 1888 and was known as the Aryan High school, Triplicane. It began with three upper secondary forms and at the time of application for recognition in November 1891 it had only 49 pupils on its rolls. In 1900–1901 the management passed into the hands of the Wesleyan Mission, Madras.

4. The plan which is herewith submitted shows only a portion of a completely new building which the management has decided to construct as funds become available. The present proposal is to build a section containing eight rooms. The whole building when completed will extend on to the site of the existing school and will provide suitable accommodation for a complete High school containing Class I to Form VI.

5. The school is in receipt of salary grants amounting to Rs. 50 per mensem from Provincial funds. During the year 1904–1905 the total expenditure amounted to Rs. 8,623–15–8 against a total receipt of Rs. 7,174–14–4 and the deficit of Rs. 1,449–1–4 was met from the funds of the management.

6. The general condition of the school is reported to be fairly satisfactory and with better accommodation it is likely to become more efficient.

7. Out of the allotment for building grant in the current year's budget estimate payment of Rs. 1,943 has been authorized up to date.

II

Memorandum No. 3052-C., dated 7th May 1906.

The accompanying plan and estimate for constructing an upper-storied building at the back of the Wesleyan Mission High school at Triplicane, Madras, are forwarded to the Consulting Architect to Government who is requested to report whether the foundations allowed in the case of the new building are suitable and whether the existing building can safely take an upper storey.

(By Order.)

A. G. Romilly,
Ag. Deputy Chief Engineer.

To the Consulting Architect to Government,
with plan and estimate to be returned and copy of the Director of
Public Instruction's letter No. 9071, dated 9th April 1906.

III

Letter—from G. S. T. Harris, Esq., Consulting Architect to Government.
To—the Chief Engineer, Public Works Department.
Dated—Chepauk, the 12th July 1906.
No.—1415.

With reference to your Memorandum No. 3052-C., dated 7th May 1906, regarding the construction of an upper-storied building at the back of the Wesleyan Mission High school at Triplicane, I have the honour to report that after an inspection of the trial pits dug at the site, I found that the surface soil is made earth for a depth of 3 feet, the foundation should therefore be carried 1 foot deeper and the extra depth may be in brickwork.

2. As regards the existing building it would not be safe to add an upper storey.

IV

Memorandum No. 375, Educational, dated 11th August 1906.

The plan and estimate for extending the building occupied by the Wesleyan Mission High school, Triplicane, Madras, are returned to the Director of Public Instruction with the request that he will call upon the authorities of the school to revise the estimate with reference to the following remarks:—

(1) The foundations of the new building should be increased in depth by 1 foot or to 7 feet. They may be 18 inches sand filling, 2 feet concrete and 3 feet 6 inches masonry.

(2) As surki is not to be used the rates for brickwork should be reduced by Rs. 2 per 100 cubic feet.

(3) For paving with 2 inches Cuddapah slabs Rs. 20 per 100 square feet is allowed in the estimate. With concrete the rate for Cuddapah slab flooring is Rs. 22. Consequently if the cost of 4-inch concrete (Rs. 4–10–8) be deducted the balance should be Rs. 17–5–4 or say Rs. 17–8–0 per 100 square feet against Rs. 20 provided for.

(4) The rate for plastering should be reduced from Rs. 2–8–0 to Rs. 2–4–0 per 100 square feet.

(5) The rate for wood oiling, two coats, should be reduced from Rs. 1–4–0 to Rs. 1–2–0 per 100 square feet.

(6) The scantlings of timbers and sections of girders should be altered with reference to the table of calculations furnished by the Public Works Department, copy of which is enclosed.

(7) The old building will not carry an upper storey and this should not be constructed.

H. D. Taylor,
Ag. Secretary to Government.

To the Director of Public Instruction, with plan and estimate.

V

Letter—from the Revd. D. G. M. Leith, Manager, Wesleyan Mission High School, Triplicane.
To—the Director of Public Instruction.
Dated—Madras, the 1st October 1906.

I have the honour to acknowledge receipt of your No. 9071 of 1905, dated 12th September 1906. In accordance with the request therein, the plans and estimates for extending the building occupied by the Wesleyan Mission High school, Triplicane, have been revised. The total estimate now becomes Rs. 17,575. I have, however, left the figures in the original application for grant, as they were, so as to facilitate matters and avoid confusion.

2. I trust that sanction may be given as soon as possible, as the additions contemplated become every day more urgent.

VI

R.O.C., No. 9071 of 1905, dated 22nd October 1906.

Submitted to Government, Educational, with reference to Memorandum No. 375, dated 11th August 1906.

T. T. LOGAN,
Ag. Director of Public Instruction.

Order—No. 762, Educational, dated 23rd November 1906.

The Government are pleased to sanction a grant not exceeding Rs. 5,000 towards the cost of extending the building occupied by the Wesleyan Mission High school, Triplicane, subject to the following conditions :—

(1) That the work is carried out in accordance with the estimate as now revised ;

(2) that it is completed before the 31st of December 1907 ;

(3) that a certificate of the actual expenditure incurred on the work is submitted before the 31st of January 1908 ;

(4) that the total actual *bonâ fide* expenditure incurred on the building does not fall below Rs. 17,000 ;

(5) that all other conditions prescribed in the Grant-in-Aid Code have been duly complied with.

2. On the above conditions being fulfilled, the grant will be paid as funds become available.

(True Extract.)

H. D. TAYLOR,
Ag. Secretary to Government.

To the Director of Public Instruction, with plans and estimate.
,, Accountant-General.

NOTES CONNECTED WITH G.O., No. 762, EDUCATIONAL, DATED 23RD NOVEMBER 1906.

[SUBJECT.—*Application for a building grant towards the cost of extending the building occupied by the Wesleyan Mission High School, Triplicane.*]

From the Director of Public Instruction, dated 9th April 1906, *No.* 9071.

The cost of the proposed extension is estimated at Rs. 16,965 and the grant applied for is Rs. 5,655 or one-third. Before a decision is arrived at regarding the amount to be promised, the plans and estimates may be forwarded u.o. to the Public Works Department for the usual scrutiny.

P. T. THARYAN—12-4-06.

(1) | Is this the usual method ?
(2) | Has not administrative sanction to be obtained first ?

C. A. SOUTER—17-4-06.

(1) Submitted yes.

(2) Administrative sanction has to be obtained only for Government works. This is a private work.

P. T. THARYAN—17-4-06.

C. A. SOUTER—17-4-06.

To the Public Works Department.

PUBLIC WORKS DEPARTMENT.

For scrutiny.

P.V.—18-4-06.

A. G. ROMILLY—18-4-06.
J. P. DAVIDSON—18-4-06.

Note by Technical Section.

Names of Officers.

Plan and estimate submitted by the school authorities. Name of the party who prepared them not noted.

Name of Work.

Constructing an upper storied building at the back of the Wesleyan Mission High School at Triplicane, Madras, to accommodate 8 classes.

	RS.
Amount of estimate ..	16,950

Particulars of Estimate.

	RS.
Main building	9,491
Land compensation — cost of site	7,000
Contingencies	474
Total ..	16,965

A new upper storey building is to be added to an old one-storey building and an upper storey put on this. The proposal must go to Superintending Engineer for report whether the foundations allowed in the case of the new building are suitable, and whether the old building can safely take an upper storey.

J. P. DAVIDSON—30-4-06.

This is absolutely necessary. Would it not be as well to send a circular pointing out that though this is of the greatest importance, it is constantly omitted.

A. G. Romilly.

Should be as in Consulting Architect to Government's letter.

J. P. Davidson.

I see this is a private building—the estimate has never received any professional scrutiny till it reaches this office. No one knows anything of the old building and whether it is fit to carry an upper storey, and yet we are told nothing of soil, or what the old foundations are.

Please find out what the proper procedure is; it seems to me that the plan and estimate should just have gone to Superintending Engineer; they will have to go to him now for report as to the general suitability and soundness of the proposal, that is, if scrutiny in this office implies responsibility for general soundness of the scheme put forward.

J. P. Davidson—27-4-06.

Particulars of Construction.

Surface soil and sub-soil—not stated and no opinion can be given whether the foundations are suitable.

Foundations—6 feet deep of which one foot sand filling, then two feet concrete of broken brick in surki mortar and the remainder of brick in mortar.

Basement—2 feet high of brick in mortar.

Walls—will be built to the heights marked on the plan with brick in chunam. Arch work in verandahs and over the doors and windows will be built with the same materials.

Roof timbers.—Teakwood.

Roofing.—Mangalore tiles over flat tiles with air spaces.

Flooring.—Ground floor 2″ Cuddapah slabs pointed with cement, over 4″ concrete.

First floor.—Brick on edge, 3″ concrete and one course of flat tiles plastered on top with ½″ portland cement and ceiling with three coats chunam mortar.

Plastering.—Interior two coats white and the exterior two coats coloured mortar.

Doors and windows.—Teakwood as per estimate.

Painting—doors, windows and eave boards three coats and wood-oiling the roof timbers two coats.

Scantlings—*vide* calculations.

Rates—fair except for a few items—*vide* remarks.

The plinth area of the main building is 3,015 square feet and the cost per square foot will be Rs. 3-14-11.

The plans and estimates have been countersigned by the Director of Public Instruction and approved in the Educational Department.

Remarks.—The present building which is a dwelling house with narrow passages and stairs is unsuitable for school purposes and the accommodation is insufficient; hence it is proposed to construct a completely new building as per plan and estimate submitted.

The accommodation provided is as follows :—

Ground floor.

Two rooms each.. ..	20′ × 18′
One room	20′ × 19′
Two rooms each ..	20′ × 19′

First floor.

One room	$20\frac{3}{8}'$ × $19\frac{3}{8}'$
Two rooms each ..	$20\frac{3}{8}'$ × $18\frac{3}{8}'$

Verandahs are provided in front of the rooms on both floors.

Ordinary mortar ought to be sufficient.

A. G. Romilly.

Rates.—Rates for brick work and arch work agree with those in the Architect's schedule which includes surki, but in the abstract it is merely stated in lime mortar. Consequently if surki is not used, the rates should be reduced by Rs. 2 per 100 cubic feet.

Paving with 2″ Cuddapah slabs, Rs. 20 are allowed in the estimate. With concrete the rate for Cuddapah slab flooring is Rs. 22. Consequently if the cost of 4″ concrete (Rupees 4–10–8) be deducted the rate should be Rupees 17–5–4 or say 17–8–0 against Rs. 20.

Plastering Rs. 2–8–0 per 100 square feet against Consulting Architect's schedule rate of Rs. 2–4–0.

Wood-oiling 2 coats Rs. 1–4–0 per 100 square feet against Rs. 1–2–0 in Consulting Architect's schedule.

R. J. P. Enright—25-4-06.

A. G. Romilly—27-4-06.

Calculations.

Ground floor—Front rooms with single girders.

Room 19 feet wide.—	
Joists—unsupported length = ...	$9\frac{1}{2}$ feet.
Load = $9\frac{1}{2} \times 1\frac{1}{2} \times 150$ = ...	2,138 lbs.
$bd^3 = \frac{WL^2}{180} = \frac{2138 \times (9\frac{1}{2})^2}{180}$ = ...	1,072
Make section	3″ × 7″
In estimate	3″ × 6″
Rooms 18 feet wide.—	
Joists—unsupported length = ...	9 feet.
Load = $9 \times 1\frac{1}{2} \times 150$ = ...	2,025 lbs.
$bd^3 = \frac{WL^2}{180} = \frac{2025 \times 9^2}{180}$ = ...	911
Make section	3″ × $6\frac{3}{4}$″
In estimate	3″ × 6″
Rooms on sides with 2 girders.—	
Joists—unsupported length = ...	6·66 feet.
Load = $6{\cdot}66 \times 1\frac{1}{2} \times 150$ = ...	1,499 lbs.
$bd^3 = \frac{WL^2}{180} = \frac{1499 \times (6{\cdot}66)^2}{180}$ = ...	369
Make section	3″ × 5″
In estimate	3″ × 6″
Verandahs in front.—	
Joists—unsupported length = ...	7 feet.
Load = $7 \times 1\frac{1}{2} \times 150$ = ...	1,575 lbs.
$bd^3 = \frac{WL^2}{180} = \frac{1575 \times 7^2}{180}$ = ...	429
Make section	3″ × $5\frac{1}{4}$″
In estimate	3″ × 5″
Verandahs on side.—	
Joists—unsupported length = ...	6·81 feet.
Load = $6{\cdot}81 \times 1\frac{1}{2} \times 150$ = ...	1,533 lbs.
$bd^3 = \frac{WL^2}{180} = \frac{1533 \times (6{\cdot}81)^2}{180}$ = ...	395
Make section	3″ × 5″
In estimate	3′ × 5″
Beam in verandah—	7 feet.
Unsupported length = ...	LB.
Load = $7 \times 3\frac{3}{4} \times 150$ = ...	3,938
Joists = $5 \times 3\frac{3}{4} \times \frac{1}{4} \times \frac{5}{12} \times 46$ = ...	94
Total ..	4,032

$bd^3 = \frac{WL^2}{180} = \frac{4032 \times 7^2}{180} =$	1,098
Make section	4″ × 6½″
In estimate	7″ × 8″
Staircase joists—Lower flight—	
Load $= 10\frac{1}{2} \times 1\frac{1}{2} \times 112 \times 1 =$	1,764 lbs.
Liue load $= 10\frac{1}{2} \times 1\frac{1}{2} \times 60 =$	1,890
Parapet $= 10\frac{1}{2} \times \frac{1}{2} \times 3 \times 112 =$	1,744
Total	5,398
$bd^3 = \frac{WL^2}{180} = \frac{5398 \times (10\frac{1}{2})^2}{180} =$	3,306
Make section	4″ × 9″
In estimate	4″ × 9″
Staircase joists—Upper flight—	
Length =	9 feet
Load $= \frac{9}{10\frac{1}{2}}$ or ·85 of 5,398 =	4,598 lbs.
$bd^3 = \frac{4598 \times 9^2}{180} =$	2,069
Make section	3″ × 9″ or 4″ × 8″
In estimate	3″ × 9″
Landing joists—	
Unsupported length =	4 feet.
Load $= 4 \times 1\frac{1}{2} \times 150 =$	900 lbs.
$bd^3 = \frac{WL^2}{180} = \frac{900 \times 4^2}{180} =$	80
Make section	2″ × 3½″
In estimate	3″ × 4″
Beam at landing—	
Load $= 3 \times 5\frac{1}{4} \times 1 \times 112 =$	1,764 lbs.
Load $= 3 \times 4\frac{1}{2} \times 1 \times 112 =$	1,512 lbs.
Live load $= 7 \times 9\frac{3}{4} \times 60 =$	4,095 lbs.
Parapets $= 9\frac{3}{4} \times \frac{1}{2} \times 3 \times 112 =$	1,638
Landing $= 7 \times 2 \times 150 =$	2,100
Joists $= 3 \times 5\frac{1}{4} \times \frac{1}{3} \times \frac{3}{4} \times 46$	181 lbs.
Do. $= 3 \times 4\frac{1}{2} \times \frac{1}{4} \times \frac{3}{4} \times 46$	116 lbs.
Landing joists $= 5 \times 2 \times \frac{1}{6} \times \frac{1}{4} \times 46$	19 lbs.
Total	11,425 lbs.
$bd^3 = \frac{WL^2}{180} = \frac{11425 \times 7^2}{180} =$	3,110
Make section	5″ × 9″
In estimate	12″ × 9″
Beam at upper landing—	
Load $= 3 \times 4\frac{1}{2} \times 1 \times 112$	1,512 lbs.
Live load $= 3 \times 4\frac{1}{2} \times 60$	810 lbs.
Parapets $= 4\frac{1}{2} \times \frac{1}{2} \times 3 \times 112$	756 lbs.
Joists $\times 3 \times 4\frac{1}{2} \times \frac{1}{4} \times \frac{3}{4} \times 46$	116 lbs.
Total	3,194
$bd^3 = \frac{WL^2}{180} = \frac{3194 \times 7^2}{180} =$	870
Make section	4″ × 6″
In estimate	9″ × 10″

As the staircase joists are 4″ × 8″ it would be better to make this beam 4″ × 8″ also.

Rolled steel girders.

In front rooms with single girders—

	LBS.
Load $= 20 \times 9\frac{1}{2} \times 150$	28,500
Joists $= 13 \times 9\frac{1}{2} \times \frac{1}{4} \times \frac{7}{12} \times 46$	865
Approximate weight of girder	800
Total	30,165
or tons	13·46

Equivalent load for a limiting stress of 5 * tons per square inch $= \frac{13{\cdot}46 \times 3}{2} = 20{\cdot}19$ tons.

Hence a girder 15″ × 6″ × 59 lbs. is required against 12″ × 6″ × 54 lbs. provided in the estimate.

If 7½ tons per square inch is adopted then a girder 15″ × 5″ × 42 lbs. will be required against 12″ × 6″ × 54 lb.

In side rooms with 2 girders—

	LBS.
Load $= 19 \times 6{\cdot}66 \times 150 =$	18,981
Joists $= 12 \times 6{\cdot}66 \times \frac{1}{4} \times \frac{5}{12} \times 46 =$	400
Approximate weight of girder =	750
Total	20,131
or tons	9

Equivalent load for a limiting stress of 5 tons per square inch $= \frac{9 \times 3}{2} = 13\frac{1}{2}$ tons.

A girder 15″ × 5″ × 42 lbs. is required against 12″ × 6″ × 44 lbs. in the estimate.

If 7½ tons per square inch is adopted then a girder 12″ × 5″ × 32 lbs. will be required against 12″ × 6″ × 44 lbs.

Roofing.

Mangalore tiles over flat tiles with air spaces. Rise = ⅓ span, and weight = 42 lbs. per square foot.

Common rafters 2 ft. centres.

	LBS.
Load $= 6{\cdot}45 \times 2 \times 42$	542
$bd^3 = \frac{WL^2}{180} = \frac{542 \times (6{\cdot}45)^2}{180} =$	125
Make section	2″ × 4″
In estimate	2″ × 4″
Purlins—	
Unsupported length	9·68 feet.
	LBS.
Load $= 9{\cdot}68 \times 6{\cdot}45 \times 42$	2,622
Rafters $= 5 \times 6{\cdot}45 \times \frac{1}{6} \times \frac{1}{3} \times 46$	82
Total	2,704 lbs.
$bd^3 = \frac{WL^2}{180} = \frac{2704 \times (9{\cdot}68)^2}{180} =$	1,408
Make section	5″ × 6½″
In estimate	5″ × 7″
Principal rafters—	
Load as on purlin	2,704
Weight of purlin $= 9{\cdot}68 \times \frac{5}{12} \times \frac{13}{24} \times 46$	105
Total	2,809
$bd^3 = \frac{WL^2}{180} = \frac{2809 \times (6{\cdot}45)^2}{180} =$	649
Make section	4″ × 5½″
In estimate	4½″ × 6″
Make tie beam	4″ × 6″
In estimate	4½″ × 7″
Make struts	4″ × 4″
In estimate	4½″ × 4½″

Verandah.

Rafters 2 ft. apart—	
Load $= 10{\cdot}20 \times 2 \times 30$	612 lbs.
$bd^3 = \frac{WL^2}{180} = \frac{6{\cdot}12 \times (10{\cdot}2)^2}{180} =$	354 lbs.
Make section	3″ × 5″
In estimate	2½″ × 4″

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* No. 61 C. of 4th January 1906.

Bressummers—

Greatest unsupported length =	12·56
Load = $12{\cdot}56 \times 7\frac{1}{2} \times 30$	2,826 lbs.
Rafters = $7 \times 7\frac{1}{2} \times \frac{1}{4} \times \frac{5}{12} \times 46$	258
Total	3,084
$bd^3 = \frac{WL^2}{180} = \frac{3084 \times (12{\cdot}56)^2}{180} =$	2,703
Make section	$5\frac{1}{2}'' \times 7\frac{3}{4}''$ or $6'' \times 7''$
In estimate	$5'' \times 6''$

If 5 posts are placed to support the roof near the open terrace—

Distance apart =	9·41 ft.
Load = $9{\cdot}41 \times 7\frac{1}{2} \times 30 =$	2,117 lbs.
Rafters = $5 \times 7\frac{1}{2} \times \frac{1}{4} \times \frac{5}{12} \times 46 =$	188
Total	2,305 lbs.
$bd^3 = \frac{WL^2}{180} = \frac{2305 \times (9{\cdot}41)^2}{180} =$	1,128
Make section	$4\frac{1}{2}'' \times 6\frac{1}{2}''$
or $5'' \times 6''$ as in estimate	

Pressure on foundations— Wall P.P.—

	LBS.
Wall $2 \times 1\frac{1}{8} \times 13 \times 112$	3,276
Do. below $2 \times 1\frac{1}{2} \times 15 \times 112$	5,042
Roofing $2 \times 19{\cdot}20 \times 42$	1,613
Rafters $1 \times 12{\cdot}90 \times \frac{1}{6} \times \frac{1}{3} \times 46$	33
Do. $1 \times 6{\cdot}30 \times \frac{1}{4} \times \frac{5}{12} \times 46$	32
First floor $1 \times 2 \times 4{\cdot}43 \times 150$	1,328
Joists $1 \times 3{\cdot}68 \times \frac{1}{4} \times \frac{5}{12} \times 46$	18
Total weight on basement	11,342
or tons	5

Area of basement = $1\frac{7}{8} \times 2 =$	$3\frac{3}{4}$ sq. ft.

$\therefore$ pressure $= \frac{5}{3{\cdot}75} = 1{\cdot}33$ tons per square foot for brick in chunam is fair.

2. Pressure on basement	11,342
Base $2 \times 1\frac{7}{8} \times 2 \times 112$	840
Founds = $2 \times 2'\ 5\frac{1}{4}'' \times 2 \times 112$	1,093
Total weight on concrete	13,275
or tons	6 nearly.
Area of concrete = $4\frac{1}{4} \times 2 =$	$8\frac{1}{2}$ sq. ft.
$\therefore$ Pressure on concrete $= \frac{6}{8\frac{1}{2}} =$	·70 or say $\frac{3}{4}$ ton.

	LB.
3. Pressure on concrete	13,275
Concrete $2 \times 4\frac{1}{4} \times 2 \times 112$	1,904
Total pressure on soil	15,179
or tons	6·77
Area on soil = $4\frac{1}{4} \times 2 =$	$8\frac{1}{2}$ sq. ft.
$\therefore$ Pressure on soil $= \frac{6{\cdot}77}{8{\cdot}5} =$	·79 or say 1 ton per sq. foot.

The nature of the sub-soil is not stated.

R. J. P. Enright—25-4-06.

A. G. Romilly—27-4-06.

A draft memorandum to the Consulting Architect to Government in accordance with Secretary's orders on page 1 *supra* is submitted for approval.

C.G.—2-5-06.

A. G. Romilly—4-5-06.

[Memorandum as No. 3052-C., dated 7th May 1906.]

From the Consulting Architect to Government, dated 12th July 1906, No. 1415.

The Consulting Architect reports that the surface soil is made earth for a depth of 3 feet and that the foundation should be carried a foot deeper, the extra depth being in brickwork. As regards the existing building it is stated that it would not be safe to add an upper storey.

C.G.—20-7-06.

A. G. Romilly—23-7-06.

The plans and estimate are returned to Educational for sanction. The foundations of the new building should be increased in depth by 1 foot, that is, they should be 7 feet deep; they may be 18 inches sand filling, 2 feet concrete and 3 feet 6 inches masonry.

2. The other modifications suggested in the Technical note herewith should also be adopted, especially those dealing with the scantlings of timbers and sections of girders.

3. The report is misleading and the plan as drawn implies that an old building is to have a new one added to it. This apparently is not to be the case at present, but in the future something is to be done which neither nor I Mr. Romilly can quite understand. The old building will not carry an upper storey. This is the Consulting Architect to Government's verdict.

J. P. Davidson—24-7-06.

To the Educational Department.

Educational Department.

The draft placed below is submitted for approval. As it deals with a technical matter, Public Works Department may perhaps be asked u.o. to state whether it is all right.

P. T. Tharyan—4-8-06.

C. G. Mackay—7-8-06.

To the Public Works Department for acceptance.

H. D. Taylor—8-8-06.

Public Works Department.

The technical matter in the draft memorandum seems to be quite in accordance with the technical notes *supra*.

P.V.—9-8-06.

Accepted in Public Works Department as correct.

J. P. Davidson—9-8-06.

To the Educational Department.

Educational Department.

Issue.

H. D. Taylor—10-8-06.

[Memorandum No. 375, dated 11th August 1906.]

From the Director of Public Instruction, dated 22nd October 1906, *No.* 9071.

The Manager states that the plans and estimates have been revised as suggested by the Chief Engineer in his notes *supra*. In consequence of the revision, the estimated cost has risen from Rs. 16,965 to Rs. 17,575. The Manager of the institution has, however, left the figures in the original application for grant as they were, in order, as he says, to facilitate matters and avoid confusion. The Manager also requests that sanction may be accorded as soon as possible as the contemplated additions become every day more urgent. Submitted that the plans and estimates, as now revised, may be sent u.o. to the Public Works Department, to ascertain whether the revised estimate provides for the alterations suggested by that department. On the return of the file from the Public Works Department the question of the grant may be taken up.

P.K.M.—3-11-06.

P. T. Tharyan—3-11-06.

C. G. Mackay—5-11-06.

To the Public Works Department.

Public Works Department.

The estimate has been corrected as per Secretary's remarks, on page 7 *supra* and the other modifications suggested in the technical notes. The amount of the estimate is now increased from Rs. 16,950 to Rs. 17,575.* In the item brick in chunam in founds and basement the quantity should be 4,212 + ⅓ of 2,061, for the extra foot = 4,899 cubic feet and not 4,555 cubic feet as corrected in the abstract.

* The amount of the estimate corrected for the above quantity 4,899 cubic feet = Rs. 17,634.

R. J. P. Enright—10-11-06.

The estimate as corrected may be approved.

A. G. Romilly—13-11-06.

To the Educational Department.

Educational Department.

The amount of grant to be paid to the institution has now to be determined. The amount of the estimate as revised by the Public Works Department is Rs. 17,634 and under rule 51 of the Grant-in-Aid Code the maximum grant admissible is Rupees 5,878. The application is for a grant of Rs. 5,655. The Manager has left the figures in the original application, as they were, in order, as he says, to facilitate matters and avoid confusion.

Grant not exceeding ⅓ of the total cost.
C. G. Mackay.

P.K.M.—16-11-06.

Public Works Department has not stated what time may be allowed for the work—but it should be possible to finish the work before 31st December 1907 in which case the grant will be payable by the 1st of February 1908, *i.e.*, before the close of 19 7-1908.

Doubtful, judging from other cases we have had.
C.G M.

P. T. Tharyan—16-11-06.

C. G. Mackay—16-11-06.

I think that a grant of Rs. 5,000 in round figures may be given, subject to the usual conditions—the work to be completed by 31st December 1907, and accounts submitted by 31st January 1908.

H. D. Taylor—17-11-06.

The Memorandum, dated 11th August 1906, No. 375, to the Director of Public Instruction seems to be quite wrong. What right have we to "call on" a private school management to revise estimates. Will the Registrar of the department never learn the right view of things. He puts up these "mamool" orders, and they get passed without reflection We have constantly got into trouble by our "clerical" language being construed into promises. There has been no decision as yet to make any grant whatever.

2. The memorandum and similar memoranda ought to proceed on lines which leave the onus with the private school authority. The Director of Public Instruction should have been requested to inform the school authority that the Government are unable to consider the estimates because (1) a building of the kind contemplated should have foundations of 7 feet depth, which might be 18 inches sandfilled, etc. and (2) that no proposal to place an upper storey on the old building can be entertained. That as to the rates, it is observed (1), (2), etc.

3. Then I should leave it to the institution to take further action.

4. I instance the above as merely general lines for dealing with such proposals.

Noted.
Deputy Registrar will please initial.
H. D. Taylor—21-11-06.

P. T. Tharyan—21-11-06.

5. I agree to the proposed final order. The grant of Rs. 5,000 being contingent on an *actual bona fide* expenditure of at least Rs. 17,000, but the grant will not be increased although the actual expenditure may exceed that amount.

G. S. F[orbes]—19-11-06.

Please draft accordingly.

H. D. Taylor—21-11-06.

The draft placed below is submitted for approval.

P.K.M—21-11-06.

P. T. Tharyan—22-11-06.

C. G. Mackay—22-11-06.

Issue.

H. D. Taylor—23-11-06.

[G.O., No. 762, Educational, dated 23rd November 1906.]

[E. 0 / ,70]
1,500—12- -04.

G.O.-No. 762 Edn.-d/ 20-11-06.

EDUCATIONAL DEPARTMENT.

CURRENT FILE.

9

CONTENTS.

	From	Number.	Date.	Pages.
[632]	The D.P.I	Roc 9071	9-4-06	1-5
	Memo to the D.P.I	375	11-8-06	6+7
[1745]	The D.P.I.	9071	22-10-06	8-26

[P. T. O. FOR PUT UP PAPERS.

PAPERS PUT UP WITH CURRENT No.

Papers of the department to which the current belongs.

Number.	Date.	Original (=O) or spare copy (=S. C.).	Remarks. (In this column such of the papers as have been removed for copying, printing, &c., should be marked with a cross.)	Initials of Referencer with date in token of return to Reference department.

Papers of other departments.

Department.	Number.	Date.	Original (=O) or spare copy (=S. C.).	Despatcher to note the return of the papers to the departments concerned.

Stock Form No. 135
3,700—17-6-05.

10

EDUCATIONAL DEPARTMENT.

Edl CURRENT No. 632

Received 10-4. 1906 Registered 10-4. 1906.

Subject.

Recommending that Government may be pleased to sanction a third grant towards the cost of extending the building occupied by the Wesleyan Mission High School, Triplicane.

18

Enclosures.
No. 3
Spare copies

ASSIST'T SECY. TO GOVT. LOCAL MUNL. EDL & LEG DEPT. 10 APR 1906

Ref on Cur No. 9071/05

Station Madras, Dated the 9th April 1906.

From (Name) The Hon'ble Mr. A.G. Bourne, D.Sc., F.R.S.,

(Designation) Director of Public Instruction.

To The Secretary to the Government of Madras,
Educational Department.

Sir,

I have the honour to submit the enclosed plan with estimate amounting with cost of site to Rs 16,965/- for extending the building occupied by the Wesleyan Mission High School, Triplicane Madras and recommend that Government may be pleased to sanction a third grant under Rule 118 of the Grant-in-Aid Code.

Enclosures.	
Plan	1
Estimate	1
Application	1
	3

2. The present building which is a dwelling house with narrow passages and stairs is unsuitable for school purposes and the accommodation provided by it is insufficient for the strength of the school which contains over 300 pupils.

3. The school has been in existence for a period of over 17 years. It was started by Mr. G. Subrahmanya Aiyar in 1888 and was known as the Aryan High School, Triplicane. It began with three upper secondary forms and at the time of application

627/5

2/5

for recognition in November 1891 it had only 49 pupils on its rolls. In 1900-1901 the management passed into the hands of the Wesleyan Mission Madras.

4. The plan which is herewith submitted shows only a portion of a completely new building which the management has decided to construct as funds become available. The present proposal is to build a section containing eight rooms . The whole building when completed will extend on to the site of the existing school and will provide suitable accommodation for a complete High School containing class I to Form VI.

5. The school is in receipt of salary grants amounting to Rs 50/- per mensem from provincial funds. During the year 1904-1905 the total expenditure amounted to Rs ~~8263~~ 8623-15-8 against a total receipt of Rs 7174-14-4 and the deficit of Rs 1449-1-4 was met from the funds of the management.

6. The general condition of the school is reported to be fairly satisfactory and with better accommodation it is likely to become more efficient.

7. Out of the allotment for Building grant in the current year's budget estimate payment of Rs 1943/- has been authorized up to date.

I have the honour to be,

Sir,

Your most obedient servant,

E W Middlemast

For Director of Public Instruction.

5-6-06

3/

Memo

No. 3052 C, d 7-5-1906

P.W.D.

2 P

The accompanying plan and estimate for constructing an upper storied building at the back of the Wesleyan Mission High School at Triplicane, Madras are forwarded to the C. E. to Govt who is requested to report whether the foundations allowed in the case of the new building are suitable and whether the existing building can safely take an upper storey.

(B.O.)

4/5/06

D Ed

To
The C E to Govt with plans + estimate to be returned and copy of the D.P.I.'s letter No 9071 of 9-4-06

5/5/06

DESPATCHED
-8 MAY 1906

Reminder 11/6/06

Stock Form No. 141
10,000—16-11-05.

Urgent 4/

PUBLIC WORKS DEPARTMENT.

12

CURRENT No. 7733

ENCLOSURES. Plans No. /
Others No. /

Received 190 .

Registered 190 .

SPARE COPIES. Total

Passed on by Registering Clerk ... 18-7-06
" " U. R. Clerk ...
" " Referencer ... 19.7.06
" " Record Superintendent.
" " Drafting Officer ...

SECRETARY TO GOVERNMENT, PUBLIC WORKS DEPARTMENT. 15 JUL 1906

Subject.

Reporting that it would not be safe to add an upper storey to the Wesleyan Mission High School at Triplicane.

3 P

No. 1415

Station Chepauk, *Dated the* 12" July 1906

From (Name) G.S.T. Harris Esq.,

(Designation) Consulting Architect to Government.

To ~~*The Chief Engineer*~~ / *The Secretary* *to the Government of Madras,*
Public Works Department.

Sir,

Pal 30 C.7

With reference to your Memorandum No. 3052-C, dated 7th May 1906, regarding the construction of an upper storied building at the back of the Wesleyan Mission High School at Triplicane, I have the honor to report that after an inspection of the trial pits dug at the site, I found that the surface soil is made earth for a depth of 3 feet, the foundation should therefore be carried 1 foot deeper and the extra depth may be in brick work.

[illegible] 16.7.06

B347

2.

2. As regards the existing building it would not be safe to add an upper storey.

I have the honor to be,
Sir,
Your most obedient servant,
Geo Harris (

Consulting Architect to Government.

Educational Depart

No 48

Cuo 632.

Memo 375 dy 11.8.06

7c/44/2/06

Desp
15/8/6

The plan and estimate for extending the building occupied by the Wesleyan Mission High School, Triplicane, Madras, are returned to the D.P.I with the request that he will call upon the ~~at~~ authorities of the school to revise the estimate with reference to the following remarks:—

(1) The foundations of the new building should be increased in depth by 1 foot or to 7 feet. They may be 18" sand filling, 2 ft concrete and 3 ft - 6 inches masonry.

[18 seconds! surely 18 inches ' & " mean mins & seconds not ft & inches]

(2) As Surki is not to be used the rates for brickwork should be reduced by Rs 2 per 100 c ft.

(3) For paving with 2" Cuddapah slabs Rs 20 per 100 sq: ft is allowed in the estimate. With concrete the rate for Cuddapah slab flooring is Rs 22. Consequently if the cost of 4" concrete (Rs 4-10-8) be deducted the ~~rate for ...~~ balance should be Rs 17-5-4 or say Rs 17-8-0 per 100 sq: ft against Rs 20 provided for.

(4) The rate for plastering should be reduced from Rs 2-8-0 to Rs 2-4-0 per 100 sq. ft

7 2 5p

(5) The rate for wood oiling, 2 coats, should be reduced from Rs 1-4-0 to Rs 1-2-0 per 100 sq. ft.

(4

(6) The scantlings of timbers and sections of girders should be altered with reference to the table of calculations furnished by the P.W.D. copy of which is enclosed.

(7) The old building will not carry an upper storey ~~which should not be put on it at any time.~~ & this ~~which~~ should not be constructed

P.J.
4/8/6

8.8.6

To
The D.P.I. with plan & Estimate.

Desp^d
11/8/6

8

CURRENT No. 1745

Stock Form No. 135
3,700--17-6-05.

LOCAL & MUNICIPAL
24 OCT 1906
SECRETARIAT.

EDUCATIONAL DEPARTMENT.

5

Received .... 190 , *Registered* 24-10-1906.

Subject.

Submitting revised plans and estimates for extending the building occupied by the Wesleyan Mission High School, Triplicane.

ENCLOSURES.
No. Plans and estimates.
Spare copies

Ref on Current No. 9071/05

Station Madras, *Dated the* 22 October 1906.

From (Name) The Hon'ble Mr. T.T. Logan, B.A.,

(Designation) Ag: Director of Public Instruction

Madras.

To The Secretary to the Government of Madras,
Educational Department.

Sir,

Wesleyan Mission High School,
Triplicane,
1st October 1906.

To

The Director of Public Instruction,
Madras.

Sir,

I have the honour to acknowledge receipt of your No. 9071 of 1905 dated 12th September 1906.

In accordance with the request therein, the plans and estimates for extending the building occupied by the Wesleyan Mission High School, Triplicane have been revised. The total estimate now becomes Rs. 17,575. I have, however, left the figures in the original application for grant, as they were, so as to facilitate matters and avoid confusion.

I trust that sanction may be given as soon as possible, as the additions contemplated become every day more urgent.

I have the honour to be,
Sir,
Your obedient servant,
(Sd.) D.G.M. Leith,
Manager.

Plans, estimates and original application herewith sent.

Submitted to Government, Educational, with reference to Memorandum No. 375 dated 11th August 1906.

EW Middlemast
For Director of Public Instruction.

K.P.D.

O.P.
13-10-06

EDUCATIONAL DEPARTMENT.

No 762
27/[illegible]

NOTES.

Read

10

notes communicated G.O. No. 762 d/ 23-11-06

E.
2.
1,500—3-12-04

EDUCATIONAL DEPARTMENT.

C. No. 632 From the D.P.I. No. 9071, dated 9-4-1906.

SUBJECT.

Application for a building grant towards the cost of extending the building occupied by the Wesleyan Mission High School, Triplicane.

The cost of the proposed extension is Rs estimated at Rs 16,965 and the grant applied for is Rs 5,655 or one-third. Before a decision is arrived at regarding the amount to be promised the plans & estimates may be forwarded U.O. to the P.W.D. for the usual scrutiny.

P.J. 17/4/06

(1) Is this the usual method?
(2) Has not admn. sanction to be obtained first?

Chs
17.4.06.

(1) Submitted yes.
(2) Administrative sanction has to be obtained only for Govt. works. This is a private work.

Narayan.
17/4/06

Chs
17.4.06.

SECRETARIAT TO GOVERNMENT, PUBLIC WORKS DEPARTMENT.
18 APR 1906

Edl. No. 303 D
18.4.06.

desp
17/4/06

To the P.W.D. U.O.

T

For Scrutiny.
18/4/06

P.W. No. R 446
18.4.06

P.V.
18.4.06

Dc
20/4/06

D.W.

P.W.D.

Recd
Note C1 G.
762 Education
[illegible] 23/11/06

E/11

258
18

Public Works Department.

Note by Technical Section.

Current No. WO 446 from Educational Department U O No 303 D of 18 April 1906.

Names of Officers.

Plan and estimate submitted by the School Authorities. Name of the party who prepared them not noted —

Name of Work Contg: an upper storied Building at the back of the Wesleyan Mission High School at Triplicane, Madras, to accommodate 8 classes.

Amount of Estimate, Rs. 16960

Particulars of Estimate

Main Building	Rs	9491
Subsidiary Buildings		
Lightning Conductor	„	
Land Compensation Cost of Site	„	7000
Contingencies	„	474
Petty Supervision	„	—
Total Rupees ...		16965

A new upper storey building is to be added to an old one storey building and an upper storey put on this. The proposal must go to S.E. for report whether the foundations allowed in the case of the new building are suitable, & whether the old building can safely take an upper storey.

30 Sept 06

Particulars of Construction

Surface soil and Sub-soil: not stated and no opinion can be given whether the foundations are suitable.

Foundations: 6 feet deep of which 1 foot sand filling, then 2 ft concrete of broken brick in surki mortar and the remainder of brick in mortar.

Basement: 2 ft high of brick in mortar

This is absolutely necessary.

W. Would it not be as well to send a circular pointing out that though this is of the greatest importance it is constantly omitted?

Should be as C.A. to Govt letter

D.W. I see this is a private building — the estimate has never received any professional

[illegible] 30.11.06

P. W. 58.
500—15-8-05.

D.W. 15

Read

12

Walls— will be built to the heights marked on the plan with brick in chunam. Archwork in verandahs and over the doors and windows will be built with the same materials.

Roof Timbers— Teakwood.

Roofing— Mangalore tiles over flat tiles with air spaces

Flooring— Ground floor - 2" Cuddapah slabs, pointed with cement, over 4" concrete.
1st Floor. Brick on edge, 3" concrete & 1 course of flat tiles plastered on top with 1/2" Portland cement and ceiling with 3 coats chunam mortar.

Plastering— Interior 2 coats white and the exterior 2 coats coloured mortar.

Pointing— ——

Doors and Windows— Teakwood as per estimate.

Painting ~~and wood oiling~~ doors, windows and eave boards 3 coats and wood oiling the roof timbers 2 coats

Scantlings— Vide calculations.

Rates— Fair except for a few items vide remarks.

The plinth area of the main building is 3015 square feet and the cost per square foot will be Rs. 3-14-11

The plans and estimates have been counter-signed by the Director of Public Instruction and approved in the Educational Department.

REMARKS. The present building which is a dwelling house with narrow passages and stairs is unsuitable for school purposes and the accommodation is insufficient hence it is proposed to construct a completely new building as per plan and estimate submitted.

Read

~~7~~/13

193 SP

The accommodation provided is as follows:-

Ground floor

2 rooms	each	20' × 18'
1 do		20' × 19
2 rooms	each	20 × 19

1st Floor

1 room		20 3/8' × 19 3/8
2. do	each	20 3/8' × 18 3/8

Verandahs are provided in front of the rooms on both floors.

Rates.

Rates for brickwork and arch work agree with those in the Architect's schedule which includes surkhi, but in the abstract it is merely stated in lime mortar. Consequently if surkhi is not ~~[illegible]~~ used the rates should be reduced by Rs 2 per 100 Cft.

Paving with 2" Cuddapah slabs, Rs 20

Scrutiny till it reaches this office. No one knows anything of the old building whether it is fit to carry an upper storey - and yet we are told nothing of soil, or what the old foundations are.

Please find out what × the proper procedure is. It seems to me that the plan & estimate should first have gone to S.E. - they would have to go to him now for report as to the general suitability & soundness of the proposal - that is if scrutiny in this office implies ordinary routine responsibility - oversight to sufficient for general soundness of the scheme put forward.

27/9/06

Note × W has since seen G.O. No 597 Educational dt/27-9-06 laying down the procedure as allowed in the estimate. With Concrete the rate for C Slab flooring is Rs 22. Consequently if the cost of 4" Concrete (Rs 4.10.8) be deducted the rate should be Rs 17.5.4 or say 17.8.0 against Rs 20.

Plastering Rs 2.8.0 per 100 sq ft against C. Ps schedule rate of Rs 2.4.0

Wood oiling 2 coats Rs 1.4.0 per 100 sq ft against Rs 1.2.0 in C. Ps schedule.

25.4.06

7/4/06

Calculations.

Ground floor. Front rooms with single girders.

Room 19 ft wide.

Joists - unsupported length = $9\frac{1}{2}$ ft.

Load = $9\frac{1}{2} \times 1\frac{1}{2} \times 150 = 2138$

$bd^3 = \frac{WL^2}{180} = \frac{2138 \times (9\frac{1}{2})^2}{180} = 1072$

Make section 3" × 7"

In estimate 3" × 6"

Rooms. 18 ft wide

Joists - unsupported length = 9 ft

Load = $9 \times 1\frac{1}{2} \times 150 = 2025$

$bd^3 = \frac{WL^2}{180} = \frac{2025 \times 9^2}{180} = 911$

Make section $3" \times 6\frac{3}{4}"$

In estimate 3" × 6"

Rooms on sides with 2 girders

Joists - unsupported length = 6.66 ft.

Load = $6.66 \times 1\frac{1}{2} \times 150 = 1499$

$bd^3 = \frac{WL^2}{180} = \frac{1499 \times (6.66)^2}{180} = 369$

Make section 3" × 5"

In estimate 3" × 6"

Verandahs - in front

Joists - unsupported length = 7 ft.

Load = $7 \times 1\frac{1}{2} \times 150 = 1575$

$bd^3 = \frac{WL^2}{180} = \frac{1575 \times 7^2}{180} = 429$

Make section $3" \times 5\frac{1}{4}"$

In estimate 3" × 5"

Verandah on side.

Joists - unsupported length = 6.81 ft.

Load = $6.81 \times 1\frac{1}{2} \times 150 = 1533$

$bd^3 = \frac{WL^2}{180} = \frac{1533 \times (6.81)^2}{180} = 395$

Make Section 3"×5"

In estimate 3"×5"

Beam in Verandah. unsupported length = 7 ft.

Load = $7 \times 3\frac{3}{4} \times 150 = 3938$

Joists = $5 \times 3\frac{3}{4} \times \frac{1}{4} \times \frac{5}{12} \times 46 = 94$

Total ~~[illegible]~~ lbs 4032

$bd^3 = \frac{WL^2}{180} = \frac{4032 \times 7^2}{180} = 1098$

Make Section 4"×6½"

In estimate 7"×8"

Stair Case joists - lower flight.

Load = $10\frac{1}{2} \times 1\frac{1}{2} \times 112 \times 1$ — 1764

Live load = $10\frac{1}{2} \times 1\frac{1}{2} \times 60$ — 1890

parapet = $10\frac{1}{2} \times \frac{1}{2} \times 3 \times 112$ — 1744

Total lbs - 5398

$bd^3 = \frac{WL^2}{180} = \frac{5398 \times (10\frac{1}{2})^2}{180} = 3306$

Make Section 4"×9"

In estimate 4"×9"

Stair Case joists - upper flight. Length = 9 ft.

Load = = $9/10\frac{1}{2}$ or .85 of 5398 = 4598 lbs

$bd^3 = \frac{4598 \times 9^2}{180} = 2069$

Make Section 3"×9" or 4"×8"

In estimate 3"×9"

Landing joists - unsupported length = 4 ft.

Load = $4 \times 1\frac{1}{2} \times 150 = 900$

$bd^3 = \frac{WL^2}{180} = \frac{900 \times 4^2}{180} = 80$

Make Section 2"×3½"

In estimate 3"×4"

Beam at Landing.

Load = $3 \times 5\frac{1}{4} \times 1 \times 112$ — 1764

do - $3 \times 4\frac{1}{2} \times 1 \times 112$ — 1512

Live load = $7 \times 9\frac{3}{4} \times 60$ — 4095

parapets $9\frac{3}{4} \times \frac{1}{2} \times 3 \times 112$ — 1638

Landing - $7 \times 2 \times 150$ — 2100

C. over 11109

7623 rd.

Hw

B. over 11109

Joists - $3 \times 5\frac{1}{4} \times \frac{1}{3} \times \frac{3}{4} \times 46$ — 181

do — $3 \times 4\frac{1}{2} \times \frac{1}{4} \times \frac{3}{4} \times 46$ — 116

Landing - do - $5 \times 2 \times 1/6 \times \frac{1}{4} \times 46$ — 19

Total lbs — 11425

$bd^3 = \frac{WL^2}{180} = \frac{11425 \times 7^2}{180} = 3110$

Make Section 5"×9"

In estimate 12"×9"

Beam at upper landing

Load = $3 \times 4\frac{1}{2} \times 1 \times 112$ — 1512

Live - do - $3 \times 4\frac{1}{2} \times 60$ — 810

parapets - $4\frac{1}{2} \times \frac{1}{2} \times 3 \times 112$ — 756

Joists — $3 \times 4\frac{1}{2} \times \frac{1}{4} \times \frac{3}{4} \times 46$ - 116

Total lbs - 3194

$bd^3 = \frac{WL^2}{180} = \frac{3194 \times 7^2}{180} = 870$

Make Section 4"×6"

In estimate 9"×10"

As the Stair Case joists are 4"×8" it would be better to make this beam 4"×8" also.

Rolled Steel girders.

In front Rooms with single girders.

Load = $20 \times 9\frac{1}{2} \times 150$ — 28500

Joists = $13 \times 9\frac{1}{2} \times \frac{1}{4} \times \frac{2}{12} \times 46$ 865

Approx: weight of girder — 800

Total lbs 30165

or tons 13.46

Equivalent load for a limiting Stress of 3× tons per □" =

$\frac{13.46 \times 3}{2}$ = 20.19 tons

× No 61C of 4-1-06.

Hence a girder 15"×6"×59 lbs is required against 12"×6"×52 lbs provided in the estimate.

If 7½ tons per sq inch is adopted then a girder 15"×5"×42 lbs will be required against 12"×6"×54 lbs

In side rooms with 2 girders

Load = 19×6.66×150 = 18981

joists = $12 \times 6.66 \times \frac{1}{4} \times \frac{5}{12} \times 46 = 400$

Approx weight of girders — = 750

Total lbs 20131

or tons 9

Equivalent load for a limiting shear of 5 tons per □"

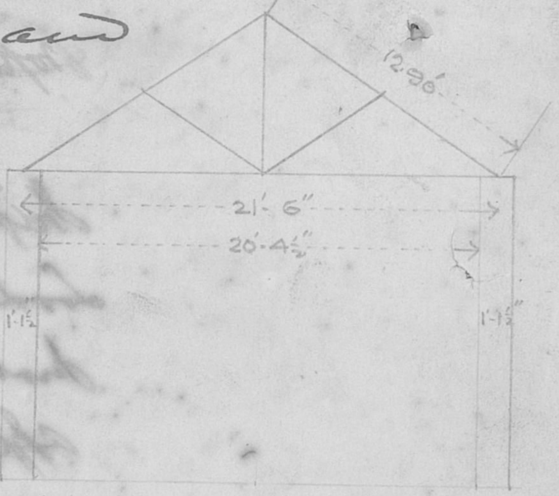
$= \frac{9 \times 3}{2} = 13\frac{1}{2}$ tons

A girder 15"×5"×42 lbs is required against 12"×6"×44 lbs in the estimate.

If 7½ tons per sq inch is adopted then a girder 12"×5"×32 lbs will be required against 12"×6"×44 lbs

Roofing.

Mangalore tiles or pot tiles with air spaces. Rise = 1/3 span and weight = 42 lbs per sq ft.



Common rafters 2 ft centres.

Load = 6.45×2×42 = 542

$bd^3 = \frac{WL^2}{180} = \frac{542 \times (6.45)^2}{180} = 125$

Math. Section 2"×4"

In estimate 2"×4"

Purlins. unsupported length = 9.68 ft.

Load = 9.68×6.45×42 —— 2622

rafters = $5 \times 6.45 \times \frac{1}{6} \times \frac{1}{3} \times 46$ — 82

Total lbs 2704

$bd^3 = \frac{WL^2}{180} = \frac{2704 \times (9.68)^2}{180} = 1408$

Math. Section 5"×6½"

In estimate 5"×7"

Principal rafters

Load as on purlin ——— 2704

weight of purlin = $9.68 \times \frac{5}{12} \times \frac{13}{24} \times 46$ — 105

Total lbs 2809

$bd^3 = \frac{WL^2}{180} = \frac{2809 \times (6.45)^2}{180} = 649$

Math. Section 4"×5½"

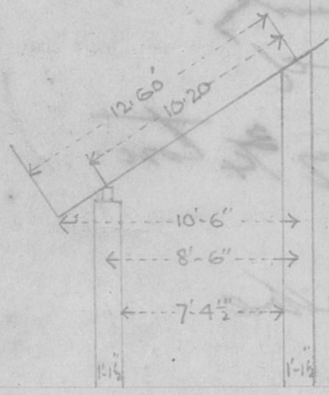
In estimate 4½"×6"

Math. tie beam 4"×6"

In estimate — 4½"×7"

Math. struts — 4"×4"

In estimate — 4½"×4½"



Verandah.

Rafters 2 ft apart.

Load = 10.20 × 2 × [illegible] 30 = 612

$bd^3 = \frac{WL^2}{180} = \frac{612 \times (10.2)^2}{180} = 354$

Math. Section 3"×5"

In estimate 2½"×4"

Bressummers. greatest unsupported length = 12.56 ft

Load = 12.56×7½×30 = 2826

rafters = $7 \times 7\frac{1}{2} \times \frac{1}{4} \times \frac{5}{12} \times 46 = 258$

Total lbs 3084

$bd^3 = \frac{WL^2}{180} = \frac{3084 \times (12.56)^2}{180} = 2703$

Math. Section 5½"×7¾" or 6"×7"

In estimate 5"×6"

If 5 posts are placed to support the roof near the open terrace [illegible] Distance apart = 9.41 ft.

Load = 9.41×7½×30 = 2117

rafters = $5 \times 7\frac{1}{2} \times \frac{1}{4} \times \frac{5}{12} \times 46$ = 188

Total lbs 2305

$bd^3 = \frac{WL^2}{180} = \frac{2305 \times (9.41)^2}{180} = 1128$

Math. Section 4½"×6½"

or 5"×6" as in Estimate 5"×6"

Read

N 20

Pressure on foundations. Wall P.P.

Wall - 2 × [illegible] × 1⅓ × 13 × 112 lbs — 3276
Do. below - 2 × [illegible] × 1½ × 15 × 112 lbs — 5042
Roofing - 2 × [illegible] × 19.20 × 42 lbs — 1613
Rafters — 1 × 12.90 × 1/6 × 1/3 × 46 — 33
Do — 1 × 6.30 × 1/4 × 5/12 × 46 — 32
1st floor - 1 × 2 × 4.43 × 150 — 1328
Joists — 1 × 3.68 × 1/4 × 5/12 × 46 — 18

Total weight on base- - 11342
-ment — or tons 5

Area of basement = 17/8 × 2 = 3¾ sq ft
∴ pressure = $\frac{5}{3.75}$ = 1.33 tons per sq ft
for brick in chunam is fair.

2. Pressure on basement = 11342
base — 2 × 17/8 × 2 × 112 — 840
foundn = 2 × 2'-5¾ × 2 × 112 — 1093
Total weight on Concrete 13275
or tons - 6 tons nearly.

Area of Concrete = 4¼ × 2 = 8½ sq ft
∴ Pressure on Concrete = $\frac{6}{8\frac{1}{2}}$ = .70 or say ¾ ton.

3. Pressure on Concrete — 13275
Concrete - 2 × 4¼ × 2 × 112 — 1904
Total lbs pres-
sure on Soil } 15179
or tons 6.77 tons.

Area on Soil = 4¼ × 2 = 8½ sq ft.
∴ Pressure on Soil = $\frac{6.77}{8.5}$ = .79 or
say 1 ton per sq foot.

The nature of the sub soil is not stated.

De.
25.4.06

27/4/06

2628 d.

~~13~~ 21

For DW

A draft memo: to the CA to Govt in accordance with lo's orders on the first page of the 1st note is submitted for approval.

CA.
2.5.06.

4/5/06

page 3 C7

Issued as No 3052 C d/ 7th May 1906

4-5

C No 7733 from the C.A. to Govt. No 1415 d/ 12.7.06

For W.

The Consg. Architect reports that the surface soil is made earth for a depth of 3 feet and that the foundation should be carried a foot deeper the extra depth being in brickwork.

As regards the existing building it is stated that it would not be safe to add an upper storey.

CA
20.7.06

23/7/06

The plans & estimate are returned [illegible] for sanction —
The foundations of the new building should be increased in depth by 1 ft

~~18~~ 22

That is, they should be 7 ft deep.
They may be 18" sand filling - 2 ft concrete & 3'6" masonry —
The other modifications suggested in the Technical note herewith should also be adopted, especially those dealing with the scantlings of timbers & sections of girders —
The report is misleading ~~or rather~~ & the plan as drawn implies (see plan of upper floor) that an old building ~~[illegible]~~ is to have a new one added to it — this apparently is not to be the case at present, but in the future something is to be done which neither I nor my Mr Romilly can quite understand — The old building will not carry an upper storey — this is the C.E. to Govt's verdict.

24/7/06

To Educational U.O.

(1 plan)

Urgent

LOCAL & MUNICIPAL 26 JUL 1906 SECRETARIAT.

Y TO GOVERNMENT, 8 AUG 1906 IC WORKS DEPARTMENT

Educational Departt

The draft placed below is submitted for approval. As it deals with a technical matter P.W.D. may perhaps be asked U.O. to state whether it is all right.

7.8.06

Edl No 555/D
~~U.O.~~ 8-8-06
P.W. U.O. No. 943
8-8-06

P.W.D. U.O. please place

7.8.06

Wesleyan Mission
High Schools, Triplicane

~~#~~ 23

P.W.D.

For the Secretary

The technical matters in the draft memo seems to be quite in accordance with the technical notes at pages 4 to 13 supra.

P.V.
9.8.06.

accepted. P.W.D. as concl.

W Educational Do 9/8/06

Educational Dept

Drew
M
10.8.06

Pages 6 + 7 Cf. [Memo to the D.P.I. No. 375 d/ 11.8.06].
Pages 8-26 Cf. from the D.P.I. No. 9071 d/ 22.10.06.

(The Manager states that ~~The~~ the plans and estimates have been revised as suggested by the Chief Engineer in his notes supra.

Pages 3 of current. In consequence of the revision, the estimated cost has risen from Rs16,965 to Rs17,575. The Manager of the institution, has however, left ~~the~~ figures in the original application for grant as they were

Page 10 of current in order, as he says, to facilitate matters and avoid confusion. The Manager also requests that sanction may be accorded as soon as possibl

24 10 P

as the contemplated additions become every day more urgent. Submitted that the plans and estimates as now revised, may be sent u.o. to the P.W.D., to ascertain whether the revised estimate provides for the alterations specified by that Dept. On the return of the file from the P.W.D. the question of the grant may be taken up.

5/11/06

LOCAL & MUNICIPAL
14 NOV 1906
SECRETARIAT.

3.11.06.

3/11/6

TO GOVERNMENT
6 NOV 1906
PUBLIC WORKS DEPARTMENT

P.W.D. u.o.

disp
5/11/6

Edl u.o. 780 D
6-11-06.

T

P.W. u.o. No. 1316
7-XI-06

P.W.
7-11-06

7.11.06

Public Works Department

D.W.

The estimate has been corrected as per W's remarks pp 12 and 13 and the other modifications suggested in the T note pp 2-11. The amount of the estimate is now increased from Rs 16,950 to Rs 17,575.× In the item brick in chunam in foundn. & basement the qty: should be 4212 + ⅓ of 2061, for the extra foot, = 4899 cft & not 4555 cft as corrected in the abstract.

× The amount of the estimate corrected for the above quantity 4899 cft = Rs 17634.

10.11.06.

The estimate as corrected may be approved.

13/11/06

D.W.

Educational u.o.

Desp. 13/xi

Educational dept.

The amount of grant to be paid to the institution has now to be determined. The amount of the estimate as revised by the P.W.D. is Rs 17,634 and under rule 51 of the Grant-in-Aid Code the maximum grant admissible is Rs 5878. The application is for a grant of Rs 5655. The Manager has left the figures in the original application, as they were, in order, as he says, to facilitate matters and avoid confusion.

grant not exceeding 1/3 of the total cost.

16/11/06

PWD has not stated what time may be allowed for the work - but ~~time~~ it should be possible to finish the work before 31st December next in which case the grant will be payable by the 1st of February 1908 i.e. before the close of 1907-08.

Doubtful judging from other cases we have had.

16/11/06

Secy.

16/11/06

I think that a grant of Rs 5000 in round figures may be given, subject to the usual conditions - the work to be completed by 31st Dec 07, & accounts submitted by 31st Jany 08

H.M.

12/11/06

The Memo d 11/8/06 No 375 to D.P.I. seems to be quite wrong. What right have we to "call on" a private school managt. to revise estimates. While the Registrar of the Dept. never learn the right view of things. He puts up these "mamool" orders, & they get passed without reflection. We have constantly got into trouble by our "clerical" language being construed into promises. There has been no decision as yet to make any grant whatever.

The Memo & similar requests ought to proceed on lines which leave the onus with the private School authority. The D.P.I. shd have been requested to inform the School authority that the Govt. are unable to consider the estimates because ~~the Govt.~~ (1) a building of the kind contemplated shd have foundations of 7 feet depth, which might be

18 inches sandfilled &c & (2) that no proposal to place an upper storey on the old building can be entertained That as to the rates it is observed (1) (2) &c

Then I shd. leave it to the institution to take further action.

I instance the above as merely general lines for dealing with such proposals.

Noted
Registrar will please initial
21.11.06.

21/11/06

I agree to the proposed final order. The grant of R5000 being contingent on an actual expre of at least R17,000, but the grant will not be increased altho' the actual expre may exceed that amount.

19/

Please Deptt. acc.
21.11.06

~~19~~ 28 14P

The draft placed below is submitted for approval.

Tkor
21/XI/6.

P.J.
22/11/6.

Secy.

22/11/06

22.11.06

PKM

Where is the printed form?

Why has it been printed if not to be used?

P.J.
21/11/6

The printed forms have been exhausted. Shall indent for a fresh supply.

Tkor
22/11/06.

Rew

29 Educational DEPARTMENT.

[F/12]
1,000—2-5-06.

7 P

READ AGAIN G.O., No. ...., dated ....190 .
" " " " ...., " ....190 .

READ ALSO:—

C. No. 632, From the D. C. I., No. 9071 dated 9. 6. 1906.
~~note by the Chief Engineer~~ ~~24. 7. 1906~~
" " 174 " " do, " do " 22. 10. 1906
" " ...., " " ...., " ...., " ....190 .

ORDER.

No. 762 dated 23. 11. 1906

P. S.

desp mins
& print
23/11/6

The Government are pleased to ~~a~~ sanction a grant ~~of~~ ~~not exceeding~~ Rs 5000, towards the cost of extending the building occupied by the Wesleyan Mission High School, Triplicane, subject to the following conditions:—

(1) that the work is carried out ~~authorities of the School, carry out the work~~ in accordance with the estimate as now revised ~~Chief Engineer's note read above~~;

(2) that ~~the~~ it ~~work~~ is

Rec

30.

completed before the 31st of December 1907;

(3) that a certificate of the actual expenditure incurred on the work is submitted before the 31st of January 1908;

(4) that the total actual bona fide expenditure incurred on the building does not fall below Rs17,000;

(5) that all ~~other~~ other conditions prescribed in the Grant-in-Aid Code have been duly complied with

2. On the above conditions being fulfilled the grant will be paid as funds become available.

21/11/6.

22/11/6

22/11/06

23.11.06

2

To,

The D.P.I. with plans and estimate

" A.G.

Despatched with Encls. 26/11/6

First copy sent to Press.

Returned for signature.

Despatched in print.

NUMBER OF COPIES REQUIRED. { Order complete. 25
Letter only.
Order complete with Letter.

READ AGAIN G.O., No. 1 ., DATED

CURRENT No. 632-A
1745-A.

Please show press

18/7/06.

G. P.
Noted 148

ENCLOSURES TO C. No. A

ORDER OF GOVERNMENT. A

LETTER OF GOVERNMENT.

STATEMENT WITH DITTO.

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH IN ORIGINAL.

N.B. —

A = Print in full.
B = Not to be printed.
P = Print abstract only.
Q = Print heading only.