

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE

Government of Madras

Public Works DEPARTMENT

G.O. No.	1936	Press
B.P. No.		Mis.
Dated	18-7-	1874 195

Not to be folded or roughly handled

Proceedings of the Madras Government, Public Works Department.
18th July 1874.

No. 359.

Read the following papers :—

From Colonel E. A. FOORD, R.E., Inspecting Engineer for Civil and Military Buildings, to Colonel G. W. WALKER, R.E., Chief Engineer, Public Works Department, dated Chepauk, 8th June 1874, No. 807.

With reference to your endorsement, dated 12th March, on a letter from the District Engineer of Bangalore, No. 988, of the 5th March 1873, I have the honor to state that the original estimates for latrines for the two Native

Infantry Regiments at Bangalore were as follow :—

	Rs.
For four latrines of thirty-two seats for men...	12,520
For four latrines of sixteen seats for women...	7,180

2. The cost being considered too great, some alterations were suggested to the District Engineer who was requested to revise the plans. He did so, and by reducing the breadth and adopting the revised cross section attached to the original plan, the estimates became, respectively, Rupees 11,560 and Rupees 6,540.

3. With a view to reduce the cost still further, the Vizianagram plan was sent to the District Engineer, and his estimate of a latrine of sixteen seats at the Bangalore rates is Rupees 1,260. The cost of four such would, therefore, be Rupees 5,040. If they had the same number of seats as in the Bangalore pattern, their cost would be doubled and come up nearly to the revised estimates of the Bangalore pattern, while parts of the construction are of a more temporary nature.

4. The plan and estimates first submitted have alone received the approval of the Officer Commanding the Division and His Excellency the Commander-in-Chief.

REFERRED to the Quarter Master General for decision of His Excellency the Commander-in-Chief whether to adopt the revised Bangalore design costing Rupees 2,800 for thirty-two men, or the Vizagapatam design costing Rupees 2,500; and for sixteen women of the latter plan at Rupees 1,260 against Rupees 1,635 on the former.

OOTACAMUND,
13th June 1874.

(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government, P.W.D.

No. 360. From Brigadier General A. HOWLETT, C.B., Quarter Master General, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated head-quarters, Ootacamund, 2nd July 1874, No. 154.

In returning the plans and estimates, etc., for latrines for Native Infantry Regiments at Bangalore, received with your memorandum, dated 13th June, I have the honor by order to state that the Commander-in-Chief considers the cheapest description of latrine, viz., that on the Vizagapatam plan, will answer all purposes.

Proceedings of the Madras Government, Public Works Department,
18th July 1874.

2. When funds are available, His Excellency recommends that four* latrines of this description with sixteen seats each, estimated cost each Rupees 1,260 or Rupees 5,040 for four, be built in the vicinity of the new lines of the 36 Regiment Native Infantry.
3. The latrines for the other Native Infantry Regiment and for women and children, one above noted for 36th Regiment excepted, to be postponed for the present. The Vizagapatam plan being considered the approved one for all.

No. 361.

ORDER THEREON, 18th July 1874, No. 1,936.

MILITARY WORKS, No. 14.

His Excellency the Governor in Council sanctions the construction of latrines for the Native Infantry Regiments at Bangalore on the Vizagapatam design, copy of which has been furnished to the District Engineer.

2. As recommended by His Excellency the Commander-in-Chief* four latrines with sixteen seats each at an aggregate cost of Rupees 5,040 will be built in the vicinity of the new lines of the 36th Regiment Native Infantry when funds are available. The construction of the other latrines will be postponed.

(True Extract.)

Colonel, R.E.,

Secretary to Government.

To the District Engineer, *Bangalore*
,, Officiating Controller of Public Works Accounts.
,, Military Department.

Exd. E. C. Shunker.

Spare Copies

No. 807

OFFICE OF THE INSPECTING ENGINEER
FOR CIVIL AND MILITARY BUILDINGS,
Chepauk, 8th June 1874.

From

THE INSPECTING ENGINEER
FOR CIVIL AND MILITARY BUILDINGS,

To

The Chief Engineer.
P. W. Dept.

Enclosures
1 Letter
3 Plans
5 Estimates
3 Specifications

SIR,

With reference to your endorsement dated 12 March on a letter from the District Engineer of Bangalore No. 988 of the 5 March 1873, I have the honor to state that the original estimates for latrines for the two Native Infantry regiments at Bangalore were as follows:

For 4 latrines of 32 seats for men
Rupees 12,520
For 4 - do - 16 - do - for women - 7,180

The cost being considered too great, some alterations were suggested to the District Engineer who was requested to revise the plans. He did so, and by reducing the breadth and adopting the revised cross section attached to the original plan the estimates became respectively Rs 11,560 and Rs 6,540.

With a view to reduce the cost
Still

5
still further, the Vizianagaram plan was
sent to the District Engineer and his
estimate of a latrine of 16 seats at
the Bangalore rates is Rupees 1260.
The cost of four such would therefore
be Rupees 5040. If they had the same
number of seats as in the Bangalore
pattern their cost would be doubled and
come up nearly to the revised estimates
of the Bangalore pattern, while parts
of the construction are of a more temporary
nature.

The plan and estimates first
submitted have alone received the
approval of the Officer Commanding
the division and His Excellency the
Commander-in-Chief.

I have the honor to be
Sir

Your most obedient servant

E A and Secy
District Engineer for B.N. Dy.

13
QUARTERMASTER GENERAL'S OFFICE,
Head Quarters Ootacamund,
2nd July 1874.

No 154

FROM

Brigadier General A. Howlett, C.B.

QUARTER MASTER GENERAL,

TO

Colonel G. W. Walker A.E.
Secretary to Government.

Military Department.

Sir

In returning the Plans and Estimates for Latrines for Native Infantry Regiments at Bangalore, received with your Memorandum dated 13 June, I have the honor, by order, to state that the Commander in Chief considers the cheapest description of latrine - viz that on the Vizagapatnam plan - will answer all purposes.

2. When funds are available, His Excellency recommends that four Latrines of this description with 16 seats each, estimated cost, each Rupees 1260 or Rupees 5040 for four

Malles.
women and
children
are located.

FROM

8. 1874
1809
523468

The Inspecting Engineer
for Buildings,

TO

The Chief Engineer

11/4/1874
12

11/4/1874
12

Dated 8 June 1874.
Recd. 1

My Lord's estimate
information regarding
the construction of
latrines for the two
Native Infantry Regts
at Bangalore.

1874-75 1836. 18-7-74

1874-75 1836. 18-7-74

Approved & the quarters
The General for despatch
me - to be of a right the revised
Bangalore design costing Rs 2390
2390 for 32 men, or the Vizagapatnam
design costing Rs 5040 for 16 men and the latter
plan at Bangalore, 1860 against
Rs 1635 for the former.

Colonel G. W. Walker A.E.
13th June 1874.
Secretary to Government
Military Department.

1836. 18-7-74

9
4
four, be built in the vicinity of the new
lines of the 36th Regiment N. I.

3. The Latrines for the other Station
Infantry Regiment and for women and
children, one above noted for 36th Regiment
excepted, to be postponed for the present.

The Vizagapatam plan being considered
the approved one for all.

I have the honor to be.

Sir

Your obedient servant

James G. Brigadier General
Quarter Master General

Ch 36

flushed up with chunam (3 parts of sand to two of fresh and well burnt lime) slaked on the work. Every sixth stone at least to be a through header.

The superstructure to be of best bricks ($9 \times 4\frac{1}{2} \times 2\frac{1}{2}$) in chunam (composed of 3 parts of sand to two of fresh and well burnt lime) slaked on the work. The bricks to be soaked in water before they are used and English bond to be observed throughout.

A stone to be placed over each opening in rear of Privy seats instead of Arch work. The stone to be $1\frac{3}{4}$ feet long 1 wide and 6 inches thick and to extend 6 inches on each side of the openings.

The spaces between pillars in front and rear of Latrine are to be closed with open tiles or Honey Comb work as shown on the Plan.

The

Superstructure

Covering stone over the openings

Honey Comb tile work

Plastering

The joints to be scraped out and the walls plastered inside and outside with two coats of chunam 1st coat to consist of one part of lime to $1\frac{1}{2}$ of River sand well ground together and the second coat to be of 3 parts of lime to one of white sand well smoothed off.

Color washing

The building to be blue-washed outside and to be white-washed inside each with two coats.

The following proportions to be used in mixing the blue wash.

For blue washing 10 sqs two coats
1 Parah of stone chunam

$7\frac{1}{2}$ pollums of gum

$\frac{3}{4}$ measure of raw rice

For whitewashing 10 sqs two coats

1 Parah of stone chunam

$7\frac{1}{2}$ pollums of gum

$\frac{3}{4}$ measure of raw rice

Cement Plastering

The Cisterns to be plastered with two coats of cement rough coat to consist of one of Portland Cement and one and a half of poorker - thoroughly

thoroughly mixed and applied hot
after the joints have been scraped
out and the surface well watered.
Second coat to consist of pure port-
land cement laid down in a
thin paste which is to be smoothed
and polished.

The passage and Dry
Earth store to be floored with
concrete to a thickness of 12 and
6 respectively.

Flooring

The concrete floor of the
passage to be laid with a 3 sloping
towards the drain and to be ram-
med and smoothed.

The passage and the seats
to be floored with asphalt mixed
in proportion 4 measures of asphalt
to 3 of sand is to be laid 1 inch
thick and well rubbed and
smoothed off with wooden floats.
Wherever blisters appear the places
must be picked and well smoothed
with a hot iron and well rubbed.

The

Timber

The whole of the timber to be
of well seasoned and sound teak
free from all shakes and knots and
neatly finished off. No timber to be
put up until passed by the District
Engineer.

Roofing

The roof of the latrine to be
pent supported on couples with
collar pieces. The rafters for
couples to be $(2\frac{1}{4} \times 3\frac{1}{4})$ and Collar
pieces (2×3) . The couples to be
 $\frac{1}{2}$ feet apart from centre to centre
nailed on the bressumers $(4 \times 5\frac{1}{2})$
placed over the pillars as shown
on the plan. The Couples to be
covered with reapers $(2\frac{1}{2} \times \frac{3}{4})$ flat
and pan tiles with chunam
borders.

Roofing

The Wood work of the
roof to be coated with two coats
of wood oil.

Larring

The walls on three sides of
the

the seats to be painted with two coats of coal tar to a height of 3 feet from the seats.

The ground to be raised with gravel to a height of 6 around the building well watered and rammed till thoroughly consolidated.

Wooden boxes 9 broad and 1 1/4 feet long with handles of the shape shown on the Plan.

The bamboo mats 3 feet long and 2 1/2 feet in height to be placed between the seats with vertical pieces and spikes with iron rings and to be painted with two coats of coal tar.

Urine tub or buckets 12 diameter at top 9 at bottom and 1 1/4 feet in height with handles and to be painted with two coats of coal tar.

Two

Seats

Carts

Two carts are also provided in the Estimate for the supply of dry earth and removal of night soil.

All materials used and work done to be of the best description subject to the approval of the District Engineer of Bangalore who shall have the entire power of ordering the removal of any work with which he is dissatisfied.

Arthur Stuart
Captain R.E.
District Engineer Bangalore

Lt
Dist Engr's Office
Bangalore
6th February 1874

124
 Revised Abstract Estimate of the probable
 cost of Constructing Latrine for 16 Males to be built
 for two Native Infantry Regiments at Bangalore.

Quantity	Description of work	Rate per	Amount	Total
1368	ft. of Excavation	1 cft.	7	
704	ft. of concrete	33	143	
522	ft. of Foundation stone			
	in chunam	26	82	
1054	ft. of Superstructure			
	brick in chunam	29	181	
16	Sq. of covering slabs			
	over the openings			
	in rear of seats	1	8	16
	($1\frac{3}{4} \times 1\frac{1}{2}$)			
2.15	Sq. of Honey Comb			
	tile work	8	17	
16.36	Sq. of Plastering with			
	two coats of Chunam	28	41	
8.68	Sq. of Whitewashing			
	two coats	3	2	
7.68	Sq. of Blue washing			
	two coats	4	2	
	Carried over		491	

From
 The District Engineer
 Bangalore
 Civil. m. d. 11. 11. 1879
 J. B. Jones Esq.
 Military Engineer
 for Civil & Military
 P. O. 310 1/2 Channarayana
 Street
 Bangalore
 Revised Abstract Estimate
 and specification for construction
 of latrine for 16 Males to be
 built for two Native
 Infantry Regiments at
 Bangalore.
 Bangalore 11. 11. 1879
 Submitting to P. O. 1260-
 dt. 11. 11. 1879

Quantity Description of work Rate Per Amount Total

Brought over— 1491
 1.59 sqrs of Plastering with
 Cement— 12 .. sqrs 19
 4.62 sqrs of Rephalk floor
 ing 1 thick for
 passage seats 25 .. sqrs 116
 45-3-8 bft of Teakwood wrought
 and put up— 3 8 1/2 159
 7.51 sqrs of Roofing with
 teak sleepers, nails
 flat and fan tiles & 18 .. sqrs 135
 Chumoon border & 1/2
 Complete
 5.21 sqrs of Woodoring
 two coats— 2 10
 3.71 sqrs of Larring— 1 1
 15.77 sqrs of Graveling 6
 thick around the
 building— 1 16
 16 Nos of Wooden boxes
 with handles 4 3 8 1/2 56
 15 Nos of Bamboo mat
 with vertical pieces &
 spikes with iron rings 1 8 1/2 23
 Carried over— 1029

Quantity Description of work Rate Per Amount Total

Brought over— 1029
 4 Carred Wooden buckets
 including handles 3 .. E 12
 for urine & waters
 2 carts for the supply
 of dry earth and
 removal of night
 soil 50 .. E 100

1141
 Sundries @ 10 percent 119
 Total Estimate Rupees 1260

Hurphy Whart Captain P.E.
 District Engineer, Bangalore.

Sub
 Dist. Engr. Office
 Bangalore
 6th February 1874

Edmd Colonel R.E.
 Insp^r Eng^r for Buildings

Specification to accompany
Plan and Estimate for constructing
the Latrines for Women to be built
for ^{Two} Native Infantry Regiments at
Bangalore one for each wing.

Amount of Estimate Rupees 6540
7000

Excavation The excavation for foundation
to be taken down to such a depth
as the District Engineer may consider
necessary and the bottom taken out
perfectly level.

Foundation The foundation to be laid
with stone in chunam stones laid
closely fitted with good bond and
well flushed up with chunam
(3 parts of sand to two of fresh and
well burnt lime) slaked on the
work every sixth stone at least
to be a through header.

Basement The basement to be similar
- larly laid with outer joints scraped
out and plastered. The top course of
the basement to be of flat stones
of

— Bangalore Dist. —

Mr 4195/4
9/1/4

29 24-68/4

Enclined letter 18/1/4

2 June 1874

29 24-68/4

Enclined letter 18/1/4

Enclined letter 18/1/4

Enclined letter 18/1/4

Enclined letter 18/1/4

Enclined letter 18/1/4

Enclined letter 18/1/4

Enclined letter 18/1/4

Enclined letter 18/1/4

of as great a length as possible.

The superstructure to be of best bricks ($9 \times 4\frac{1}{2} \times 2\frac{1}{2}$) in chunam composed of 3 parts of sand to two of fresh and well-burnt lime, slaked on the work. The bricks to be soaked in water before they are used and English bond to be observed throughout.

The arches to be neatly turned and only selected hard bricks used. The joints all to radiate correctly according to the nature of the arch. Bricks to be ground down to required shape and the key bricks to be well driven home joints not to exceed $\frac{1}{4}$ " thick and to be scraped out before plastered.

The description of the cornice should be of the pattern supplied by the District Engineer; cornice bricks to have proper bearing not less than 4 inches and set with strong lime.

Stone

Steps

Stone slabs for steps to be of one stone of the required dimensions according to the nature and size of the step having outer sides and edges dressed.

Plastering

The joints to be scraped out and the walls plastered inside and outside with two coats of chunam, 1st coat to consist of one part of lime to $1\frac{1}{2}$ of river sand well ground together and the second coat to be of 3 parts of lime to one of white sand well smoothed off. And the inside of the cistern to be plastered with two coats of Portland cement.

Color washing

The building to be bluewashed outside and to have a uniform color throughout to be approved of by the District Engineer and to be whitewashed inside each with two coats.

The following proportions to be used in mixing the bluewash

For

For bluewashing 10 sq. two coats
6 charcoal sufficient to give slate color
1 Parah of stone chunam
 $7\frac{1}{2}$ Pollums of gum
 $\frac{3}{4}$ Measure of raw rice

For Whitewashing 10 sq. two coats
1 Parah of stone chunam
 $7\frac{1}{2}$ Pollums of gum
 $\frac{3}{4}$ Measure of raw rice

The whole of the timber Timber
to be of well seasoned and sound teak
free from all shakes and knots and
neatly finished off. No timber to be
put up until passed by the District
Engineer.

The roof to be bent sup- Roofing
ported on trapes as shown on plan
each trap to bear on stone plates
($2 \times 1\frac{1}{2} \times \frac{1}{3}$). The common rafters
to be $1\frac{1}{2}$ ft. apart and to be well
secured with proper nails. The whole
to be nailed with teak sleepers
 $2\frac{1}{2} \times \frac{3}{4}$ and to be covered with flat
and pan tiles with chunam borders.

A

A ridge ventilator to be provided
as shown on plan.

The various parts of the trapes
to be fixed together to the joints by
means of iron clamps ($2 \times \frac{1}{4}$) bolts $\frac{3}{4}$
with screw heads and nuts and
cleats to be sunk and screwed to
the principal rafters &c. to support
purlins &c.

Wood oiling The wood works of the roof
to be coated with two coats of wood oil.

Rectangular There will be 12 rectangular
openings in openings in each side wall as shown
the side wall on plan and to be fixed with venetian
planks $1\frac{1}{4}$ ft. long, 1 foot broad and
 $\frac{1}{2}$ inch thick at an interval of 6. The planks
to be painted with two coats of barons
anti corrosive paint chocolate color.

Iron The iron partitions are
partitions to be provided and fixed in the
manner shown on the plan. The
iron partitions to be $\frac{1}{2}$ inch thick and
painted with two coats of cool tar.

The

The basement to be filled in with earth well watered and rammed till thoroughly consolidated, over which a flooring of 6 concrete to be laid to a sloping of 6 towards the drain and to be well rammed and smoothed. This must be perfectly dry before the asphalt is to be laid over this. The asphalt floor mixed in proportion 4 measures of asphalt to 3 of sand is to be laid $\frac{3}{4}$ thick and well rubbed wherever blisters appear the places must be picked and well smoothed. The earth store to be floored with stone slabs having a smooth surface not less than 4 thick with the edges dressed square to be laid in mortar joints scraped out and pointed with strong lime.

A stone drain (9" broad at top and 8 deep) V shaped as shown on plan to be constructed around the building and the same

Flooring

Drain

same extended for (50) feet in a direction to be pointed out by the District Engineer for carrying off the water. The drain to consist of having stone not less than 3" thick with the edges neatly dressed and set in chunam. The joints scraped out and pointed with strong lime.

All materials used and work done to be of the best description and subject to the approval of the District Engineer of Bangalore who shall have the entire power of ordering the removal of any work with which he is dissatisfied.

Hursh Vibact
Distt. Engr. Office
Bangalore
15th February 1873.
Captain P. B.
Distt. Engr. Bangalore

Specification to accompany
Plan and Estimate for constructing
the Latrines for Men to be built
for ^{two} Native Infantry Regiments at
Bangalore. - one for each Wing

Amount of Estimate Ft $\frac{11560}{12520}$

Excavation

The excavation for foundation to be taken down to such a depth as the District Engineer may consider necessary and the bottom taken out perfectly level.

Foundation

The foundation to be laid with stone in chunam stones laid closely fitted with good bond and well flushed up with chunam (3 parts of sand to two of fresh and well burnt lime) slaked on the work every sixth stone at least to be a through header.

Gasement

The basement to be sim-
-ilarly laid with outer joints scraped
out and plastered. The top course of
the basement to be of flat stones of a
great

ending 2023

Ms. 7/18 July 1874
L. H. N. 360.

from the North American
Institution

To the Chief Clerk

L. L. B.

6. In order
we will be 80%
of the same
of the same

3418
Med. & M. 450774

Specification for

and reaching the —

Edward Johnson

to the South for hours.

Robert Langford

Dea H. A. Johnson

Thos. M. Smith

5340
5340

1888-89

Lucy 2057

Studio 51

great a length as possible.

The superstructure to be of best bricks ($9 \times 4\frac{1}{2} \times 2\frac{1}{2}$) in chunam composed of 3 parts of sand to two of fresh and well burnt lime) slated on the work. The bricks to be soaked in water before they are used and English bond to be observed throughout.

Superstructure

The arches to be neatly turned and only selected hard bricks used. The joints all to radiate correctly according to the nature of the arch. Bricks to be ground down to required shape and the key bricks to be well driven home. Joints not to exceed $\frac{1}{4}$ inch thick and to be scraped out before plastered.

Arch work

The description of the cornice should be of the pattern supplied by the District Engineer; cornice bricks to have proper bearing not less than 4 inches and set with strong lime.

Cornice work

Steps

Stone slabs for steps to be of one stone of the required dimensions according to the nature and size of the step having outer sides and edges dressed.

Plastering

The joints to be scraped out and the walls plastered inside and outside with two coats of chunam. 1st coat to consist of one part of lime to $1\frac{1}{2}$ of river sand well ground together and the second coat to be of 3 parts of lime to one of white sand well smoothed off. And the inside of the Cistern to be plastered with two coats of Portland cement.

Colour Washing

The building to be blue washed outside and to have a uniform color throughout to be approved of by the District Engineer and to be whitewashed inside each with two coats.

The following proportions to be used in mixing the blue wash.

For

For blue washing 10 sq ft two coats
 6 charcoal sufficient to give slate color
 1 Parah of stone chunam
 7 1/2 Pollums of Gum
 3/4 Measure of raw rice

For Whitewashing 10 sq ft two coats
 1 Parah of stone chunam
 7 1/2 Pollums of Gum
 3/4 Measure of raw rice

The whole of the timber
 to be of well seasoned and sound teak
 free from all shakes and knots and
 neatly finished off. No timber to be
 put up until passed by the District
 Engineer

Timber

The roof to be pent sup-
 -ported on trusses as shown on plan
 each truss to bear on stone plates (2 x 1 1/2 x 3/4)
 The common rafters to be 1 1/2 ft. apart
 and to be well secured with proper
 nails. The whole to be nailed with teak
 sleepers 2 1/2 x 3/4 and to be covered with
 flat and pan tiles with chunam
 borders. A ridge ventilator to be

Roofing

provided as shown on plan

The various parts of the trusses
 to be fixed together to the joints by
 means of iron clamps (2 x 1/4) bolts 3/4
 with screw heads and nuts and cleats
 to be sunk and screwed to the principal
 rafters ~~via~~ to support purlins

Wood oiling

The wood works of the roof
 to be coated with two coats of wood oil

Rectangular
 openings in
 the side wall

There will be 24 rectangular
 openings in each side wall as shown
 on plan and to be fixed with wooden
 planks 1 1/4 ft. long, 1 foot broad and 1/2
 thick at an interval of 6. The planks
 to be painted with two coats of barsons
 anti corrosive paint chocolate color

Iron
 partitions

The iron partitions are to be
 provided and fixed in the manner
 shown on the plan. The iron parti-
 tions are to be 1/2 thick and painted
 with two coats of cool tar

Flooring

The basement to be filled in
 with earth well watered and rammed
 till

till thoroughly consolidated, over which
a flooring of 6" concrete to be laid to
a sloping of 6" towards the drains
and to be well rammed and smoothed.
This must be perfectly dry before the
asphalte floor ^{is to be laid over this} mixed in proportion
4 measures of asphalte to 3 of sand
is to be laid 3" thick and well rubbed
and smoothed off with wooden floats;
wherever blisters appear the places
must be picked and well smoothed
with a hot iron and well rubbed.
The earth store to be floored with
stone slabs having a smooth surface
not less than 4" thick with the
edges dished square to be laid in
mortar joints scraped out and
pointed with strong lime.

A stone drain (9" broad Drain
at top and 8" deep) V shaped as
shown on plan to be constructed
around the building and the same
extended for (50) feet in a direction
to be pointed out by the District
Engineer for carrying off the water.
The

The drain to consist of paving
stone not less than 3" thick with the
edges neatly dished and set in
chunam. The joints scraped
out and pointed with strong lime.

All materials used and
work done to be of the best
description and subject to the appro-
val of the District Engineer of
Bangalore who shall have the
entire power of ordering the removal
of any work with which he is dis-
satisfied.

Henry H. Macartney Captain R.E.
District Engineer
Bangalore
15th February 1913

Abstract Estimate for constructing
the Latrines for Men to be built for ^{two} Native
Infantry Regiments at Bangalore.

Quantity	Description of work	Rate	Amount	Sub. Total
0	cft of Excavation	1 cft	11	
5	" of Foundation and Basement stone in chunam	26 cft	332	
3296	Cft of Superstructure Brick work in chunam	29	567	
200	" of Archwork	4	50	
52	Pft of cornice work	4 Pft	13	
14	" Stone slabs tread for steps	4	4	
51.66	sqre of Plastering with two coats of chunam	28 sqre	129	
1.70	sqre of Plastering with cement	12	20	
19.95	sqre of Blue washing 2 coats	4	5	
	Carried over		1131	

Quantity Description of work Rate per Amount Total

Brought over 1131
3171 sq. of Whitewashing
2 coats 3 6

177-102 cft of Teakwood wrought
and put up 3 8 cft 623

6 Nos of Trapes with
Iron work &c complete 30 6 180

78 Nos of Nails 7 long 7 3 3

432 Nos 6 long 6 14

12 Stone plates under
trapes (2 x 1 1/2 x 1/3) 4 3

2308 sq. of Roofing with teak
keepers, nails, flat
and pantiles chumam
border &c complete 18 8 415

2203 sq. of Woodoiling 2 coats 2 44

780 sq. of Painting with two
coats of chocolate
color paint 5 39

Carried over 2458

Quantity Description of work Rate per Amount Total

Brought over 2458
252 sq. of Iron partition with
frames &c complete 12 8 189

812 cft of Filling in basement
with earth 1/2 2

85 sq. of Flooring with stone
slabs 15 8 13

1014 sq. of Asphalt flooring 18 183

294 cft of concrete 3 3 60

200 Rft of V shape drain 6 75

2980

Sundries 150

Total Rupees for one Latrine 3130

Total Rupees for Four Latrines 12520

Dist. Engrs (Office)
Bangalore
15th February 1873

Henry W. Vibart Captain P.E.
District Engineer
Bangalore

Ed. Arnold Colonel P.E.
Supg. Engrs for Buildings

EN EN

Abstract Estimate for constructing the Latrines for Women to be built for ^{two} Native Infantry Regiments at Bangalore.

Quantity	Description of work	Rate	Per	Amount	Total
1316	cft of Excavation for Foundation	1 cft	-	7	
1325	Foundation and Base ment stone in chunam	26 cft		207	
2085	Superstructure Brick in chunam	29 cft		358	
123	Arch work D ₂	4 cft		31	
52	Rft of Cornice work D ₂	4 Rft		13	
7	Rft of Stone slabs tread for steps (1 x 1/2)	4		2	
31.84	sq ^{ft} of Plastering with 2 coats of chunam	28 sq ^{ft}		80	
13.36	Blue washing D ₂	4		3	
18.48	of White washing D ₂	3		3	
.85	Plastering with cement	12		10	
					Carried over 714

Rs. 1. 3. 60
M 4195 1/4

from
The District Engineer
Bangalore
to the Chief Engineer
P. W. D.
Madras
Dated 5th March 1933
Recd. P. M. 1503/73
Abstract Estimate
for constructing the
latrines for women to
be built for Native
Infantry Regiments
at Bangalore.

Amounting to
Rupees 125.20

300.3
P. M. 1503/73
Approved

Quantity Description of Work Rate Per Amount Total

Brought over — 784

95-4-1 cft of Oakwood wrought
and put up — 3 8 cft 333

3 Nos of Trunks with
iron works & complete — 30 8 90

39 — of Nails 7" long — 7 1

234 — of — 6" long — 6 7

6 — of Stone plates under
trunks (2 x 1 1/2 x 1/3) — 4 2

12-51 sq ft of Roofing with
teak reapers nail
flat and pan
tiles and chunam
borders & complete — 18 8 sq ft 225

11-74 — Wood oiling 2 coats — 2 23

3-90 — of Painting with
2 coats of chocolate
color paint — 5 20

1-26 sq ft of Iron partition with
frames & complete — 12 8 sq ft 95

Carried over — 1510

Quantity Description of work Rate Per Amount Total

Brought over — 1510

390 cft of Filling in basement
with earth — 1 1/2 cft 1

85 sq ft of Flooring with stone
slabs for earth store — 15 8 sq ft 13

5-07 — Flooring with asphalt — 18 91

147 cft of concrete — 3 3 cft 30

100 sq ft of V shaped drains — 6 38

1683

Sundries — 87

Total Rupees for Latrines 1770

— Rs. — for four Latrines 7080

District Engineer's Office
Bangalore
15th February 1893

Henry Vibart
Captain P.E.
District Engineer
Bangalore

EA and Colonel P.E.
Inspr. Engrs for Building

EDJW

Revised Abstract Estimate for constructing
the Latrines for Men to be built for two Native
Infantry Regiments at Pongalore. vide Inspect-
ing Engineer's letter N^o 1004 dated 27th August 1873

Quantity	Description of work	Rate per Unit	Total
2061	Cft. of Excavation	1 cft.	11
1700	Cft. of Foundation Stone in Chunam	26	266
343	Cft. of Basement Stone in—	26	54
3180	Cft. of Superstructure brick in chunam	29	547
90	Cft. of Brickwork—	4	23
46	Py. of cornice work—	4	12
10	— Stone slabs for steps—	4	3
47.12	Sq. of Plastering with two coats	28	118
28.90	— Whitewashing two coats	3	5
18.22	— Blue washing—	4	5
1.70	— Plastering with Cement	12	20
152-6-8	Cft. of Teakwood wrought and put up	38	534
6	N ^o of Trusses with iron work very complete	26	156
78	N ^o of Nails 6 long	6	2
432	— 5 long	5	11
12	— Stone plates under trusses (2x1 1/2 x 3)	4	3

Carried over— 1770

Mr. 4/195/74
2. 7. 18 July 74
2. 18. 360

to the Chief Engineer
Pongalore

Estimated cost of
construction of
latrines for two
Native Infantry
Regiments at Pongalore
vide Inspect-
ing Engineer's letter
N^o 1004 dated 27th August 1873

2. 375/75
August 52

Quantity	Description of work	Rate Per Amount	Total	Quantity	Description of work	Rate Per Amount	Total
----------	---------------------	-----------------	-------	----------	---------------------	-----------------	-------

Brought over — 1874

21.89 Sqr of Roofing with
teak reapers nail
flat and pan
tiles and chunam
borders $\frac{1}{2}$ — 18. Sqr 394

20.81 Sqr of Wood oiling
two coats — 2 42

780 Sqr of Painting with
two coats of Ch.
colate color
paint — 5. Sqr 39

252 Sqr of Iron partition
with frames $\frac{1}{2}$
complete — 12. Sqr 189

689 Cft of Filling in base
ment with
earth — $\frac{1}{2}$ Cft 2

74 Sqr of Flooring with
Stone slabs for
earth store — 15. Sqr 11

10.03 Sqr of Asphalt flooring 18. Sqr 181

2.48 Cft of concrete under
the asphalt
flooring — 33 Cft 50

Carried over — 2678

Brought over 2678

200 Rft of V Shaped drain . 6. Rft 75.
1 Marking board 5. E 5

2758

Quadrant — 132

Total Rupees for one
Latrine — } 2890

Total Rupees for four
Latrines — } 11560

Distt Engrs Office
Bangalore
26th September 1913
District Engineer
Bangalore.

42. 8/11

Edwrd Colonel R. E.
Inspecting Engineer for
Civil & Military Buildings

Revised Abstract Estimate for constructing
 Latrines for Women to be built for two Native
 Infantry Regiments at Bangalore vide Engineer-
 ing Engineer's letter No. 1004 dated 27th August 1893.

Quantity Description of work Rate Per Amount Total

1250	Cft. of Excavation	1 cft.	7
1049	of Foundation stones		
	in chunam	26	164
212	of Basement	26	33
1983	of Superstructure brick		
	in chunam	29	341
68	of Arch work	4	17
26	of cornice work	4	7
5	Stone slabs for steps	4	1
2954	Sq. of Plastering with two		
	coats of chunam	28	74
1680	of Whitewashing two coats	3	3
1274	of Blue washing two coats	4	3
85	of Plastering with cement	12	10
3255	Cft. of Teakwood wrought		
	and put up	38	288
3	of Trusses with Iron		
	works complete	26	78
39	of Nails 8 long	6	1
234	of Nails 5 long	5	6

2941

Carried over - 1033

From
 The Resident Engineer
 Bangalore
 To
 The Deputy Commr.
 for Civil Supply
 Madras.
 Dated 26th Sept 1893
 Approved
 The Resident Engineer
 Bangalore
 Estimated for constructing
 Latrines for Women to
 be built for two Native
 Infantry Regiments
 at Bangalore
 Amount Rs. 10530/-
 Rs. 10530/-
 10/9/93

and
 and

Quantity	Description of work	Rate Per Amount	Total
	Brought over		1038
6	It ¹ / ₂ of Stone plates under trepses	4. Emb	2
11.97	Sq ^{rs} of Roofing with teak keepest, nails flat and pan tiles and chumam borders tea	18	215
11.10	Sq ^{rs} of Wood oiling two coats	2	22
3.90	Sq ^{rs} of Painting with two coats of Chocolate color paint	5	20
126	Sq ^{ft} of Iron partition 1/8 thick with frames		
3.79	Cft of Filling in base ment with earth	12. 1/2	95
74	Sq ^{rs} of Flooring with Stone plates	15	11
5.14	Sq ^{rs} of Flooring with asphalt	18	93
	Carried over		1492

Quantity	Description of work	Rate Per Amount	Total
	Brought over		1492
124	Cft of Concrete under asphalt flooring	33 cft	25
100	9 Cft of V shaped drain	6. 7/8	38
1	Marking Board	5	5
	Cundries		1560
	Latrine		75
	Total Rupees for one Latrine		1635
	Rs for four Latrines		6540

Distt Engrs Office Mangalore
 26 September 1933
 District Engineer, Mangalore

EA and Colonel R. C.
 Inspecting Engineer for
 Civil & Military Buildings

1898. District Engineer's Office
 Bangalore 5 March / 98.
 From
 The District Engineer
 Bangalore.

To
 The Chief Engineer
 Public Works Department.

Sir,
 I have the honor to forward for
 sanction of Government, Plans

and Estimates, as per margin, for
 2. Plans
 1. Abstract
 Estimate for 4 Constructing latrines for two Native
 latrines for Infantry Regiments at Bangalore.
 men Rs

The latrines are required, in
 connection with the new lines
 for women
 for Native Infantry now in course
 of construction. As the lines are
 for two Infantry Regiments, four
 double latrines for Males, and
 four single latrines for Females,
 have been estimated for, one of
 each being required for each wing.

From
 The District Engineer
 Bangalore

The Chief Engineer
 Public Works Department
 Bangalore

Dated 26th April / 98

Recd. 2nd 28th 4th 1998

Approved for Construction
 Estimated for 4 latrines
 to be built for two
 Native Infantry Regiments
 Bangalore

Approved by
 Bangalore

Approved by
 Bangalore

Approved by
 Bangalore

The work has been called
for by the Military Authorities,
and the plans and estimates
have been approved of, both by
the Officer commanding the
Division, and His Excellency
the Commander-in-Chief.

I have the honor to be
Sir,

Your most Obedt Servt

Herbert W. Hart Capt. R.E.
District Engr. Bangalore.

1930 P. 11. 2

To District Engr. Bangalore W.
256 7/14 March 73.
M. 41951
2/1/74
No 360

Referred to the
Inspecting Engineer for
Civil and Military Build-
ings with reference to
L.O. No 189 of 4th
March 73 with special
reference to the
Cost of these latrines.
P. 18 July 74
En. No 366

M. N. S. Col. R.
Chief Engineer
12th March 73.

11th 13th March
1917

P. W. 1873 Depart
At 986.
From At 1503.
The District Engr.
Bangalore.

To The Chief Engr.
Civil & Military Build-
ings Bangalore
Reed 7th March 73
Forward Plans &
Estimates for sanction
of Govt. for construction
of latrines in connection
with the lines now
under construction
for two Native Infantry
Regiments.

P. 18 July 74
12/1/74
Referred to

1930 Public Works Department
Proceedings of the Madras Government
Read the following

From
Mr. J. J. for
Buildings
" Dr. Milcent

H. S. No. 807 of 2nd July/41

H. S. No. 154 of 2nd July/41

His Excellency
the Governor in Council
sanctions the con-
struction of La-
tines for the Native
Infantry Regiments
at Bangalore on the
Vizagapatnam design
copy of which has
been furnished to the
District Engineer

As recommended
by His Excellency

M. J. J.

The Commander-in-Chief
four Latrines with
16 seats each at an
aggregate cost of Rs
5,040 will be built
in the vicinity of the
new lines of the 36th
Regiment I.I. when
funds are available.
The construction of
the other Latrines
will be postponed.
C.M.W.

x 3 for males
for women and
children separately
located.

To the District Eng^r Bangalore
" Controller of P. & W. Dept
" Military Dept

cc: Insp^r 28-7-74

359-361

4/1/74 Rd 11/1/74

3468V
4195

Govt. of 1874 Madras.

PUBLIC WORKS.

The Dist. Engr.
Vizagapatam

Dated

Recd.

Encl. 13

G. O. 18 Feb 1874. No. 1924

Nos. 355-261

Latrines The construction
of Latrines for the Native In-
fantry Regiments at Bangalore
sanctioned on the Vizagapatam
Engr. - Four Latrines with
seven seats each at an
aggregate cost of Rs. 5040
to be built in the vicinity
of the new lines of the 36th
Regt. & when funds are
available and the construction
of others to be postponed.

4/12/74 11/12/74