Public Works (1898) Department.

Urgent

G.O., No. 911 W

DATED 2 April 1898

4/4/98

[Despatch Abstract.]

Main Gate Well in the Central Jail at Coimbatore:

Revised estimate of Rs. 10,900 for deepening the — returned unsanctioned to the S.E. IV Circle with reference to the Acting Chief Engineer's note and sanction accorded with remarks to the immediate local purchase of the pumps required.

100/.4

7/2.4.98

Indexed.

[P. W. 35.
1,000—12-2-98.]

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 {1898} of Madras.
PUBLIC WORKS.

Recd. } 1898. *Enclosures*
Regd. } *Spare copies*

G.O., No. 911 W., 2nd April 1898.

APRIL.

Main Gate Well in the Central Jail at Coimbatore

Revised estimate of Rs. 10,900 for deepening the — returned unsanctioned to the Superintending Engineer, IV Circle, with reference to the Acting Chief Engineer's note and sanction accorded with remarks to the immediate local purchase of the pumps required.

BACK PAPERS

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following paper:—

From the Judicial Department, dated 26th November 1897, No. 1654.
" " " 27th January 1898, R. No. 142.
" Superintending Engineer, IV Circle, dated 29th January 1898, No. 40 W.
" " " " " 19th February 1898.
Telegram from the Superintending Engineer, IV Circle, dated 2nd March 1898.

Note by the Chief Engineer, Public Works Department.

An estimate of Rs. 5,650 for deepening the existing main gate well in the Central Jail at Coimbatore was sanctioned in G.O., No. 562 W., dated 20th February 1892. It was afterwards decided to excavate a new well, and this well has been sunk to a depth of 93 feet at a cost of Rs. 2,960. In G.O., No. 1332, Judicial, dated 18th August 1896 (G.O., No. 2774 W., dated 25th September 1896), orders were issued to carry out the steining of the well and to provide means of drawing water. The revised estimate of Rs. 10,900 provides for the expenditure already incurred and for that necessary to complete the work including a distributing tank and a system of pipes for carrying water to certain parts of the jail.

2. The excess over original estimate amounts to Rs. 5,250 as shown below:—

	RS.
(*a*) Increase in rates	1,209
(*b*) Change of material, etc.	1,165
(*c*) Works not provided in the original estimate	7,477
Total ..	9,851
Contingencies 2½ per cent.	241
Total ...	10,092
Savings on the original estimate	4,842
Net excess ...	5,250

Item (*a*) is explained to be due to the depth and hardness of rock met with during actual construction.

The excess under item (*b*) is attributable to the change of materials found necessary.

Item (*c*) is chiefly due to the provision for the proposed water-supply.

3. The revised estimate is, however, inadequate in the following particulars:—

The daily supply required for the well is 8,400 gallons = 1,344 cubic feet. In paragraph 8 of the report it is said that "The excavation as carried out only allows of a finished interior diameter of 7 feet. This is sufficient;" and in paragraph 29 "The level to which water will subside when the well is worked is not definitely known."

Now a well 7 feet in diameter has an area of 38·5 square feet, so that if no water entered the well during the six hours of pumping the level of the water would be reduced by 1344/38·5 or nearly 35′! Even if half the quantity comes in that is drawn out, the water level would be reduced by 17 feet, which is too much, and this inflow cannot be counted on. In a 10 feet diameter well, without inflow during pumping, the water level would be reduced 17 feet, and in a 12 feet diameter well, it would be reduced 12 feet. I think this latter is the safest size to adopt in view of our ignorance of the rate of inflow, and the estimate should be revised accordingly.

4. It is also not clear how the two pumps are to be worked simultaneously with Capstan gearing independently of each other. Their respective circles would cut if placed as shown on plan. When ordering them, they must be designed to work independently.

(Signed) W. B. deWINTON,
Ag. Chief Engineer.

28th March 1898.

Order—No. 911 W., dated 2nd April 1898.

The revised estimate, amounting to Rs. 10,900, for deepening the main gate well in the Central Jail at Coimbatore is returned unsanctioned with reference to the Acting Chief Engineer's note attached.

2. Sanction is given, subject to the remarks made in paragraph 4 of the above note, to the immediate local purchase of the pumps required. An application in proper form should be submitted.

3. The estimate should be returned for sanction as soon as possible.

(True Extract.)

Under Secretary to Government.

To the Superintending Engineer, IV Circle, with 15 enclosures.
" Examiner, Public Works Accounts.
" Judicial Department.

Exd. S. J. Pereira.

BACK PAPERS

A

w/p to S.E. H.E. the Governor

urgent

DEPARTMENT.

Public Works

Papers to be read in Proceedings:—

Again G.O., dated 189 , No.

Again G.O., dated 189 , No.

~~Print~~ Current No. 12023 of 1897, dated 26th November, from the Judicial Dept. No 1654.

Quote „ „ 781 „ 1898, „ 27th January, „ -Do- R No: 142.

Quote „ „ 945 „ 1898, „ 29th January, „ the S.E. IV Circle. No 40W

Quote D.O. 9 „ 1898, „ 19th February -Do-

Quote C. No. 1949 „ 1898, „ 2nd March -Do- Telegram of 2-3-98

Print Note by the Chief Engineer, P.W.D., d/28th March 1898.

ORDER.

No 911W 2.4.98

B.T.R.

29.3.98

The revised estimate, amounting to Rs. 10,900, for deepening the Main gate well in the Central Jail at Coimbatore is returned unsanctioned with reference to the Acting Chief Engineer's note attached.

2. Sanction is given, subject to the remarks made in Para 4 of the above note, to the immediate local purchase of the pumps required. An application in proper form should be submitted.

3. The estimate should be returned for sanction as soon as possible.

28.3.98

I/B

D 14/4/98

D 2/4/98

The Suptg. Engr. IV Circle with 15 enclos. ✓

„ Examiner, P.W. Accounts.

„ Judicial Department. ✓

28.3.98

P. W. 6
500—27-1-98.

A

H. E. the Governor

Inspt S.E.

P. W. DEPARTMENT.

911 W

Urgent

Papers to be read in Proceedings:—

Again G.O., dated 189 , No.

Again G.O., dated 189 , No.

Current No. 12023 of 1897, dated 26th Novr 1897, from The Judicial Dept.

" " 781 " 1898, " 27th January 1898, " — Do —

" " 945 " 1898, " 29th January 1898, " The S. E. IV circle

D. 6 " " 9 " 1898, " 19th Feby 1898, " — Do —

" " 1949 " 1898, " 2nd March 1898, " — Do —

Note by the Chief Engineer, P.W.D. dy

ORDER.

The revised estimate, amounting to Rs 10,900, for deepening the Main gate well in the Central Jail at Coimbatore is ~~sanctioned in supersession~~ in of ~~the estimate of Rs 5,650 sanctioned in G.O. No 562 W dated 20th February~~ 1892.

2 ~~Attention is drawn to para 2 of the Proceedings in the Judicial Department No 1654 dated 26th November 1897~~

3 ~~The Suptg Engr. will submit as early as possible an application for the local purchase of pumps required for the work.~~

4 The sanction accorded in para 1 has been registered as Provincial No W of 1897-98 and classified as "Civil Buildings, Original Works"

returned unsanctioned with refce to the Cy. C[E]'s note attached & flagged S.

2. Sanction is given subject to the remarks made in para 2 of the above note, to the immediate local purchase of the pumps required. ~~in anticipation~~ An application in proper form must be submitted.

3. The estimate should be returned for sanction as [illegible]

[illegible]

26.3.98

To The S. E. IV circle with 15 encls.

- Exr. P. W. Accts

- Judicial Dept.

[P. W.]

W

[illegible] 24.5.98.

Note. This estimate has been dealt with in the accompanying technical note

W

Mais

Public Works Department.

Note by the Chief Engineer, P. W. D.

+ Flag S

× Flag Q

An estimate of Rs. 5,650 for deepening the existing Main gate well in the Central Jail at Coimbatore was sanctioned in G.O. No. 562 W + dated 20th February 1892. It was afterwards decided to excavate a new well and this well has been sunk to a depth of 93 feet at a cost of Rs. 2,960. In G.O. No. 1332 × Judicial dated 18th August 1896 (G.O. No. 2774 W d/ 25th September 1896) orders were issued to carry out the steining of the well and to provide means of drawing water. The revised estimate of Rs. 10,900 provides for the expenditure already incurred and for that necessary to complete the work including a distributing tank and a system of pipes for carrying water to certain parts of the jail.

2. The excess over original estimate amounts to Rs. 5,250 as shown below:-

	Rs.
(a) Increase in rates........	1,209
(b) Change of materials etc.	1,165
(c) Works not provided in the original estimate..	7,477
Total	9,851
Contingencies 2½%..	241
Total	10,092
Savings on the original estimate..	4,842
Net excess.	5,250.

Item (a) is explained to be due to the depth and hardness of rock met with during actual construction.

The excess under item (b) is attributable to the change of materials found necessary.

Item (c) is chiefly due to the provision for the proposed water supply.

3. The revised estimate is, however, inadequate in the following particulars.

The daily supply required for the well is 8,400gals.= 1344 C.ft. In para 8 of the Report it is said that "The excavation as carried out only allows of a finished interior diameter of 7'. This is sufficient", and in para 29 "The level to which water will subside when the well is worked is not definitely known".

Now a well 7' in diameter has an area of 38.5 sq.ft., so that if no water entered the well during the 6 hours of pumping the level of the water would be reduced by $\frac{1344}{38.5}$ or nearly 35'! Even if half the -- quantity comes in that is drawn out, the water level would be reduced by 17', which is too much, and this inflow cannot be counted on. In a 10' diameter well, without inflow during pumping, the water level would be reduced 17', and in a 12' diameter well, it would be reduced 12'. I think this latter is the safest size to adopt,

in

80

in view of our ignorance of the -- rate of inflow, and the estimate -- should be revised accordingly.

See D.G.H.

4. It is also not clear how the 2 pumps are to be worked simultaneously with Capstan gearing, independently of each other. Their respective circles would cut if placed as shown on plan. When ordering them, they must be designed to work independently.

E.W. 28.5.84

P.W.D

Note by the Chief Engineer. P.W.D

An estimate of Rs 5.650 for deepening the existing main gate well in the Central Jail at Coimbatore was sanctioned in G.O. No ~~560 W~~ x562W dated 20th February 1892. It was afterwards decided to excavate a new well and this well has been sunk to a depth of 93 feet at a cost of Rs 2.960. In G.O. No 1332† Judicial dated 18th August 1896 (G.O. No 2774W dated 25th Septr 1896) orders were issued to carry out the steining of the well and to provide means of drawing water. The revised estimate of Rs 10.900 provides for the expenditure already incurred and for that necessary to complete the work including a distributing tank and a system of pipes for carrying water to certain parts of the jail.

x Flagged S

† Flagged 2

2 The excess over original estimate amounts to Rs 5.250 as shown below.

(a) Increase in rates —	Rs 1.209
(b) Change of materials &c —	.. 1.165
(c) Works not provided in the original estimate —	.. 7.477
Total Rs	9.851
Contingencies 2½% —	.. 241
Total	.. 10.092
Savings on the orig'l est. —	.. 4.842
Net excess	Rs 5.250

Item (a) is explained to be due to the depth and hardness of rock met with during actual construction.

The excess under item (b) is attributable to the change of materials found necessary.

Item (c) is chiefly due to the provision for the proposed water supply.

3. The revised estimate is, however, inadequate in the following particulars.

E. W.

Mr CWMS

24/3 98.

(a) The daily supply reqd from the well is 8400 Gals = 1344 cft.

(b) In para 8 of the Report it is said that "the excavation as carried out to allow of a finished interior diameter of 7'. This is sufficient" & in para 9 "the level to which water will subside when the well is worked is not definitely known."

(c) Now a well 7' in diar has an area of 38.5 sq ft. So that if no water entered the well during the 6 hours of pumping the level of the water would be reduced by nearly $\frac{1344}{38.5}$ or nearly 35'! Even if half the quantity comes in that is drawn out the water level would be reduced by 17' which is too much, as the inflow cannot be counted on. For a 10' diar well without inflow during pumping the water level would be reduced 17', & in a 12' diar well it will be reduced 12'. I think this latter is the safest size to adopt in view of our ignorance of the rate of the estimated inflow, & the estimate should be revised accordingly.

It is also not clear how the 2 pumps are to be worked simultaneously with one capstan bearing independently of each other. Their respective engines would cut off if placed as shown in plan. When working them they must be designed to work independently.

24 3 98

BACK PAPERS

Item (a) is explained to be due to the depth and hardness of rock met with during actual construction.

The excess under item (b) is attributable to the change of materials found necessary.

Item (c) is chiefly due to the provision for the proposed water supply.

3. The revised estimate is, however, inadequate in the following particulars.

E. W.

May C.W.R.S. 24/3/98.

(a) The daily supply reqd. from the well is 8400 gals = 1344 c.ft.

(b) In para 8 of the Report it is said that "the excavation as carried out up to a finished internal diameter of 7' this is sufficient" and in para 9 "the level to which water will subside when the well is worked is not definitely known."

(c) Now a well 7' in diar has an area of 38.5 sq ft. so that if no water entered the well during the 6 hours of pumping the level of the well would be reduced by nearly 1344/38.5 or nearly 35'! Even if half the quantity comes in that is drawn out the water level would be reduced by 17' which is too much, and this inflow cannot be counted on. For a 10' diar. well without inflow during pumping the water level would be reduced 17', and in a 12' diar well it will be reduced 12'. I think this latter is the safest size to adopt in view of the rate of inflow, and the estimate should be revised accordingly.

It is also not clear how the 2 pumps are to be worked simultaneously with capstan gearing independently of each other. Their respective cranks will cut if placed as shown in plan when working them. They must be designed to work independently!

24-3-98

W/ The figures have been checked and found to be correct.

The pumps will be fixed within the well at H.W.L. and worked by manual or bullock gear, vide para 10 of the report. The working of the gear will be somewhat similar to the drawing shown on page 40 of R.A.Co. catalogue.

It is not intended to have the two Rotary pumps shown on platform of the well but as per marginal illustration on fair type drawing of R.A.Co's letter No. 1550 of 29th May 1897.

Quite so. but how are the pumps to work 2 distinct pumps by the above gear without interfering with each other?

25-3-98.

W/ It does not seem possible to work the 2 pumps together. It will be seen

26-3-98

BACK PAPERS

Telegram

Public Works (1898) Department.

CURRENT No. 1949

From

The Supdg: Engineer

IV Circle.

No.

Dated 2. 3. 98

Received }
Registered } 3. 3. 98

Enclosures

Spare copies

Order

T/

2 return the estimate as very urgent

[illegible] 2/3/98 P

Cen/

SUBJECT.

Coimbatore Jail work.

Requesting to send the plans & estimate for the —

84.00 × 60

× 16

5 0 4 0 0

8 4 0 0

1 3 4 4 . 0 0 ✓

1344 C/f

Area of well 7 diam:

= π r²

= 22/7 × (3½)²

12.25

2¾

24.50 ✓

38.50 ✓

38.5) 1344 (3

1155

1890

192

Telegram

Public Works (1898) Department.

CURRENT No. 1949

Order

T/ Submit the estimates as very urgent

3/3/98

Cn/

From The Supdg: Engineer IV Circle.

No.

Dated 2. 3. 98

Received } 3. 3. 98
Registered

Enclosures

Spare copies

SUBJECT.

Coimbatore jail work.

Requesting to send the plans & estimate for the —

BACK PAPERS.

No.	Date.
562 W	20-2-92 ✓
2774 W	25-9-96 ✓

FURTHER PAPERS.

No.	Date.

From
Coimbatore
S. E.

S.
Works

T—14.

Class. XS	INDIAN TELEGRAPH.	Monthly Local No. 39

To Station Ms Triplicane
From Station Coimbatore

Words.	Day.	Hour.	Minute.	Official Instruction.
21	2	17	17	Wft

To (Person) Works
From (Person) Supdg Engineer

Please send plans
~~an~~ and estimate
Coimbatore jail
work to enable
grant to be
spent

TRIPLICANE 2 MA. 98

Recd. from L. N. At Hrs. Mts. By
Sent to L. N. At Hrs. Mts. By
Date
Postmaster.

Please send plans and
estimate Coimbatore jail work
to enable grant to be spent.

s with
945

S.E. enquiring when estimate for deepening well in jail is likely to be sanctd. - Write T.
3/3/98

BACK PAPERS.

ting
to

Sanc

G.O. No

Public Works (1898) Department.

D.D. CURRENT No. 9

From The Supdg: Engr IV Circle

Order

No.

Dated 19th February 1898.

Received } 21. 2. 98
Registered }

Enclosures

Spare copies

SUBJECT.

Water supply scheme in Coimbatore Jail.

Enquiring if there is any alteration in the —— or whether the work may be proceeded without

BACK PAPERS.

No.	Date.

FURTHER PAPERS

No.	Date.

Public Works (1898) Department.

CURRENT No. 945
781
736

Order

T/o treat the estimate as urgent

8/2/98

From The Supg. Engineer
4th Circle.

No. 40/W

Dated 29th January 1898.
Received }
Registered } 2-2-98
Enclosures ✓
Spare copies ✓

SUBJECT.

Central Jail at Coimbatore.

Requesting to be informed whether the revised estt. for deepening the main gate well in the — is likely to be sanctd in order to deal with the current year's grant thereof.

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

No 700/W.

Superintending Engineer's office
4th Circle
Camp Ponachi 29th January 1898

From
A. H. Garrett Esq
Superintending Engineer
4th Circle

To,
The Chief Engineer
P. W. Department.

Sir,

I have the honor to request you will be good enough to inform me when the revised estimate amounting to Rs: 10,900 for deepening the main gate well in the central Jail at Coimbatore, submitted for sanction through the Inspector General of Prisons with this office No 495/M dated 13th September 1897 is likely to be sanctioned to enable me to deal with the current years grant for the work viz Rs. 5060.

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

29.1.98

Superintending Engineer
4th Circle.

Public Works (1898) Department.

CURRENT No. 781
945
736

From
The Judicial Dept

Order

R.No. 142

Dated 27th January 1898.
Received 28.1.98
Registered 28.1.98
Enclosures
Spare copies

SUBJECT.

Recording the ~~Pro~~ Mem of
the P.W.D bearing No 2074 C / 14.1.98
with reference to G.O. No 1657 / 26.11.97
re main gate wells in the
Central Jail at Coimbatore

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

[G. / 53]
2,000—5-1-98

JUDICIAL DEPARTMENT.

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following paper :—

× Extract ck. 680 C 5.2.98

E.E.'s remarks on S.E.'s progress Report for Nov. '97

Memorandum from the Public Works Department, No. 204 C, dated 14th January 1898.

The Judl. Dept. asked to expedite the transmission of the revised estimate for deepening the main jail well in the Central Jail Coimbatore, forwarded by the S.E. to the I.G. of Prisons

O R D E R:- No. 142 R dated 27th January 1898.

× ck. 12023 ~~Sent to J~~ ~~9.12.97~~

Recorded with refernce to G.O. 1654×, dated 26th November 1897 in which the estimate referred to was approved and transferred to the Public Works Department.

(True Extract)

A. R. Knapp.

for Chief Secretary.

To

The Public Works Department.

R.L.
26.1.98

W.R.
25/1/98

Public Works Department.

Current No. 12023

~~Letter~~ G.O No. 1654

Dated 26th Novbr 1897

From the Judicial Dept

NOTE BY TECHNICAL SECTION.

Name of work Revised Estimate for deepening the Main Gate Well Central Jail. Coimbatore

Est Rs 10.900

This scrutiny has not been made with sufficient care. The daily supply req'd from the well is 8400 gallons = 1344 cubic feet.

In Para 8 of the Report it is said that "the excavation is carried out up to a finished interior diameter of 7'. This is sufficient" and in Para 29 "The level to which water will subside when the well is worked is not definitely known".

Now a well 7' dia: has an area of 38.5 sq ft. so that if no water entered the well during the 6 hours of pumping the level of the water would be reduced by $\frac{1344}{38.5}$ or nearly 35 ft. Even if half the quantity comes in that is drawn during the 6 hours the water level would be reduced by 17' which is too much - & [illegible] [illegible] the [illegible] [illegible] this should have been pointed out.

P.T.O

The original Estimate amounting to Rs 5650 was sanctioned in G.O. No 562 W dated 20th Feby 1892 provided for deepening an existing well. It was afterwards decided to excavate a new well. The new well has been excavated to a depth of about 93 feet at a cost of Rs 2960.

In G.O. No 1332 dated 18th Ap 1896 orders were issued to carry out the steining of the well and provide means of drawing water. The Estimate now submitted for Rs 10,900 provides for the expenditure already incurred and that necessary to complete

P W. 60
250—30-9-97.

work including, as approved by the Inspector General of Prisons in his No. 2585 of 18th June 1897, a distributing Tank and a system of pipes for carrying water to certain parts of the Jail. The well distributing Tank and pipe system are shown on the enclosed tracing, survey of the Jail. The steining will be carried down to a depth of 74 feet below ground level the object being to keep out all surface drainage or percolation.

The details of construction are fully explained in the Executive Engineer's report accompanying the Estimate.

Two force pumps, each capable of the full duty required, will be fixed in the well at ripe Water level. These pumps will be of the pattern shown and described in attached drawing and letter from Messrs Richardson & Cruddas and will be fitted with Bullock gearing arranged for Manual Labor.

The top of the well is to be completely closed with planking. access to the well will be obtained by a trap door and a few steps at the side of the well, and not through the plank covering. The water will be forced up to a wrought iron distributing Tank whose bottom will be 21 feet above ground level, near the Central Tower, from which Tank the distribution by two main pipes will be made as explained in the report in detail.

The new system is based on the following data..

To supply all water from the new well for a Jail population of 1,400 souls, allowing 6 gallons per head per day. Total daily supply 8,400 gallons.

The pumps alone will cost R: 1,860 and the Executive Engineer states that he cannot commence the steining of the well until he gets the pumping plant, and requests permission to purchase them locally.

The Inspector General of Prisons strongly recommends the local purchase of the pumps as it is very necessary in view of the recent disastrous epidemic. the expenditure

---

been settled with a Contractor requires Explanation. And how do we know that the dimensions of the pipes are correct, but why is there no calculation sheet, but we have no drawings to show the gradients and bends if any. No Technical note is complete that does not point out the respects in which an Estimate is wanting in details necessary to present it in a fit state for the sanction of Govt.

Please add a statement of details still wanting

CAWS
12/3 98.

In a 10' dia: well, without upflow during pumping, the water level would be reduced 17', and in a 12' dia: well it wd be reduced 12.5 feet. I think this latter is the safest size to adopt in view of our ignorance of the rate of upflow.

It is also not clear to me how the 2 pumps of capstan barrel, are to be worked independently of each other. Their respective circles wd cut if placed as shown in plan. Please check these figures & return to me today

BACK PAPERS

on which cost over Rs 10,000 to place the water supply of the Jail on a sound basis.

The Sanitary Engineer to Govt. in his note No. 1589 dated 5th October 1897 submits certain suggestions regarding the pumps & pipes, valves &c but the Executive Engineer considers it unnecessary to alter the Estimate as there is ample provision under unforeseen works for all minor items.

The favor of very early orders on the Estimate and on the Requisition to purchase European Stores locally is requested.

Rates. Data, in detail, has been furnished and found correct. The item incurred for baling viz Rs 1611 was done departmentally.

The excess over original Est. is as follows.

	Rs
1. Insufficient rates	1209
2. Change of materials &c	1165
3. not provided in Orgl. Est	7477
	9851
Contingencies 2½ %	242
Total Rs	10,092
Less	4,842
Excess amount reqd. to be sanctioned	Rs 5,250

The plan & Estimate has been countersigned by the Inspector General of Jails.

W. G. S.
11/3/98

It is not known whether the working Agency is Departmental or Contract but the increase in rates is due, as explained by the Executive Engineer, to the depth and hardness of rock met with during actual execution and arranged according to depths which could not have been foreseen until the work was in actual progress.

The existing [illegible] system of supplying the Jail with water is described in paras 13 to 22 of the Executive Engineer's report. The Tank is shown to be large enough to hold the water required. The Jail population being taken at 1,400 souls, allowing 6 gallons per head per day the daily supply is 8,400 gallons the Tank containing 6125 gallons (14 × 14 × 5 × 6¼). ✻ No details of the pipe system is given, except the diameters of pipes to different parts of the Jail, shown on tracing. If further details are required they should be

✻ vide para 22 of Ex Eng's report which proves sufficiency of supply applied for, but as the system has been scrutinized by the Sanitary Engineer, and the Inspector General of Jails presses for early sanction, it may be assumed that the pipes provided by the Executive Engineer answer the purpose for which they are intended.

W. C. A.
15. 3. 98

10. This is in reply to my pencil note.
As the work of the Sanitary Engineer has to be scrutinized in this office and as the I. G. of Prisons does not possess technical knowledge it seems necessary to ask for further details.

C. W. B.
15. 3. 98.

H. W. 52.00

No the matter is urgent. Try & settle it with the informa. now available

19. 3. 98

S. O. W.
Please send it forward.
Scrutiny in this office is, as far as possible, complete.

C. W. B.
21. 3. 98.

Original received in R/S
vide I. W. C. N. 12023
97

and sent to
T. on 9. 12. 97

11698

Government {1897} of Madras.

JUDICIAL.

12023
Recd. 3. 12. 97

Recd. }1897. Enclosures
Regd. Spare copies

G.O., No. 1654, 26th November 1897.

NOVEMBER.

Coimbatore Central Jail.

Approving, with remarks, the revised estimate for the water-supply of the —.

GOVERNMENT OF MADRAS.

JUDICIAL DEPARTMENT.

Read—the following papers:—

From A. G. CARDEW, Esq., M.A., I.C.S., Inspector-General of Prisons, to the Chief Secretary to Government, dated Coimbatore, 18th September 1897, No. C. 1679.

I have the honour to submit, for the approval and sanction of Government, a revised estimate, amounting to Rs. 10,900, with plans for the water-supply of the Coimbatore Central Jail.

2. The report attached to the estimate has been so clearly and carefully prepared by the Executive Engineer Mr. Malet, to whom I am under great obligations for the prompt and very satisfactory preparation of the estimate, that but little remark is needed.

3. It will be seen that, though the estimate is nominally Rs. 10,900, the excess amount required to be sanctioned is only Rs. 5,250. For this comparatively small sum, the jail will be provided with pumps, distribution system, hydrants, and bathing platforms, thus making the arrangements for water-supply of all kinds, drinking and bathing complete. The scheme is thus a very cheap one.

4. The pumps will cost Rs. 1,850, and I would specially invite attention to the Executive Engineer's statement in his letter, No. 3428, dated 1st September 1897 (copy enclosed), that he cannot commence any work until he gets the pumping plant. On this ground the local purchase of the pumps is strongly recommended, as it is very necessary, in view of the recent disastrous epidemic, to place the water-supply of the jail on a sound basis.

5. The water will be raised by the pumps into a large covered iron cistern 25 feet above ground level. This cistern is already in the jail, but the well near which it at present stands, supplies water unfit for drinking. It will therefore be shifted to a new well, a cover will be provided, and the whole water-supply will be distributed by pressure therefrom.

6. By these means all water, both for drinking and bathing, will be delivered in the yards untouched by hand, and free from all risk of pollution after leaving the well.

7. In place of the old bathing-troughs in which water was collected and a number of convicts bathed together, an overhead sytem of bathing platforms of the most inexpensive character will be provided. The overhead arrangements consist merely of a V shaped 1″ iron pipe, perforated with holes, and costing only Rs. 90 for all the bathing platforms put together. The water will be forced by pressure along these pipes which will thus produce a shower-bath, the men standing under it. The water will fall on the existing store platforms, whence it will flow off at once. There will be no trough for dirty water to collect in or for stagnant water to lie in, and there will be no fear of men drinking contaminated water in this way.

8. The drinking-water will be drawn off by press taps from the same hydrants which supply the bathing pipes, but at a lower level.

9. The plans and estimates have been examined by the Superintendent of the Jail and myself, on the spot, and appear to meet all requirements. The work of steining the well will necessarily take time. It cannot be begun till the pumps are got. It is therefore very desirable that early sanction to the estimate should be accorded. Provision to the extent of Rs. 2,060 exists in the Public Works Budget for 1897–98 (class A works, item 43), and this will be sufficient for the purchase of the pumps to be made and the steining to be begun at once. I trust, therefore, that the scheme may receive the very early sanction of Government.

10. As the expenditure on the last cholera epidemic of April—June 1897 has come to much over Rs. 10,000, it will prove economical in the end to take such measures as will diminish the chance of the recurrence of such calamities.

Endorsement No. 1981.

Referred to the Sanitary Engineer for very early remarks.

(By order.)

(Signed) A. R. KNAPP,
Ag. Under Secretary.

23rd September 1897.

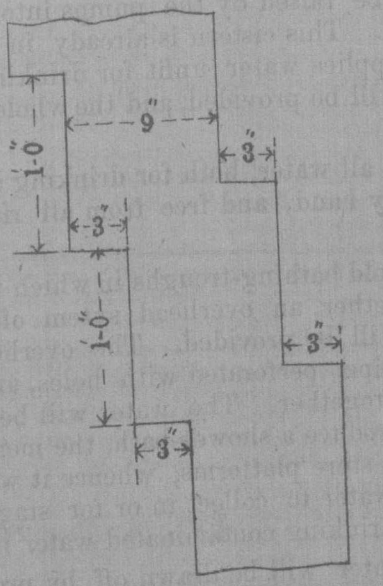
From J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E., Sanitary Engineer to Government, to the Chief Secretary to Government, dated Fort St George, 5th October 1897, No. 1589.

With reference to endorsement, No. 1981 of 23rd September 1897, I have the honour to forward my remarks in a separate note herewith.

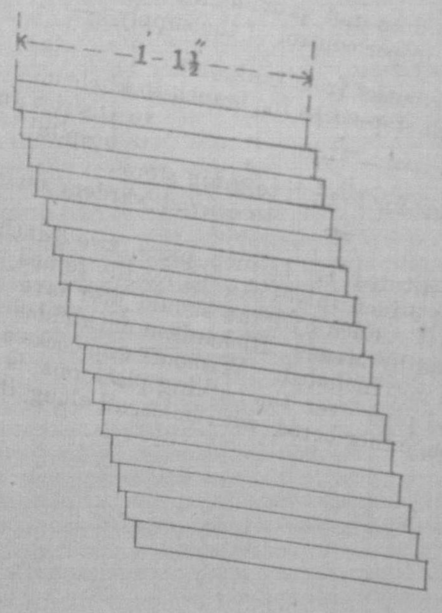
ENCLOSURE.

Note by the Sanitary Engineer to Government—Coimbatore Jail Water-supply.

Well.—The base of the steining which is splayed has less bearing area between the stepped portions than the steining above. On the contrary, the bearing area in the splayed portion should, if anything, be greater than in the portion above. It is suggested that the base of the steining shown on the plan thus:—



should be built thus:—



2. The pumps are shown in Messrs. Richardson & Cruddas' plan as over the well. This is objectionable and the pumps should be placed away from the well. It is much doubted whether satisfactory pumping by direct working pumps can be done on such a high lift by convicts or anyone else. It would be better to adopt the capstan system, with the capstan clear away from the well, and before the pumping arrangements are definitely decided on, experiments with the pumps working against the head of 115 feet ought to be made in presence of the Executive Engineer.

3. *Pipes and distribution.*—The pumps will be about 60 feet below ground and this length of force pipe (apparently 4 inches) will be required. It is not apparent whether Messrs. Richardson & Cruddas have included this length of force pipe in their estimate for pumps (it usually is not so); if not, provision should be made in the estimate for it separately.

4. The length of 4-inch pipes in the estimate is 140 feet. The horizontal length shown on plan between the well and the service tank is 105 feet. The up and down pipes to the tank will be another 60 feet, or a total of 165 feet.

5. There is no apparent reason why the tank is placed where proposed. The proper place for it is adjacent to the well and on the opposite side to where the gearing would be if the pumps are worked by bullock-power or capstan.

6. As shown on the plan the two mains are taken from opposite sides of the tank. It is desirable to have a single outlet down pipe (4 inches) from the tank with a branch pipe from below ground level.

7. The outlet pipe should be taken from the side of the tank an inch or two above its bottom, so that sediment, if any, may deposit in the tank below the mouth of the outlet pipe.

8. The tank should also have a scouring pipe taken off at the very bottom of the tank. This pipe may be 2 inches and should have a valve. There is no necessity for an overflow if the tank has a self-registering gauge.

9. *Existing pipes.*—A note on the plan says that existing pipes will be removed and stacked as they are not of the required size. From the plan it would appear that there are now in the ground about 1,200 feet of 2¾-inch pipes and that two 1½-inch branch lines are provided in the estimate, *i.e.*:

Branch in No. 7 yard to District Jail,	640 feet.
Main line to hospital,	540 ”

The existing 2¾-inch pipes could be used on the above two lines with much advantage and of course with a saving. The 2¾-inch pipe may be larger than what is required. There is however, no objection to use a pipe larger than necessary if in stock, though there are serious objections to usuing one too small; it must be remembered that the discharge from a pipe (unless it has a free and open end, depends upon the number and size of taps provided. Any quantity of water small or large (the latter not exceeding its maximum discharging capacity) can be drawn from a pipe, no matter what its size, by regulating the number and size of taps. The only difference that a large-size pipe makes is that gives a greater pressure in the pipe.

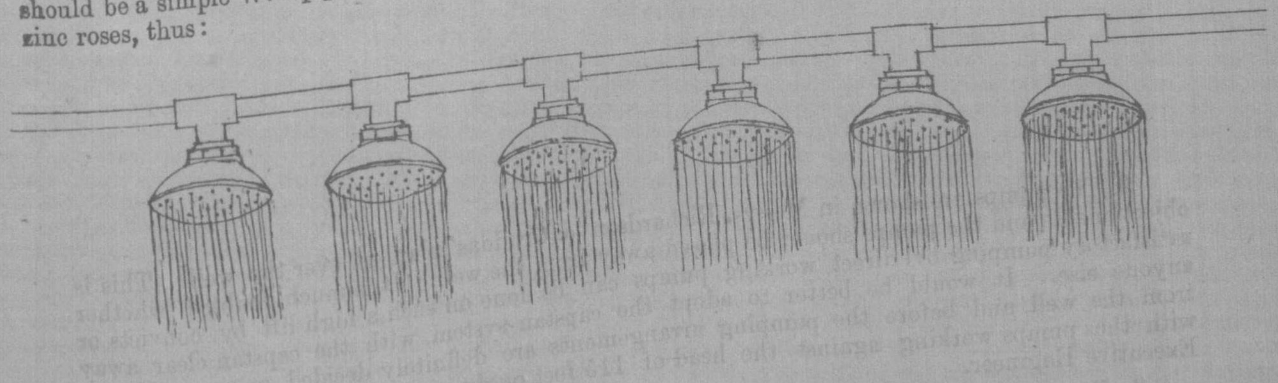
10. The substitution of 2¾-inch pipes in above two branch lines will effect a saving of some Rs. 500.

---

11. *Valves.*—The estimate does not provide for a valve near the distributing tank. The following are essential for the proper control of the supply:—

1 four-inch valve for outlet from tank.
3 one-and-a-half-inch stop-cocks for branch to kitchen,
3 ” ” to District Jail.
3 ” ” to hospital.
2 one-inch stop-cocks for branch to grain stores.
2 ” ” to convict warders' quarters.

If 2¾-inch pipes are substituted for 1½-inch pipes, two 3-inch valves will be required and only one 1½-inch valve. The 3-inch valves can be readily joined to the 2¾-inch pipe; the small difference in size is immaterial. Each hydrant should also have a stop-cock of the proper size; judging by the price quoted by Messrs. Richardson & Cruddas for the hydrants, it is apparent that the cost of stop-cocks is not included. Without stop-cocks a hydrant could not be shut off for repairs. The ⊂ shaped pipe over the bathing platforms is not recommended. The pipe should be a simple W.I. pipe, either bored with holes all along its length or filled with brass or zinc roses, thus:



BATHING PLATFORM

This would be found much more satisfactory than what is proposed.

12. No provision has been made in the estimate for branches, collars, and other pipes fittings (except under the item for unforeseen work).

Endorsement No. 2111.

Referred to the Inspector-General of Prisons for remarks with advertence to the Sanitary Engineer's note.

(By order.)

(Signed) A. R. KNAPP,
Ag. Under Secretary.

12th October 1897.

From A. G. CARDEW, Esq., M.A., I.C.S., Inspector-General of Prisons, to the Chief Secretary to Government, dated Hosdrug, 18th November 1897, No. C. 2719.

I have the honour to return the papers referred to me for remarks under Judicial endorsement, No. 2111, dated 12th ultimo.

2. The Sanitary Engineer's note was referred to the Executive Engineer, Coimbatore, who has dealt with the Sanitary Engineer's remarks seriatim in a letter, No. 4217, dated 4th November 1897, herewith submitted in original.

3. As most of the Sanitary Engineer's suggestions deal with small details and can be accepted, little comment is needed—

(1) I agree with the proposed change in the location of the service tank. A bend should be provided in the distributing pipe.

(2) Existing pipes should be used so far as they are found in usable condition. It is unnecessary, as the Executive Engineer states, to alter the estimate.

(3) I agree with the Executive Engineer that the ⊂ shaped pipe is essential, and I consider that roses are not required. I have seen the perforated iron pipe in use and it works well.

4. The favour of very early orders on the estimate and on the requisition to purchase European stores locally is requested.

Enclosure.

From S. B. MURRAY, Esq., Executive Engineer, Coimbatore division, to the Superintendent, Central Jail, Coimbatore (through the Superintending Engineer, IV Circle), dated 4th November 1897, No. 4217.

I have the honour to return your No. 2879, dated 27th October 1897, with all enclosures, and to offer the following remarks on the note submitted by the Sanitary Engineer to Government.

2. The alteration in the footing of the steining can be adopted. A note can be entered against the section of the well to that effect. It is not necessary to alter the estimate.

3. The capston and working path will, of course, be clear of the well; only the shaft from the bevelled gearing will run over the well. Instructions to this effect will be given when the pumps are being ordered.

It would certainly be advisable to have the pumps tested before despatch from Bombay (if procured there) and this can be arranged for. The suppliers will be told that they will be required to test the pumps at the time of ordering.

4. The quotation given by Messrs. Richardson & Cruddas distinctly includes suction and delivery pipes up to ground level; so no extra provision for the same has been made in the estimate.

5. The alteration in the position of the service tank is an unimportant point. If altered, as suggested, a part of the main distributing pipe will have to be laid in a curve or have a bend in it.

6. A single 4-inch outlet down pipe from the service tank can be provided.

7. The position of the junction of the pipes with the service tank and the scouring pipe are, of course, points which would be attended to when preparing a detailed specification after the estimate is sanctioned.

8. The existing pipes, if in good condition, can be used instead of new pipes of a smaller diameter. It will not, however, be advisable to alter the estimate. The old pipes will be examined and tested before new pipes are ordered.

9. A valve worked by a chain will be provided for in the detail specification, at the mouth of the outlet down pipe.

10. Stop-cocks were not provided on purpose, but they can be allowed for if desired. The system is a very simple one, and the want of stop-cocks has not been felt so far. Their introduction would make the arrangements more complete.

11. The ⊂ shaped pipe over the bathing platform is essential. A large number of convicts have to bathe at the same time, and a single pipe of this shape would suffice to meet the requirements. The existing platforms are broad and suitable for the proposed ⊂ pipe. The arrangement of roses would be better than a simple perforated pipe and they can be fixed about 3½ feet apart in the ⊂ pipe.

12. Minor details were purposely avoided in the report as their inclusion would have made it very bulky. There is ample provision in the estimate under unforeseen works for all minor items.

13. I am sending a revised application for permission to purchase European stores locally, through the Superintending Engineer, as the one attached to the file does not include pipes.

14. The pumps will probably have to be ordered from England by the suppliers; so advance orders permitting their purchase are requested.

No. 611—M.

Forwarded to the Superintendent, Central Jail, Coimbatore.

The revised application referred to in paragraph 13 is herewith sent with recommendation that it may be substituted for the original one sent to the Inspector-General of Prisons in this office letter, No. 495 M., dated 13th September 1897.

(Signed) J. HANNAN,
Supg. Engineer, IV Circle.

6th November 1897.

Order—No. 1654, Judicial, dated 26th November 1897.

The revised estimate, amounting to Rs. 10,900, is approved and will be transferred to the Public Works Department.

2. The suggestions of the Sanitary Engineer, most of which have been concurred in by the Executive Engineer, Coimbatore division, and the Inspector-General of Prisons, should be carried out. The provision for the ⊂ shaped pipe over the bathing platforms should, however, be retained.

3. The application for permission to purchase locally articles of European manufacture will be considered in the Public Works Department.

(True Extract.)

Chief Secretary.

To the Inspector-General of Prisons.
„ Public Works Department.
„ Sanitary Engineer.

Exd. T. K. Narayana Iyengar.

BACK PAPERS

Public works (1897) department

Current No: 12023

Government (1897) of Madras.

JUDICIAL.

Recd. 3. 12. } 1897.
Regd. 3. 12. }

Enclosures 15 (5 plans)
Spare copies

G.O., No. 1654, 26th November 1897.

NOVEMBER.

Coimbatore Central Jail.

Approving, with remarks, the revised estimate for the water-supply of the —.

I
for secretary
CWBS
9d
9.12.97

GOVERNMENT OF MADRAS.

JUDICIAL DEPARTMENT.

Read—the following papers :—

From A. G. CARDEW, Esq., M.A., I.C.S., Inspector-General of Prisons, to the Chief Secretary to Government, dated Coimbatore, 18th September 1897, No. C. 1679.

I have the honour to submit, for the approval and sanction of Government, a revised estimate, amounting to Rs. 10,900, with plans for the water-supply of the Coimbatore Central Jail.

2. The report attached to the estimate has been so clearly and carefully prepared by the Executive Engineer Mr. Malet, to whom I am under great obligations for the prompt and very satisfactory preparation of the estimate, that but little remark is needed.

3. It will be seen that, though the estimate is nominally Rs. 10,900, the excess amount required to be sanctioned is only Rs. 5,250. For this comparatively small sum, the jail will be provided with pumps, distribution system, hydrants, and bathing platforms, thus making the arrangements for water-supply of all kinds, drinking and bathing complete. The scheme is thus a very cheap one.

4. The pumps will cost Rs. 1,850, and I would specially invite attention to the Executive Engineer's statement in his letter, No. 3428, dated 1st September 1897 ~~(copy enclosed),~~ that he cannot commence any work until he gets the pumping plant. On this ground the local purchase of the pumps is strongly recommended, as it is very necessary, in view of the recent disastrous epidemic, to place the water-supply of the jail on a sound basis.

5. The water will be raised by the pumps into a large covered iron cistern 25 feet above ground level. This cistern is already in the jail, but the well near which it at present stands, supplies water unfit for drinking. It will therefore be shifted to a new well, a cover will be provided, and the whole water-supply will be distributed by pressure therefrom.

6. By these means all water, both for drinking and bathing, will be delivered in the yards untouched by hand, and free from all risk of pollution after leaving the well.

7. In place of the old bathing-troughs in which water was collected and a number of convicts bathed together, an overhead sytem of bathing platforms of the most inexpensive character will be provided. The overhead arrangements consist merely of a V shaped 1″ iron pipe, perforated with holes, and costing only Rs. 90 for all the bathing platforms put together. The water will be forced by pressure along these pipes which will thus produce a shower-bath, the men standing under it. The water will fall on the existing store platforms, whence it will flow off at once. There will be no trough for dirty water to collect in or for stagnant water to lie in, and there will be no fear of men drinking contaminated water in this way.

8. The drinking-water will be drawn off by press taps from the same hydrants which supply the bathing pipes, but at a lower level.

9. The plans and estimates have been examined by the Superintendent of the Jail and myself, on the spot, and appear to meet all requirements. The work of steining the well will necessarily take time. It cannot be begun till the pumps are got. It is therefore very desirable that early sanction to the estimate should be accorded. Provision to the extent of Rs. 2,060 exists in the Public Works Budget for 1897–98 (class A works, item 43), and this will be sufficient for the purchase of the pumps to be made and the steining to be begun at once. I trust, therefore, that the scheme may receive the very early sanction of Government.

10. As the expenditure on the last cholera epidemic of April—June 1897 has come to much over Rs. 10,000, it will prove economical in the end to take such measures as will diminish the chance of the recurrence of such calamities.

Endorsement No. 1981.

Referred to the Sanitary Engineer for very early remarks.

(By order.)

(Signed) A. R. KNAPP,
Ag. Under Secretary.

23rd September 1897.

From J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E., Sanitary Engineer to Government, to the Chief Secretary to Government, dated Fort St. George, 5th October 1897, No. 1589.

With reference to endorsement, No. 1981 of 23rd September 1897, I have the honour to forward my remarks in a separate note herewith.

Enclosure.

Note by the Sanitary Engineer to Government—Coimbatore Jail Water-supply.

Well.—The base of the steining which is splayed has less bearing area between the stepped portions than the steining above. On the contrary, the bearing area in the splayed portion should, if anything, be greater than in the portion above. It is suggested that the base of the steining shown on the plan thus:—

BACK PAPERS.

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3 „ „ „ to hospital.
2 one-inch stop-cocks for branch to grain stores.
2 „ „ to convict warders' quarters.

If 2¾-inch pipes are substituted for 1½-inch pipes, two 3-inch valves will be required and only one 1½-inch valve. The 3-inch valves can be readily joined to the 2¾-inch pipe; the small difference in size is immaterial. Each hydrant should also have a stop-cock of the proper size; judging by the price quoted by Messrs. Richardson & Cruddas for the hydrants, it is apparent that the cost of stop-cocks is not included. Without stop-cocks a hydrant could not be shut off for repairs. The ⊂ shaped pipe over the bathing platforms is not recommended. The pipe should be a simple W.I. pipe, either bored with holes all along its length or filled with brass or zinc roses, thus:

This would be found much more satisfactory than what is proposed.

12. No provision has been made in the estimate for branches, collars, and other pipes fittings (except under the item for unforeseen work).

Endorsement No. 2111.

Referred to the Inspector-General of Prisons for remarks with advertence to the Sanitary Engineer's note.

(By order.)

(Signed) A. R. KNAPP,
Ag. Under Secretary.

12th October 1897.

From A. G. CARDEW, Esq., M.A., I.C.S., Inspector-General of Prisons, to the Chief Secretary to Government, dated Hosdrug, 18th November 1897, No. C. 2719.

I have the honour to return the papers referred to me for remarks under Judicial endorsement, No. 2111, dated 12th ultimo.

2. The Sanitary Engineer's note was referred to the Executive Engineer, Coimbatore, who has dealt with the Sanitary Engineer's remarks seriatim in a letter, No. 4217, dated 4th November 1897, herewith submitted in original.

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(2) Existing pipes should be used so far as they are found in usable condition. It is unnecessary, as the Executive Engineer states, to alter the estimate.

(3) I agree with the Executive Engineer that the ⊂ shaped pipe is essential, and I consider that roses are not required. I have seen the perforated iron pipe in use and it works well.

4. The favour of very early orders on the estimate and on the requisition to purchase European stores locally is requested.

Enclosure.

From S. B. MURRAY, Esq., Executive Engineer, Coimbatore division, to the Superintendent, Central Jail, Coimbatore (through the Superintending Engineer, IV Circle), dated 4th November 1897, No. 4217.

I have the honour to return your No. 2879, dated 27th October 1897, with all enclosures, and to offer the following remarks on the note submitted by the Sanitary Engineer to Government.

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3. The capston and working path will, of course, be clear of the well; only the shaft from the bevelled gearing will run over the well. Instructions to this effect will be given when the pumps are being ordered.

It would certainly be advisable to have the pumps tested before despatch from Bombay (if procured there) and this can be arranged for. The suppliers will be told that they will be required to test the pumps at the time of ordering.

4. The quotation given by Messrs. Richardson & Cruddas distinctly includes suction and delivery pipes up to ground level; so no extra provision for the same has been made in the estimate.

5. The alteration in the position of the service tank is an unimportant point. If altered, as suggested, a part of the main distributing pipe will have to be laid in a curve or have a bend in it.

6. A single 4-inch outlet down pipe from the service tank can be provided.

7. The position of the junction of the pipes with the service tank and the scouring pipe are, of course, points which would be attended to when preparing a detailed specification after the estimate is sanctioned.

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9. A valve worked by a chain will be provided for in the detail specification, at the mouth of the outlet down pipe.

10. Stop-cocks were not provided on purpose, but they can be allowed for if desired. The system is a very simple one, and the want of stop-cocks has not been felt so far. Their introduction would make the arrangements more complete.

11. The ⊂ shaped pipe over the bathing platform is essential. A large number of convicts have to bathe at the same time, and a single pipe of this shape would suffice to meet the requirements. The existing platforms are broad and suitable for the proposed ⊂ pipe. The arrangement of roses would be better than a simple perforated pipe and they can be fixed about 3½ feet apart in the ⊂ pipe.

12. Minor details were purposely avoided in the report as their inclusion would have made it very bulky. There is ample provision in the estimate under unforeseen works for all minor items.

13. I am sending a revised application for permission to purchase European stores locally, through the Superintending Engineer, as the one attached to the file does not include pipes.

14. The pumps will probably have to be ordered from England by the suppliers; so advance orders permitting their purchase are requested.

No. 611—M.

Forwarded to the Superintendent, Central Jail, Coimbatore.

The revised application referred to in paragraph 13 is herewith sent with recommendation that it may be substituted for the original one sent to the Inspector-General of Prisons in this office letter, No. 495 M., dated 13th September 1897.

(Signed) J. HANNAN,
Supg. Engineer, IV Circle.

6th November 1897.

Order—No. 1654, Judicial, dated 26th November 1897.

The revised estimate, amounting to Rs. 10,900, is approved and will be transferred to the Public Works Department.

2. The suggestions of the Sanitary Engineer, most of which have been concurred in by the Executive Engineer, Coimbatore division, and the Inspector-General of Prisons, should be carried out. The provision for the ⊂ shaped pipe over the bathing platforms should, however, be retained.

3. The application for permission to purchase locally articles of European manufacture will be considered in the Public Works Department.

(True Extract.)

for *Chief Secretary.*

To the Inspector-General of Prisons. ✓ — with enclosures
" Public Works Department.
" Sanitary Engineer.

[illegible] complete copies with [illegible]

BACK PAPERS

Public works (1897) department

Current No: 12023

Government {1897} of Madras.

JUDICIAL.

Recd. 3 - 12 - } 1897.
Regd. 3 - 12 - }

Enclosures 15 (5 plans)

Spare copies

G.O., No. 1654, 26th November 1897.

NOVEMBER.

Coimbatore Central Jail.

Approving, with remarks, the revised estimate for the water-supply of the —.

I for scrutiny

Cmrs god

9-12-97.