MADRAS RECORD O

Government of Madras.

X & M DEPARTMENT.

G.O. No. 13067 Press
~~Mis.~~

Dated 14 - 8 - 1891.

Not to be folded or roughly handled

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

Read—the following papers :—

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, 13th April 1891, No. 282.

I have the honour to forward copy of correspondence between myself and the Chairman of the Municipality of Kumbakónam with reference to the submission of accounts for work done.

2. I need not point out to Government that it will in time become impossible for me to meet all the varied requisitions of Municipalities in regard to the mode and time of rendering accounts, and that it seems to me, therefore, that the best plan would be for me to be treated exactly as a Public Works officer executing works such as described in chapter XI, section 1342, of the Public Works Code. There is then the question who is to audit the bills of this department, not in an administrative but an account aspect, and whether this should be done by Accountant-General (Local Fund Department)—which would seem the most convenient—or by the Examiner of Public Works Accounts, I must leave to Government to decide.

Enclosures.

From J. A. JONES, Esq , mem. inst. c.e., f.r.s.e., Sanitary Engineer to Government, to the Chairman, Municipal Council, Kumbakonam, dated Camp, Kumbakónam, 28th November 1890, No. 28-I.

With reference to G.O., dated 4th November 1890, Mis. No. 1636 M., I have the honour to request that you will be good enough to place for the present at the Treasury the sum of Rs. 2,000 and send me a cheque book, so that I may when necessary draw against such amount. I will make arrangements to submit a monthly account of expenditure to the Council, and the amount of such expenditure can then be remitted to the separate account of the Sanitary Engineer monthly.

2. I propose to take upon myself the duty of paying the staff monthly and contingencies, &c., until the work starts, when I shall also deal with the contractors, and when work is started the imprest account may require to be increased.

3. To save two sets of accounts being kept I shall be obliged if you will send me a detailed account of all expenditure in connection with the scheme up to date, so that I may post up in my ledger in Madras.

4. Kindly advise the Treasury in reference to Sanitary Engineer's account to acknowledge cheques signed by myself or by my assistant, Mr. Hormusji Nowroji.

From M.R.Ry. S. SESHAYYA, Rao Bahadur, Chairman, Municipal Council, Kumbakonam, to the Sanitary Engineer to Government, Madras, dated Kumbakónam, 7th April 1891, No. 9.

[*Reference* —Your office letter, No. 28-I, of 28th November 1890.]

I have the honour to request that you will be good enough to cause to be sent to me at an early date a detailed account of expenditure incurred by you from the Municipal fund in March last in connection with the drainage scheme of this town, and the same to be continued for every month in future, so as to enable me to include the expenditure in this office accounts.

From J. A. JONES, Esq., MEM. INST. C.E., F.R.S.E., Sanitary Engineer to Government, to the Chairman, Municipal Council, Kumbakónam (through the Collector of Tanjore), dated Fort St. George, 13th April 1891, No. 281.

With reference to your No. 9, of the 7th instant, I have the honour to inform you that I presume that this request is made with reference to the terms of my letter, No. 28-I, of 28th November last.

2. Since the date of that letter and taking into consideration that with many Municipalities to deal with, I have looked further into the matter and now think that looking also to G.Os., dated 20th June 1890 and 4th November 1890, Mis. Nos. 950 M. and 1636 M., Local and Municipal, respectively, that the accounts should be dealt with by me exactly the same as if I were a Public Works officer.

3. In such a case accounts would not be rendered to the Municipality, but the vouchers would be audited exactly in a manner similar to what other Public Works accounts are.

4. I propose, however, to refer the matter to Government as one which affects the question of all my future dealings with Municipal and Government funds.

5. Meantime there is no necessity to keep the Municipal accounts for March open merely to adjust small items of expenditure for which an advance has been made—possibly there may be no need for such adjustment except tri-monthly.

No. 328.

Referred to the Accountant-General for very early remarks.

(By order).

FORT ST. GEORGE,
24th April 1891.

(Signed) N. S. BRODIE,
Ag. Under Secretary.

From M.R.Ry. S. SESHAYYA, Rao Bahadur, Chairman, Municipal Council, Kumbakónam, to the Chief Secretary to Government (through the Sub-Collector and the Collector of Tanjore), dated Kumbakónam, 28th April 1891, No. 66.

In G.O., dated 5th January 1891, Mis. No. 6 M., Government were pleased to direct the Chairman to advance to the Sanitary Engineer all sums required by him for the execution of the drainage project; but until detailed bills should be submitted they were to be treated as advances for works, and not be debited in the accounts to service heads.

2. Accordingly I placed in the local treasury Rs. 2,000 to the credit of Mr. Jones, and furnished him with a cheque book, that he might issue cheques for payment at the local treasury.

3. To my call for adjustment of accounts for March last, Mr. Jones was pleased to send me the enclosed communication; and I beg to submit, for the consideration of Government, the following remarks on the same:—

(1) The proposal of the Sanitary Engineer practically amounts to ignoring the Council in the matter of the drainage works. I seriously doubt whether such a course would be legal. The Council, I beg to submit, ought to have the right of checking, in the ultimate resort, all municipal expenditure. Financial control is the chief function of Municipal Councils. I do not wish to question in the least the superiority of professional check over the unprofessional; but the latter is not altogether useless, and economy is sometimes secured by it, when it is backed by local knowledge. I am compelled to submit these observations for the consideration of Government, because of the question often put to me in the Council as to what is being done in connection with the drainage works. So long as Mr. Walsh was in charge of the works, the Council and the Chairman were in perfect ignorance as to what was going on with the drainage works. Matters have, I am glad to observe, changed since Sub-Conductor A. C. Lord was put in charge of the works. The Sanitary Engineer has courteously kept me informed from time to time as to what is being done, and I communicate the same to the Council. In these circumstances,

I beg to submit that it is not advisable to deprive the Council of the right of checking the drainage bills, due deference being, of course, paid to professional control.

(2) So long as bills are not submitted to the Council with necessary vouchers, payments made on the orders of the Sanitary Engineer have to be treated as advances, and I do not see my way to closing the accounts without adjustment of the advances. If it is the order of Government that the advances made to the Sanitary Engineer should be treated as payments requiring no vouchers in this office for supporting them, the accounts might be closed as they are.

4. I beg to take this opportunity of submitting whether it would not simplify the accounts if the Sanitary Engineer were to order all his payments in connection with the drainage works by means of bills on the Municipality payable like other bills. The Sanitary Engineer is the best judge of the position, and must consult convenience and despatch of work in his office, dealing, as he does, with so many institutions. I make the suggestion only for the facility of municipal accounts.

R. No. 1529.

Forwarded.

2nd May 1891.

(Signed) C. J. WEIR,
Ag. Sub-Collector.

No. 398 M.

Forwarded.

TIRUTURAIPUNDI,
7th May 1891.

(Signed) J. THOMSON,
Acting Collector.

No. 380.

Referred to the Accountant-General, in continuation of endorsement, dated 24th April 1891, No. 328.

(By order.)

FORT ST. GEORGE,
19th May 1891.

(Signed) N. S. BRODIE,
Ag. Under Secretary.

From T. W. RAWLINS, Esq., Accountant-General, Madras, to the Chief Secretary to Government, dated Fort St. George, 3rd June 1891, No. 64-L.F.D.

With reference to the Under Secretary's endorsements, Nos. 328 and 380, dated 24th April and 19th May 1891, respectively, referring to me for remarks letters from the Sanitary Engineer to Government and the Chairman of the Kumbakónam Municipality regarding the manner of accounting for expenditure on the Kumbakónam drainage works entrusted for execution by the former of these officers, I have the honour to observe that the accounts of the works referred to must be dealt with either—

(*a*) by placing at the disposal of the Sanitary Engineer, both in the local treasuries and in the Bank of Madras, such sums as may from time to time be required for expenditure by that officer. These should be debited in the District Municipality's accounts to the suspense head "Advances" pending adjustment by the submission of accounts with vouchers to be audited either by the Accountant-General or the Public Works Examiner,—preferably the former, as he is already entrusted with the annual audit of the accounts of District Municipalities by means of his special inspecting staff;

(*b*) by placing the requisite funds at the disposal of the Sanitary Engineer in the manner explained in (*a*) above and debiting them to "Advances," but accounting direct to the Municipal Council for the outlays incurred; or

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(*a*) by placing at the disposal of the Sanitary Engineer, both in the local treasuries and in the Bank of Madras, such sums as may from time to time be required for expenditure by that officer. These should be debited in the District Municipality's accounts to the suspense head "Advances" pending adjustment by the submission of accounts with vouchers to be audited either by the Accountant-General or the Public Works Examiner,—preferably the former, as he is already entrusted with the annual audit of the accounts of District Municipalities by means of his special inspecting staff;

(*b*) by placing the requisite funds at the disposal of the Sanitary Engineer in the manner explained in (*a*) above and debiting them to "Advances," but accounting direct to the Municipal Council for the outlays incurred; or

(*c*) by the Municipal Council making disbursement on bills and other vouchers duly checked and passed for payment by the Sanitary Engineer, and by debiting the outlay thus incurred direct to the budget heads concerned.

2. The first of these schemes would involve very considerable increase of work in the office of the Sanitary Engineer, who would have to keep up a complete set of accounts and registers, as well as in those of the District Municipalities concerned, and would have the additional disadvantage of causing some delay in the adjustment of the advances made.

3. Notwithstanding these disadvantages, concurrent and regular audit in my office appears to have been preferred by the Sanitary Engineer, in consideration, apparently, of the heavy expenditure on the works of the kind under notice and of the check it would impose on outlay in excess of or without allotments, though he really has the remedy in his own hand.

4. *System* (*b*).—Although this would dispense with the necessity of the special establishment and the consequent system of double audit necessary under System (*a*), as well as with the preparation of vouchers in triplicate, it would involve additional account work in the Engineer's office and would entail the same adjustments as Scheme (*a*). Under the circumstances, therefore, System (*b*) also does not commend itself for adoption.

5. System (*c*) has the advantage of simplifying the accounts to be maintained and rendered by all concerned. It is the cheapest of the three systems under consideration, and has the following further advantages :—

(1) No funds need be placed at the disposal of the Sanitary Engineer beyond a sum sufficient to meet petty expenses connected with advertisement and other charges. This will greatly reduce the amount of Public Works expenditure that must pass through the "Advance Account." For petty payments and for payments on account of daily labour by the officers or subordinates in immediate executive charge, imprests may be allowed. The Sanitary Engineer would exercise a professional check as controlling officer and pass for payment the bills and other vouchers relating to works executed after the required scrutiny. On receipt of these vouchers with the counter-signature of the Sanitary Engineer, the necessary payments would be made by the Chairman with the knowledge and under orders of the Council.

(2) The Sanitary Engineer would not maintain any other accounts than imprest accounts (in the ordinary Public Works form) and the register of works with its subsidiaries to guard against expenditure in excess over sub-heads of estimates, &c. The register of works would also be found useful for purposes of the annual reports required by No. 9 of the Sanitary Board rules to be rendered to Government, or for any other statistics which might be considered necessary.

(3) The amounts disbursed from time to time on bills, &c., being duly passed by the Sanitary Engineer, would at once be finally debited to the budget heads concerned, and thus no advances for works would be shown as outstanding at the end of the year.

6. Under the existing system, cheques are issued in payment by the Sanitary Engineer and transmitted to the parties concerned for encashment at the local treasuries. Under System (*c*), payments would be similarly made by cheques issued direct by the Chairman himself, instead of by the Sanitary Engineer. There would thus be no cause for delays in disbursements.

7. Payments required to be made at Madras for pipes, machinery, &c., could be made in the same manner as those made by Municipalities in the case of similar purchases.

8. I may add that, even under the system recommended for adoption, the Sanitary Engineer would be quite competent to decide upon the agencies to be employed for the execution of works, whether contract or departmental, and to arrange for all the other necessary details connected therewith; and that if contractors are entertained, their selection will, of course, rest with that officer.

Order—dated 24th June 1891, No. 955 M., Local and Municipal.

Of the three alternative systems referred to by the Accountant-General in his letter read above, the third and last is, as stated by him, at once the most simple and most easily carried out. It is therefore approved, and will be adopted by the Sanitary Engineer in future.

2. In this connection, it must be clearly understood that, in selecting contractors, settling the terms of contracts, and making arrangements for the purchase of the necessary stores and plant, full discretion must vest in the Sanitary Engineer. Any objections which may be raised by the Councils concerned will be duly considered, but must be addressed to Government through the Sanitary Engineer, and will, on no pretext whatever, be allowed to interfere with the prompt execution of the works in progress. Unless Councils are willing to accept these conditions, the services of the Sanitary Engineer, and any aid which may have been promised from Provincial funds, will be withdrawn.

3. The amount of the imprests required by the Sanitary Engineer must be settled by that officer in communication with the Councils concerned. All contracts arranged for by him will be drawn out in the name of the Council under its authority and signed by the Chairman and one of the councillors, as required by section 45 of the Municipal Act. Any letters which it may be necessary to despatch, containing orders for stores or plant, must be legalized in the same manner.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Sanitary Engineer.
„ the Accountant-General.
„ all Chairmen of Municipal Councils,
through the Collectors concerned.

Exd. A. Raitt.

Govt. of {1891} Madras.

LOCAL AND MUNICIPAL.

Issued

Recd. *Encl.*

G.O., 24th June 1891, No. 955 M.

JUNE.

Works.

Passing orders on the subject of accounting for expenditure on drainage and other works executed under the supervision of the Sanitary Engineer.

Read - also the following papers:-

11 P

FORM A.

No. 166

GOVERNMENT OF MADRAS.

OFFICE OF SANITARY ENGINEER,

Fort St. George, 11th March 1891.

674 Loc

From

J. A. JONES, ESQ., MEM. INST. C.E., F.R.S.E.,

SANITARY ENGINEER TO GOVERNMENT,

To

The Chief Secretary to Government
Local and Municipal Department

SIR,

In addition to works at Kumbakonam Government have now been pleased to direct the immediate execution of works for Drainage and Water Supply at Coonoor and Trichinopoly respectively and it may be presumed that there will not be much delay in starting works at Dindigul and Madura and also at Adoni.

2. As you are aware I have no staff to superintend the execution of such works and with reference to Coonoor I have already in anticipation of the course meeting the views of Government taken steps to put on an officer at Coonoor Vide my No. 80 of 9th February 1891.

3. For Trichinopoly however where an expenditure of about four Lacs will be incurred it

it will be necessary to have a superior officer
and so also in other places where the expenditure
proposed is large.

6. The works will go on increasing in
number year by year and though probably it will
be impossible to have under construction without
a very large staff more than 6 works at a time
it is evident that for even that amount of work I
must have responsible subordinates as I cannot
with my large range visit works under construc-
tion as often as is desirable.

5. I therefore open up the whole question
of staff for the execution of Municipal works.

6. I have in my No. $\frac{T}{91}$ of the 24th Ultimo
proposed a plan by which if approved I shall
be enabled to get through all the work of an
initiatory nature; but when works have been
sanctioned and we arrive at the stage which re-
quires the preparation of detail drawings, spe-
cifications, working estimates and the actual
supervision and execution of the works, some
more staff is necessary.

7 It has been suggested that the
Public Works Department should undertake
the execution of the sanctioned works. This no
doubt if the Public Works Department can
spare

Con. 563 #/91

spare men to be in actual charge and Engineer
to superintend would save me a great deal of
time and labor but as I shall be practically
responsible for the work the designs for which
will have been prepared in my department,
it would be necessary for me to superintend
at least to some extent their execution and it
is probable that differences might arise between
the superintending Engineers and myself, I do
not think that the divided responsibility would
be for the benefit of work or to the advantage
of Government or the Municipality concerned.

8. It appears to me therefore it would
be better for provision to be made for a sepa-
rate staff; junior officers of the Public Works
Department could be put in charge of the exe-
cution of a work or group of works with a sub-
ordinate on each particular work on special
men might be engaged.

9. For instance Trichinopoly might be
grouped with Dindigul and Madura all
these places are near to one another.

10. Kurnool and Bellary might form
another group. Kumbakonam and Sanjore
another. Salem Vellore and Tirupati another
and so on.

Coonoor

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upto 15th

12

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6. I have in my No. T/91 of the 24th Ultimo proposed a plan by which if approved I shall be enabled to get through all the work of an initiatory nature; but when works have been sanctioned and we arrive at the stage which requires the preparation of detail drawings, specifications, working estimates and the actual supervision and execution of the works, some more staff is necessary.

Con 563 T/91

7. It has been suggested that the Public Works Department should undertake the execution of the sanctioned works. This no doubt if the Public Works Department can spare

11. Coonoor and Coly might also be grouped. There are two projects at the former, one sanctioned and the other likely to be so and one at the latter but these with the Municipal Engineer at Coly would probably not require any more than the subordinate officer I proposed to appoint at Coonoor.

12. As a beginning an officer might be transferred from the Public Works Department for Trichinopoly or I might transfer my own Assistant to that work (at an increased salary which he much deserves) and a Public Works officer might become my Assistant until he is acquainted with the class of work in the department. He in turn might go out on a group of works.

13. If Government approve of this latter arrangement it seems to me the one most desirable.

14. I have further in connection with the execution of Municipal works to ask Government to accord sanction for the following proposals:-

(1) That it being necessary for me to appoint subordinates from time to time power be granted to me to appoint such subordinates

subordinates temporarily with pay up to a maximum of Rs 200 monthly so long as the amount under the contingent head in each estimate is not exceeded and with regard to the amount available for establishment and contingencies.

(2) That when an estimate is sanctioned that my powers extend to the ordering on behalf of Government and the Chairman of the Council concerned, machinery and materials as provided in the estimates and to enter into the necessary contracts for execution of the works or for making any other necessary arrangement for carrying out the sanctioned estimate. This has already been done in the special case of Kumbakonam.

(3) That so soon as an estimate is sanctioned and funds are available to the Municipality for the work, an account be opened in the local treasury in my name and such funds as are necessary placed at my disposal from time to time as an advance or imprest, the imprest account being reconped on submission of bills properly signed and vouched for the work as completed and paid for.

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(2) That when an estimate is sanctioned that my powers extend to the ordering on behalf of Government and the Chairman of the Council concerned, machinery and materials as provided in the estimates and to enter into the necessary contracts for execution of the works or for making any other necessary arrangement for carrying out the sanctioned estimate. This has already been done in the special case of Kumbakonam.

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(4) The appointment of an agent at home being necessary who can arrange for the payment against bills of lading on shipment of machinery, pipes &c (should tenders from English Firms be accepted and they will probably be found cheaper than local firms), that Messrs H. L. King & Co. who are the Madras Municipal agents be so appointed. Their charge is 2½ per cent and they also appoint when necessary inspectors to pass machinery and pipes before acceptance in England; their charges will be covered by the rates in the estimates which are intended to include the English price of goods plus shipping charges freight ~~and~~ landing charges and conveyance by rail to site in this country. This course I consider very preferable to ordering machinery through the India office Store Department where very considerable delays occur.

15. As the works increase in number I shall from time to time as necessary ask for an increased staff but if my proposals as above are generally sanctioned I shall be able to proceed with the works already ordered for execution.

16. As I shall not be able to do much as regards Trichinopoly until the above points

points are settled I trust that orders may issued at an early date.

I have the honor to be,
Sir,
Your most obdt servant.

Sanitary Engineer to Govt

C No 4241

9]

LOCAL AND MUNICIPAL DEPARTMENT.

Local & Municipal Dept
CURRENT No 674 M

From

The Sanitary Engineer
to Government.

Rd 17-4-91
Encl

No. 166

Dated 11-3-91

Received 12-3-91

Enclosures

SUBJECT.

Re stating that he has no staff to Superintend the execution of works, entrusted to him suggests that Junior officers of P.W.D. could be put in charge of a work or group of Works with a Subordinate on each particular work and requests that in connection with the execution of Municipal Works he may be granted certain powers.

11th 3/91
21

For

No 290

158

Referred to the Chief Engineer in continuation of G.O. dated 2nd April 1891 No 479 M. Mis for consideration of these proposals in connection with the questions referred in that G.O

Maja R.E

Fort St George
16th April 91

Under Secretary P.W.D.
for chief Secretary

× Cat 3773 Sent to ooty 4-4-91

0
12/4
John

Public Works Department

No. 257 D dated Ootacamund 26th May 1891

CURRENT No 1277 M

Endorsement

Proceedings in the Local and Municipal Department No. 479 M dated 2nd April 1891.

A

Letter from the Sanitary Engineer to Government No. 166 dated 11 March 1891.

A

Endorsement thereon by the Local and Municipal Department No. 290 dated 16th March 1891.

A

Memo by the Sanitary Engineer to Government.

Q A

Joint note by the Ag. Chief Engineer P.W.D and Sanitary Engineer to Govt dated 21st May 1891.

A

The joint note required by para 3 of the orders quoted above is herewith transferred to the Local and Municipal Department

C. No 4241

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LOCAL AND MUNICIPAL DEPARTMENT.

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Joint note by the ag: Chief Engineer P.W.D and Sanitary Engineer to Govt.
A with Encl dated 21st May 1891.

The Joint note required by para 3 of the orders quoted above is herewith transferred to the Local and Municipal Department

Department together with a note "for orders" dated 22d May 1891 and the receipt of the Hon'ble Member thereon.

2. It is thought that the proposed application to the Government of India for the services of Assistant Engineers should be deferred until it is decided whether they, with the Sanitary Engineer, would be attached to, or be outside the ordinary P. W. Department.

CHIEF SECRETARY'S
27 MAY 91
GOVERNMENT

H Smith
Lt-Col. R.E
Ag. Jt. Secy. to Govt.
P. W. D.

To
The Local and Municipal Dept.
with the 4 enclosures forwarded with No 479 M
dated 2-4-91 and the following papers.
1. Letter from Sanitary Engineer to Govt. with endt. by L & M Dept No. 290 16-III-91.
2. Memo by the Sanitary Engineer to Govt. marked A.
3. Joint note by the Ag. Chief Engineer and Sanitary Engineer dated 21-5-91
4. Note "for orders" dated 22-5-91 and the receipt of the Hon'ble Member thereon

P. W. D.

Proposals for establishment for Sanitary Engineer. (With reference to G.O. No. 479 M. dtd 2d April 91) by Ag Chief Engineer and Sanitary Engineer.

Read Memo: by the Sanitary Engineer marked A put up herewith.

Also his No. 116 of 11th March 1891 enclosed forwarded with Endt. from the L & M. dept No. 290 dated 16.4.91

It is evident from the large amount of work sketched out in A that if this work is to be carried out in a satisfactory manner without hindrance a special staff must be allowed whether this be provided by advertising in the open market or by officers and

Department together with a note "for orders" dated 22nd May 1891 and the prescript of the Honble Member thereon.

2. It is thought that the proposed application to the Government of India for the services of Assistant Engineers should be deferred until it is decided whether they, with the Sanitary Engineer, would be attached to, or be outside the ordinary P. W. Department.

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with endt. by L & M Dept No. 1290
2. Memo by the Sanitary Engineer 16-III-91.
to Govt. marked A.
3. Joint note by the Ag. Chief Engineer
and Sanitary Engineer d/ 21-5-91.
4. Note "for orders" d/ 22-5-91 and
the prescript of the Honble Member thereon.

P. W. D.
168

Proposals for establishment for Sanitary Engineer. (With reference to G.O. No. 479 M. Misc of 2nd April 91) by Ag Chief Engineer and Sanitary Engineer.

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27 MAY 91
GOVERNMENT

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Read Memo: by the Sanitary Engineer marked A put up herewith.

Also his No. 166 of 11th March 1891 enclosed forwarded with Endt from the L & M. dept No. 290 d/16-4-91

It is evident from the large amount of work sketched out in A that if this work is to be carried out in a satisfactory manner without hindrance a special staff must be allowed whether this be provided by advertising in the open market or by officers and

subordinates lent by the P.W.D.

The existing staff of the P.W.D. has more than enough work as it is, and in times of pressure it is almost impossible to carry work on satisfactorily.

It is therefore evident that the P.W.D cannot spare a single man to lend to the Sanitary Department. Whatever happens or however constituted, the staff of the Sanitary Department must be in excess of the present strength. and therefore a special additional service must be provided for.

This being so, the question is how such service shall be constituted.

It is thought that the proposal that the works when designed and estimated by the Sanitary Engineer and duly approved by Government should be carried out by Executive Engineers of Divisions will not be at all a satisfactory arrangement for

(1) Works of this class require constant & continuous supervision, and it will be impossible for an Executive Engr

of the S.W.D, who now a days has so large a charge that it takes him a year to see the whole of it, to devote sufficient time for this purpose -

(2) It is always very difficult in this class of work to carry out without constant reference the plans and estimates made by others.

(3) There would be a dual control - no man can serve two masters. on the one han the Safety Engineer of the Circle would have just cause

for complaint if the Executive Engineer neglected, as he would be obliged to do, his own proper work in order to supervise work for the Sanitary Engineer, and the latter would undoubtedly grumble if his work was either not carried out expeditiously or scamped in the absence of proper supervision.

Then again the Sanitary Engineer would be quite justified in declining all responsibility in the results of these designs if the wor

of the S.W.D, who now a days has so large a charge that it takes him a year to see the whole of it, to devote sufficient time for this purpose -

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for complaint if the Executive Engineer neglected, as he would be obliged to do, his own proper work in order to supervise work for the Sanitary Engineer, and the latter would undoubtedly grumble if his work was either not carried out expeditiously or scamped in the absence of proper supervision.

Then again the Sanitary Engineer would be quite justified in declining all responsibility in the results of these designs of the other

ot placed in the position
of a superintending
officer with powers to
alter or modify such
designs, for in these kinds
of works it is impossible
to foresee all requirements.

Then as regards the
position of the Chief
Engineer P.W.D. with regard
to the Sanitary Dept.
if he is to scrutinise
or revise the designs
and lead his officers to
the Sanitary Dept to carry
them out, in case of
failure or misadventure
the P.W.D. would be
held to blame though
as is above shewn
it will be impossible for
it to undertake such
works satisfactorily.

Taking all these
things into consideration
it is thought advisable
to make the Sanitary
Engineer and his Dept
totally independent
of the P.W.D. as far as designing
and execution of work is concerned

except of course that
the Chief Engr. P.W.D. should
act as adviser to the Govt.
on all schemes they may
wish to consult him
about. Subordinate Staff

The Sanitary Engr. should
have under him a staff
sufficient for the pur-
poses of investigation and
execution of the works
required, and for this
purpose it seems that
the undermentioned Staff
Staff is necessary. This
is proposed with
the idea of carrying
out all the works within
a few years, but it might
be thought advisable to
commence with only one
or two sets of works geogra-
phically close together
and then on Completion
transport the staff else-
where in much the same
way as the Tank Restoration
Scheme is being Carried
on. This would, however,
delay

delay work very much, and there are several towns lying far apart for which schemes have been more or less matured and ready almost for execution. This will be a question for the Govt to decide. It is proposed divide the Presidency roughly into 3 Sanitary Circles, each Sanitary Circle to consist of 2 D.P.W. Circles

The Sanitary Engr would have charge of the whole, and be Director of all the works whether of investigation or execution, with powers of Supg. Engr D.P.W. It might be a convenient arrangement and relieve the Local Dept of much work if the Sanitary Engr were made Secretary to Govt. under him would be a Deputy Sanitary Engr whose sole duty it would be to Supervise generally the works under execution, or in case of necessity where the Sanitary Engr could not take up certain work, to direct the designing of such work; the Deputy to have the powers of an Exec. Engr D.P.W. Under the above would be 3 Assistant Sanitary Engrs, each in charge of a Sanitary Circle for the purposes of directing Surveys, &c

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to under instructions of Sanitation or Deputy Sanitary Engr. Read over existing Sanitary works as may have been sanctioned.

Subordinate Staff — This will at first be small. The number to be decided by the Sanitary Engr and will increase as work develops, but according to Statement A. a fairly large number will be at once required, and the number will be restricted not by the amount of work there has to be done so much as by the difficulty in procuring efficient recruits, and herein lies the crux of the whole question. There is no other source from which experienced men (and no other sort will do for works of this nature) can be obtained except from the ranks of the D.P.W. Some few may be obtained from retired D.P.W men, but very few as they must be physically capable men as well as experienced. The only plan that suggests itself is to augment, as early as can be, but gradually the existing D.P.W Strength — to transfer a few capable men to the Sanitary Dept.

Their

places being taken
in the D. W. D by promotion
junior and deserving
and putting new hands on
(and there are several non-
passed practical Course
men unprovided for) at
the bottom. This temporary
tion of the D. P. W. seems to
be the only way out of the
difficulty if the Sani-
tary works are really
to be carried out at
all satisfactorily.

All the above staff
with the exception of the
Sanitary Engineer who
will thus be the Head
of a Separate Depart-
ment, will be
graded for pro-
motion, &c in the
D. P. W. and
their status will
be regulated
in an exactly
similar manner

and individuals, either
officers or subordinates,
may or may not be
a question to be decided
by Govt. / transferable
from one Department
to the other. The officers
would thus remain Govt.
officers and would not
be lent to Municipalities
and no question as to
pensionary contributions
would arise. As regards
temporary staff which
will be required on
each work from time
to time the employment
of these could be regulated
in the same manner
as in the D. P. W.

Accounts. As regards
accounts it might be
advisable to treat the
whole of the Sanitary
Department as one large
D. P. W. Division under
the Examiner D. P. W. the
Assistant Sanitary Engineer
to be as Sub Divisional
Officer

Hours D. S. W. and the Deputy Sanitary Engineer as an Executive Engineer to render accounts to the Examiner direct A reference on this point has already been made to Govt. by the Sanitary Engineer but no orders have as yet been received.

Stones. As great delay is experienced in many instances where stones are ordered through the India office it would be advisable to order them as is done in the Madras Municipality through an agent in England, who could arrange with the firms whose tenders might be accepted for the payment against bills of lading on shipment of machinery. Municipalities are not bound to get supplies through the Secretary of

of State. The other proposal made by the Sanitary Engineer in his no. 1166 of 11th March 1891 in respect to agency and powers of making contracts and as to the manner in which funds will be placed at his disposal seem satisfactory.

Funds. As regards the contributions from Municipal Funds towards Establishment and Works, it will rest with the Govt. to decide the amount in each particular case, but doubtless the bulk of the money will have to be provided from Provincial funds, but it may be pointed out that the Municipalities under the above scheme will be relieved from making the grants now required for [illegible] Office. An increased

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the office staff is apparently desirable, but Mr. Jones will submit separate proposals on this head which will include the necessary accounts staff.

H.C.
E.N.

A

33 x

Extract from Memo by the Sanitary Engineer to Government

33 x

× × × ×

The towns which are now being dealt with are as follows—

North Arcot District

Vellore - Water supply scheme; levels taken
Tirupati - Drainage scheme; levels taken

South Arcot District

Chidambaram - Water supply scheme; levels being taken by P.W.D.

Bellary District

Bellary - Water supply scheme - levels not yet taken nor any investigation made.

Adoni - Scheme submitted but details, schedules, abstract plans etc yet to be done.

South Canara District

Mangalore - Drainage scheme ordered to be investigated

Chingleput District.

Conjeveram - Water supply scheme to be prepared. No levels taken yet

Chingleput - Drainage scheme is to be prepared

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J.L. A.L. E.W.

A

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× × × ×

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Tirupati - Drainage scheme; levels taken

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Chingleput District.

Conjeeveram - Water supply scheme to be prepared. No levels taken yet

Chingleput - Drainage scheme is to be prepared

prepared.

Coimbatore District

Coimbatore - Water supply and drainage schemes under investigation. Levels taken.

Erode — Drainage scheme to be prepared.

Karur — do — do — do —

Cuddapah District

Cuddapah Dranage scheme ordered to be prepared - funds granted.

Ganjam District.

Berhampore - Water supply scheme under investigation. levels taken by D.P.W.

Chicacole - Drainage scheme to be prepared - funds granted.

Godavari District

Cocanada - Water supply scheme to be prepared - funds granted.

Rajahmundry - Water supply scheme to be prepared but funds not as yet granted.

Ellore — Drainage scheme to be prepared.

Kistna District

Masulipatam Water supply required artesian

artesian well to be bored (sanctioned)

Guntur - Water supply scheme under investigation.

Bezvada - Water supply and drainage under investigation, levels taken.

Kurnool District

Kurnool - Water supply under investigation - preliminary report submitted.

Madura District

Madura - Water supply scheme Estimate under preparation.

Dindigul - Water supply scheme - Estimates submitted.

Periyakolum Dranage estimate to be prepared.

Salem — do — do — do —

Malabar District

Calicut - Drainage scheme to be prepared

Cochin - Water supply and drainage scheme ordered

Tellicherry - Drainage and Water supply schemes

Cannanore - Drainage scheme

Nellore District

Nellore — Drainage scheme ordered water supply to be investigated funds asked for.

Ongole — Water supply scheme — Estimates ordered.

Nilgiris District

Ootacamund. South water supply estimates submitted.

Coonoor — Drainage under execution
Water supply schemes submitted.

Salem District

Salem — Drainage and water supply projects under investigation
Levels taken.

Tanjore District

Tanjore — Water supply estimates under preparation

Negapatam — Drainage scheme ordered to be prepared.

Kumbaconam — Drainage under execution

Tinnevelly District

Tinnevelly — Report on water supply scheme ordered.

Palamcottah — do — do —

Tuticorin — do — do —

Trichinopoly District. Trichinopoly Water supply scheme Estimates submitted

Srivangam — Report on water supply submitted.

Vizagapatam Dt. 37/2688

Vizagapatam — Water supply scheme Estimates to be prepared.

Ex. 1916

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[9]

LOCAL AND MUNICIPAL DEPARTMENT.

CURRENT No. 1277.

352 M. 90 12-3-91
573 M. 90 4th April 91.
479 M. 90 2-4-91
630 M. 91 4-11-91.

Hm

From The C. W. Khatt

No. 257 D.

Dated 26-5-91.

Received 29-5-91.

Enclosures 4 and Clos. 3017 & 3052 4
and 19306 74 M/91 red. 1/0

SUBJECT.

Forwarding
with reference to para 2 of the memorandum
of the Public works departt

Transferring the
papers reg. the staff required
for the execution of Water supply
and Drainage works and stating
that the proposed application to
the Govt. of India for the services
of Sanit. Engineers should be
deferred until it is decided
whether they, with the Lawson
Engineer, would be attached
to or be outside the Director

For

Memo

41

G. O, dated 2nd April 1891, no 479 M, Mis.

The first point, it seems to me, which
it is necessary to settle is to what extent
is the work of the Sanitary Engineer to be
executive & to what consultative.

For if his work is to be that of
advising on schemes & drawing up schemes
& their submission & if his work is to end
there, a different staff both in respect of
rank & number will have to be allotted
than if he is also to carry out the works
when sanctioned.

If his position is to be that of
Superintending Engineer that is if he is in
addition to the submission of schemes merely
to inspect them during execution & leave the
work & the accounts in connection therewith
entirely to the officer in charge of the work
then in most cases officer not under the
rank of an Assistant Engineer will be
required; on the other hand if he is to see
to the execution of the works, keep the accounts
&c, an account staff must be provided for

for his office and in some cases Assistant Engineers will be required at the works & in others upper subordinates will be sufficient.

There is a further point & that is are the officers of the Sanitary Engineer's department to be lent to Municipalities in future or are they to be Government officers as is the sanitary Engineer doing Government work. The latter plan would be much more preferable because the pensionary contribution would be avoided & correspondence with Municipalities would be saved.

The work of the department is gradually growing & it is certainly more than one man without a deputy can now efficiently manage.

The work in regard to each town entails or will entail

(1) a preliminary report sometimes accompanied by sections & sketches and this after an inspection and acquaintance with town.

(2) a report, plan & estimates in detail

(3) on receipt of sanction the preparation

of detailed schedules, drawings, the taking in of tenders & the arrangements for the supply of materials most of which have to be procured from England.

(4) the execution of the works including the necessary payments & keeping of accounts.

The towns which are now being dealt with are as follow:-

North arcot district

Vellore - water supply scheme; levels taken

Tirupati - drainage scheme; levels taken

South arcot district

Chidambaram - water supply scheme; levels being taken by P.W.D.

Bellary district

Bellary - water supply scheme - levels not yet taken nor any investigation made.

Adoni - scheme submitted but details schedules, abstract plans &c yet to be done.

South Canara district

Mangalore - drainage scheme ordered to be investigated.

Chingleput district

Conjeeveram - water supply scheme to be prepared. No levels taken yet

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Chingleput District

Conjeeveram - water supply scheme to be prepared. No levels taken &c

Chingleput — drainage scheme is to be prepared

Coimbatore district

Coimbatore — water supply & drainage scheme under investigation - Levels taken.

Erode — drainage scheme to be prepared

Karur — ——do——do——do——

Cuddapah district

Cuddapah — drainage scheme ordered to be prepared. funds granted

Ganjam District.

Berhampore — water supply scheme under investigation; levels taken by P.W.D.

Chicacole — drainage scheme to be prepared - funds granted

Godavari district.

Cocanada — water supply scheme to be prepared - funds granted.

Rajahmundry — water supply scheme to be prepared but funds not as yet granted.

Ellore —— drainage scheme to be prepared.

Kistna district

Masulipatam — water supply regained artesian well to be bored (sanctioned)

Guntur — water supply scheme under investigation.

Bezwada — water supply & drainage under investigation, levels taken.

Kurnool district

Kurnool — water supply under investigation - preliminary report submitted -

Madura district

Madura — water supply scheme - Estimate under preparation.

Dindigul — water supply scheme. Estimates submitted

Periya kolum — drainage estimate to be prepared.

Palni —— do —— do —— do

Malabar District

Calicut — drainage scheme to be prepared

Cochin — water supply & drainage scheme ordered.

Tellicherry — drainage & water supply schemes.

Cannanore — drainage scheme.

Nellore district.

Nellore —— drainage scheme ordered, water supply to be investigated, funds asked for.

ongole — water supply scheme - Estimate ordered -

Nilgiri District

Ootacamund - south water supply - Estimates submitted -

Coonoor —— Drainage under execution - water supply scheme submitted -

Salem District.

Salem — Drainage & water supply projects under investigation Levels taken -

Tanjore District.

Tanjore — water supply, estimates under preparation -

Negapatam - Drainage scheme ordered to be prepared -

Kumbaconam - Drainage under execution.

Tinnevelly District.

Tinnevelly — Report on water supply scheme ordered.

Palamcottah —— do —— do —

Tuticorin —— do —— do ——

Trichinopoly District.

Trichinopoly — water supply scheme Estimates submitted

Srirangam — Report on water supply submitted -

Vizagapatam District.

Vizagapatam - water supply scheme. Estimates to be prepared -

as to outdoor work, there is only one surveyor who can take up any small amount of levelling work for other levels the councils have severally been asked for funds - but this is unsatisfactory as good men are not to be got - in fact at present I cannot get surveyors fit for the work -

In indoor work, I have one assistant & it is impossible for him as he has also outdoor work to do, to set up the details necessary for the preparation & submission of estimates & reports except for a very limited number of places - He has much work in connection with plans & estimates submitted by Municipalities & District Boards - and when it comes to getting up detailed schedules and making contracts it is simply impossible to undertake the work.

For outdoor work for any work over a lakh I think assistant Engineers should be employed and for setting up schemes such for instance as Bellary water supply & both for the Indoor & outdoor work I require an Assistant Engineer.

An assistant or Deputy Sanitary Engineer should I think be appointed & I could employ two or three assistant Engineers or Upper subordinates in the preparation of some of the many schemes above mentioned.

As accounts they must either be kept in the work by the Officer in charge but it would probably be more economical if they were kept in my office all cheques & payments made for them especially as large amounts will have to be had to meet English Bills & the stores such as pipes & machinery will be landed in some seaport or other.

How all this is to be arranged for must be left for discussion but an increase to my indoor staff of some superior officer is desirable and officers for outdoor works are

49X

urgently required.

I think that except for the indoor staff which Government are now defraying a general contribution from Municipalities might be required as the services of these officers would be available for all Municipalities as required but the officers themselves should belong & the Sanitary Engineer's department & be at his disposal.

[signature illegible]
Sanitary Engr & Chief

For present indoor staff we should I have to employ from Municipal funds 1 Surveyor, working on Imperial & Provincial Schemes on Commission, 1 in Imperial Schemes

Staff of Office of Sanitary Engineer Division

1 - assistant to Sany Engs

1 - Offic assistant

3 - Draftsmen

1 - Tracer -

1 - Surveyor -

4 - clerks -

4 - Peons -

4 - Lascars -

Q

Items by the Sanitary Engineer

Public Works Dept.
674 Ire

1891.

From

The Sanitary Engineer
to Government,

To

The Chief Secretary
to Government
L & M Dept.

No. 166

Dated 11
Despd. 11 — March 1891.
Recd.

Enc. –

Subject.

In stating that he has no staff to superintend the execution of works entrusted to him suggests that junior officers of P.W.D could be put in charge of a work or group of works with a subordinate on each particular work & requests that in connection with the execution of Municipal Works he may be granted certain powers.

C193 4/91
1636 Ire 4-4-91
C563 4/91

352 Ire 12-3-91

Hon'ble Foresters

The previous paper referred to by Mr J nos is a proposal to place the Municipal engineering staff under Local Boards. The present proposals are for the execution of work under the Sanitary Engineer.

NOTS
18.3.91.

Not under Local Bds but to have the right of employing the Dist. Bd. Engr Staff on payment of a certain percentage which he has not mentioned to plan carry out, & incur works and to check the bills –

Mr Jones requests comprise a large order.

(1) That for the superintendence of large works a special staff be entertained and that young officers of the P.W.D be employed as superintendents. The reply seems to be that Mr P.W.D has no officers to be spared unless Local Bds are prepared to pay for certain a long time to come. This question of the provision of proper superintendence for large works is a very difficult one but which cannot be much longer left unsolved with

(2) That he shall be empowered to appoint subordinates (for works &c.) on salaries up to Rs 200 per annum. This means that Mr. Jones will get all his working staff from outsiders and that he will not be able often to pay and the Govt. Rules. There seems no reason why he should not obtain sanction before making appt. There is no such great hurry about matters as all that.

(3) That Mr Jones should have power to order machinery & plant

and to enter into contracts for the execution of works.

This means an entire setting aside of the Chairman & Council and the proposal regarding entering into contracts appears to be contrary to Section 45 of the Act. Mr Jones is not a Municipal but a Govt. Servant.

(4) That as soon as a work is sanctioned he be given an imprest to the amount of the Sanitary Engr. on the Local Treasury.
Any money paid out must be under orders signed by the Chairman. Mr Jones can draw this & I presume that there would be no objection to his keeping an account for it in a Local Treasury. The Sanction of an advance & receipt by bills signed by the Sanitary Engr – seems to be one for settlement between him and the Municipality concerned. It appears to be no business of Govt.

(5). That a local Agent be appointed also England to make payments &c. Apparently Mr Jones a matter for the particular Municipalities concerned to decide.

25 March

Please see G.O. dd 2nd April 1891 No 479 M, not replied to as yet.
NOTS
6.4.91.

Letter from one of more Supt Govt Works Divisions under control D.P.W. officers with the Sanitary Engr – Supt Engr –
12/4

55x

Put up to Secy
12/4/91

This is much more than I was led to expect when I suggested it was expedient that a trial should be made of the execution of large municipal works by the P.W.D. at certain rates of percentage? I think it would be referred to be noted only by Col Puxley.

NOTS
29 March

V.E

This must wait w/h by the G.O. 2 April 91. I did intimate a formal G.O. report in the former case, but a lumpsum offer not to be entertained. This letter may be now cancelled & that office in continuation & for answer in connection with the questions referred. The matter is urgent

Wks
8/1/91

12/4

290
16-4-91

order

Communicated to the Chief Engineer in continuation of G.O. dt 2nd April 1891 No 479 M. Mis for consideration of these proposals in connection with the questions referred in the G.O. above quoted.

Wks (From orders)
15.4.

15 April

Pubd. Instt. Approved
12/4

C 7/4
R 13/4

No. D.

Government of Madras.

PUBLIC WORKS DEPARTMENT.

Ootacamund, 188 .

For Orders

OFFICE NOTE.

Read G.O. No. 479 M. Mis (dated) 2/4.91
" Letter from the Sanitary Engr. No. 166 of 11.3.91
" Encl. thereto by the Asst. dept. " 290 of 16.4.91
Proposals by the Ag Chief Engr. & Sanitary Engr. of 21.4.91

From

Referring to G.O. No 479 M. Mis of 2 April 91 the accompg proposals are submitted

To

by the Executive Engr. Ootacamund for the permanent water supply, conservancy, & drainage of the Dodabetta Sanatorium by the Govt of India on Rs 250 per mensem to that the question of commencing the Asst Engr Deptt by a few temporary.

Asst Engineer is put out of court

but only this but on consultation with the Chief Engineer Irrigation it was concluded that no man of sufficient ability could be found in the Deptt; I th

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

READ—again the following papers:—

G.O., dated 2nd April 1891, Mis. No. 479 M., Local and Municipal.

Read—the following papers:—

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 December 1890, No. 637.

I have the honour to forward the marginally-noted correspondence, and, in view of the difficulty the Public Works Department have, and apparently will have, in finding duly qualified upper subordinates who can be placed in charge of works in the Sanitary Engineering Department, I find it necessary to address Government on the whole subject.

Letter from the Sanitary Engineer, to the Chief Engineer, Public Works Department, dated 28th November 1890, No. T-30.
Letter from the Chief Engineer, Public Works Department, to the Sanitary Engineer, dated 4th December 1890, No. 5005 C.

2. Kumbakónam is the only town, out of 24 water-works and 13 drainage-works schemes in view, at which work has been sanctioned and which ought to have been started long ago. Of the 24 water-works schemes and 13 drainage schemes under investigation or design, I believe that the following stand every chance of proceeding at an early date:—

	Approximately estimated.
	Rs.
1. Ootacamund water-supply	63,000
2. Coonoor do.	50,000 (Estimates not complete.)
3. Coonoor drainage	40,000
4. Trichinopoly water-supply	3,00,000
5. Dindigul do.	70,000
6. Madura do.	3,00,000
7. Adóni do.	1,53,742
8. Bellary do.	Unknown.
9. Kurnool do.	Do.
10. Bezváda drainage	Do.
11. Masulipatam water-supply	Do.
12. Ongole do.	Do.
13. Salem drainage	2,63,000 (For drainage.)
14. Vellore water-supply or drainage	Unknown.
15. Conjeeveram water-supply	1,10,000
16. Tirupati drainage	

3. The first-named town has an Engineer and therefore does not require to be further considered.

4. But as to the other towns, some staff to take immediate charge of the work must be provided and I need not point out to Government that this department is one which must, from its very *raison d' etre*, continue to expand and which Government will wish to expand as showing the increasing amount of sanitary works under construction.

14TH AUGUST 1891, No. 1306 M., LOCAL AND MUNICIPAL.

GOVERNMENT OF MADRAS.

LOCAL AND MUNICIPAL DEPARTMENT.

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5. Dindigul do.	70,000	
6. Madura do.	3,00,000	
7. Adóni do.	1,53,742	
8. Bellary do.	Unknown.	
9. Kurnool do.	Do.	
10. Bezváda drainage	Do.	
11. Masulipatam water-supply	Do.	
12. Ongole do.	Do.	
13. Salem drainage	Do.	
14. Vellore water-supply or drainage	2,63,000	(For drainage.)
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16. Tirupati drainage	1,10,000	

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5. I think, therefore, that the large question of the necessity for providing a proper staff of subordinates for the department ought at once to be faced and I think that towns might be grouped into sets of three or four and an officer of the rank of Assistant Engineer placed in charge with an Inspector under him on each work.

6. Thus Trichinopoly, Dindigul and Madura might form one group; Tirupati Vellore and Salem another; Adóni, Kurnool and Bellary another, and so on.

7. Trustworthy men of proper qualifications cannot be readily picked up. The majority of men one can get are either failures or there is some other reason why they are out of employment.

8. We can therefore in this country depend only on retired men of the upper subordinate class, but the class of work would be quite new to them and men who have retired are not usually gifted with that amount of energy which is required to lay out, start and give continued supervision to a new work and a class of works which, from their nature, require speedy execution.

9. Government have relieved Municipalities from any share in the expenditure on account of this department, and as provision is always made in the estimates for supervision of works, I do not think that any hardship would be created if each group of Municipalities (where work is proposed or started) had an Assistant Engineer on a pay of Rs. 350 to Rs. 500 per mensem.

10. I think that the appointments ought to be temporary—non-pensionable, but that a guarantee of employment for at least three years ought to be given and something must be sacrificed, if necessary, to get good men, because incapable men are not cheap at any price, but I do not think there need be any fear that there will not be enough work even after that time has expired.

11. I would propose to Government that at least three men such as I have suggested should be engaged at once. I can guarantee to find work for them even now and one might be sent to Kumbakónam at once.

12. I am proceeding to Rangoon and Calcutta on the 20th instant and I shall be obliged if this letter can be dealt with emergently, as, if Government agree to my proposals, I should be in a position to select men at Rangoon or Calcutta, or at least see them there and forward their names for approval to Government.

13. As to Kumbakónam in particular, I am much annoyed that the Municipality has been so unfortunate in the men sent down for the work; but the surveyor and draftsman there are now working up the new plans and estimates, and those for the Nandalar outfall (6 miles) will be ready shortly. I hope to get the land marked out soon and I shall send one of my assistants to Kumbakónam to push on the work throughout the Christmas holidays when he can be spared from my office. The whole of the plans, sections and estimates have had to be prepared anew and hence the long delay in starting work.

From the Sanitary Engineer to Government, dated 9th December 1890, No. 650.

Abstract.—Informs that there is no immediate urgency in disposing of the whole question of future staff for the execution of water-supply and drainage works referred to in his No. 637 of 5th December 1890, as Mr. Lord's transfer from Kumbakónam has been cancelled.

Reference—dated 19th December 1890, No. 1101.

Owing to the rapid development of the Sanitary Engineering Department and the heavy expenditure which will shortly be incurred by it, the Government is of opinion that the time has now come for considering the propriety of attaching it to the Public Works Department for the purposes of discipline and control and criticism

of the Sanitary Engineer's plans and estimates. Mr. Jones' first letter read above will therefore be referred to the Secretary to Government, Public Works Department, for remarks as to how this can best be done.

(Signed) N. S. BRODIE,
Ag. Assistant Secretary.

To the Secretary to Government, Public Works Department,
with Current Nos. 3017 and 3052 M., in original, to be returned.

No. 407 C.

Note.

The undersigned considers that the best and simplest method of attaining the end contemplated in Local and Municipal Department memorandum, No. 1101 of 19th December 1890, would be to grade the Sanitary Engineer on the Public Works establishment as a Superintending Engineer, extra to the regular scale, precisely as the Consulting Architect is now graded.

2. All estimates for works to be carried out from Municipal or Local funds should include the regular percentage for Public Works establishment, which would then be provided in the usual course. It would be open to Government in any case to relieve the Municipality concerned of the whole or any portion of this charge by a grant-in-aid from Provincial funds.

3. The designs and estimates prepared by the Sanitary Engineer would then, as a matter of course, pass through the Chief Engineer's hands before submission to Government, while the establishment employed in execution of the works would be part of the regular Public Works establishment and be subject to the same discipline and control.

4. It would be an incidental advantage of this course that the greater part of the works in question would probably be executed by the Executive Engineers of Divisions under the control of the Superintending Engineers, the Sanitary Engineer being thus relieved of executive work and left free for his own legitimate duties of design and advice.

5. The additional work thus thrown on the Public Works Department would of course require a small increase in establishment, the cost of which would be met by the percentage provided in the estimates for that purpose; this increase would be entirely in the subordinate class and in the lower grades of the Engineering class and would be almost entirely, if not entirely, "temporary;" whether any increase to the permanent establishment would be necessary, the undersigned cannot at present say with any degree of certainty, but if experience showed a small addition to be necessary, there is no reason to suppose that the Government of India would refuse to consider a proposal for its sanction.

6. The memorandum under reply asks for the views of the undersigned as to the best means of carrying out the policy indicated therein, and not as to the propriety of that policy; but the undersigned thinks it right to say that he considers the course in question to be eminently desirable. It is no slight to Mr. Jones to say that it is advisable that his schemes should be subject to further professional examination before being sanctioned for execution, and if the proposed course is advisable as regards the design of works, it is still more so as regards their execution.

7. At present there is absolutely no superior engineering control over the execution of works under the Sanitary Engineer, except that of the Sanitary Engineer himself, and no officer, however able or however active, can visit works scattered over the whole Presidency at sufficiently frequent intervals to ensure good work; the

arrangement proposed would ensure to these works the same engineering control as is given to those executed on behalf of Government.

23*rd January* 1891. (Signed) J. PENNYCUICK, Col., R.E.,
Secretary to Government, P.W.D.

To the Local and Municipal Department, with original papers returned.

Order—dated 2nd April 1891, Mis. No. 479 M., Local and Municipal.

The proposal that the Sanitary Engineer should be graded on the staff of the Public Works Department does not commend itself to Government. There will be no difficulty in referring Mr. Jones' plans and estimates to the Chief Engineer whenever necessary and independent professional criticism can thus be secured should occasion arise.

2. With regard to the establishment required for the execution of sanitary works, the Government is of opinion that a certain number of subordinates in the Public Works Department should be selected and placed under the orders of the Sanitary Engineer, this body being recruited from time to time from the same source. The works should be executed under the supervision of the Executive Engineer of the Division to which they appertain, a percentage of 3 per cent. on the estimates being levied for this service together with the usual charge for scrutiny of estimates and the actual cost of the subordinate establishment employed, instead of the 23 per cent. ordinarily paid to the Public Works Department when works are executed by that agency.

3. The papers will be again referred to the Chief Engineer for an expression of his opinion on these suggestions. It would be advisable that he should confer with the Sanitary Engineer and both officers should submit a joint note on the subject.

(True Extract.)

(Signed) J. F. PRICE,
Chief Secretary.

To the Secretary to Government, Public Works Department,
" Sanitary Engineer. with papers.

G.O., dated 24th June 1891, No. 955 M , Local and Municipal.

ABSTRACT.—Passing orders on the subject of accounting for expenditure on drainage and other works executed under the supervision of the Sanitary Engineer.

READ—also the following papers :—

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, 11th March 1891, No. 166.

In addition to works at Kumbakónam, Government have now been pleased to direct the immediate execution of works for drainage and water-supply at Coonoor and Trichinopoly, respectively, and it may be presumed that there will not be much delay in starting works at Dindigul and Madura and also at Adóni.

2. As you are aware, I have no staff to superintend the execution of such works, and, with reference to Coonoor, I have already, in anticipation of the course meeting the views of Government, taken steps to put on an officer at Coonoor—*vide* my No. 80 of 9th February 1891.

3. For Trichinopoly, however, where an expenditure of about four lakhs will be incurred, it will be necessary to have a superior officer and so also in other places where the expenditure proposed is large.

4. The works will go on increasing in number year by year, and though probably it will be impossible to have under construction, without a very large staff, more than six works at a time, it is evident that for even that amount of work I must have responsible subordinates as I cannot with my large range visit works under construction as often as is desirable.

5. I therefore open up the whole question of staff for the execution of municipal works.

6. I have in my No. T-91 of the 24th ultimo proposed a plan by which, if approved, I shall be enabled to get through all the work of an iniatory nature, but when works have been sanctioned and we arrive at the stage which requires the preparation of detail drawings, specifications, working estimates and the actual supervision and execution of the works, some more staff is necessary.

7. It has been suggested that the Public Works Department should undertake the execution of the sanctioned works—this, no doubt, if the Public Works Department can spare men to be in actual charge and Engineer to superintend would save me a great deal of time and labour, but as I shall be practically responsible for the work, the designs for which will have been prepared in my department, it would be necessary for me to superintend, at least to some extent, their execution, and it is probable that differences might arise between the Superintending Engineers and myself. I do not think that the divided responsibility would be for the benefit of work or to the advantage of Government or the Municipality concerned.

8. It appears to me, therefore, it would be better for provision to be made for a separate staff; junior officers of the Public Works Department could be put in charge of the execution of a work or group of works with a subordinate on each particular work, or special men might be engaged.

9. For instance, Trichinopoly might be grouped with Dindigul and Madura; all these places are near to one another.

10. Kurnool and Bellary might form another group; Kumbakónam and Tanjore another; Salem, Vellore and Tirupati another, and so on.

11. Coonoor and Ootacamund might also be grouped. There are two projects at the former—one sanctioned and the other likely to be so, and one at the latter; but these, with the Municipal Engineer at Ootacamund would probably not require any more than the subordinate officer I proposed to appoint at Coonoor.

12. As a beginning, an officer might be transferred from the Public Works Department for Trichinopoly or I might transfer my own assistant to that work (at an increased salary which he much deserves) and a Public Works officer might become my assistant until he is acquainted with the class of work in the department. He in turn might go out on a group of works.

13. If Government approve of this latter arrangement, it seems to me the one most desirable.

14. I have further, in connection with the execution of municipal works, to ask Government to accord sanction for the following proposals :—

(1) That it being necessary for me to appoint subordinates from time to time, power be granted to me to appoint such subordinates temporarily with pay up to a maximum of Rs. 200 monthly so long as the amount under the contingent head in each estimate is not exceeded and with regard to the amount available for establishment and contingencies.

(2) That when an estimate is sanctioned, that my powers extend to the ordering on behalf of Government and the Chairman of the Council concerned, machinery and materials as provided in the estimates and to enter into the necessary contracts for execution of the works or for making any other necessary arrangement for carrying out the sanctioned estimate. This has already been done in the special case of Kumbakónam.

(3) That so soon as an estimate is sanctioned and funds are available to the Municipality for the work, an account be opened in the local treasury in my name and

such funds as are necessary placed at my disposal from time to time as an advance or imprest, the imprest account being recouped on submission of bills properly signed and vouched for the work as completed and paid for.

(4) The appointment of an agent at home being necessary, who can arrange for the payment against bills of lading on shipment of machinery, pipes, &c. (should tenders from English Firms be accepted, and they will probably be found cheaper than local Firms), that Messrs. H. S. King and Co., who are the Madras Municipal agents, be so appointed. Their charge is $2\frac{1}{2}$ per cent., and they also appoint, when necessary, Inspectors to pass machinery and pipes before acceptance in England; their charges will be covered by the rates in the estimates which are intended to include the English price of goods *plus* shipping charges, freight, landing charges and conveyance by rail to site in this country. This course I consider very preferable to ordering machinery through the India Office Store Department, where very considerable delays occur.

15. As the works increase in number, I shall, from time to time as necessary, ask for an increased staff; but if my proposals as above are generally sanctioned, I shall be able to proceed with the works already ordered for execution.

16. As I shall not be able to do much as regards Trichinopoly until the above points are settled, I trust that orders may be issued at an early date.

No. 290.

Referred to the Chief Engineer, in continuation of G.O., dated 2nd April 1891, Mis. No. 479 M., for consideration of these proposals in connection with the questions referred in that Government order.

Fort St. George,
16*th April* 1891.

(Signed) O. V. BODDY, Major, R.E.,
Under Secy. to Govt., P.W.D.,
for *Chief Secretary*.

No. 257 D.

Endorsement.

Proceedings in the Local and Municipal Department, dated 2nd April 1891, No. 479 M.

Letter from the Sanitary Engineer to Government, dated 11th March 1891, No. 166.

Endorsement thereon by the Local and Municipal Department, dated 16th April 1891, No. 290.

Memorandum by the Sanitary Engineer to Government—A.

Joint note by the Acting Chief Engineer, Public Works Department, and Sanitary Engineer to Government, dated 21st May 1891.

Enclosures.

Proposals for establishment for Sanitary Engineer (with reference to G.O., Mis. No. 479 M., of 2nd April 1891), by Acting Chief Engineer and Sanitary Engineer.

It is evident from the large amount of work sketched out in A, that if this work is to be carried out in a satisfactory manner without hindrance, a special staff must be allowed, whether this be provided by advertising in the open market or by officers and subordinates lent by the Public Works Department.

The existing staff of the Public Works Department has more than enough work as it is, and in times of pressure it is almost impossible to carry work on satisfactorily.

It is therefore evident that the Public Works Department cannot spare a single man to lend to the Sanitary Department. Whatever happens, or however constituted, the staff of the Sanitary Department must be in excess of the present strength, and therefore a special additional service must be provided for.

This being so, the question is—how such service shall be constituted?

It is thought that the proposal that the works when designed and estimated by the Sanitary Engineer and duly approved by Government should be carried out by Executive Engineers of Divisions, will not be at all a satisfactory arrangement, for—

(1) Works of this class require *constant*, if not *continuous*, supervision, and it will be impossible for an Executive Engineer of the Public Works Department, who now-a-days has so large a charge that it takes him a year to see the whole of it, to devote sufficient time for this purpose.

(2) It is always very difficult in this class of work to carry out, without constant reference, the plans and estimates made by others.

(3) There would be a dual control—no man can serve two masters—on the one hand the Superintending Engineer of the circle would have just cause for complaint if the Executive Engineer neglected, as he would be obliged to do, his own proper work in order to supervise work for the Sanitary Engineer, and the latter would undoubtedly grumble if his work was either not carried on expeditiously or scamped in the absence of proper supervision.

Then again the Sanitary Engineer would be quite justified in declining all responsibility in the results of his designs if he were not placed in the position of a superintending officer with powers to alter or modify such designs, for in these kind of works it is impossible to foresee all requirements.

Then as regards the position of the Chief Engineer, Public Works Department, with regard to the Sanitary Department, if he is to scrutinise or revise the designs and lend his officers to the Sanitary Department to carry them out, in case of failure or misadventure, the Public Works Department would be held to blame, though, as is above shown, it will be impossible for it to undertake such works satisfactorily.

Taking all these things into consideration, it is thought advisable to make the Sanitary Engineer and his department totally independent of the Public Works Department as far as designing and execution of work is concerned, except, of course, that the Chief Engineer, Public Works Department, should act as adviser to the Government on all schemes they may wish to consult him about.

Superior Staff.—The Sanitary Engineer should have under him a staff sufficient for the purposes of investigation and execution of the works required, and for this purpose it seems that the undermentioned staff is necessary. This staff is proposed with the idea of carrying out all the works within a few years, but it might be thought advisable to commence with only one or two sets of works geographically close together, and then, on completion, transport the staff elsewhere in much the same way as the Tank Restoration Scheme is being carried on. This would, however, delay work and there are several towns lying far apart for which schemes have been more or less matured and ready almost for execution. This will be a question for the Government to decide. It is proposed to divide the Presidency roughly into three Sanitary Circles, each Sanitary Circle to consist of two Public Works Department Circles.

The Sanitary Engineer would have charge of the whole and be director of all the works whether of investigation or execution, with powers of a Superintending Engineer, Public Works Department. It might be a convenient arrangement and relieve the Local and Municipal Department of much work if the Sanitary Engineer were made Secretary to Government. Under him would be a Deputy Sanitary Engineer whose sole duty it would be to supervise generally the works under execution, or, in case of necessity where the Sanitary Engineer could not take up certain work, to direct the designing of such work; the Deputy to have the powers of an Executive Engineer, Public Works Department. Under the above would be three Assistant

such funds as are necessary placed at my disposal from time to time as an advance or imprest, the imprest account being recouped on submission of bills properly signed and vouched for the work as completed and paid for.

(4) The appointment of an agent at home being necessary, who can arrange for the payment against bills of lading on shipment of machinery, pipes, &c. (should tenders from English Firms be accepted, and they will probably be found cheaper than local Firms), that Messrs. H. S. King and Co., who are the Madras Municipal agents, be so appointed. Their charge is $2\frac{1}{2}$ per cent., and they also appoint, when necessary, Inspectors to pass machinery and pipes before acceptance in England; their charges will be covered by the rates in the estimates which are intended to include the English price of goods *plus* shipping charges, freight, landing charges and conveyance by rail to site in this country. This course I consider very preferable to ordering machinery through the India Office Store Department, where very considerable delays occur.

15. As the works increase in number, I shall, from time to time as necessary, ask for an increased staff; but if my proposals as above are generally sanctioned, I shall be able to proceed with the works already ordered for execution.

16. As I shall not be able to do much as regards Trichinopoly until the above points are settled, I trust that orders may be issued at an early date.

No. 290.

Referred to the Chief Engineer, in continuation of G.O., dated 2nd April 1891, Mis. No. 479 M., for consideration of these proposals in connection with the questions referred in that Government order.

Fort St. George,
16*th April* 1891.

(Signed) O. V. BODDY, Major, R.E.,
Under Secy. to Govt., P.W.D.,
for *Chief Secretary*.

No. 257 D.

Endorsement.

Proceedings in the Local and Municipal Department, dated 2nd April 1891, No. 479 M.

Letter from the Sanitary Engineer to Government, dated 11th March 1891, No. 166.

Endorsement thereon by the Local and Municipal Department, dated 16th April 1891, No. 290.

Memorandum by the Sanitary Engineer to Government—A.

Joint note by the Acting Chief Engineer, Public Works Department, and Sanitary Engineer to Government, dated 21st May 1891.

Enclosures.

Proposals for establishment for Sanitary Engineer (with reference to G.O., Mis. No. 479 M., of 2nd April 1891), by Acting Chief Engineer and Sanitary Engineer.

It is evident from the large amount of work sketched out in A, that if this work is to be carried out in a satisfactory manner without hindrance, a special staff must be allowed, whether this be provided by advertising in the open market or by officers and subordinates lent by the Public Works Department.

The existing staff of the Public Works Department has more than enough work as it is, and in times of pressure it is almost impossible to carry work on satisfactorily.

It is therefore evident that the Public Works Department cannot spare a single man to lend to the Sanitary Department. Whatever happens, or however constituted, the staff of the Sanitary Department must be in excess of the present strength, and therefore a special additional service must be provided for.

This being so, the question is—how such service shall be constituted?

It is thought that the proposal that the works when designed and estimated by the Sanitary Engineer and duly approved by Government should be carried out by Executive Engineers of Divisions, will not be at all a satisfactory arrangement, for—

(1) Works of this class require *constant*, if not *continuous*, supervision, and it will be impossible for an Executive Engineer of the Public Works Department, who now-a-days has so large a charge that it takes him a year to see the whole of it, to devote sufficient time for this purpose.

(2) It is always very difficult in this class of work to carry out, without constant reference, the plans and estimates made by others.

(3) There would be a dual control—no man can serve two masters—on the one hand the Superintending Engineer of the circle would have just cause for complaint if the Executive Engineer neglected, as he would be obliged to do, his own proper work in order to supervise work for the Sanitary Engineer, and the latter would undoubtedly grumble if his work was either not carried on expeditiously or scamped in the absence of proper supervision.

Then again the Sanitary Engineer would be quite justified in declining all responsibility in the results of his designs if he were not placed in the position of a superintending officer with powers to alter or modify such designs, for in these kind of works it is impossible to foresee all requirements.

Then as regards the position of the Chief Engineer, Public Works Department, with regard to the Sanitary Department, if he is to scrutinise or revise the designs and lend his officers to the Sanitary Department to carry them out, in case of failure or misadventure, the Public Works Department would be held to blame, though, as is above shown, it will be impossible for it to undertake such works satisfactorily.

Taking all these things into consideration, it is thought advisable to make the Sanitary Engineer and his department totally independent of the Public Works Department as far as designing and execution of work is concerned, except, of course, that the Chief Engineer, Public Works Department, should act as adviser to the Government on all schemes they may wish to consult him about.

Superior Staff.—The Sanitary Engineer should have under him a staff sufficient for the purposes of investigation and execution of the works required, and for this purpose it seems that the undermentioned staff is necessary. This staff is proposed with the idea of carrying out all the works within a few years, but it might be thought advisable to commence with only one or two sets of works geographically close together, and then, on completion, transport the staff elsewhere in much the same way as the Tank Restoration Scheme is being carried on. This would, however, delay work and there are several towns lying far apart for which schemes have been more or less matured and ready almost for execution. This will be a question for the Government to decide. It is proposed to divide the Presidency roughly into three Sanitary Circles, each Sanitary Circle to consist of two Public Works Department Circles.

The Sanitary Engineer would have charge of the whole and be director of all the works whether of investigation or execution, with powers of a Superintending Engineer, Public Works Department. It might be a convenient arrangement and relieve the Local and Municipal Department of much work if the Sanitary Engineer were made Secretary to Government. Under him would be a Deputy Sanitary Engineer whose sole duty it would be to supervise generally the works under execution, or, in case of necessity where the Sanitary Engineer could not take up certain work, to direct the designing of such work; the Deputy to have the powers of an Executive Engineer, Public Works Department. Under the above would be three Assistant

Sanitary Engineers, each in charge of a Sanitary Circle, for the purposes of directing surveys, &c., under instructions from the Sanitary or Deputy Sanitary Engineer, and executing such works as may have been sanctioned.

Subordinate Staff.—This will at first be small. The number will be decided by the Sanitary Engineer and will increase as work develops; but according to Statement A, a fairly large number will be at once required, and the number will be restricted not by the amount of work there has to be done so much as by the difficulty in procuring efficient men, and herein lies the *crux* of the whole question. There is *no other source* from which experienced men (and no other sort will do for works of this nature) can be obtained except from the ranks of the Public Works Department. Some few may be obtained from retired Public Works Department men, but very few, as they must be *physically capable* men as well as experienced. The only plan that suggests itself is to augment, as early as can be, but gradually, the existing Public Works Department strength—to transfer a few capable men to the Sanitary Department, their places being taken in the Public Works Department by promoting junior and deserving men, and putting new hands in (and there are several now passed practical course men unprovided for) at the bottom. This augmentation of the Public Works Department seems to be the only way out of the difficulty, if the sanitary works are really to be carried out at all satisfactorily.

All the above staff, with the exception of the Sanitary Engineer, who will thus be the head of a separate department, will be graded for promotion, &c., in the Public Works Department, and their status will be regulated in an exactly similar manner, and individuals, either officers or subordinates, may or may not be (question to be decided by Government) transferable from one department to the other. The officers would thus remain Government officers and would not be lent to Municipalities, and no question as to pensionary contributions would arise. As regards temporary staff which will be required on each work from time to time, the employment of these could be regulated in the same manner as in the Public Works Department.

Accounts.—As regards accounts, it might be advisable to treat the whole of the Sanitary Department as one large Public Works Department Division under the Examiner, Public Works Department. The Assistant Sanitary Engineers to be as Sub-Divisional officers, Public Works Department, and the Deputy Sanitary Engineer as an Executive Engineer, to render accounts to the Examiner direct. A reference on this point has already been made to Government by the Sanitary Engineer, but no orders have as yet been received.

Stores.—As great delay is experienced in many instances where stores are ordered through the India Office, it would be advisable to order them, as is done in the Madras Municipality, through an agent in England, who could arrange with the Firms whose tenders might be accepted, for the payment against bills of lading on shipment of machinery, &c. Municipalities are not bound to get supplies through the Secretary of State. The other proposals made by the Sanitary Engineer in his No. 166 of 11th March 1891, in respect to agency and powers of making contracts and as to the manner in which funds will be placed at his disposal, seem satisfactory.

Funds.—As regards the contributions from Municipal funds towards Establishment and Works, it will rest with the Government to decide the amount in each particular case, but doubtless the bulk of the money will have to be provided from Provincial funds, but it may be pointed out that the Municipalities under the above scheme will be relieved from making the grants now required for surveys, &c.

Office.—An increase in the office staff is apparently desirable, but Mr. Jones will submit separate proposals on this head which will include the necessary Accounts staff.

(Signed) A. C. SMITH, Lt.-Col., R.E.,
Ag. Chief Engineer, P.W.D.
(„) J. A. JONES,
Sanitary Engineer to Govt.

Extract from Memorandum by the Sanitary Engineer to Government.

* * * * *

The towns which are now being dealt with are as follow:—

North Arcot District.

Vellore.—Water-supply scheme, levels taken.
Tirupati.—Drainage scheme, levels taken.

South Arcot District.

Chidambaram.—Water scheme, levels being taken by Public Works Department.

Bellary District.

Bellary.—Water-supply scheme, levels not yet taken nor any investigation made.
Adóni.—Scheme submitted, but details, schedules, abstract plans, &c., yet to be done.

South Canara District.

Mangalore.—Drainage scheme, ordered to be investigated.

Chingleput District.

Conjeeveram.—Water-supply scheme, to be prepared; no levels taken yet.
Chingleput.—Drainage scheme, is to be prepared.

Coimbatore District.

Coimbatore.—Water-supply and drainage schemes, under investigation; levels taken.
Erode.—Drainage scheme, to be prepared.
Karúr.— Do. do. do.

Cuddapah District.

Cuddapah.—Drainage scheme, ordered to be prepared; funds granted.

Ganjam District.

Berhampore.—Water-supply scheme, under investigation; levels taken by Public Works Department.
Chicacole.—Drainage scheme, to be prepared; funds granted.

Godavari District.

Cocanada.—Water-supply scheme, to be prepared; funds granted.
Rajahmundry.—Water-supply scheme, to be prepared; but funds not as yet granted.
Ellore.—Drainage scheme, to be prepared.

Kistna District.

Masulipatam.—Water-supply required, artesian well to be bored (sanctioned).
Guntur.—Water-supply scheme, under investigation.
Bezváda.—Water-supply and drainage, under investigation; levels taken.

Kurnool District.

Kurnool.—Water-supply, under investigation; preliminary report submitted.

Madura District.

Madura.—Water-supply scheme, estimate under preparation.
Dindigul.—Water-supply scheme, estimates submitted.
Periyakulam.—Drainage, estimate to be prepared.
Palni.— Do. do. do.

Malabar District.

Calicut.—Drainage scheme, to be prepared.
Cochin.—Water-supply and drainage scheme, ordered.
Tellicherry.—Drainage and water-supply schemes.
Cannanore.—Drainage scheme.

Nellore District.

Nellore.—Drainage scheme, ordered; water-supply, to be investigated; funds asked for.
Ongole.—Water-supply scheme, estimates ordered.

Nilgiris District.

Ootacamund—South.—Water-supply, estimates submitted.
Coonoor.—Drainage, under execution; water-supply, schemes submitted.

Salem District.

Salem.—Drainage and water-supply projects, under investigation; levels taken.

Tanjore District.

Tanjore.—Water-supply, estimates under preparation.
Negapatam.—Drainage scheme, ordered to be prepared.
Kumbakonam.—Drainage, under execution.

Tinnevelly District.

Tinnevelly.—Report on water-supply scheme, ordered.
Palamcottah.— Do. do. do.
Tuticorin.— Do. do. do.

Trichinopoly District.

Trichinopoly.—Water-supply scheme, estimates submitted.
Srirangam.—Report on water-supply, submitted.

Vizagapatam District.

Vizagapatam.—Water-supply scheme, estimates to be prepared.

(Signed) A. C. SMITH, Lt.-Col, R.E.,
Ag. Chief Engineer, P.W.D.
(„) J. A. JONES,
Sanitary Engineer to Govt.

The joint note required by paragraph 3 of the orders quoted above, is herewith transferred to the Local and Municipal Department together with a note "for orders," dated 22nd May 1891, and the rescript of the Honorable Member thereon.

2. It is thought that the proposed application to the Government of India for the services of Assistant Engineers should be deferred until it is decided whether they, with the Sanitary Engineer, would be attached to, or be outside, the ordinary Public Works Department.

Ootacamund,
26*th May* 1891. (Signed) A. C. SMITH, Lt.-Col., R.E.,
Ag. Jt. Secy. to Govt., P.W.D.

To the Local and Municipal Department, with the 4 enclosures forwarded with No. 479 M., dated 2nd April 1891, and the following papers:—(1) Letter from Sanitary Engineer to Government, with endorsement by Local and Municipal Department, No. 290, dated 16th April 1891; (2) Memorandum by the Sanitary Engineer to Government, marked A; (3) Joint note by the Acting Chief Engineer and Sanitary Engineer, dated 21st May 1891; (4) Note "for orders," dated 22nd May 1891, and the rescript of the Honorable Member thereon.

Order—dated 14th August 1891, No. 1306 M., Local and Municipal.

In the papers read above, the Sanitary Engineer with Government makes certain proposals with a view to carrying out the works entrusted to him with greater efficiency and despatch than is possible at present. His Excellency the Governor in Council now proceeds to deal with these suggestions and those of the Public Works Department contained in the second letter read above. The proposals made are briefly as follow:—

(1) That the Sanitary Engineer should be attached to, and graded upon, the staff of the Public Works Department.

(2) That he should be empowered to deal, as Secretary, directly with the members of Government.