# Educational (1904) Department.

ORDINARY PRINTED.

G.O., No. 468

DATED 1. 8. 04

ORIGINAL

[Despatch Abstract.]

Building Grant.

Declining, with remarks, to sanction any additional building grant for the National High School, Leichhardt.

BACK PAPERS.

| G.O. | No. | Department. | Date. | G O. | No. | Department. | Date. |
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Building Grant.

Declining, with remarks, to make any additional building grant for the National High school, Trichinopoly.

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# Government {1904} of Madras.

## EDUCATIONAL.

468

*Read.* } 1904. *Enclosures*

*Regd.* } *Spare copies*

ORIGINAL

**G.O., No. 468, 1st August 1904.**

[N. P.]

**AUGUST.**

Building Grant.

GOVERNMENT OF MADRAS.

EDUCATIONAL DEPARTMENT.

Read—again the following paper:—

G.O., No. 614, Educational, dated 14th September 1899.

*Read*—the following paper:—

From the Hon'ble Mr. D. DUNCAN, M.A., D.Sc., LL.D., Director of Public Instruction, Madras, to the Secretary to Government, Educational Department, dated 31st August 1899, No. 9816.

I have the honour to submit the enclosed plans with estimates amounting to Rs. 33,000 for constructing a new building for the National High school, Trichinopoly, and to recommend that a third grant of Rs. 11,000 be sanctioned under Chapter VIII of the Grant-in-Aid Code.

*Enclosures* 5.

| | |
|---|---|
| 1 Plan. | 1 Report. |
| 1 File of estimates. | 1 Specification. |
| 1 Site plan. | |

2. The school is in a flourishing condition. It contains complete upper and lower secondary departments. Many of the forms being unwieldy have been split into divisions. The present strength is reported to be nearly 500 and it would have been even more, had it not been for want of accommodation in the rented building in which the school is held. The advantages of possessing a building of its own having been felt, the School Council collected public subscriptions for constructing the new building, the foundation of which was laid by His Excellency the Governor at the time of his visit to Trichinopoly last year. The site was granted by Government free of cost.

3. A portion of the grant for the new building is payable from Municipal funds, as the lower secondary department is also to be accommodated in it. However, the whole grant is recommended for payment from Provincial funds, in view of the fact that the Municipality has provided in the current year's budget only Rs. 250 for payment of building and furniture grants, and that the Council is not likely to be in a position to allot for some years any large sum for building grants.

4. The grant, if sanctioned, may be paid by instalments, when funds are available. The whole of the current year's building grant allotment of Rs. 30,000 has been exhausted.

———

*Order*—No. 614, Educational, dated 14th September 1899.

The Government is pleased to sanction a one-third grant of Rs. 11,000 towards the cost of constructing a building for the National High school, Trichinopoly.

(True Extract.)

M. HAMMICK,
*Ag. Secretary to Government.*

To the Director of Public Instruction.
„ Accountant-General.



Read—also the following papers:—

From the Hon'ble Mr. A. G. BOURNE, D.Sc., F.R.S, Director of Public Instruction, Madras, to the Secretary to Government, Educational Department, dated 10th December 1903, Ref. on Cur. No. 504.

In its order, No. 614, Educational, dated 14th September 1899, Government was pleased to sanction a building grant of Rs. 11,000 for the National High school, Trichinopoly, and of that a part payment of Rs. 3,531 was authorized in January last. The manager reports that in the course of construction of the building certain defects were noticed, and that consequently certain alterations involving an excess expenditure of Rs. 11,081-3-8 over the approved estimate were found absolutely necessary. He has accordingly applied for an additional grant of Rs. 3,694, being a third of the excess cost. The Superintending Engineer is of opinion that the alterations are all in the nature of improvements and has approved them with the exception of the facing with cut stone done to the basement of the main building which is considered structurally wrong, the stone not being bonded into the wall. I have the honour to recommend that an additional grant not exceeding Rs. 3,690 may be sanctioned. The facing with cut stone not having been approved by the Public Works Department, a third of its cost will be deducted when authorizing payment.

2. The plan and estimates, together with comparative statements showing the difference between the original and revised estimates, are submitted herewith.

3. I beg to request that if the grant now recommended be sanctioned, this sanction as well as the one already accorded in G.O., No. 614, Educational, dated 14th September 1899, may be allowed to have effect till 31st March 1905, so that there may be no necessity for any renewal of sanction in case of any delay in the completion of the building or in the granting of a completion certificate by the Public Works Department authorities.

4. Out of the current year's allotment of Rs. 70,000 for building grants, payment of grants amounting to Rs. 28,961 has been authorized up to date.

———

Memo. No. 698, Educational, dated 19th December 1903.

With reference to his letter No. 504, dated 10th December 1903, the Director of Public Instruction is requested to be so good as to forward a copy of the Superintending Engineer's remarks on the revised estimate for the building now under construction for the National High school, Trichinopoly.

(By Order.)

A. GALLETTI,
*Ag. Asst. Secretary to Government.*

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From the Hon'ble Mr. A. G. BOURNE, D.Sc, F.R.S, Director of Public Instruction, Madras, to the Secretary to Government, Educational Department, dated 23rd December 1903, Ref. on Cur. No. 504.

Copy of a communication, Dis. No. 572, dated 6th June 190[illegible], from the Executive Engineer, Trichinopoly Division, to the Superintending Engineer, VI Circle.

(2) Letter from the Superintending Engineer, VI Circle, No. 921 T.C., dated 8th July 1903.

(3) Letter from the Superintending Engineer, VI Circle, No. 1448 T.C., dated 18th November 1903.

With reference to Government Memorandum No. 698, Educational, dated 19th December 1903, I have the honour to submit copy of each of the papers noted in the margin which contain the remarks of the Public Works Department officers on the revised estimate for the building of the National High school, Trichinopoly.

Enclosures.

From the Executive Engineer, Trichinopoly Division, to the Superintending Engineer, VI Circle, dated 6th June 1903, Dis. No. 572.

I have the honour to return the estimates forwarded with your R.C. No. 682-T.C., dated 19th May 1903, with the following remarks:—

I have inspected the buildings in company with the headmaster and find that the "side building has been almost completed in accordance with the revised design, the chief alterations in this estimate are: (1) roofing with Mangalore pattern tiles and special ceiling tiles instead of with country tiles, (2) doors and windows increased in size, (3) the construction of walls to the inner face of the building instead of trollis work as originally proposed. These are all improvements and may be accepted. The walls of the main building are not yet above the level of basement except as regards the porch and staircase which have been raised slightly above this level. The alterations in the plan of this building are as follows: (1) the addition of two staircases in rear, this was very necessary as the only access to the upper storey originally provided was by way of a small spiral staircase in each tower of which the width was only 2′ 9″ allowing for the newel. It is proposed to roof the new staircases, this seems to me rather unnecessary; (2) the use of Mangalore tiles with special ceiling tiles for roofing, this is an improvement and may be accepted; (3) the raising of the walls of the upper storey to allow the verandah to be made sufficiently high, this was quite necessary; (4) the four cross walls of the lower rooms to be omitted so as to give two larger rooms instead of a number of small ones; (5) the provision of a terraced porch instead of one supported on old rails, this is a decided improvement as regards appearance; (6) the towers are retained entirely for the sake of ornament, the spiral staircases alone having been omitted: this seems to be waste of money, if ornament is required it could be provided by building much smaller turrets at a quarter the cost of the large ones, if the towers are to be included in the estimate for the purposes of the grant-in-aid, I submit that they should be made of some use by the retention of the staircases; (7) the whole of the basement of the main building has been faced with a skin of cut stone 6″ thick, this seems to me to be structurally wrong as the cut stone is not bonded into the wall and simply depends on the mortar for its adhesion to the brickwork. I would also mention that some painting has been done to the pillars in the side building which I think it would be well to alter, the colour is a brilliant blue which does not seem to me suitable and which will show dirt very much more than a darker shade such as oak or chocolate. With these remarks I return the estimates for disposal.

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From the Superintending Engineer, VI Circle, to the Director of Public Instruction, Madras, dated 8th July 1903, Dis. No. 921-T.C.

With reference to your letter R.C. No. 504, dated 9th May 1903, I have the honour to forward herewith copy of a letter received from the Executive Engineer, Trichinopoly Division, and to state that I agree with the Executive Engineer that the alterations made or proposed to be made are all in the nature of improvements, and may be accepted.

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From the Superintending Engineer, VI Circle, to the Director of Public Instruction, dated 18th November 1903, Dis. No. 1448-T.C.

With reference to your letter R.C. No. 504, dated 5th November 1903, I have the honour to state that I consider that the two towers at either flank of the main building—National High school—which have been partly constructed may be completed, and that their cost may be included for the purpose of calculating the grant-in-aid.

2. The objection of the Executive Engineer to the stone work done to the basement was that it was merely a skin 6″ thick and that there was no bond between the stone and brickwork, *i.e.*, none of the stones were so built as to penetrate the brickwork. This mode of construction is, as remarked by the Executive Engineer, structurally wrong.

3. The roofing of the staircases may, I consider, be allowed.

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Telegram from the Secretary to Government, Public Works Department, to the Executive Engineer, Trichinopoly Division, dated Madras, 8th March 1904, No. 1821 C.

Report what work remains to be done to National High school, Trichinopoly.



Telegram from the Executive Engineer, Trichinopoly, to the Secretary to Government, Public Works Department, dated 9th March 1904.

Side block complete. Main block lower floor complete except plaster and flooring. Turrets complete. Doors windows ready.

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Telegram from the Secretary to Government, Public Works Department, to the Executive Engineer, Trichinopoly Division, dated 19th March 1904, No. 2166 C.

Your telegram 9th. National High school building, Trichinopoly. Ask manager stop work pending instructions.

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Memorandum No. 2352 C., dated 28th March 1904.

With reference to the design and estimate for a National High school at Trichinopoly, herewith sent, the Superintending Engineer's attention is drawn to the following faults, mistakes and omissions in the design and estimate, and he is requested to revise and resubmit the estimate and design. Wherever possible mistakes already made should be rectified and for the incomplete portion of the work the instructions now sent should be carefully followed.

If not too late the ground flooring should be $4\frac{1}{2}$″ concrete paved with flooring tiles, pointed with portland cement.

The following errors are noticed in the estimate:—

(*a*) Roofing, page 9, should be 7,100 square feet and not 10,077 square feet.

(*b*) Roofing, page 17, the cost is Rs. 754 less, *vide* corrections in data page 20.

(*c*) Contingencies and superintendence, page 16, at 9 per cent. should be Rs. 1,058 and not Rs. 1,198. The total on this page should be Rs. 12,850 and not Rs. 11,870.

(*d*) Contingencies and superintendence, page 17, at 9 per cent. should be Rs. 615 and not Rs. 843. The cost of the roofing should be Rs. 1,686 and not Rs. 2,440. The total on this page should be Rs. 7,448 and not Rs. 8,430.

(*e*) Contingencies and superintendence, page 19, are calculated at 11·10 per cent. At 10 per cent. (which is a very fair allowance) it will amount to Rs. 1,889 and the total Rs. 20,920 can be reduced to Rs. 20,750

(*f*) On page 25, for cost of compound wall, the total should be Rs. 1,252-4-6 and not Rs. 1,305-4-6. The same error occurs on page 27.

The extra cost of the cut-stone facing, of the basement, is Rs. 640 which should be excluded from the total when calculating the grant payable to the managers.

The piers of the large arches, at the ends of the portico, in front of the main building should be made $4\frac{1}{4}$ feet wide instead of 3 feet to withstand the thrust of the arch—*vide* pencil drawing on plan.

The outer side of the steps of the staircases should have wooden rails and the roof should be supported on wooden posts.

The following alterations should be made in the roof, etc., timbers, if practicable at the present stage of the work.

Main building—Ground floor—

(*a*) Verandah joists should be 3″ × $4\frac{1}{2}$″ instead of 3″ × 6″.

(*b*) Diagonal beams at corners of verandahs should be 4″ × $6\frac{1}{2}$″ instead of 9″ × 12″ first floor-roof.

(*c*) Common rafters should be 2″ × 4″ instead of 3″ × $4\frac{1}{2}$″.

(*d*) Purlins should be 4″ × 6″ instead of 6″ × 6″.

(*e*) Bressummers should be 4″ × 6″ instead of $6\frac{1}{4}$″ × $7\frac{1}{2}$″.

(*f*) Rafters for staircase should be 3″ × 5″ instead of $2\frac{1}{2}$″ × $3\frac{1}{2}$″.

Detached building—The scantlings used are incorrect as shown below:—

(*a*) Keepers 2″ × $1\frac{1}{4}$″ instead of 2″ × 1″.

(*b*) Rafters 3″ × $5\frac{1}{4}$″ instead of 3″ × $4\frac{1}{2}$″.

(*c*) Verandah rafters 2″ × 4″ instead of 3″ × $4\frac{1}{2}$″.

(*d*) Bressummer 4″ × $5\frac{1}{2}$″ instead of $4\frac{1}{2}$″ × 6″.

The nature of the surface and sub-soil is not given and the Superintending Engineer should satisfy himself that the soil is capable of bearing the pressure put on it, which for the tower is 1·48 tons per square foot and for the main building 1·37 tons per square foot.

The outer abutments of the top arches of the stair cases are not thick enough to withstand the thrust of the arches and if not too late these abutments should be made $3\frac{1}{2}$ feet wide, otherwise the arches may be demolished and the landing carried on the joists as shown on the plan.

(By Order.)

S. B. MURRAY,
*Under Secretary to Government.*

To the Superintending Engineer, VI Circle.

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Memorandum No. 2615 C., dated 9th April 1904.

With reference to memorandum No. 2352 C., dated 28th March 1904, the Superintending Engineer, VI Circle, is requested to be so good as to expedite the submission of the revised estimate for the National High school, Trichinopoly.

(By Order.)

S. B. MURRAY,
*Under Secretary to Government.*

To the Superintending Engineer, VI Circle.

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From C. J. USSHER, Esq., Superintending Engineer, VI Circle, to the Chief Engineer, Public Works Department, dated Trichinopoly, 16th June 1904, No. 448 C.E.

In retransmitting the plan and estimate for the National High school at Trichinopoly sent to me for revision with memorandum No. 2352 C., dated 28th March 1904, I have the honour to inform you that the greater portion of the main building had been completed before the receipt of the orders, and that the detached building is reported to have been completed about a year ago and is now in use; the alterations ordered to be made have therefore been given effect to only as far as admissible.

2. The flooring of the lower storey verandah was not done, and the class of flooring ordered by you is now provided. The rest of the flooring has been finished with square tiles pointed with cement over a layer of thin brick-bats over 6 inches of dry sand. The porch and the top arches under the staircase having been already built, it was found impracticable to carry out the alterations ordered. The Manager, however, has been written to by the Executive Engineer to demolish the staircase arches and to carry the landings on joists as ordered by you. If found necessary, buttresses can be added to the porch, but as these would be unsightly, and as the porch is now quite sound, I think no action need be taken at present. The Executive Engineer informs me that the Manager desires to build only brick parapets for the staircase and to omit providing roofing. The estimate therefore provides for brick parapets only.

3. With regard to alterations in the scantlings of roof timbers, the Executive Engineer reports that the timbers have been already sawn to the required dimensions, but that the sizes ordered by you are now provided in the estimate for the upper storey roof timbers, as the basis for payment. The other minor defects pointed out [items (*a*) to (*f*)] have all been now rectified and a note made at the foot of the abstract estimate regarding the deduction of the cost of cutstone facing in the basement to be made when calculating the grant payable to the Manager.

4. As regards the foundations my predecessor (Colonel Boddy) ordered the foundation of the too-storied building to be taken down to rock and the Executive Engineer states that he verified the depths and widths when checking the work for



the payment of the first instalment of the grant, and that the foundations are on hard or soft rock. The towers have been completed and the main building carried up to roof level. The work done may be regarded as satisfactory and decidedly above the average.

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Order—No. 468, Educational, dated 1st August 1904.

The Government are unable to make any additional building grant, as recommended by the Director, to the sum of Rs. 11,000 sanctioned in G.O., No. 614, Educational, dated 14th September 1899. The attention of the Director of Public Instruction is drawn to the fact that no portion of the grant should be paid till formal agreements have been executed.

(True Extract.)

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

To the Director of Public Instruction, with plans and estimates.

Exd. P. Sankaran Nair.

EDUCATIONAL DEPARTMENT.

# NOTES CONNECTED WITH G.O., No. 468, EDUCATIONAL, DATED 1ST AUGUST 1904.

[SUBJECT.—*Additional Building Grant for the National High school, Trichinopoly.*]

*From the Director of Public Instruction, dated 10th December* 1903, *No.* 504.

In their order No. 614, Educational, dated 14th September 1899, the Government were pleased to sanction a grant of Rs. 11,000 towards the cost of constructing a building for the National High school, Trichinopoly. In the Director's letter read in that Government Order it was stated that the grant, if sanctioned, would be paid by instalments when funds were available. It is now stated that a part payment of Rs. 3,531 was authorized only in January last.

2. The manager of the school now applies for an additional grant of Rs. 3,694 and reports that in the course of construction certain defects were noticed and that in consequence certain alterations involving an additional expenditure of Rs. 11,081 were found absolutely necessary. The Director points out that these alterations with one exception have been approved by the Superintending Engineer, though there is nothing on record to indicate it, and recommends an additional grant not exceeding Rs. 3,690. He further requests that, if the grant be sanctioned, this sanction as well as the one already accorded in G.O., No. 614, Educational, dated 14th September 1899, may be allowed to have effect till 31st March 1905 so as to avoid the necessity for any renewal of sanction. It is submitted that before the grant recommended is sanctioned, the plans and estimates may be referred u.o. to the Public Works Department for verification and scrutiny.

[3. The Director's attention will have to be drawn to G.O., No. 305, Educational, dated 23rd June 1903, under which "no building grant should in future be paid under rule 113 of the Grant-in-Aid Code unless the grantee executes a formal agreement undertaking to refund such portion of the amount as may be determined under rule 116 if, within the period specified in that rule, the building is diverted to purposes other than those for which the grant was sanctioned."]

N. LAKSHMANA RAO—15-12-03.

P. T. THARYAN—15-12-03.

The Director may first be asked to submit a copy of the Superintending Engineer's remarks?

A. GALLETTI—17-12-03.

The Superintending Engineer's remarks may be called for, and the file meanwhile forwarded to the Public Works Department for scrutiny.

A. G. CARDEW—17-12-03.

A draft memorandum is submitted for approval. After it is approved and despatched, the file may be forwarded u.o. to the Public Works Department.

P.T.T.—17-12-03.

Lie over till the Director of Public Instruction's answer is received? The Superintending Engineer's remarks may be of use to the Public Works Department.

A. GALLETTI—18-12-03.

Very well.

A. G. CARDEW—18-12-03.

[Memorandum No. 698, dated 19th December 1903.]

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*From the Director of Public Instruction, dated 23rd December* 1903, *No.* 504.

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The Director now forwards a copy of the Superintending Engineer's remarks called for in memorandum No. 698, dated the 19th ultimo, and also a copy of the remarks of the Executive Engineer, Trichinopoly division. It is submitted that as suggested above the file may be forwarded u.o. to the Public Works Department for verification and scrutiny of the plans and estimate.

N. LAKSHMANA RAO—4-1-04.

P. T. THARYAN—5-1-04.

A.G.—5-1-04.

A.G.C.—5-1-04.

*To the Public Works Department.*

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PUBLIC WORKS DEPARTMENT.

*To the Technical section* for scrutiny.

P. K. SUBBA AIYAR.

S. B. MURRAY—11-1-04.

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TECHNICAL NOTE.

*Name of work.*—Constructing a building for the National High school at Trichinopoly.

*Amount of Estimate.*—Rs. 44,281.

*Particulars of Estimate.*

| | Rs. |
|---|---|
| Main building .. .. .. .. .. .. .. .. | 21,750 |
| Side buildings .. .. .. .. .. .. .. .. | 20,920 |
| Compound wall .. .. .. .. .. .. .. .. | 1,305 |
| Contingencies and petty supervision 4,338 at 10 per cent. | |
| Levelling and blasting rock .. .. .. .. .. .. | 306 |
| Total .. | 44,281 |

*Particulars of Construction.*

Surface soil—not stated.

Sub-soil—not stated.

Foundations—6 feet deep, of which the lower 5 feet will be concrete and the remainder brick in chunam.

For the towers the foundations will be 9 feet deep—8 feet concrete and 1 foot brick in chunam.

Basement—3 feet high, brick in chunam, faced with 6-inch cutstone.

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



Plastering—interior with lime mortar and pointing the exterior with cement.

Should be flooring bricks pointed, if not too late. Portland cement. S. B. MURRAY.

Flooring—Ground floor 6 inches thick, but what it is to be is not stated. First floor terrace.

Yes. Tiles not bricks. W. B. DEWINTON.

Roofing—Mangalore tiles over special ceiling tiles.

Already made. S.B.M.

Doors and windows—Description not given; painting allowed.

Roof timbers—Teak wood. Wood-oiled.

Scantlings—*vide* remarks.

Rates—*vide* remarks.

The plinth area of the main building is 5,000 square feet, and the cost per square foot will be Rs. 4-5-7.

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

*Remarks.*

A grant of Rs. 11,000 was sanctioned in No. 614, Educational, dated 14th September 1899, on the original estimate, amounting to Rs. 32,200, but the manager reports that in the course of construction certain alterations were found necessary, thus increasing the amount of the estimate to Rs. 44,281 as per comparative statement submitted.

H. H. RISLEY,
*Secretary to the Government of India.*

The Executive Engineer, Trichinopoly division, in his No. 572 of 6th June 1903, generally approves of the proposed alterations, except the cut stone facing of basement, and the Superintending Engineer agrees with the Executive Engineer—*vide* his No. 921-T.C. of 8th July 1903.

The following errors are noticed in the estimate:—

Careless estimating. S.B.M.

Flooring, page 6 of estimate, should be 3,659 square feet and not 3,224 square feet.

Wood work, page 6, requires alteration as per calculation sheet.

Careless estimating. S.B.M.

Roofing, page 9, should be 7,100 square feet and not 10,077 square feet.

Correct estimate accordingly. W.B.DEW.

Wood work, page 9, requires alteration as per calculation sheet.

Careless estimating. S.B.M.

Brick in chunam, page 13*a*, the quantity is 700 cubic feet in excess.

Do. S.B.M.

Plastering, page 14, is 369 square feet in excess.

Do. S.B.M.

Wood work, page 15, is in excess of actual requirements—*vide* calculation sheet.

May stand. S.B.M.

Yes. W.B.DEW.

Rolled steel girders, page 6 of abstract, are calculated at Rs. 100 each and amount = Rs. 1,000.

By weight—

| | Rs. |
|---|---|
| 10 × 23 × 42 lb. = 9,660 lb. or 4·31 tons. 4·31 tons at Rs. 160 .. | 690 |
| Hoisting and fitting at Rs. 10 .. .. .. .. .. .. | 40 |
| Trainage, cart-hire, terminal charges, etc., at Rs. 40 .. .. .. | 172 |
| Total .. | 902 or say 910. |

Roofing, page 17, the cost is Rs. 754 in excess—*vide* corrections on data, page 20. Sundries and superintendence, page 16, at 9 per cent. should be Rs. 1,058 and not Rs. 1,188. The total should be Rs. 12,870 and not Rs. 11,870.

It is probably too late to make these corrections now, the work being presumably done in an agreement.

S. B. MURRAY.

Correct the estimate anyhow.

W. B. DEWINTON.

Contingencies and superintendence, page 17 at 9 per cent. should be Rs. 683 and not Rs. 843. The cost of the roofing should be Rs. 1,686 and not Rs. 2,440.

Contingencies and supervision, page 19, is calculated at 11·10 per cent. At 10 per cent. (a fair allowance) it will be only Rs. 1,889 and the amount reduced from Rs. 20,920 to Rs. 20,750.

Yes.

S.B.M

One page 25, for cost of compound wall, the total should be Rs. 1,252-4-6 and not Rs. 1,305-4-6. The same error occurs on page 27.

Yes.

S.B.M.

If the scantlings are corrected, as per calculation sheet, there will be further reductions in the estimate.

This amount should be excluded from the total when calculating Government's grant.

S.B.M.

The extra cost of the cut stone facing of the basement is Rs. 640.

Yes.

W. B. DEW.

The rates for plastering and wood work are now increased by As. 4 each—*vide* items 6 and 8, on page 23, comparative statement.

Semi-circular arches—

Thickness of pier—

$$(2 + \cdot 162 \times d)\sqrt{\frac{h + \frac{1}{4}d}{H}} \times \frac{0 \cdot 87 \times d}{\frac{1}{4}d + e}$$

$e$ = thickness of arch at crown = $1\frac{1}{2}$ ft.
$d$ = span of arch = 10 ft.
$h$ = height from ground to springing = 10 ft.
$f$ = versed sine or rise of arch = $\frac{10}{2}$ ft.
$h$ = height from ground to top of extrados, as loaded = 20 75 ft.

$$(2 + \cdot 162 \times 10)\sqrt{\frac{10 + \frac{1}{4}10}{20 \cdot 75}} \times \frac{87 \times 10}{\frac{10}{4} \times 1\frac{1}{2}}$$

$= 4 \cdot 13$ ft. or say $4\frac{1}{4}$ feet.

Dimensions taken from plan and estimate.

The piers of the large end arches of the portico should be increased from 3 to $4\frac{1}{4}$ feet—*vide* margin, and the front arches and piers may be altered as shown on the plan in pencil.

Yes.

W. B. DEWINTON.

The detached building, on three sides of the main building, is completed, and it is considered that any review of that estimate would be now unnecessary beyond stating that the pressure on the soil, in the foundations, is 0·76 ton per square foot and that the scantlings of the roof timbers are incorrect—*vide* calculation sheet. In the items of brick work and plastering, the heights are 6 inches in excess of those marked on the plan, and the value of this excess is Rs. 112.

Yes.

W.B.DEW.

Point out these errors.

W.B.DEW.

The plinth area of this building is 10,990 square feet and the cost per square foot, Rs. 1-14-5.

The Director of Public Instruction submits the above estimates for scrutiny with reference to the remarks of the Executive Engineer, Trichinopoly, No. 572 of 6th June 1903, and the Superintending Engineer's No. 1448-T.C., of 18th November 1903.



The steps should be built with through arches. The outer abutment of the top arch should be $2\frac{1}{2}$' thick.

Is this sufficient? W.B.DEW.

S. B. MURRAY.

Since found that the steps are cut stone running through from wall, hence through arches are not necessary.

R.E.—24-3-04.

The outer side of the steps should have wooden railings and the roof be supported on posts.

S.B.M.

Yes; or iron steps such as are provided for jails would be better still.

W. B. DEWINTON.

The stair cases in rear of main building—The steps are built over terracing of brick on edge, the span of which is $4\frac{1}{2}$ feet, with no intermediate support. It is submitted that it would be better to have joists below the steps, as is usually done. The cross section, of the stairs, C.D. is incorrect and the estimate cannot be checked. Plan of upper storey should be furnished. A parapet wall 8 feet high is allowed on the outer side of the steps, probably to support the roof above; this will make it very dark. Wooden railings are also provided but it is not shown on the plan; they appear unnecessary.

R.E.—7-3-04.

*I. Calculations.*

Ground floor.

Joists—

Load $= 8 \times 1\frac{1}{3} \times 200 = 2,400$

$$bd^3 = \frac{WL^2}{180} = \frac{2,400 \times 8^2}{180} = 853$$

Make section $3'' \times 6\frac{3}{4}''$
In estimate $3'' \times 7''$

Rolled steel girders—

| | LB. |
|---|---|
| Load $= 20 \times 8 \times 200$ .. .. .. .. .. .. | 32,000 |
| Joists $= 14 \times 8 \times \frac{1}{4} \times \frac{13}{14} \times 46$ .. .. .. .. .. .. | 698 |
| Approximate weight of girder .. .. .. .. .. .. | 840 |
| Total .. | 33,538 or 14·97 tons. |

Safe distributed load that 1 foot of span will carry $= 14 \cdot 97 \times 20 = 299 \cdot 40$ tons. A girder $12'' \times 5''$ weighing 42 lbs. per foot will suffice—*vide* Dorman Long & Co.'s hand-book, page 24. The estimate provides a girder $15\frac{3}{4}'' \times 6\frac{1}{6}''$, no weight quoted.

Joists in verandah—

Load $= 5\frac{1}{3} \times 1\frac{1}{2} \times 200 = 1,650$

$$bd^3 = \frac{WL^2}{180} = \frac{1,650 \times (5\frac{1}{2})^2}{180} = 278$$

Make section $3'' \times 4\frac{1}{2}''$
In estimate $3'' \times 6''$

Diagonal beam at corners of verandah—

Length of beam $= \sqrt{5\frac{1}{2}^2 + 5\frac{1}{2}^2}$
$= 7 \cdot 78$.

| | LB. |
|---|---|
| Load $= \frac{5\frac{1}{2} \times 5\frac{1}{2}}{2} \times 200$ .. .. .. .. .. .. .. | 3,024 |
| Joists $= \frac{1}{2}(4 \times 5\frac{1}{2} \times \frac{1}{4} \times \frac{3}{8} \times 46)$ .. .. .. .. .. .. | 47 |
| Total .. | 3,071 |

$$bd^3 = \frac{WL^2}{180} = \frac{3,071 \times (7 \cdot 78)^2}{180} = 1,032$$

Alter.

W.B.DEW.

Make section $4'' \times 6\frac{1}{2}''$
In estimate $9'' \times 12''$

First floor.

Common rafters—

Length = 6·45 feet, distance apart 1·75 feet. Weight of roof = 43 lbs., for ¾ span, including wind pressure. Trusses placed 8 feet apart.

Load = 6·45 × 1·75 × 43 = 485

$bd^3 = \frac{WL^2}{180} = \frac{485 \times (6{\cdot}45)^2}{180} = 112$

Alter. W. B. DEWINTON. Make section 2″ × 4″
In estimate 3″ × 4½″

Purlins—

| | LB. |
|---|---|
| Load = 8 × 6·45 × 43 .. .. .. .. .. .. | 2,219 |
| Rafters = 6 × 6·45′ × 2″ × 4″ × 46 .. .. .. .. | 99 |
| Total .. | 2,318 |

$bd^3 = \frac{WL^2}{180} = \frac{2{,}318 \times 8^2}{180} = 825$

Alter. W.B.DEW. Make section 4″ × 6″
In estimate 6″ × 6″

Principal rafters—

| | S FT. |
|---|---|
| Length unsupported .. .. .. .. .. .. .. | 6·45 |

| | LB. |
|---|---|
| Load = 8 × 6·45 × 43 .. .. .. .. .. .. | 2,219 |
| Purlins 8′ × 4″ × 6″ × 46 .. .. .. .. .. .. | 61 |
| Rafters .. .. .. .. .. .. .. .. .. | 99 |
| Total .. | 2,379 |

$bd^3 = \frac{WL^2}{180} = \frac{2{,}379 \times (6{\cdot}45)^2}{180} = 550$

Leave. W.B.DEW. Make section 4″ × 5½″
In estimate 4½″ × 6″

Other dimensions should be—

Tie beam 4″ × 6″
Strut 4″ × 4″
King post 4″ × 4″

Rafters in verandah—

Load = 7·5 × 1·75 × 43 = 564

$bd^3 = \frac{WL^2}{180} = \frac{(564 \times 7\frac{1}{2})^2}{180} = 176$

Leave. W.B.DEW. Make section 3″ × 4″
In estimate 3″ × 4½″

Bressummer—

| | LB. |
|---|---|
| Load = 8 × 6 × 43 .. .. .. .. .. .. | 2,064 |
| Rafters = 6 × 6 × 3″ × 4″ × 46 .. .. .. .. .. | 138 |
| Total .. | 2,202 |

$bd^3 = \frac{WL^2}{180} = \frac{2{,}202 \times 8^2}{184} = 782$

Alter. W.B.DEW. Make section 4″ × 6″
In estimate 6¼″ × 7½″

Leave. W.B.DEW. The posts in verandah may be made 5″ × 5″ against 5″ × 6″ in the estimate wall purlins.

Length between corbel stones 5′—

| | LB. |
|---|---|
| Load = 5 × 3·75 × 43 .. .. .. .. .. .. | 806 |
| Rafters = 4 × 3·75 × 3″ × 4″ × 46 .. .. .. .. .. | 56 |
| Total .. | 862 |



$bd^3 = \frac{WL^2}{180} = \frac{862 \times 5^2}{180} = 120$

Leave. W. B. DEWINTON. Make section 2½″ × 3¾″
In estimate 3″ × 4″

Common rafters for stair case roof—

Load = 10 × 1·75 × 43 = 752

$bd^3 = \frac{WL^2}{180} = \frac{752 \times 10^2}{180} = 418$

Alter. W.B.DEW. Make section 3″ × 5″
In estimate 2½″ × 3½″

Purlins in staircase—

| | LB. |
|---|---|
| Load = 6¾ × 10 × 43 .. .. .. .. .. .. | 2,902 |
| Rafters = 4 × 10 × 3″ × 5″ × 46 .. .. .. .. .. | 192 |
| Total .. | 3,094 |

$bd^3 = \frac{WL^2}{180} \times \frac{3{,}094 \times (6\frac{3}{4})^2}{180} = 786$

Leave. W.B.DEW. Make section 4″ × 6″
In estimate 4½″ × 6″

For outside single storey building, scantlings should be as put up—

Point out. W.B.DEW.

| | |
|---|---|
| 2″ × 1½″, reepers .. .. | 2″ × 1″ |
| 3″ × 5¼″, rafters .. .. | 3″ × 4½″ |
| 2″ × 4″, rafters verandah .. | 3″ × 4½″ |
| 4″ × 5½, Bressummer .. | 4½″ × 6″ |

but as this building is completed no alteration is now necessary.

Tower—
Inside circular; outside octagonal.
Dome—

| | C. FT. |
|---|---|
| Cylindrical portion at bottom = 7·5 × 3·1416 × 1½ .. .. .. .. .. .. | 106·02 |
| Outside, upper part = 4·5² × 6½ × 1·57. | 195·84 |
| Inside, upper part, 3² × 5 × 1·57 .. | 70·65 |
| Difference .. | 125·19 |
| Total, dome .. | 231·21 |

Stone columns as per estimate 168 c. ft.
Wood-work 7·75 c. ft.
Cornice = 2 (36 × 1 × ¾)
Doors = 36 sq. ft.
Superstructure—

| | |
|---|---|
| Upper part = (62·23 — 28·27) 16¼ .. .. | 551 85 |
| Lower part (78·27 — 28·27) 14¼ .. .. .. | 712·5 |
| Basement (95·31 — 22·64)³ .. .. .. | 218·01 |
| Foundation (110·85 — 18·31) .. .. .. | 92·54 |
| Concrete, 110·85 × 8 .. .. .. .. | 886 80 |

Sand filling—

| | |
|---|---|
| Upper, 22·04 × 2¾ .. .. .. .. | 60·37 |
| Lower, 18·31 × 1 .. .. .. .. .. | 18·37 |
| Total .. | 78 68 |

ormula for calculating dome, from Molesworth, page 678, item 8. Solidity = 1·57 × $r^2$ × $h$.
For octagonal figure: side = radius of inscribed circle × 0·8284—Molesworth, page 678.
Area of octagonal portions = area of octagon *minus* area of circle.

II. Pressure of tower on soil, concrete and basement—

Weights taken—Brickwork and concrete, 120 lb. per cubic feet; cutstone, 140 lb.; woodwork, 46 lb. and earth filling, 125 lb. per cubic feet.

| | LB. |
|---|---|
| Concrete, 886·80 × 120 lb. .. | 106,416 |
| Stone floor, 28·27 × 140 lb. .. | 3,958 |
| Earth filling, 78·68 × 125 lb. .. | 9,835 |
| Brickwork— | |
| Foundation, 92·54 × 120 lb. .. | 11,105 |
| Basement, 218·01 × 120 lb. .. | 26,161 |
| Superstructure, 712 50 × 120 lb. | 85 500 |
| Do. upper 551·85 × 120 lb. | 66,222 |
| Cornice, 2 (36 × 1 × ¾ × 120 lb.) | 6,480 |
| Cutstone work, 168 × 140 lb. .. | 23,520 |
| Woodwork, 7·75 × 46 lb. .. .. | 357 |
| Doors, ⅛ × 36 × 46 lb. .. .. | 276 |
| Dome, 231·21 × 120 lb. .. .. | 27,745 |

| | SQ. FT. |
|---|---|
| Area of concrete .. .. .. | 110·85 |
| Foundation, brickwork .. .. | 92·54 |
| Basement .. .. .. .. | 72·61 |

(1) Pressure on basement—

| | LB. |
|---|---|
| Dome .. .. .. .. .. .. .. .. | 27,745 |
| Cutstone .. .. .. .. .. .. .. .. | 23,520 |
| Cornice .. .. .. .. .. .. .. .. | 6,480 |
| Woodwork .. .. .. .. .. .. .. | 357 |
| Doors .. .. .. .. .. .. .. .. | 276 |
| Brick in chunam (superstructure) .. .. .. .. | 151,722 |
| Total .. | 210,100 or 93·80 tons. |

* For good brickwork safe crushing weight = 3½ tons per square feet.

Pressure = $\frac{93{\cdot}80}{72{\cdot}61}$ = 1·29 tons per square feet.*

(2) Pressure on foundation brickwork first footing—

| | LB. |
|---|---|
| Weight as above .. .. .. .. .. .. .. | 210,100 |
| Add basement .. .. .. .. .. .. .. | 26,161 |
| Total .. | 236,261 or 105·48 tons. |

† For good brickwork safe crushing weight = 3½ tons per square feet.

Pressure = $\frac{105{\cdot}48}{92{\cdot}54}$ = 1·14 tons per square feet. †

(3) Pressure on concrete—

| | LB. |
|---|---|
| Weight as above .. .. .. .. .. .. | 236,261 |
| Add stone floor .. .. .. .. .. .. | 3,958 |
| Foundation footing .. .. .. .. .. .. | 11,105 |
| Earth filling .. .. .. .. .. .. | 9,835 |
| Total .. | 261,159 or 116·59 tons. |

‡ For good concrete safe crushing weight = 3 tons.

Pressure = $\frac{116{\cdot}59}{110{\cdot}85}$ = 1·05 tons per square feet. ‡

(4) Pressure on soil in foundations—

| | LB. |
|---|---|
| Weight as above .. .. .. .. .. .. | 261,159 |
| Concrete .. .. .. .. .. .. .. | 106,416 |
| Total .. | 367,575 or 164·09 tons. |

Pressure = $\frac{164{\cdot}09}{116{\cdot}85}$ = 1·48 tons per square feet.

III. Pressure on Foundations—

[Partition well in main building, on side of passage, marked A.]

| | LB. |
|---|---|
| Concrete, 20×4—5 .. .. .. .. .. .. | 400 |
| Masonry— | |
| Foundations, 20×3′ 4½″×1′ .. .. .. .. .. | 675 |
| Basement, 20×2′ 7½″×3′ .. .. .. .. .. | 142·5 |
| Superstructure, 20×1′ 10½″×14¼″ .. .. .. .. | 534·37 |
| ,, upper storey, 20×1′ 6″×16′ .. .. | 480·00 |
| ,, gabbs, 20×1′ 6″×3′ .. .. .. .. | 90·00 |
| Total, cubic feet .. | 1,714 37 |
| | LB. |
| Weight at 120 lb. per cubic feet .. .. .. .. | 205,724 40 |
| Terrace floor, 20×9⅜×150 lb. .. .. .. .. | 28,110·00 |
| Total .. | 233,834·40 |
| | LB. |
| Roofing, 24·4×9⅜×43 lb. .. .. .. .. .. | 9,836·20 |
| Joists, lower storey, 14×9⅜×3″×7″×46 lb. .. .. .. | 880·00 |
| Roof timbers, upper storey— | |
| Common rafters, 5×12′×3″×4½″×46 .. .. .. | 259·00 |
| Purlins, 2×9⅜×6″×6″×46 .. .. .. .. .. | 262·00 |
| Ridge, 1×9⅜×3″×8″×46 .. .. .. .. .. | 72·00 |
| Grand total .. | 245,134·6 |



Area of soil in foundations = 20′×4′ = 85 sq ft. ∴ pressure per square foot = $\frac{245{,}134{\cdot}6}{2{,}240\times80}$ = 1·37 tons.

It should be reported.

W. B. deWINTON.

The nature of the surface and sub-soil is not stated.

R.E.—7–3–04.

These calculations show that the design is wrong, in many respects, but it is very doubtful if the mistakes can now be rectified. The only thing to do is to stop work at once by wire and send Superintending Engineer instructions which should be followed as far as possible.

Yes, quickly please.

W.B.deW.

Point this out.

W. B. deW—17–3–04.

I think you should protest against the way that professional scrutiny has been ignored in this instance.

2. If Government wishes to know how its grant-in-aid money is to be spent I think they should insist on plans and estimates for works which are to be aided being approved by Government before work is started.

S. B. MURRAY—14–3–04.

Certainly. I thought this was the rule, and do not understand how such an important building came to be commenced without such approval.

W. B. deWINTON—17–3–04.

*Outer abutment of top arch.*

Semicircular arch.

Thickness of abutment = $(2+{\cdot}162\,d)\sqrt{\frac{h+\frac{1}{4}d}{H}\times\frac{0{\cdot}87\times d}{\frac{1}{4}d+e}}$

where.

$e$ = thickness of arch at crown = 1·125 feet,
$d$ = span of arch = 6′ 6¾″ = 6·56 feet,
$h$ = height from ground to springing = 12·00—3·28 = 8·72,
$H$ = height from ground to top of extrados as loaded = 18 feet,

then above formula = $(2+{\cdot}162\times6{\cdot}56)\sqrt{\frac{8{\cdot}72+1{\cdot}64}{18}+\frac{{\cdot}87\times6{\cdot}56}{1{\cdot}64+1{\cdot}125}}$

$= 3{\cdot}06\sqrt{{\cdot}57\times2{\cdot}06}$

$= 3{\cdot}06\sqrt{1{\cdot}17\frac{1}{4}2}$

$= 3{\cdot}06\times1{\cdot}08$ = 330 feet, or, say 3 feet 6 inches.

In your note it is stated the thickness of the outer abutment of the top arch should be 2½ feet. The above calculations give 3½ feet. Orders are requested if 3½ feet may be entered in the memorandum to the Superintending Engineer. This wide abutment will project across the archway near it, please see A on plan. It will not interfere with the door way at B, but it will look odd.

2. The telegram states that the lower floor is completed, therefore it may be assumed that the stair cases also are built up.

R.E.—22–3–04.

The plan and estimate have been scrutinised and found to contain several mistakes. With a view to remedy these as far as possible the Executive Engineer has been asked by wire to arrange for the work to be stopped. Detailed information as to where the plan and estimate are wrong is being sent to the Superintending Engineer, and he is being told to see that the building is finished off as far as possible in conformity with these instructions.

S.B.M.—25–3–04.

*To the Educational Department.*

EDUCATIONAL DEPARTMENT.

The Public Works Department has called upon the Superintending Engineer to revise and resubmit the estimate and design. The amount of the grant payable can be determined only after receipt of this revised estimate. The file may therefore be

shown to the Director of Public Instruction and returned to the Public Works Department with the request that it may be retransmitted with the revised design and estimate approved by that Department.

P. T. THARYAN—31-3-04.

There seems to have been bad building and estimates so erroneous that they even contained arithmetical mistakes. The alterations in the figures now made by Public Works Department have the effect of decreasing not increasing the total.* But what about alterations in the buildings which will apparently increase the cost? Apparently the building is nearly complete. If the managers are now, as ordered by Public Works Department, to pull down certain arches and put up stronger arches in their place, is Government to give an increased grant? Submitted that Public Works Department may be asked who is responsible for the bad building—the local Public Works Department officers or the managers of the school. The original plans and estimates seem to have been sent to the local Public Works Department officers in 1898. If their advice was not followed and if the managers are at fault, will not the question whether any increase and if so, what increase, in the grant should be made, arise?

| Old figures. | New figures. |
|---|---|
| *11,870 | 12,850 |
| 8,430 | 7,448 |
| 20,920 | 20,750 |
| 1,305 | 1,252 |
| 42,525 | 42,300 |

A. GALLETTI—5-5-04.

The question for orders is the recommendation of the Director of Public Instruction of an additional grant of Rs. 3,694.

2. It is necessary, in order to dispose of this, to know what were the causes of the revised estimate, and who was responsible. The Public Works Department may be asked u.o. to favour us with remarks and information on these points.

A. G. CARDEW—5-4-04.

*To the Public Works Department.*

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PUBLIC WORKS DEPARTMENT.

Submitted.

The revised plan and estimate have been returned to the Superintending Engineer, and he may be asked to explain the causes of the revision. The original plan and estimate appear to have been approved by the Superintending Engineer.

P. K. SUBBA AIYAR—7-4-04.

The revised estimate should be less than the original one, and if the estimate had been revised before work was started there would have been further saving, as the scantling of much of the timber is too heavy. It is, however, too late to alter this now.

2. The demolition of the arches referred to in the notes above is a small matter and will add very little to the cost of the building.

3. It is only recently that these designs and estimates have received close scrutiny in this office. Formerly all that was required was the general approval of the Superintending Engineer of the circle, and in this case he could not have been expected to have detected any of the mistakes except perhaps that of the design for the steps.

4. The Superintending Engineer may now be asked to expedite the submission of the revised estimate, and Educational informed accordingly.

S. B. MURRAY—7-4-04.

Approved.

A. H. GARRETT—8-4-04.

Draft memorandum to the Superintending Engineer is submitted for approval. After issue the file may be sent (u.o.) to Educational.

P.K.S.—8-4-04.

S.B.M.—8-4-04.

*To the Educational Department.*



[Reminder from the Educational Department, dated 30th May 1904.]

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This file was, by oversight in the office, not sent to Educational as marked by Under Secretary on 8th April 1904. The revised estimate called for from the Superintending Engineer is still awaited. A second reminder was sent to him on the 18th ultimo. The file may now be forwarded (u.o.) to Educational for information.

P. K. SUBBA AIYAR—3-6-04.

The delay is regretted.

S. B. MURRAY—6-6-04.

*To the Educational Department.*

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EDUCATIONAL DEPARTMENT.

Submitted that the receipt of the revised estimate may be awaited.

P. T. THARYAN—8-6-04.

A. GALLETTI—9-6-04.

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PUBLIC WORKS DEPARTMENT.

[*Letter from the Superintending Engineer, VI Circle, No.* 448 *C.E., dated* 16*th June* 1904.]

In the circumstances explained by the Superintending Engineer, the revised estimate now furnished may be passed. It amounts to Rs. 41,790. On this sum the Government grant for the building has to be calculated. The file may, it is submitted, be returned to Educational.

P.K.S.—12-7-04.

Yes.

S.B.M.—15-7-04.

W. B. DEWINTON—15-7-04.

*To the Educational Department.*

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EDUCATIONAL DEPARTMENT.

The estimate, as now revised by the Public Works Department, for constructing a building for the National High school, Trichinopoly, amounts to Rs. 41,790, and the grant payable on this amount under rule 118 of the Grant-in-Aid Code will be Rupees 13,930. But a grant of Rs. 11,000 was already sanctioned in 1899—*vide* G.O., No. 614, Educational, dated 14th September 1899. The additional grant that will have to be sanctioned now is Rs. 2,930. Submitted that this may now be sanctioned.

N. LAKSHMANA RAO—21-7-04.

P.T.T.—21-7-04.

A.G.—22-7-04.

Please note (1) whether any portion of the total proposed grant of Rs. 13,930 has been already paid, (2) what is the current budget allotment for building grants, and (3) what sums have been sanctioned up to date in the current year. Paragraph 4 of the Director of Public Instruction's letter on page 3 of current file relates to last year.

H. D. TAYLOR—23-7-04.

(1) Of the total proposed grant of Rs. 13,390, a payment of Rs. 3,531 was authorized in January 1903—*vide* paragraph 1 of the Director of Public Instruction's letter No. 504, dated 10th December 1903.

But I presume not *paid*.
H. D. TAYLOR—26-7-04.

(2) The current budget allotment for building grants is Rs. 70,000. Please see the item marked with pencil on page 32 of G.O., No. 849, Financial, dated 12th December 1903.

(3) From the latest application for a building grant received from the Director, which is now available in the office, it will be seen that out of the allotment for the purpose in the current year's budget payment of Rs. 1,902 has been authorized up to 20th May 1904—*vide* paragraph 4 of the Director of Public Instruction's letter No. 3959, dated 20th May 1904.

N. LAKSHMANA RAO—25-7-04.

A. GALLETTI—25-7-04.

There appears to have been a muddle owing to the original plans and estimates not having been carefully scrutinized in the Public Works Department. The Government must know in advance in making these contributions what their maximum liabilities are to be, and I am not disposed to recommend any grant in excess of the Rs. 11,000 originally sanctioned. Article 118 of the Grant-in-Aid Code leaves it purely optional with Government whether any grant should be given or not. The grants cannot be paid till formal deeds have been executed by the responsible manager—agent of the institution.

2. The original estimate for the building was Rs. 33,000 (G.O., No. 614, Educational, dated 14th September 1899). As now finally revised it amounts to Rs. 41,790 and the additional grant applied for is Rs. 2,930.

H. D. TAYLOR—26-7-04.

It has been repeatedly stated that such grants are entirely within the discretion of Government, and the rules only indicate the maximum amount that Government will in any circumstances allow. Government is not to pay an enormous contribution because the managers propose to erect a magnificent building. We are far too lavish in these grants and should have more regard to the general requirements of the Department and especially in the matter of buildings for poor schools in poor localities.

2. I should explain that the Government regret to be unable to give no further grant than the Rs. 11,000 originally promised, and which moreover cannot be paid till formal deeds have been drawn, etc.

(In this connection I should like if the Secretary will get the office to look through the Bengal, Bombay and North Western Provinces Educational administration reports or rules and see how the grants we so lavishly pay compare with those given there. In the *Pioneer*, I read the other day that the Lieutenant-Governor of Bengal at Dacca made a great deal of promising towards the construction of a new *Madrissa* the sum of Rs. 5,000 as a half-grant. They must be content with much cheaper accommodation than the edifices we provide here.)

Please comply.
H. D. TAYLOR—22-7-04.

G. S. F[ORBES]—27-7-04.

Please draft accordingly.

H.D.T.—25-7-04.

A draft is submitted below for approval.

2. After issue of the order the information wanted by the Honourable Member will be collected.

N.L.R.—28-7-04.

A.G.—29-7-04.

Issue.

H.D.T.—1-8-04.

[G.O., No. 468, Educational, dated 1st August 1904.]

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Stock Form No. 127
2,000—12-2-03.

1 12

# Educational (1903) Department.

## CURRENT No. 2038

*From*

[*Name*] A.G. Bourne Esquire, D.Sc., F.R.S.,

[*Designation*] Director of Public Instruction,

[*Station*] Madras.

Ref on Cur No. 504 of 03.

*No.*

*Dated* 10th December 1903.

*Enclosures* Plans and estimates (Sent separately)

*Received* 12 DEC 1903 SECRETARIAT *190* .

*Registered* 20 *190* .

SUBJECT.

Recommending an additional grant of Rs 3,690/- for the National High School building at Trichinopoly.

BACK PAPERS.

| | |
|---|---|
| Go no 614 Edl mis 9/14-9-99<br>Go no 305 Edl 03 Aug<br>Go no 548 Edl 03 Aug | 1065/03 Cy Sent |

FURTHER PAPERS.

N.L.R. 12/12/03 Recd at 5-25 pm MD 12/12/03

To

*The Secretary to Government,*

*Educational Department.*

Sir,

In its order No. 614 Educational dated 14th September 1899 Government was pleased to sanction a building grant of Rs 11,000/- for the National High School, Trichinopoly and of that a part payment of Rs 3,531/- was authorized in January last. The manager reports that in the course of construction of the building certain defects were noticed and that consequently certain alterations involving an excess expenditure of Rs 11,081-3-8 over the approved estimate were found absolutely necessary. He has accordingly applied for an additional grant of Rs 3,694/- being a third of the excess cost. The Superintending Engineer is of opinion that the alterations are all in the nature of improvements and has approved them with the exception of the facing with cut stone done to the basement of the main building which is considered structurally wrong, the stone not being bonded into the wall. I have the honour to recommend that an additional grant not exceeding Rs 3,690/- may be sanctioned. The facing with cut stone not having been approved by the Public Works Department, a third of its cost will be deducted when authorizing payment.

2. The plan and estimates together with comparative statements showing the difference between the original and revised estimates are submitted herewith.

3. I beg to request that if the grant now recommended be sanctioned, this sanction as well as the one already accorded in G.O. No. 614 Educational dated 14th September 1899 may be

allowed

Stock Form No. 127
2,000—12-2-03.

# Educational (1903) Department.

## CURRENT No. 3

*From*

[*Name*] The Hon'ble Mr. A.G. Bourne, D.Sc., F.R.S.,

[*Designation*] Director of Public Instruction,

[*Station*] Madras.

SECRETARY TO GOVERNMENT 23 DEC 1903 EDUCATIONAL DEPARTMENT

Ref. on No. C.No. 504/03,

*Dated* 23rd December 1903.

*Enclosures* 3

*Received* 190 .

*Registered* 2-1- 1904

SUBJECT.

Submitting copies of correspondence which contain the remarks of the D.P.W. officers on the revised estimate for the building of the National High School, Trichinopoly.

BACK PAPERS.

| | |
|---|---|
| Memo 698/03 | |

FURTHER PAPERS.

| | |
|---|---|
| | |

To

*The Secretary to Government,*

*Educational Department.*

*Sir,*

With reference to Government Memorandum No. 698, dated 19th December 1903, I have the honour to submit copy of each of the papers noted in the margin which contain the remarks of the D.P.W. officers on the revised estimate for the building of the National High School, Trichinopoly.

I have the honour to be,

Sir,

Your most obedient servant,

E Wmiddlemast

For Director of Public Instruction.

Ⓜ Copy of a communication No. Dis. 572/6-6-03 from the Executive Engineer, Trichinopoly Division to the Superintending Engineer, VI Circle.
(2) Letter from the Superintending Engineer, VI Circle.
No. 921 T.C/8-7-1903.
(3) do. No. 1448 T.C/18-11-1903.

9.5 Telegram 14

5,000—1-9-02.

# Public Works (1904) Department.

CURRENT No. 2808

From [Name] Executive Engineer

[Designation]

[Station] Trichinopoly

No. Telegram
Dated 9 — 3 — 1904
Enclosures { Plans / Others } Total.
Spare copies

Received 190 .
Registered 190 .
Passed on, by—
Registering Clerk 10 - 3 — 1904
U. R. Clerk 190 .
Referencer 10 . 3 . 1904
Record Supdt. 190 .
Drafting Officer 190 .

SUBJECT.

The Building of National High School. Trichinopoly

Reporting the progress of work on ——

BACK PAPERS.

1821 C S. 3.04
File these notes.

Dw/ Submitted 12/11-3-04

FURTHER PAPERS.

9.S. 23-12-03.

To

The Chief Engineer / Secretary to Government, Public Works Department.

T—14.

Class. | INDIAN TELEGRAPH. | Monthly Local No. 60

To Station Dy Collector

From Station Trichinopoly

| Words. | Day. | Hour. | Minute. | Official Instruction. |
|---|---|---|---|---|
| 25 | 9 | 14 | 0 | dtd |

To (Person)

From (Person) Kerr

Madras

1 works
2
3 Side Hy Cock
4 Complete main
5 Clock tower
6 floors complete
7 Except plastering
8 and flooring
9 turrets complete
10 doors windows
11 ready
12
13
14

Recd. from L. N. | Sent to L. N.

At Hrs. Mts. By | At Hrs. Mts. By

10.30 a

Date Postmaster.

Stock Form No. 154
5,000—21-7-03.

# Public Works (1904.) Department.

## CURRENT No. 6434

*From*

[*Name*] C. J. USSHER Esquire.,

[*Designation*] Superintending Engineer. VI Circle.

[*Station*] Trichinopoly.

*No.* 448 C E

*Dated* 16th June 1904.

*Enclosures* { *Plans* 1 / *Others* 6 } *Total.* 7

*Spare copies*

*Received* 23-6- 1904

*Registered* 190 .

*Passed on, by—*

*Registering Clerk* 28-6- 1904

*U. R. Clerk* 28-6- 1904

*Referencer* 1-7- 1904.

*Record Supdt.* 11-7- 1904.

*Drafting Officer* 190 .

SUBJECT.

SECRETARY TO GOVERNMENT. 23 JUN 1904 PUBLIC WORKS DEPARTMENT.

National High School, Trichinopoly.

Retransmitting with certain remarks, plan & estimate for — duly revised.

BACK PAPERS.

FURTHER PAPERS.

O.S. 222 11/1 v.19261

To

The Chief Engineer / ~~Secretary to Government~~, Public Works Department.

MADRAS.

Enclosures:- 2.
1 Estimate and
1 Plan.

Sir,

In retransmitting the plan and estimate for the National High School at Trichinopoly sent to me for revision with Memo: No.2352-C, dated 28th March 1904, I have the honor to inform you that the greater portion of the main building had been completed before the receipt of the orders, and that the detached building is reported to have been completed about a year ago and is now in use; the alterations ordered to be made have therefore been given effect to only as far as admissible.

2. The flooring of the Lower storey verandah was not done, and the class of flooring ordered by you is now provided. The rest of the flooring has been finished with square tiles pointed with cement over a layer of thin brick-bats over 6" of dry sand. The porch and the top arches under the stair case having been already built it was found impracticable to carry out the alterations ordered. The Manager, however, has been written to by the Executive Engineer to demolish the staircase arches and to carry the landings on joists as ordered by you. If found necessary buttresses can be added to the porch, but as these would be unsightly, and as the porch is now quite sound I think no action need be taken at present. The Executive Engineer informs me that the Manager desires to build only brick parapets for the staircase and to omit providing roofing. The estimate therefore provides for brick parapets only.

3. With regard to alterations in the scantlings of roof timbers, the Executive Engineer reports that the timbers have been already sawn to the required dimensions, but that the size ordered by you are now provided in the estimate for the upper storey roof timbers, as the basis for payment. The --

E. 12
1,200—7-10.00

EDUCATIONAL DEPARTMENT.

READ AGAIN G.O., No. 614 Edl, dated 14 - 9 - 1899 / ~~190~~.

" " " " , " 190 .

READ ALSO:—

C. No. 2038, From the Director of Public Instruction, No. 504, dated 10 - 12 - 1903.

" " 3 , " " do , " 504 , " 23 12 1903

" " " " Executive Engineer, Trichinopoly " , " 9 3 - 1904
Supdg. Engineer, VI circle 4468 C.E. 16 - 6 - 1904

ORDER No. 468, dated 1 - 8 - 1904

The Government regret that they are unable to give any further additional grant for building recommended by the Director, to the National High School, Trichinopoly, over and above the grant of Rs. 11,000 originally sanctioned for the purpose in G.O. no. 614 Educational, dated 14th September 1899. They further consider that the grant should not be paid till formal agreements have been executed.

To the D.P.I. with plans and estimate

. copy sent to Press.

urned for signature.

spatched in print.

AGAIN G.O., No. , DATED
190 .

RRENT No.

CEDURES TO C, No.

BER OF GOVERNMENT .. .. .. ..

BER OF GOVERNMENT.

STATEMENT WITH DITTO.

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

NUMBER OF COPIES REQUIRED. { Order complete. 4D
Letter only.
Order complete with Letter.

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23

*N.B.*—

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