Public Works (1897). Department.

G.O., No. 1688 W

DATED 23. June 1897

25/1/97

[Despatch Abstract.]

Local Fund Offices at Kokkarkulam.

Revised estimate of Rs. ~~23,750~~ 26,640 for Constructing a building to accommodate the — in the Tinnevelly Dt. sanctioned with remark.

50/4

J

[P.W. 26. / 1,500—30-11-96.]

Re 23.6.97

Indexed 15/6

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

BUILDINGS AND ROADS.
CIVIL WORKS.

Government (1897) of Madras.

PUBLIC WORKS.

Recd.	1897.	*Enclosures*
Regd.		*Spare copies*

G.O., No. 1688 W., 23rd June 1897.

JUNE.

Local Fund Offices at Kokkarkulam

Revised estimate of Rs. 26,640 for constructing a building to accommodate the
— in the Tinnevelly district, sanctioned with remark.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following paper :—

From Lieutenant-Colonel O. V. BODDY, R.E., Superintending Engineer, VI Circle, to the Chief Engineer, Public Works Department, dated Trichinopoly, 16th March 1897, No. 248 T.N.

I have the honour to forward herewith a revised estimate amounting to Rs. 27,980 (reduced in this office to Rs. 27,750), together with revised plans, and a letter in original, received from the President, District Board, Tinnevelly, No. 717 of 1896, dated 26th November 1896, with its enclosures as noted in the margin, connected with the construction of a building to accommodate the Local Fund offices at Kokkarkulam in the Tinnevelly district.

1 Original tracing plan.
1 Do. estimate.
1 Do. abstract estimate.
1 President's letter in original, No. 717, dated 26th November 1896, with the Proceedings of the District Board, No. 10, dated 11th November 1896.
1 Revised tracing plan.
1 Do. estimate with report, &c.
1 Comparative statement.
1 Tracing plan of portico.
—
8
—

2. The original estimate was sanctioned by Government for Rs. 24,000 in G.O., No. 418 W., dated 19th February 1895. This estimate has been now revised by the District Board Engineer, in order to make provision for certain alterations in the original design with a view to increasing the accommodation of the meeting hall, and also for forming a room over the front portico.

3. Provision has also been made for some other items, such as drains all round the building, vertical zinc pipes to carry off rainfall from roof, lightning conductors, &c. The amount of the original estimate has been thus increased by Rs. 3,980, which sum has been sanctioned by the District Board in their Proceedings, No. 10, dated 11th November 1896. This excess of Rs. 3,980 has been slightly reduced in this office to Rs. 3,750, by reducing the scantlings of timbers as noted below :—

Item—Wood work.

		From	*To*
Cross beams in front verandah	... ...	9″ × 18″	7″ × 12″

Item—Staircase.

Beams for catching stringers	... ...	9″ × 18″	7½″ × 13½″
Stringers above and below staircase platform	...	6″ × 12″	3″ × 12″

4. The proposed alterations appear to be necessary, and the revised estimate as reduced in this office to Rs. 27,750 is recommended for sanction. I may add that the revised design is prepared in accordance with your views as regards foundation, &c., expressed in your note embodied in the Government Order sanctioning the original estimate of Rs. 24,000.

Note by the Chief Engineer, Public Works Department.

It is observed that the estimate, as revised, provides for seventeen steel girders, each 12″ × 6″ and weighing 57 lb. per foot run, irrespective of spans and weights to be carried. But the girders for the roof should be of greater section than those for the floor, and the latter should be of greater section than those for the porch. The following dimensions and weights are considered suitable :—

Roof-girders 16″ × 5″ weighing 50 lb., per foot run.
Floor-girders 15″ × 5″ „ 42 lb., „
Porch-girders 10½″ × 4½″ „ 30 lb., „

The total weight of the girders will thus be reduced from 10·54 tons to 8·34 tons, and the cost from Rs. 2,266 to Rs. 1,836, making a difference of Rs. 430 in the price. This, moreover, will affect the items "Contingencies" and "Superintendence," making the increase of the former Rs. 570 instead of Rs. 777, and of the latter Rs. 457 instead of Rs. 548.

2. The item Rs. 364, for zinc pipes is thought unnecessary, for the terrace might be so sloped as to allow rainwater to flow freely off the building.

3. By attending to the above suggestions, the increase may be reduced from Rs. 3,750 to Rs. 2,660 and the estimate from Rs. 27,750 to Rs. 26,640.

4. The item Rs. 150, provided for a lightning conductor should be kept in the estimate, but the work should not be undertaken pending a reply from the Secretary of State to a reference which has been made regarding the latest approved method of constructing conductors.

5. Scarcely any footing is allowed to the concrete inside the portico wall; it is drawn almost flush with the superincumbent masonry. There should be offsets of a foot all round the walls of the building, inside and out.

(Signed) D. McNEIL CAMPBELL, Col., R.E.,
Chief Engineer.

7th June 1897.

Order—No. 1688 W., dated 23rd June 1897.

The revised estimate, amounting to Rs. 27,750, for constructing a building to accommodate the Local Fund offices at Kokkarkulam in the Tinnevelly district, is reduced to Rs. 26,640 and sanctioned in supersession of the estimate of Rs. 24,000 sanctioned in G.O., No. 418 W., dated 19th February 1895.

2. Attention is drawn to the note by the Chief Engineer, Public Works Department.

3. This sanction has been registered as Local No. 6 W. of 1897-98.

(True Extract.)

Under Secretary to Government.

To the Superintending Engineer, VI Circle.
„ Local and Municipal Department, with 17 enclosures.

Exd. T. K. Narayana Aiyangar.

Estimate for a Local Fund Office at Kokkarkulam, Tinnevelly Dist.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

P.T.R. Civil works

READ the following

Print

From the Superintending Engineer VI circle; No. 248 T.N. d/ 16th March 1897.

Note by the Ch. E. [illegible] Dept. d/ 7.6.97.

No: 1688 W. d/ 22nd June 1897

S.P.

The Secretary to Govt. L & M. Dept. for favour of counter-initials

D.A.H. 19.6.97

Note for the Secretary

No objection in this department.

11/6/97

T

B

The revised estimate, amounting to Rs 27,750, for constructing a building to accommodate the Local Fund Offices at Kokkarkulam in the Tinnevelly District, is reduced to Rs 26,640 and sanctioned in supersession of the estimate of Rs 24,000 sanctioned in G.O. No. 418 W dated 19th February 1895.

2. Attention is drawn to the Note by the Chief Engineer P.W.D.

3. This sanction has been registered as Local No. 6 W of 1897-98

To
The S.E. VI circle
" L & M. Dept. with 7 enclosures

22/7/97

C.W.W.S.
8/6/97

10/6/97

(40—4,000—14-3-95.)

H.E. 14.6.97 R 19.6.97

No.

Government of Madras.

PUBLIC WORKS DEPARTMENT.

MEMORANDUM.

Dated Madras,   189 .

Seen.
A.S.H.
19.6.97

Note by the Chief Engineer P.W.D.

It is observed that the Estimate, as revised, provides for seventeen steel girders, each 12" × 6" and weighing 57 pounds per foot run, irrespective of spans and weights to be carried. But the girders for the roof should be of greater section than those for the floor, and the latter should be of greater section than those for the porch. The following dimensions and weights are considered suitable:-

Roof-girders 16" × 5" weighing 50 lbs per foot run

Floor-girders. 15" × 5" " 42 " " "

Porch-girders 6½" × 4½" " 30 " " ".

The total weight of the girders will thus be reduced from 10.54 tons to 8.34 tons, and the cost from Rs 2266 to Rs 1836, making a difference of Rs 430 in the

P. W. 41.
500—13-3-97.

price. This, moreover, will affect the items "Contingencies" and "Superintendence", making the increase of the former Rs 570 instead of Rs 777 and of the latter Rs 457, instead of Rs 548

2. The item, Rs 364, for zinc pipes is thought unnecessary, for the terrace might be so sloped as to allow rainwater to flow freely off the building.

3. By attending to the above suggestions the increase may be reduced from Rs 3750 to Rs 2660 and the estimate from Rs 27,750 to Rs 26,640.

4. The item Rs 150 provided for a lightning conductor should be kept in the estimate, but the work should not be undertaken pending a reply, from the

Secretary of State, to a reference which has been made regarding the latest approved method of constructing conductors.

5. Scarcely any footing is allowed to the concrete inside the portico wall: it is drawn almost flush with the superincumbent masonry. There should be offsets of a foot all round the walls of the building, inside and out.

CHWS
7.6.97.

Public Works (1897) Department.

CURRENT No. 2897

Order

T/ for scrutiny

[illegible] on 7-4-97.

From
The Supg Engineer
VI Circle

No. 248 T.W.

Dated 16 March 1897.
Received 20.3.97
Enclosures ~~8~~ 17+ (+ 3 Plans)
Spare copies

SUBJECT.

Local Fund Offices at Kokkarakulam, Tinnevelly — Submitting for sanction a revised estimate of Rs 27,750 for constructing a building to accommodate the —

W.

o.L.S. 166

BACK PAPERS.

G.O.	No.	Department.	Date.
	418 W	PW	19-2-95

FURTHER PAPERS.

G.O.	No.	Department.	Date.

No. 248 TN 1P

OFFICE OF THE SUPERINTENDING ENGINEER,
6TH CIRCLE,

Trichinopoly, 16th March 1897.

O/W

From

Lt Col. O. V. Boddy R.E.
~~The~~ Sperintending Engineer,
6th Circle.

To

The Chief Engineer,
P. W. D.

SIR,

8 ENCLOSURES.

1. Origl tracing plan.
1 — do — Estimate
1 — do — abstract do.
1. Presidents letter in original No: 717 d/26-11-96 with the Proceedings of the Dist. Board No: 10 d/11-11-96.
1. Revised Tracing Plan
1 — do — estimate with report &ca
1 — Comparative Statement
1. Tracing plan of portico

8

I have the honor to forward herewith a revised estimate amounting to Rs 27,980 (reduced in this office to Rs 27,750) together with revised plans, and a letter in original, received from the President, District Board, Tinnevelly, No: 717 of 96 d/26 November 1896, with its enclosures as noted in the margin, connected with the construction of a building to accommodate the Local Fund offices at Kokkarkulam in the Tinnevelly District.

2. The original estimate was sanctioned by Government for Rs 24,000 in G.O. No: 418 W d/19 February 1895. This estimate has been now revised by the District Board Engineer in order to make provision for certain alterations in

in the original design with a view to increasing the accommodation of the Meeting Hall, and also for forming a room over the front Portico.

3. Provision has also been made for some other items such as, drains all round the building, vertical Zinc pipes to carry off rain fall from roof, lightning conductors &ca. The amount of the original estimate has been thus increased by Rs 3,980, which sum has been sanctioned by the District Board in their Proceedings No: 10 dated 11th November 1896. This excess of Rs 3,980 has been slightly reduced in this office to Rs 3,750, by reducing the scantlings of timbers as noted below:—

Item - Wood work.

	From.	To.
Cross beams in front verandah	9" × 18" –	7" × 12"

Staircase - Item.

Beams for catching stringers —	9" × 18" –	7½" × 13½"
Stringers above & below staircase platform —	6" × 12" –	3" × 12"

4. The proposed alterations appear to be necessary and the revised estimate as reduced in this office to Rs 27,750 is recommended for sanction. I may add that the revised design is prepared in accordance with your views as regards foundation &ca, expressed in your note embodied in the Government Order sanctioning the original estimate of Rs 24,000.

I have the honor to be
Sir,
Your most obedient Servant.

J. V. Woolley
Lt Col. R.E.
Superintending Engineer
II Circle

15/2/97

P. W. D. 6th CIRCLE.

FROM

THE SUPERINTENDING ENGINEER,
6TH CIRCLE.

TO

THE CHIEF ENGINEER,

NO.

Dated. }
Received. } 189 .

Enclosure.

1488 W

Public Works Department.

Current No. 2897.
Letter No 248 T.N.
Dated 16th March 1897.
From the Supg. Engr VI Circle.

NOTE BY TECHNICAL SECTION.

Dft

For orders.

Draft G.O. submitted

C.
28/5/97

Name of work Revised Estimate for Constructing a building to accommodate the Local Fund Offic at Kokkarakolum in the Tinnevelly District.

Amount of Estimate Rs. 27750

An Estimate for Rs. 24,000, Sanctioned for the above wor in G.O. No. 418W, D/ 19th Februar 1895.

This Estimate has been no revised by the District Board Engr in order to make provis for certain alterations in the original design with a vie to increase the accommoda for the Meeting Hall, and a for forming a room over the front Portico &c &c.

By these alterations the am of the original Estimate ha bee

[P. W. 60
250—28-4-97.]

been increased by Rs: 3750 as per following particulars:—

(a) Altering the size of the Meeting-room from $22\frac{1}{2}' \times 22\frac{1}{2}'$ to $22\frac{1}{2}' \times 36\frac{1}{2}'$. (b) Forming a room over Portico, $22\frac{1}{2}' \times 17'$. (c) Providing drain round the building.	Rs= 1,285	Includes, brickwork, Concrete, plastering, terracing, wood work &ca -
(d) Providing Zinc pipes to carry off rain fall from roof - - -	364	(omit).
(e) Providing Lightning Conductor - - -	150	
(f) Increasing the No of Rolled steel Girders from 12 to 17 (due to the increased accommodation) - - -	~~626~~ 196 corrs	
(g) Contingency including Cost of Conveyance of girders from Railway station to Work spot & other unforeseen works - (h) Superintendence - - -	570 ~~777~~ corrs 457 (there being only 8.34 tons) ~~548~~	- A great deal too much -
Total increase-	3,750	

The items may be revised thus:-
(a), (b), & (c) ... Rs 1285
(d) ... " 0
(e) ... " 150
f ... " 196
(see calculations) g " 570
h " 459
2640
Sanctioned Est. 24000
Revised Rs 26640

30 202

In the revised Estimate now submitted, the instructions given by the Chief Engr. as regards foundations &ca in the note embodied in the G-Order Sanctioning the Origl. Estimate have been attended to. | Not as regards portico

Remarks.

I beg to submit that Zinc pipes, Costing Rs: 364, is unnecessary. The terrace may be so sloped as to allow the ~~the~~ rain water to run off freely all round the building. | Yes

Rates - fair.
Scantlings - Correct.

The plan & Estimate have been

Countersigned by the President, District Board. An Extract from the Proceedings of the District Board, No 10 D) 11th Nov/96, Sanctioning the Revised Estimate is submitted.

AH
28/5/97.

Calculation of Girders.

Roof.

Live load
22.5 × 7 × 120 . . . . . . = 18900 lbs.
Dead load (terrace)
22.5 × 7 × 1.5 × 120 - - . . = 28350 "
(Joists.)
$17 \times 7 \times \frac{1}{4} \times \frac{6.75}{12} \times 46.$ = 770 "
48020 lbs
= 21.4 tons.

By w = WL
w = 21.4 × 22.5 = ~~26~~ 481 5. think will Suit a girder ~~14"~~ 16" corrs × ~~6"~~ 5" weighing ~~57~~ 50 lbs per foot run ~~but as 22 span is the largest kept in stock - a 42 lbs per foot run girder 15" × 5" would be quite sufficient for the live-load above is taken very high for a roof with no ladder leading to the top.~~ CWM

The estimate provides 12" × 6" weighing ~~54~~ 57 lbs per foot run. This section ~~will~~ might do ~~if kept in stock~~ corrs, though the weight is 54 lbs per foot run according to Dorman and Long. but 16" × 5" would be better.

~~Lower~~ Floor

It is obvious that 16" × 5" as heavy a girder as that provided for the roof is not necessary. weight of floor = 18 tons. vide T's note of 6-2-97.

∴ w = 18 × 22.5 = 405 which suits a girder 15" × 5" weighing 42 lbs per foot run.

Porch

Live load
16.5 × 7 × 120 - - . . . . = 13860.0 lbs
Dead load (terrace)
16.5 × 7 × 0.75 × 120 . . . . . = 10395.0 "
(Joists)
$10 \times 7 \times \frac{1}{4} \times \frac{5}{12} \times 46$ - . = 335.4 "
24590.4 lbs = 11 tons nearly

and w = 11 × 16.5 = 181.5

which will suit a girder 10½" × 4½" weighing 30 lbs per foot.

We have the following girders:—

Upper floor

lbs
9 × 25 × 50 ... = 11250 lbs

Lower floor

6 × 25 × 42 .. = 6300 "

Porch 2 × 19 × 30 .. = 1140

18690 lbs = 8.34 tons

Against 10.54 tons provided in the Estimate a quantity derived from allowing girders 12" × 6" at 57 lbs per foot throughout, irrespective of span and weight to be carried.

According to Estimate 10.54 tons cost Rs 2266.1
∴ 8.34 " " " 1836.1
∴ Saving = Rs 430 —

In the original estimate girders as below were provided

Rs
7.63 tons at 215 per ton = Rs 1640.45.
which deducted from 8.54 tons costing " 1836.1
makes a difference of Rs 195.65 and not Rs 626 as stated above.

But of course all this should have been gone into by the Superintending Engineer before sending up the Estimate. CHBM. 7.6.97