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TAMIL NADU ARCHIVES

GOVERNMENT OF TAMIL NADU

P. W. D. DEPARTMENT

G.O. No.	2542 W.	Press.
B.P. No.		Mis.
Dated	17.6.1878	297.

34
Not to be folded or roughly handled

2542
1

GOVERNMENT OF MADRAS
PUBLIC WORKS DEPARTMENT.

17th June 1878, No. 2,542 W.

Buildings and Roads.
Military Works

Read the following papers —

No 175 From Colonel P. O'CONNELL, R E, Superintending Engineer, Chingleput, to the Chief Engineer, Buildings and Roads, dated Ennore, 7th March 1878. No 976

In reference to your memoranda, Nos 3,852 and 4,571, of 12th November and 19th December 1877, I have the honor to forward the plans and estimates noted in the margin for the improvements to the New Hospital at Poonamallee prepared in accordance with the suggestion conveyed in the above memoranda

2 In regard to the stability of the principal stair-case and the suitability of the stairs of the upper-story latrine the Range Officer reports relative to the former that the stone steps of the same were not laid in cement but that they were most carefully embedded in good mortar under the personal supervision of Sergeant Lord, the Overseer, and that there need be no apprehension as to its permanent security, and relative to the latter that as they are intended only for the sweepers, they appear to be suited to the purpose

No 175A. From the same Officer, dated St. Thomas' Mount, 13th April 1878, No 1,528

Referring to G.O., No 611 W, of 6th February 1878, and in continuation of my No 976, of 7th instant, I have the honor to forward the enclosed plan and estimate, amounting to Rupees 3,630, for providing a new cook-house fitted with a Duff's cooking range for the New Hospital at Poonamallee.

2. A site plan showing the existing and proposed buildings. &c, is also forwarded as called for in the above Government Order. In this the Range Officer has marked the site for a new Apothecary's quarters in case it is decided to remove the present quarters which are just in front of and close to the New Hospital. I observe, however, from the Minute of His Grace the Governor, of 17th October 1877, that the question of the removal of the existing buildings is not to be considered till the removal of any has been found by actual experience to be necessary

No 175-B From the same Officer, dated St. Thomas' Mount, 8th June 1878, No 2,121.

No 176. ORDER THEREON, 17th June 1878, No 2,542 W.

The plans and estimates for the following works in connection with the New Hospital at Poonamallee are sanctioned

9512
2

1 Fitting up apparatus for supplying water to the lavatories of the New Hospital at Poonamallee	Rs 2,550	Logster No 32
2 Providing additional ventilators to the lavatories of the New Hospital at Poonamallee	1,310	33
3 Alterations to the entrances of latrines of the New Hospital at Poonamallee	225	34
4 Fitting up blocks to form a lift over stair-case of latrines of the New Hospital at Poonamallee	110	35
5 Providing a hand-rail on the inner side of stair-case of latrine of the New Hospital at Poonamallee	58	36
6 Constructing a new cook-house with Duff's range at the New Hospital at Poonamallee	3,630	37
Total ..	7,733	

B of 1873-79

2. Funds are appropriated from the Reserve under Military
- 3 This sanction has been registered as Imperial and numbered as shown above.

(True Extract)

(Signed) E A. FOORD, Colonel, R E,
Secretary to Govt, P.W D

(True Copy)

Major, R E,
Under Secy to Govt, P W D.

To the District Engineer, Chingleput
" Examiner of Public Works Accounts
" Military Department.

Ltd T, D Ryan
Spare Copies

2

ALL RIGHTS RESERVED
 1877

Vol. 17

1877

Estimate for the Construction a
 Staging for lifting water for the water
 Hospital at Broomfield. *9/12/77*
 Specification

Excavations.

Excavate the soil for the foundations
 to the depth of 12 feet below the surface or to such
 other depth as the Officer in Charge of the
 work may direct.

Concrete

The foundations have been
 sufficiently made to lay 12 inches
 of concrete composed of 3 parts of granite
 spurs broken to the size of 1/2" cubes to one of
 mortar. The concrete will be laid in layers
 of 6 inches & well rammed with heavy rammer.

Work in the room

On the completion of the concrete the
 foundations will be commenced & the
 dimensions shown in the design. The super-
 structure will be carried up according
 to the thickness shown in the plan and
 section. The pillars to have a base of 12 inches
 in the exterior. The interior to be 10 inches
 in diameter.

New Hospital at Poonamallee.
Water Lifting Stage of 12/9

The area of the platform is 5.5 feet and it is possible that it may have a support 6.5 feet. The weight is to be supported by two beams resting on the top of the masonry pillars. Distance between the points of support 4.5 feet. The beams may be assumed to be supported at both ends with the weight uniformly distributed.

Take the formula $P = \frac{2W}{L}$ ft.

$$\text{we have } BD = \frac{P}{2} = \frac{4562.5 \times 5}{2 \times 70} = 572.27$$

and taking B at 6"

$$\text{We have } D = \frac{572.27}{6} = 85.38 \text{ inches}$$

D = 9 25 inches nearly

Spanning may be taken at 6' x 9'

The weight is to be supported by 5 joists at intervals of say 1/4 feet apart, from Centre to Centre. Distance between points of support 8.75 feet. Weight to be supported by each joist $8.75 \times 1.25 = 1364$ lbs

$$P = \frac{2W}{L} \text{ ft}$$

$$BD = \frac{P}{2} = \frac{1364 \times 5}{2 \times 70} = 85.44$$

and if B be taken at 3 1/2"

$$\text{We have } D = 24.41$$

and D = 4.94 inches, or scantling of joists say 3 1/2" x 5"

The weight is to be supported by 4 masonry pillars and each pillar will therefore require to

10 ft. each, 100 lbs
1/10 Allowed for safety

10 ft. each, lead
1/10 for safety

Fig No 2121

20 May 1878

No 4202

to support

9562.5 - 2390.6 lbs

P = 1/4 ps

1/4 x 22 x 144 lbs

2359.5 lbs

for best brickwork 2134

1/10 of which 213.4

2.55 ft area

full at top

2.55 ft area

length 20 ft

at transverse

dimension 1/4 ft

Time required to raise the daily supply of water

The new Hospital at Bonnaville is designed

to accommodate 100 men including 10 Orderlies and

the quantity of water required for bathing and

other purposes will be 100 x 50 = 5000 Gallons per

day. A man, raising water from a deep well,

with a windlass will perform 2500 units of work

per minute.

500 Gallons per

man per day

Height the water is to be raised 60 feet

Time required to raise 5000 Gallons $\frac{5000 \times 60}{2500 \times 2 \times 60} = 10$ hr

hours. Of course the Orderlies would be relieved at

proper intervals of say 4 hours.

10 hr

10 hr

10 hr

Calculation for finding the diameter of a

pipe to deliver the required quantity of water

fast enough

The quantity of water required to be discharged

by each pipe is 5000 = 2500 gallons in 10 hr or at

the rate of 250.0 gallons per hour

Taking the formula generally

used by English Engineers

$d = \frac{1}{10} \sqrt[3]{\frac{Q \times L}{C}}$

$= \frac{1}{10} \sqrt[3]{\frac{250 \times 10 \times 2.5}{1.48}}$

$= \frac{1}{10} \sqrt[3]{\frac{6250}{1.48}} = 2.5$

Q = number of gallons

per hour

L = length of pipe in

feet

C = constant

$$= \frac{1}{15} \sqrt[3]{1444804}$$

$$= \frac{1}{15} \times 17.06 = 1.13 \text{ in the diameter of pipe}$$

(1/2 inch allowed)

g 8 1/2

Mount Range Office
26 July 1878

Thos. J. Jones
Executive Officer

Estimated in construction, two
 cubic yards with sufficient in the
 foundation of the structure, to sustain
 them

28113
 11

Excavation

Excavate the earth from foundation
 to the final depth shown in the plan or
 excavation. To such other depth as the
 office in charge of the
 work may direct.

After the foundations have been
 sufficiently sunk proceed to lay the courses
 of concrete and well compacted
 concrete consolidated. The concrete shall

be laid in layers of twelve
 and will be laid with heavy rammers.
 Concrete to be compacted at least of
 12 inches for each foot of thickness but time
 to 12 inches with mixed & consolidated to 3
 feet of concrete or concrete to be compacted
 the first 12 inches

On the completion of the concrete
 the foundation will be commenced at

The dimensions shown in the
 plan. The superstructure
 will be carried out over

Dr. 28113
 and 28113

higher

to the floor as in the first section
the wall is constructed in that section
and to the floor, & the last section
is also built in the same manner
as the first.

The island surface of masonry to
be finished with two coats,
so that no part of the masonry
is left exposed in any part
of the island. Second coat of masonry
to be finished with two coats of masonry
to be finished with two coats of masonry
to be finished with two coats of masonry.

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grey or dark color, with two coats of
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Reference is made to the report of the Committee
on the 10th of July 1878.

No. 48, 1878
10th March 1878

The Superintendent
of the Public Works

No 976

Chingleput Superintending Engineer's Office.
Chingleput, 10th March 1878.

9812
3

From

THE SUPERINTENDING ENGINEER.

Chingleput at

To

The Chief Engineer
for Roads & Buildings

Enc.
5 Estimates
4 Plans.

In reference to your memorandum
No 3852 & 4571 of 12th November and
19th December 1877 I have the honor to forward
the Plans and estimates noted in the

Setting up apparatus for } margin for the improvement
supplying water to the } of the new Hospital at Poonamallee
lavatories of the new Hos. } - mallee prepared in accordance
- Pital Poonamallee Rs 2350 } with the suggestion conveyed
Providing additional Vent } in the above memoranda.
- tilators & c. Rs 1360 } 2. In regard to the sta-
Making alterations to the } - lidity of the principal stair
entrances of Latrines of } Case and the suitability
of the stairs of the upper
story Latrine the Range Officer
left in a report relative to the former
Providing hand rail to the } that the stone steps of the
inner side of stair case & c. Rs 258 } same were not laid in

7/9 Cement

By No 2121
20 May 1878
J. H. 252

Cement - but that they were most
carefully embedded in good mortar
under the personal supervision of Supt
Lord the Overseer - and that there
need be no apprehension as to per-
manent security and relative to the
latter that as they are intended only
for the sweeps - they appear to be sui-
ted to the purpose

I have the honor to be
Sir,
Your most Obedt. Servt

Wm. C. C. C. C.
Supt. Eng. Co. of N.Y.

9512
H

No 1528

Chingleput Superintending Engineer's Office,
Saint Thomas' Mount, 13 April 1878.

From the Sup^r of Engⁿ
Chingleput D^r

From

THE SUPERINTENDING ENGINEER,
Chingleput

9812

To

The Chief Engineer
Roads and Buildings Branch

By

Enclosures 3.
1 Estimate
2 Plans.

Referring to G.O. No. 611 of 6th
February 1878 and in continuation
of my No 976 of 7th instant I have
the honor to forward the enclosed
Plan and Estimate amounting to
Rs. 3630 for providing a new Cook
house fitted with a Duff's Cooking
range for the new Hospital at
Ponamallee.

2 A site Plan showing the
existing and proposed buildings
is also forwarded as called
for in the above G.O. In this
the Range Officer has marked
the site for a new Apothecary
Quarter in case it is decided

No 976

Dated 7th } March 1878
Rec^d

Ob. No. 97 of 4th May 1878.

No of Enclosures 9

9th returned to D.E.

New Hospital at Ponamallee — Forwards
the Plans and Estimates
for the improvement
to the.

25th/6

I remove the present quarters which
are just in front of and close to the
New Hospital. I observe however
from the Minute of His Grace the
Governor of 17th October 1877, that
the question of the removal of the
existing buildings is not to be con-
sidered till the removal of
any has been found by actual
experience to be necessary.

I have the honor to be
Sir

Your most obedient servant

Wm. M. Colwell
Surge Engineer, Chingput.

C.A. 10. 1. 1.
 From the Sup. Engrs
 Chingleput D.
 2114548

N^o 1528

Dated 13th April 1878
 Rec^d 15th

Ch Engrs 1st May 1878

Spec of Engrs 1st May 1878

Engrs 1st May 1878

Providing a New Cook
 house fitted with a
 Cooking range for the
 New Hospital at Poon-
 mallee - Forwards
 plan and estimate
 for...

No 2121

Chingleput Superintending Engineer's Office,
 Saint Thomas' Mount, 8th June 1878.

21549
 13

From

THE SUPERINTENDING ENGINEER,
 Chingleput

To

The Chief Engineer
 Public Works Department

Sir,

Engrs = 12

6 Plans.

6 Estimates

With reference to your Memo-
 randum No 97 of 4th May 1878,

I have the honor to retransmit
 the undermentioned Plans and
 Estimates duly countersigned
 by the Military authorities.

Fitting up apparatus for
 supplying water to the Cana-
 -lonies of the New Hospital
 at Poonamallee.

2,350

Providing additional
 Ventilators to do do

1,360

Making alterations to the
 entrances of Laboratories &

225

Fitting up blocks to form a
 light over stair case of do do

110

Providing

Providing a hand rail on the
inner side of stair case do 58

Constructing a new Cook
house with Duff's Bagg do 3630

I have the honor to be
Sir

Your most obedient servant

Wm. J. Connell Esq. & Co.
Supt. Engineer, Chief Agent-

9212
14

1-4 3882 " 12 Nov 1977

C: 2/2/

Enochian 12
+ 6 Ch.

Apr. 12. 578. Dec. 17. 578

100

95712
16

1. Lumber are appropri-
ated from the
Reserve mch. Machinery.

247
178

This sanction has been
registered as Imperial & numbered
as shown above.

to acty 11-6-78

L. C. Chisholm
Genl. P. M. Clerk
Indy. Dept.

12.6.78 15.6.78

Dec 2-7-78

16

6513
4523
2036

Col. of (1873) India.

PUBLIC WORKS

To

From

For

By

Engl

21678

G. O. 17 June 1878, No 252210

Not

Poonamallee Kospulab

The estimates for
certain works to be
sanctioned.

Subin Kapp