

(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.	10 27	Press
B.P.-No.		Mis.
93-94-85.		
Dated	3. 4.	1843.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
3rd April 1873*

Read the following letters —

No. 83. From the District Engineer, Bangalore, to the Chief Engineer, Public Works Department, dated Bangalore, 27th February 1873, No 971

I HAVE the honour to forward, for sanction of Government, a plan and estimate of Rupees 5,500, with specification, for providing iron roof to pure-water basin at the Ulsoor Rock

2 The work has received the approval of the Major-General Commanding the Division and His Excellency the Commander-in-Chief

3. The roofing to the basin is required for the protection of water, as it is found that the cistern being uncovered, a scum is formed on the water, and it is considered desirable by the Medical Authorities that this should be prevented

No 84. From the Inspecting Engineer for Civil and Military Buildings, to the Chief Engineer, Public Works Department, dated Chepauk, 11th March 1873, No. 241.

I HAVE the honour to return, with my countersignature, the plan and estimate for an iron-roof for the pure-water basin at Bangalore, received with your memorandum No 85 of the 6th March

1 Detailed Estimate
1 Abstract do
1 Specification
1 Plan

2 The estimate had been previously examined by me and some other methods of covering in the basin considered, with a view to reducing the cost if possible. The pure-water basin being in daily use cannot be emptied for the purpose of fixing intermediate supports, and it will not be advisable to interfere with the floor. The cost of the other methods of roofing also is likely to be nearly the same as of that now proposed. If the estimate is sanctioned, I recommend that the work be carried out after the filters have been repaired and the cisterns at the barracks have been built

No 85. ORDER THEREON, 3rd April 1873, No. 1,027.

MILITARY WORKS, No. 2

THE estimate, amounting to Rupees 5,500, for roofing the pure-water basin at the Ulsoor Rock is sanctioned, but the execution of the work will be deferred, as suggested, by the Inspecting Engineer.

(True Extract)

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

To the District Engineer Bangalore
.. Controiler of Public Works Accounts
.. Military Department.

Exd. E. C. Shunker.

Total cft. of brick in Chinnai 2184 1/2

Estimate of the probable cost of providing
Iron roof to Pure Water Basin at the Ulsoor ~~Rock~~
Bangalore

Particulars of work Measurement
No. L B D Content Total

Excavation

Buttresses at west side of Basin 17 2 3 $8\frac{1}{4}$ $841\frac{1}{2}$
— Do. — East side — 17 2 3 $2\frac{3}{4}$ $280\frac{1}{2}$
— Do. — above — 17 2 $3\frac{1}{2}$ 7 833
Total cft. of Excavation 1955

Concrete

Buttresses at west side of Basin 17 2 3 $1\frac{1}{4}$ $127\frac{1}{2}$
Total cft. of concrete 127 $\frac{1}{2}$

Brick in chumari

Foundation for Buttresses at
west side of Basin 17 2 3 7 714
Buttresses above — 17 2 $2\frac{1}{2}$ 7 595
Do. Buttresses at east side of
Basin — 17 2 $3\frac{3}{4}$ $280\frac{1}{2}$
— Do. above — 17 2 $2\frac{1}{2}$ 7 595
Total cft. of Brick in chumari 2184 $\frac{1}{2}$

Particulars of work Measurement L B D Content Total

Plastering
 Buttresses at west side of
 Basin ——— 17 2 . 7½ 255
 Sides of buttresses ——— 34 2½ . 7 595
 Top of ——— 17 2 . 2 68
 Total sqs of Plastering ——— 918

Woodwork
 Purlins and ridge pole — 7 113½ 2½ 3½ 62 118
 ——— ——— ——— 7 7 2½ 3½ 3 7 114
 Total cft of Teakwood wrought 14 purlins 65-10-93

Corrugated iron sheeting
 ——— Over the Basin ——— 1 113½ 42 . 4767
 ——— for Gables at north side
 of Basin ——— 1 37 5½ . 2032
 ——— ——— South side of
 Basin ——— 1 39 3½ . 136½
 Total sqs of corrugated iron sheeting } 5107
 N 24 B 11 G

For one truss
Wrought Iron
 Rafter of T iron ¾ thick 2½
 high & top table 2½ 18-97 ft long } 2 118½ 32 . 237504
 each
 Carried over ——— 237504

Particulars of work Measurement L B D Content Total

Wrought Iron (cd) Brought over ——— 237504
 King rod ½ diameter and 4 ½
 feet long each ——— 1 2952 . 2952
 Lie rods from flanges to socket
 at foot of king rod 1½
 diameter and 8½ feet
 long each ——— 2 28228 . 56456
 Lie rods from flanges to shoe
 for Truss 1 diameter and
 9½ feet long each ——— 2 24928 . 49856
 ——— from flanges to socket at
 the ridge ¾ diameter
 and 8¾ feet long each ——— 2 17596 . 35192
 Flanges 6 diameter and ½
 thick each ——— 4 5000 . 20000
 Socket to hold the rafters 12
 long 2 thick and 3 high each 1 20048 . 20048
 Head to king rod under the
 socket 10 long 2 thick
 and 2 high each ——— 1 11140 . 11140

Carried over ——— 433148

Particulars of work Measurement
 No. L B D Content Total

Wrought Iron (cs) — Brought over — 433 148

Socket at the foot of king
 rod to secure to rods $2\frac{1}{2}$ feet

long 3 wide and $\frac{1}{4}$ thick
 each — 1 6265 . . 6265

Plates to prevent further 4
 long $2\frac{1}{2}$ wide and $\frac{3}{8}$ thick
 each — 10 1043 . . 10430

Bolts to — D: $\frac{1}{4}$ diameter
 and $\frac{1}{4}$ long with head and
 nuts each — 9 782 . . 7038

D: — D: $1\frac{1}{2}$ long and $\frac{1}{4}$
 diameter each — 20 41 . . 820

Bolts $\frac{1}{2}$ diameter and 5 long
 with head and nuts each — 4 437 . . 1748

D: — D: $\frac{3}{4}$ long and $\frac{1}{2}$
 diameter each — 14 328 . . 4592

Bolts $\frac{5}{8}$ diameter and 2-5 long
 with head and nuts
 each — 2 2818 . . 5636

Carried over — 463 377

Particulars of work Measurement
 No. L B D Content Total

Wrought Iron (cs) Brought over — 463 377

Bolts $\frac{5}{8}$ diameter 2 feet long
 and $\frac{1}{4}$ feet long with head
 and nuts each — 2 2391 . . 4782

Bolts $\frac{5}{8}$ diameter and $1\frac{1}{4}$ ft long
 with head and nut each — 4 2263 . . 9052

Iron plates fastened to shoe and
 back of the wall 2 feet high $1\frac{1}{4}$
 feet broad and $\frac{1}{2}$ thick each — 4 50000 . . 200000

Total Wrought Iron in lb — 677211

Cast Iron

Shoes for truss 3 thick and
 $1\frac{1}{2}$ sq ft each — 2 178 . . 356000

Struts $1\frac{1}{2}$ feet long $4\frac{3}{4}$ broad
 and $\frac{3}{4}$ thick each — 2 17 . . 34000

Total Cast Iron in lb — 390000

Drilling holes in the side
 walls of Basin to receive
 bolts — 8 . . 8 8

Stones under shoe $1\frac{1}{2}$ feet
 long, $1\frac{1}{4}$ feet broad and 6
 high including fixing
 Complete — 2 . . 2 2

Hangalore District

Abstract of the foregoing Estimate for
providing Iron roofs to Pure water basin at
Woor Rocks.

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

1955 cft	of Excavation	2 cft	20	
----------	---------------	-------	----	--

128	concrete	33	26	
-----	----------	----	----	--

2185	Brick in chunam	29	376	
------	-----------------	----	-----	--

9.18	sqr of Plastering with two coats of Chunam	28	23	
------	---	----	----	--

65-10-93	cft of Teakwood wrought and put up	38	221	
----------	---------------------------------------	----	-----	--

51.04	sqr of corrugated iron sheet N ^o 24 B.W.G.	30	1532	
-------	--	----	------	--

Total			2208	
-------	--	--	------	--

For one truss

644	lb of wrought iron	3	124	
-----	--------------------	---	-----	--

390	cast iron	13	30	
-----	-----------	----	----	--

Carried over			154	
--------------	--	--	-----	--

The foundation and superstructure of the Buttresses to be built with 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 new brick works to be well bonded into the old walls by bond stones 2 feet long 4 thick and 1 1/2 feet in breadth.

The joints to be scraped out and plastered with two coats of chunam. The first coat to consist of one part of lime to 1 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.

The space around the Buttress and the ground is to be filled in with good stiff clay in layers not

Foundation
and
Superstructure

Roofing

not exceeding 12 in thickness well watered and rammed.

The Pure Water Basin is to be roofed in with corrugated iron sheeting (No 24 B W G) nailed to timber pulleys ($2\frac{1}{2} \times 3\frac{1}{2}$) supported on wrought iron Trusses placed 7 1/2 feet apart from centre to centre as shown on plan.

The truss to consist of two rafters of T iron 3/8 in thick 2 1/2 high, and top table 2 1/2 one end of the rafters to be bolted into the socket at the ridge and the other end to be bolted into the shoes. The King rod 1/2 diameter to be bolted into the socket at the ridge, and foot of King rod; the tie rods 1/8 diameter to be bolted to the flanges and screwed into the socket at foot of King rod and 1" diameter tie rod to be bolted to the flanges

flanges and shoes; and the $\frac{1}{8}$ in rod to be bolted to the flanges on the main one and to the rafters near the ridge; struts of the shape shewn on the plan to be bolted to the flanges and rafters.

The shoes to be $1\frac{1}{2}$ feet at top $3\frac{1}{4}$ at bottom and 2 feet high the front face of the shoe being made into curve and fastened to wrought iron plates —

($2 \times 1\frac{1}{4} \times \frac{1}{2}$) resting on stone brackets fixed in the wall, the shoes to be bolted into the side walls of the cistern as shewn on plan.

The gables of the roof of cistern to be closed in with corrugated iron sheeting having doors to give access and ventilation to the cistern.

The rafters, rods and bolts to be of good wrought iron and shoes and struts to be of good cast iron of the best description, and the whole of the iron works

Iron works to be painted with two coats of carsons anti corrosive paint slate color

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

Hugh Vibart Captain R.E.

Dist. Engrs Office
Bangalore
5th December 1872

District Engineer
Bangalore

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

10971

14

173

From

The District Engineer

Princ. Palace

The District Engineer
Bangalore
Princ. Palace

Rs. 15/-
1000 { Remitted 1000

Rs. 1116.28/73

Estimated for purchase

of 1000 sq. ft. of land

Water Reserve at the

Water Reserve.

Amounting to

Rs. 55.00

Rs. 55.00

12.3.31

District Engineers Office
Bangalore 27th February.

Learn

17

3 Enclosures in a letter
 No 241 dated 11 March
 1873. Adm. - Chas. Ingram
 6/10/11

SM 1628/73

1352/73
From
The Dist^l Eng^r
Bangalore
To The Chief Engineer
P. W. D.
Madras

Dated 27th Feby 1913
Recd P.W.

Estimate for
providing iron roof
to Pure Water Basin
at the Ulsoor Rock
Bangalore.

Amounting to
Rupees 5500-

P.W. 1352/73.

District Engineers Office
Bangalore 27th February 1913

No 971 - From

The District Engineer
Bangalore

To

The Chief Engineer
Public Works Dept.
Madras

Sir

I have the honour to forward
for sanction of Government, a Plan and
Estimate of Rupees 5500, with Spec-
ification for providing iron roof to
Pure Water Basin at the Ulsoor Rock.

The work has received the
approval of the Major General, Com-
manding the Division and His
Excellency the Commander-in-Chief.

The roofing to the Basin
is required for the protection of water
as it is found that the cistern being
uncovered, a scum is formed on
the water, and it is considered desir-
able by the Medical Authorities that
this should be prevented.

I have the honor to be

Sr

Yours most obed^t Servant
Henry M. West - Capt R.E.
District Engineer Bangalore

1285

Memo

The Chief Engr has the honor to forward to the Inspecting Engr for Buildings, for revision and early return, the accompanying plan and Estimate of Rs. 5300, for providing an Iron roof to the Pura Water Basin, at the Ellore Rock, Bangalore.

Chief Engr's
Office 6th March 1873 } (Signed) G. M. Walker C.E.
Chief Engr. D.P.M.

To
The Inspecting Engr
for Buildings

P N 1873 Reproduced
from No 1352.
The District Engineer
Bangalore
The Chief Engineer
P. M. S.
Dated 27th Feb/73.
Recd 1st March/73.
No 971
Enclosure 3.
For revision for sanction
Place & Estimate with
the explanation for
providing an iron roof
to Pura water Basin.
Refer to the Report.
N 1024-3 dated 17/73

Office of the Inspecting Engineer
for Civil Supply, Bangalore
Chepark 11 March 1893

No 241
From

Colonel E A Ford RE.
Inspecting Engineer for
Civil Supply Bangalore

To Colonel G M Walker RE
Chief Engineer HWH

- Enclosures 4
1 detailed estimate
1 abstract do
1 Specification
1 Plan.

Sir, I have the honor to return with my
counter signature the plan and estimate for
an iron roof for the pure water Baem at
Bangalore, received with your Memorandum
of 85 of the 6th March.
The estimate had been previously
examined by me and some other methods
of covering the Baem considered, with a
view to reducing the cost, if possible. The
pure water Baem being in daily use can
not be emptied for the purpose of fixing
intermediate supports and it will not be
advisable to interfere with the floor. The
cost of the other methods of roofing also is
likely to be nearly the same as of that now
proposed. If the estimate is sanctioned,

I recommend that the work be carried out
after the gutters have been repaired and
the cisterns at the barracks have been
built.

I have the honor to be

Sir

Your most Obedient Servant

E A Dred Colonel R.E.

Inspecting Engineer for Civil
Military Buildings

J. M. 1873 30th Jan
 The Chief Engineer
 for Civil Works
 at Bangalore
 241
 dated 11th March 73
 New 1243
 Enclosure 4
 Returns with two
 counter signatures the
 same & estimate for
 one more roof for the
 post water house
 at Bangalore.
 With an order

1897 The estimate amounting to Rs 5500
 for roofing the new water house at the flower house
 is sanctioned; but the execution of the work
 will be deferred until he is ordered by the Superintending
 Engineer.
 The work is not yet started.
 J. M. 1897 30th Jan
 The Chief Engineer
 for Civil Works
 at Bangalore
 241

Govt. of 1873 Madras.

PUBLIC WORKS.

C^o 1625 & 1352

To The Public Works Department

From

10

1000

Encl

G. O. 3rd April 1873 No 42

No. 83 of 8/1/75

For the Public Works
Department. Estimate
of Rs 5500. for Roofing
in house sanctioned
the remarks.

Madras & Madras