Public Works (1898) Department

RAILWAY BRANCH.

G.O., No. 1221- 22 Ry

DATED 7th Octr 1898.

120/4/20/36/1

[Despatch Abstract.]

Completion Reports

Ordered that the Govt. of India be addresse in reply to its circular regarding the preparation & submission of ——

Stating that this Govt. is of opinion that for reasons given —— should be prepared so as to record outlay by sub-heads

P. W. S.

Indexed

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
277	W J	30/1/99					

Print only this

In the last line of letter from the Joint-Secy: to the Govt: of Madras, P.W.D. Railway Branch, to the Secretary to the Government of India, P.W. Deptt, No 1222Ry of 7th October 1898, insert the words "of railway works" before the words "should be prepared".

J.W.S.

R.

Correction slips desp to Secr

27.3.99

Note

Print the above as a Correction Slip & send to India, & correct all spare copies in office

22/3

OCTOBER.

Completion Reports

Ordered that the Government of India be addressed in reply to its circular regarding the preparation and submission of —.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.
277	W &	30/1/99					

RAILWAY.

Government (1898) of Madras.

PUBLIC WORKS.

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

G.O., No. 1221 Ry., 7th October 1898.

OCTOBER.

Completion Reports

Ordered that the Government of India be addressed in reply to its circular regarding the preparation and submission of —.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers :—

G.O., No. 3197 W., Public Works, dated 11th November 1889.

Government of India Circular No. 83/A.G., dated Simla, 21st July 1898.

To—The Government of Madras, Public Works Department (General and Railways).

I am directed to invite attention to Public Works Department Circular No. 17 P.W. of the 23rd October 1889, and to paragraph 40 of Chapter IX of Volume I of the Public Works Department Code, in connection with the preparation and submission of completion reports.

2. Under existing rules a completion report in Public Works Department Form No. 45-A. (Railway Form E 6) is prepared in detail only when the expenditure on a work is recorded by sub-heads and when the amount of the estimate is exceeded by more than 5 per cent. In other cases the completion report exhibits only the total estimated cost of the work, the total actual outlay and the net excess or saving on the estimated amount.

3. It has now been suggested that it would prove more useful and prevent laxness if completion reports for all works, the outlay on which has been recorded by sub-heads, were prepared in detail in Public Works Department Form No. 45-A. (Railway Form E 6), as sanctioning authorities would then be in a position to know the cost of each sub-head of a work, whether the total of an estimate were exceeded by more than 5 per cent. or not; and this, it is anticipated, could be done with but little additional clerical labour.

4. Before passing any orders on the suggestion, the Government of India would be glad to be favoured with the opinion of the $\frac{\text{Government}}{\text{Local Administration}}$ as to whether a reversion to the procedure in force prior to the issue of the circular above quoted is desirable.

From—The Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Trichinopoly, 26th August 1898, No. 802.

[Your endorsement No. 2225 of 5th August 1898 on Government of India Order No. 83/A.G. of 21st July 1898.]

I beg to report that the heads of the Engineering, Locomotive, and Audit departments of this Administration consider that there is no objection to the completion reports for all works being prepared in detail, and in this opinion I concur. Any record, provided that too much clerical labour is not expended upon it, which will facilitate the explanation often required as to the cause of excess or savings in carrying out works, as compared with the estimated cost of the same, is in my opinion justifiable and advisable.

Note by the Consulting Engineer for Railways, Madras.

In the Circular above referred to the Government of India ask for an expression of opinion in regard to the degree of detail in which completion reports should be submitted. The completion report in use on State Railways, whether worked by the State or leased to Companies, is Railway Form No. E. 6 which will be found at pages 209—210 of Part III of the first edition of Forms of Accounts of Open Lines of State Railways. The completion report is practically an abstract of the final entries on the page or pages of the Register of Works in which, month by month, the expenditure on the work has been recorded. As it is only a matter of a few extra minutes to fully instead of partially copy from the Register of Works the final month's items of expenditure on a work, I see no object in economising the time of a cheap clerk by decreeing that, when the excess over the estimate is less than 5 per cent., sub-heads need not be shown in the completion report.

2. One object, perhaps the main object, of estimating and accounting is that the Government or Department or person whose money is to be spent may have a fair idea of what the work is going to cost before he decides to spend his money on it. The next object is that, guided by this estimate, the actual spender of the money shall lay it out to the best advantage, and promptly inform his owner if it seems likely to cost more than was thought probable, so that he may at least have a chance of cutting his coat according to his cloth before it is too late. The third object, and one, to the mind whether of a construction Engineer or of controlling authority, of very high importance, is that accounts should show the actual rates at which the several items of the work have been constructed. The supreme utility of this last is found, when the next estimate for a similar work comes to be framed, in the estimator having something to guide him.

3. An estimate after all is only an estimate. It may be badly made for lack of experience, or it may be well made if the estimator has his own and other men's recorded experience to guide him. When a work was completed for a figure widely differing, whether in a plus or in a minus sense, from the estimate, it used to be a sort of axiom that the person at fault if the difference was plus, or the person to be praised if the difference was minus, was necessarily the constructor; the estimator was tacitly assumed to be blameless. My experience however is that nine times out of ten it is the estimator who is wrong; partly because he has insufficient data to go on in the form of rates of similar work actually done, and partly also because he cannot in the nature of things foresee the chances and the accidents which in the case of the majority of works are inevitable. This is illustrated by the fact that in Public Works Forms 45-A. and C., the completion report Forms for works which have exceeded their estimate by over 5 per cent., the names of the Engineers and subordinates by whom the work was carried out have to be recorded, while no such record is thought necessary in the Forms to be used when the estimate is not exceeded by over 5 per cent. Strangely enough in no case is the name of the estimator given, although the estimate is evidently considered to be a sufficiently important document to be posted in full detail. The object obviously has been to impress on the constructor that he must work within the estimate or show the reason why; but to my mind a far more useful object would be gained by more often calling upon estimators to explain their faulty estimates.

4. A chief object of the completion report is to place upon record, in an accessible form, the rates of work actually accomplished. Those bulky books, the Registers of Works, are not easily accessible and indeed are of too important a character to make it wise to be constantly turning them up for reference for the benefit of outsiders. The completion report on the other hand contains, or ought to contain, all the information likely to be wanted by an estimator, and not being a bulky document it can be cheaply reproduced in the necessary numbers. Still it is curious how very little use is made of it, and how very seldom Government insists on actual rates being published for general information when works have been brought to completion by selected men who make it a point to so supervise their accounts that the resulting figure shall accurately represent the cost of the several items of work

well arranged for and well executed. (It would be worse than useless to publish the records of some men's work, because any fool could do work at some men's rates.) Selected records ought certainly to be more freely published by Government and made more easily accessible to estimators than is ever now done. This would result in that better co-ordination of estimates and actuals which Government professes so sincerely to desire.

5. I am of opinion that—

(*a*) Expenditure on each work should be recorded in the Register of Works in precisely the same detail as in the Estimate.

(*b*) The completion report should be a mere transcript of the final entries, quantities, amounts and rates, in the Register of Works.

(*c*) The 5 per cent. stipulation should be done away with; because it is calculated to give the impression that the object of the completion report is to explain why the constructor came to differ from the estimator; whereas the true object of the completion report is to afford aid to future estimators, and incidentally to explain why the estimator and the constructor came to differ, *inter se*.

(*d*) The completion report ought to give the name of the estimator as well as that of the constructor, in order that, if the estimate is faultily inaccurate, explanation may be called for.

6. I am also of opinion that advantage ought to be taken by Government of the completion of selected works, such as Railway Divisions, or even whole Railways, to publish for the information of estimators the rates at which work had been actually brought to completion, and the specification of each important item.

OOTACAMUND,
28th September 1898.

FRANCIS J. E. SPRING, M.I.C.E.,
Consg. Engr. for Railways, Madras.

ORDER—No. 1221 Ry., dated 7th October 1898.

The Government of India will be addressed.

[Here enter No. 1222 Ry., dated 7th October 1898.]

(True Extract.)

FRANCIS J. E. SPRING,
Joint Secretary.

To the Agent and Manager, Madras Railway.
" Agent, South Indian Railway.
" Examiner, Guaranteed Railway Accounts.
" Consulting Engineer for Railways.

Fxd. A. F. Eccleston.

RAILWAY.

Government (1898) of Madras.

PUBLIC WORKS.

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

Letter, No. 1222 Ry., 7th October 1898.

OCTOBER.

Completion Reports

Stating that this Government is of opinion that, for reasons given, — should be prepared so as to record outlay by sub-heads.

PUBLIC WORKS DEPARTMENT.

Railway.

Letter—from

Francis J. E. Spring, Esq., c.i.e.,
Joint Secretary to the Government of Madras,
Public Works Department,
Railway Branch,

To

The SECRETARY to the GOVERNMENT of INDIA,
Public Works Department.

Sir,

In reply to your Circular No. 83/A.G., dated the 21st July 1898, I am directed to say that this Government is of opinion that in order that sanctioning authorities may be in a position to know the cost of each sub-head of a work, it is desirable that, whether the original estimate is exceeded by 5 per cent. or not, completion reports of railway works should be prepared so as to record outlay by sub-heads.

I have the honour to be,
Sir,
Your most obedient servant,
Francis J. E. Spring,
Joint Secretary.

Ootacamund,
7th October 1898.

Exd. A. F. Eccleston.

K C for 30/9/98
Compln Reptn

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

Read—the following :—

Circular from the Government of India, Public Works Department (Account—General), dated Simla, 23rd October 1889, No. 17, Public Works.

Completion Reports and Completion Certificates.

Read—

Public Works Department Code, Volume I, Chapter VII, paragraphs 33-35.
Public Works Department Code, Volume I, Chapter IX, paragraphs 38 to 43.
Public Works Department Code, Volume II, Chapter XIII, paragraph 60.

Read—also the following extract from the Report by the Committee on Public Works Accounts :—

Subject No. XVIII.

Completion Reports and Completion Certificates.

387. The orders regarding completion reports are contained in paras. 38 to 44, chapter IX, volume I of the Code.

388. Details are not required in the completion reports of works costing less than Rs. 2,500 each. A number of such works are allowed to be scheduled together in one completion report.

389. *Details in Reports.*—Provision has been made in the suggested works ledger for the record of outlay and of progress in any detail considered necessary by the Executive Engineer, the Superintending Engineer, or higher authority. It is questionable what end is served by the detail in full in the completion report of the quantities of work done as compared with the estimate.

390. The orders in para. 42 quoted above, as modified by Standing Order No. 78 of 21st September 1887, appear to meet all requirements with respect to works under Rs. 2,500, and the Committee would recommend their application to all works, the outlay on which is not recorded by sub-heads.

391. *Limit of use of detailed Reports.*—The Committee would recommend that when the account of a work is kept by sub-heads, it should not be necessary, except under special orders of the sanctioning authority, to submit a detailed completion report as in form 45A, if the total cost be within five per cent. of the estimate. In such cases a simple certificate showing the total estimate, total outlay and the excess or saving, &c., and bearing the office number of the record plan, should be sufficient. When the total amount of an estimate has been exceeded by more than five per cent., the sanctioning authority may either call for a revised estimate or accept a completion report in a form similar to the present form 45A, full explanation being given of the causes of excesses and savings under each sub-head.

392. *Completion Certificates.*—The reference to plan and estimate on the certificate on forms 45B and 45D should be cut out. It gives rise to interference by officers of departments for which the Public Works Department does a service, with professional details, which, as a rule, they are not competent to pronounce an opinion upon, and frequently causes much delay.

Resolution—The Government of India accepts the recommendations of the Committee; and is pleased to rule—

I.—That the orders in Public Works Department Code, volume I, chapter IX, paragraph 42, with respect to the omission of details from completion reports, be applied to all works, the outlay on which is not recorded by sub-heads (*vide* Circular No. 10 Public Works of 1889).

GENERAL.
ACCOUNT.

Govt. of {1889} Madras.

PUBLIC WORKS.

Dated November, 11th.

Recd. *Encl.*

G.O., 11th Nov. 1889, No. 3197 W.

NOVEMBER.

No. 1118 d/ 4.12.89

Copy forwarded

to A for information

S/ S. S.
3.12.89

Completion Reports and Completion Certificates

Circular from the Government of India issuing instructions in regard to the preparation of —, communicated to the officers concerned.

Public Works (1898) Department.

Railway

CURRENT No. 917

From

The Govt. of India

No. 2225
5.8.98.

~~*Order*~~

Copy forwarded to Agent S. I. Railway for favour of report with reference to Endorsement no. 1118 of 4th Decr 1889

for E.R.

Despatched on 5.8.98.

No. 83 A.G.

Dated 21st July 1898

Received }
Registered } 1-8-98

Enclosures

Spare copies

SUBJECT.

Completion reports

Calling for an expression of opinion as to whether a reversion to the procedure in force prior to the issue of Cir No. 17 P.W. d/ 23-10-89 in connection with the preparation & submission of — is desirable.

5/8/98.

Railway Br

BACK PAPERS.

No.	Date.

FURTHER PAPERS.

No.	Date.

[*General Distribution.*]

2

No. 83 A. G.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

ACCOUNT.
General.

To

THE GOVERNMENTS OF MADRAS AND BOMBAY (GENERAL AND RAILWAY), BENGAL, THE NORTH-WESTERN PROVINCES AND OUDH, PUNJAB, AND BURMA.
THE CHIEF COMMISSIONERS OF THE CENTRAL PROVINCES, ASSAM AND COORG.
THE RESIDENT AT HYDERABAD.
THE AGENTS TO THE GOVERNOR-GENERAL FOR CENTRAL INDIA, RAJPUTANA, AND BALUCHISTAN.
THE DIRECTOR-GENERAL OF MILITARY WORKS.
THE DIRECTOR-~~GENERAL~~ OF RAILWAYS. Constg. -
THE CONSULTING ENGINEERS TO THE GOVERNMENT OF INDIA FOR RAILWAYS, CALCUTTA, LUCKNOW, AND ASSAM.

RECEIVED
1 - AUG 1898

Simla, the 21st July 1898.

SIR,

I am directed to invite attention to Public Works Department Circular No. 17 P. W. of the 23rd October 1889, and to paragraph 40 of Chapter IX of Volume I of the Public Works Department Code, in connection with the preparation and submission of completion reports.

Vide G. [illegible]
17 [illegible]
put up

2. Under existing rules a completion report in Public Works Department Form No. 45-A. (Railway Form E 6) is prepared in detail only when the expenditure on a work is recorded by sub-heads and when the amount of the estimate is exceeded by more than 5 per cent. In other cases the completion report exhibits only the total estimated cost of the work, the total actual outlay and the net excess or saving on the estimated amount.

3. It has now been suggested that it would prove more useful and prevent laxness if completion reports for all works, the outlay on which has been recorded by sub-heads, were prepared in detail in Public Works Department Form No. 45-A. (Railway Form E 6) as sanctioning authorities would then be in a position to know the cost of each sub-head of a work, whether the total of an estimate were exceeded by more than 5 per cent. or not, and this, it is anticipated, could be done with but little additional clerical labour.

4. Before passing any orders on the suggestion, the Government of India would be glad to be favoured with the opinion of the $\frac{\text{Government}}{\text{Local Administration}}$ as to whether a reversion to the procedure in force prior to the issue of the circular above quoted is desirable.

I have the honour to be,

SIR,

Your most obedient Servant,

Deputy Secretary.

Documents accompanying.
Nil.

G. C. Press, Simla.—No. 154 P. W. D., A. G.—23-7-98.—1,104.

To. The Jt. Secretary to the Govt. of Madras.
P. W. D.
Railway Br.

No. 802
3P

South Indian Railway Co., Ld.,
AGENT'S OFFICE,
TRICHINOPOLY, 26th August 1898.

4006
29.8.98

From
The Offg: AGENT,
SOUTH INDIAN RAILWAY,

To
The CONSULTING ENGINEER FOR RAILWAYS,
MADRAS.

Sir,

Your endorsement No. 2225 of 5th August 1898.
on Government of India Order No. 83 A.G. of 21st July 1898.

CONSULTING ENGINEER
RECEIVED
29 AUG. 1898
MADRAS.

I beg to report that the heads of the Engineering, Locomotive, and Audit departments of this Administration consider that there is no objection to the Completion Reports for all works being prepared in detail and in this opinion I concur. Any record, provided that too much clerical labour is not expended upon it, which will facilitate the explanation often required as to the cause of excess or savings in carrying out works, as compared with the estimated cost of the same, is in my opinion justifiable and advisable.

WL. 29/8

I have the honor to be,
Sir,
Your most Obedient Servant,
Francis T. Smith
Offg: Agent.

We may reply, I think, in terms of A's letter. India's letter is the last paper put up.
JLA
12.9.98.

Forms John
FM
17/9/98

R. Please see flags. L & M.

Encl

A.R.

Will you please send copies of the forms asked for by D.R. below.

D.R.
13.9.98

DAM

Hewitt – Please see flags L & M. Form 45 A. will be found in Book of Forms P I, 1895 edition ~~[illegible]~~ Railway Form E 6 will be found in Part III 1896 edition – a copy was sent DGS some 5 days ago with forms ~~marked~~ required by D.G. marked out in it P III a copy is not sent as there is a copy at DGS –
17/9/98

From
The Agent,
South Indian Railway,
Trichinopoly.

To
The Consulting Engineer for Railways,
Madras.

Dated 189
Received

No.
Enclosure.

Form No. 33.

300—30-6-98.

OFFICE OF THE CONSULTING ENGINEER FOR RAILWAYS,

Madras, 30th August 1898.

EXAMINER
Regr. No. 437
30 AUG. 1898
Enclosures
RAILWAY ACCOUNTS, MADRAS.

EW 30/8/98

No 2431

OFFICE NOTE.

Letter from the Agent, South Indian Railway, No 802, dated 26th August 1898, forwarded to the Examiner of Railway Accounts for favour of remarks.

CRW
for E. R.

EXAMINER'S REPLY.

As the Company think it desirable to submit detailed completion reports in spite of the little additional clerical labour involved in their preparation, this Govt may also support the proposal to revert to the procedure of submitting Completion Reports for all Works the outlay on which has been recorded by subheads.

D R
CRW 1/9.

EWallen

3.9.98

C.R.
Encl

Govt. of India Circular No. 83.A.G.
21st July 98.

Note by the Consulting Engineer for Railways. Madras

In the Circular above referred to the Govt. of India ask for an expression of ~~[illegible]~~ opinions ~~[illegible]~~ in regard to the degree of detail in which completion reports should be submitted. The Completion Report in use on State Railways, whether worked by the State or leased to Companies, is Railway Form No. E.6. which will be found at pages 209–210 of Part III of the first edition of Forms of Account of Open Line of State Railways. The Completion Report is practically ~~an~~ a abstract of the final entries on the Page or pages of the Register of Works in which, ~~has been recorded~~ month by month the expenditure on ~~[illegible]~~ the work has been recorded ~~[illegible]~~. As it is only a matter of a few extra minutes ~~[illegible]~~ to fully instead of practically copy from the Register of Works the final months' items of expenditure on a work, ~~[illegible] work from the Register of Works~~ I see no object in economising the time of a clerk by decreeing that when the sum over the estimate is less than 5 % subheads need not be shown in the Completion report.

2 One object, perhaps the main object, of Estimating and Accounting is that the Government ~~[illegible]~~ or Department or person whose money is to be spent may have a fair idea of what the work is going to cost before he decides to spend his money on it. The next object is that, guided by this Estimate, the actual spender of the money shall ~~[illegible]~~ lay it out to the best advantage, and ~~[illegible]~~ promptly inform ~~[illegible]~~ his ~~[illegible]~~ owner if it seems likely to cost more than was thought, probably ~~[illegible]~~, so ~~[illegible]~~ that he may at least have a chance of cutting his coat according to his cloth before it is too late. The third object, and one to the mind ~~[illegible]~~ whether of a constructing Engineer or of controlling authority, ~~[illegible]~~ of very high importance, is that accounts should show the actual rates ~~[illegible]~~ at which the several ~~[illegible]~~ items of the work have been constructed. The supreme utility of this last is that when the next Estimate for a similar work comes to be framed the estimator ~~[illegible]~~ has something to guide him.

3 An Estimate after all is only an estimate. It may be badly made for lack of experience or it may be well made if the estimator has ~~his~~ own and other men's recorded experience to guide him. ~~[illegible]~~ When a work ~~is~~ was completed for a figure widely differing, whether in a plus or in a minus sense,

from the estimate, it used to be a sort of axiom that the person at fault if the difference was plus, or the person to be praised if the difference was minus, was necessarily the contractor; the estimator was supposed to be blameless. My experience however is that in nine times out of ten it is the estimator who is wrong, partly because he has insufficient data to go on in the form of rates of similar work actually done, and partly also because he cannot in the nature of things foresee the chances and the accidents which are inevitable in the case of majority of works.

This is illustrated by the fact that in P.W. Forms 45.A. and C., the completion reports for works which have exceeded their estimates by over 5%, the names of the Engineer and subordinates by whom the works was carried out have to be recorded, while no such record is thought necessary in the forms to be used when the estimate is not exceeded by over 5%. Strangely enough in no case is the name of the estimator given, although the estimate is evidently considered to be a sufficiently important document to be printed in full detail. The object obviously has been to impress on the contractor that he must work within the estimate ~~or suffer for it~~ or else show the reason why; but to my mind a far more useful object would be gained by more often calling upon estimators to explain their faulty estimates.

4, The chief object of the completion report is to place upon record the rates of works actually accomplished ~~in an accessible form~~. The bulky books the Register-of-Works Books are not easily accessible and indeed are of too important a character to make it wise to be constantly turning them up for reference for the benefit of outsiders. The completion report on the other hand contains or ought to contain all the information likely to be wanted by an estimator, and not being a bulky document it can be cheaply reproduced in the necessary numbers. Still it is extraordinary how very little use is made of it, and how very seldom Government insists on actual rates being published for general information when works have been brought to completion by selected men who make it a point to supervise their accounts that the resulting figures shall accurately represent the cost of the several items of works well arranged for and executed. (It would be worse than useless to publish the amounts of some mean works, because any fool could do work at some man's rates.) Selected annuals ought certainly to be more freely published by Government and made more easily accessible to estimators than is ever now done. This would result in that better coordination of estimates and actuals which Government professes so anxiously to desire.

I am of opinion that—

(a) Expenditure on each work should be recorded in the Register of Works in precisely the same detail as in the Estimate.

(b) The Completion Report should be a mere transcript of the final entries, quantities amounts and rates, in the Register of Works

(c) The 5 per cent stipulation should be done away with, because it is calculated to give the impression that the object of the completion report is to explain why the constructor came to differ from the estimator, whereas the true object of the Completion report is to afford aid to future estimators, and incidentally to explain why the estimator and the constructor came to differ, vide [illegible].

(d) The Completion Report ought to give the name of the estimator as well as that of the Constructor, in order that if his estimate is faultily inaccurate he may be called on to explain.

I am also of opinion that advantage ought to be taken by Government of the Completion of selected works, such as Railway Division, or even whole Railways, to publish for the information of estimators the rates at which works had been actually brought to completion, and the specification of each important item.

Ootacamund
28-9-98.

Francis J. E. Spring
M. Inst. C. E.
Con. Engr. for Rys. Madras.

AP 19

Read G.O. No. 3197. W. P.W. dated 11th Nov. 89.

~~[illegible]~~ Print.
" Govt. of India's ~~[illegible]~~ circular No. 83. A.G. dated the 21st July 98.
" Letter from the Agent S.I.R. No. 802. Aug 26th 98.
" Note of the Con. Engr for Rys Madras. dated 28-9-98.

No. 1221 Ry dated 7/10/98

78

Order. The Govt of India will be addressed.

Letter to Govt of India. Print in usual form of heading &. with No. & Dt.

No. 1222. Ry dated 7/10/98

G Letter

Sir

In reply to your circular No. 83. A.G. dated the 21st July 98. I am directed to say that this Government is of opinion that in order that sanctioning authorities may be in a position to know the cost of each subhead of a work, it is desirable that, whether the original estimate is exceeded by 5 per cent or not, completion reports should be prepared so as to record outlay by subheads.

I have &c

FKS
R.
28/9/98

D 17.10.98

DAR
Proof submitted
for AR
3/10

AR
28/8/98

Form No. 6.

Public Works Department,
Railway Branch.

OFFICE NOTE No. U.O.

Dated ____________ 189 .

From

THE JOINT SECRETARY TO GOVERNMENT, P. W. D. (RAILWAY BRANCH),

To

THE W.

Yes. I agree. The reference has not yet reached me.

7.10.98

I think we agree about this, we talked it over. You will doubtless reply separately. But I want to be sure that the reply of the Govt. in both branches of the Dept. will be uniform. So propose C. [illegible]

F. R. S.

7/10/98

120/4 20 30

Recd 3/10/98.

No. 1221 Ry., 7th October 1898.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read the following papers :—

G.O., No. 3197 W., Public Works, dated 11th November 1889.

Govt. of India Circular No. 83/A.G. dated Simla 21st July 98.

To — The Govt of Madras P.W. Dept. (General & Railways)

From—The Secretary to the Government of India, Public Works Department.
To—The Joint Secy. to the Govt. of Madras, Public Works Dept., Railway Branch.
Dated—Simla, 21st July 1898, Circular No. 83/A.G.

I am directed to invite attention to Public Works Department Circular No. 17 P. W. of the 23rd October 1889, and to paragraph 40 of Chapter IX of Volume I of the Public Works Department Code, in connection with the preparation and submission of completion reports.

2. Under existing rules a completion report in Public Works Department Form No. 45-A. (Railway Form E 6) is prepared in detail only when the expenditure on a work is recorded by sub-heads and when the amount of the estimate is exceeded by more than 5 per cent. In other cases the completion report exhibits only the total estimated cost of the work, the total actual outlay and the net excess or saving on the estimated amount.

3. It has now been suggested that it would prove more useful and prevent laxness if completion reports for all works, the outlay on which has been recorded by sub-heads, were prepared in detail in Public Works Department Form No. 45-A. (Railway Form E 6) as sanctioning authorities would then be in a position to know the cost of each sub-head of a work, whether the total of an estimate were exceeded by more than 5 per cent. or not, and this, it is anticipated, could be done with but little additional clerical labour.

4. Before passing any orders on the suggestion, the Government of India would be glad to be favoured with the opinion of the $\frac{\text{Government}}{\text{Local Administration}}$ as to whether a reversion to the procedure in force prior to the issue of the circular above quoted is desirable.

From—The ~~Officiating~~ Agent, South Indian Railway.
To—The Consulting Engineer for Railways, Madras.
Dated—Trichinopoly, 26th August 1898, No. 802.

[Your endorsement No. 2225 of 5th August 1898 on Government of India Order No. 83/A.G. of 21st July 1898.]

I beg to report that the heads of the Engineering, Locomotive, and Audit departments of this Administration consider that there is no objection to the completion reports for all works being prepared in detail and in this opinion I concur. Any record, provided that too much clerical labour is not expended upon it, which will facilitate the explanation often required as to the cause of excess or savings in carrying out works, as compared with the estimated cost of the same, is in my opinion justifiable and advisable.

No. 1221 Ry., 7th October 1898.

Note by the Consulting Engineer for Railways, Madras.

In the Circular above referred to the Government of India ask for an expression of opinions in regard to the degree of detail in which completion reports should be submitted. The completion report in use on State Railways, whether worked by the State or leased to Companies, is Railway Form No. E. 6 which will be found at pages 209—210 of Part III of the first edition of Forms of Accounts of Open Lines of State Railways. The completion report is practically an abstract of the final entries on the page or pages of the Register of Works in which, month by month, the expenditure on the work has been recorded. As it is only a matter of a few extra minutes to fully instead of partially copy from the Register of Works the final month's items of expenditure on a work, I see no object in economising the time of a cheap clerk by decreeing that when the excess over the estimate is less than 5 per cent. sub-heads it need not be shown in the completion report.

2. One object, perhaps the main object, of estimating and accounting is that the Government or Department or person whose money is to be spent may have a fair idea of what the work is going to cost before he decides to spend his money on it. The next object is that, guided by this estimate, the actual spender of the money shall lay it out to the best advantage, and promptly inform his owner if it seems likely to cost more than was thought probable, so that he may at least have a chance of cutting his coat according to his cloth before it is too late. The third object, and one to the mind whether of a construction Engineer or of controlling authority, of very high importance, is that accounts should show the actual rates at which the several items of the work have been constructed. The supreme utility of this last is ~~that~~ found when the next estimate for a similar work comes to be framed the estimator has something to guide him.

3. An estimate after all is only an estimate. It may be badly made for lack of experience or it may be well made if the estimator has his own and other men's recorded experience to guide him. When a work was completed for a figure widely differing, whether in a plus or in a minus sense from the estimate, it used to be a sort of axiom that the person at fault if the difference was plus, or the person to be praised if the difference was minus, was necessarily the constructor; the estimator was ~~supposed~~ tacitly assumed to be blameless. My experience however is that ~~in~~ nine times out of ten it is the estimator who is wrong, partly because he has insufficient data to go on in the form of rates of similar work actually done, and partly also because he cannot in the nature of things foresee the chances and the accidents which in the case of majority of works are inevitable. This is illustrated by the fact that in Public Works Forms 45-A. and C., the completion reports form for works which have exceeded their estimate by over 5 per cent., the names of the Engineer and subordinates by whom the work was carried out have to be recorded, while no such record is thought necessary in the forms to be used when the estimate is not exceeded by over 5 per cent. Strangely enough in no case is the name of the estimator given, although the estimate is evidently considered to be a sufficiently important document to be posted in full detail. The object obviously has been to impress on the constructor that he must work within the estimate or show the reason why; but to my mind a far more useful object would be gained by more often calling upon estimators to explain their faulty estimates.

4. A chief object of the completion report is to place upon record, in an accessible form, the rates of work actually accomplished. Those bulky books, the Registers of Works, are not easily accessible and indeed are of too important a character to make it wise to be constantly turning them up for reference for the benefit of outsiders. The completion report on the other hand contains, or ought to contain, all the information likely to be wanted by an estimator, and not being a bulky document it can be cheaply reproduced in the necessary numbers. Still it is ~~extraordinary~~ curious how very little use is made of it, and how very seldom Government insists on actual rates being published for general information when works have been brought

to completion by selected men who make it a point to so supervise their accounts that the resulting figure shall accurately represent the cost of the several items of work well arranged for and executed. (It would be worse than useless to publish the ~~annals~~ of some men's work, because any fool could do work at some men's rates.) Selected ~~annals~~ ought certainly to be more freely published by Government and made more easily accessible to estimators than is ever now done. This would result in that better co-ordination of estimates and actuals which Government profess so sincerely to desire.

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5. I am of opinion that—

(*a*) Expenditure on each work should be recorded in the Registers of Work in precisely the same detail as in the estimate.

(*b*) The completion report should be a mere transcript of the final entries, quantities, amounts and rates, in the Register of Works.

(*c*) The 5 per cent. stipulation should be done away with, because it is calculated to give the impression that the object of the completion report is to explain why the constructor came to differ from the estimator, whereas the true object of the completion report is to afford aid to future estimators, and incidentally to explain why the estimator and the constructor came to differ, *inter se*.

(*d*) The completion report ought to give the name of the estimator as well as that of the constructor, in order that, if ~~his~~ estimate is faultily inaccurate, ~~he~~ may be called ~~on~~ to explain.

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6. I am also of opinion that advantage ought to be taken by Government of the completion of selected works, such as Railway Division, or even whole Railways, to publish for the information of estimators the rates at which work had been actually brought to completion, and the specification of each important item.

OOTACAMUND,
28th September 1898.

FRANCIS J. E. SPRING, M.I.C.E.,
Consg. Engr. for Railways, Madras.

ORDER—No. 1221. Ry., dated 7th October 1898.

The Government of India will be addressed.

[Here enter No. 1222 Ry., dated 7th October 1898.]

(True Extract.)

~~Under~~ Jt. Secretary.

Exd. A. F. Eccleston.

To the Agent & Manager Madras Railway
— " — Agent South Indian Railway
— " — Examiner Guaranteed Ry: Accounts
— " — Consulting Engineer for Rys.

G.O. Docket: Completion Reports

— Ordered that the Govt of India be addressed in reply to its circular regarding the preparation & submission of ——

Despatched on 18/10/98

No. 1222 Ry., 7th October 1898.

PUBLIC WORKS DEPARTMENT.

Railway.

Letter—from

Francis J. E. Spring, Esq., C.I.E.,
Joint Secretary to the Government of Madras,
Public Works Department,
Railway Branch,

To

The SECRETARY to the GOVERNMENT of INDIA,
Public Works Department.

Sir,

In reply to your Circular No. 183/A.G., dated the 21st July 1898, I am directed to say that this Government is of opinion that in order that sanctioning authorities may be in a position to know the cost of each sub-head of a work, it is desirable that, whether the original estimate is exceeded by 5 per cent. or not, completion reports should be prepared so as to record outlay by sub-heads.

I have the honour to be,
Sir,
Your most obedient servant,

F.J.E.S.

Joint Secretary.

5/10/98

Ootacamund,
7th October 1898.

Completion Reports

Exd. A. F. Eccleston.

Stating that this Govt is of opinion that for reasons given — should be prepared so as to record outlay by sub heads.

18/10/98

Recd. } 1899. *Enclosures*

Regd. } 1899. *Spare copies*

Please see Go 1221-2 Ry
7/10/98
flag W

G.O., No. 277 W., 30th January 1899.

JANUARY.

Completion Reports

Concurring in the views of the Chief Engineer in the matter of the preparation of — in detail, and directing, with remark, Superintending Engineers to put into force their powers under the Public Works Code and to order that the — of certain selected works under selected officers in each division shall be, in each year, prepared in detail by sub-heads, similar orders issuing from the Secretariat in the case of works sanctioned by Government.

Completion Reports

Stating that the officers consulted by the Madras Government are almost unanimously opposed to the change proposed by the Government of India in the matter of the preparation of — in detail, and that, in the opinion of the Local Government, the Code sufficiently provides already for the object which the Government of India has in view and that its provisions will be utilized for that purpose.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

Read—the following papers :—

From the Superintending Engineer,	I Circle, dated	2nd Nov. 1898,	No.	697 G.L.
" " "	II " "	10th Oct.	" "	3152 K.
" " "	III " "	5th Nov.	" "	2883 W.
" " "	IV " "	4th Oct.	" "	534/W.
" " "	V " "	27th Sept.	" "	607 W.
" " "	VI " "	19th "	" "	1570 T.C.
" Consulting Architect to Government,	"	26th Aug.	"	1644.
" Supdt. of Works, Lighthouse Divn.,	"	14th Oct.	" "	1330.
" Chief Engineer for Irrigation,	"	3rd Dec.	" "	367.
" Examiner, Public Works Accounts,	"	7th "	" "	4148 B./A.

Note by the Chief Engineer, Public Works Department.

When Circular No. 83/A.G., dated 21st July 1898, was received, it was circulated, in G.O., No. 2007 W., dated 9th August 1898, to Superintending Engineers for an expression of opinion in consultation with selected Division officers.

2. Meanwhile, I was consulted on the subject by Mr. Spring, Consulting Engineer for Railways, with a view to concerted action between the various branches of the Public Works Department in Madras. He explained that he was in favour of preparing completion reports in detail, chiefly because the knowledge of the cost of the various descriptions of work in the past would be of great assistance to future estimators. I quite agreed that this knowledge is most essential to future accuracy in estimating, and promised to support his view.

3. The reports above called for have now been received, and are almost unanimously opposed to the change proposed by the Government of India, the chief reason advanced being that the preparation of completion reports in detail would involve a

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...he pleases, to order a detailed completion report for any particular wo... ed to by the Gover... of India should be ...; the excess... occurred; ...eans of ... ation

(True Copy)

M. A. Jayarama Mudr.
Head Clerk, P.W. Sectt.

Xd cml

H.E. The Governor

I notice that the Railway G.O. was not seen by H.E. It seemed, after my consultation with Mr de Winton, to be quite unobjectionable to issue a reply on so purely technical a subject without troubling H.E. about it. But the reply was of course intended to refer solely to Railways. I notice however that its intention to refer solely to Railways is not perhaps made clear enough in the letter to India 1222 Ry. Oct 7th 98. So I would propose that at the commencement of the last line of the letter, the words "of railway works" should be sent on a 'correction slip' for insertion before the words "should be prepared".

13/2/99

This should be done.
H.E.H.
20.3.99

HE
16.2.99

Rd
22.3.99

Completion Reports

Stating that the officers consulted by the Madras Government are almost unanimously opposed to the change proposed by the Government of India in the matter of the preparation of — in detail, and that, in the opinion of the Local Government, the Code sufficiently provides already for the object which the Government of India has in view and that its provisions will be utilized for that purpose.

if he pleases, to order a detailed completion report for any particular work;

(4) that the "laxness" referred to by the Government of India should be prevented before, and not after, the excesses have occurred;

(5) that the Divisional officer, by means of his inspections and examination of his work register, has numerous opportunities of checking excess expenditure on sub-heads during the progress of a work;

(6) that the Superintending Engineer can, under Code, Volume I, chapter III, paragraph 43, exercise similar control by means of the "workslips" therein ordered, and also by the monthly progress reports submitted;

(7) that a completion report comes too late to be of use for any other purpose except that of regularizing expenditure.

4. With the above opinions I, in the main, agree, and I must withdraw the complete support on this subject, promised to Mr. Spring, for the following reasons:—

(1) The change will involve additional clerical labour and demands for increased establishment.

(2) The change will not prevent the "laxness" referred to by the Government of India.

(3) The change will not be of the benefit anticipated by the Government of India, because it will produce a mass of figures, which will vary so greatly and be so vitiated by the influence of careless and incompetent officers that no practical use thereof will be possible.

5. I, however, most fully agree that we greatly need guidance for future estimating; and that "the best of prophets of the future is the past." To this end two things are necessary:

(1) A carefully prepared schedule of rates.

(2) Application of these rates annually by selected officers on selected works in each district, until by comparison, amendment and revision we arrive at rates which may be trusted to be as accurate as the ever-varying conditions under which work is performed in this country permit.

The first step has already been taken in this Presidency and a committee is now sitting in Madras engaged upon the revision of schedules of rates.

To meet the second requirement, I propose to direct Superintending Engineers to put into force their powers under Code, Volume I, Chapter IX, paragraph 40, and order that the completion reports of certain selected works under selected officers in each division shall be, in each year, prepared in detail by sub-heads. Where works are sanctioned by Government, these orders will issue from this office at the time of sanction.

6. I therefore recommend that the Government of India be informed that, in the opinion of this Government, the Code sufficiently provides already for the object it desires to attain, and will be utilized for that purpose in future in this Presidency.

(Signed) W. B. DE WINTON,
Chief Engineer.

23rd December 1898.

Completion Reports

Stating that the officers consulted by the Madras Government are almost unanimously opposed to the change proposed by the Government of India in the matter of the preparation of — in detail, and that, in the opinion of the Local Government, the Code sufficiently provides already for the object which the Government of India has in view and that its provisions will be utilized for that purpose.

CONSULTING ENGINEER FOR RAILWAYS
RECEIVED
8 FEB. 1899
MADRAS.

(True Extrac

Under Secretary to Government.

To all Superintending Engineers.
,, the Chief Engineer for Irrigation.
,, the Consulting Engineer for Railways, with file returned, and note by His Excellency the Governor.
,, the Consulting Architect to Government.
,, the Superintendent of Works, Lighthouse division.
,, the Superintending Engineer on Special duty.
,, the Examiner, Public Works Accounts.

Exd. T. K. Narayana Aiyangar.

GENERAL.
ACCOUNT.

Government (1899) of Madras.

PUBLIC WORKS.

Recd.	1899.	*Enclosures*	
Regd.		*Spare copies*	

Letter, No. 278 W., 30th January 1899.

JANUARY.

Completion Reports

Stating that the officers consulted by the Madras Government are almost unanimously opposed to the change proposed by the Government of India in the matter of the preparation of — in detail, and that, in the opinion of the Local Government, the Code sufficiently provides already for the object which the Government of India has in view and that its provisions will be utilized for that purpose.

PUBLIC WORKS DEPARTMENT.

General.
Account.

Letter—from

W. B. deWINTON, Esq.,
Secretary to the Government of Madras,
Public Works Department,

To

The JOINT SECRETARY to the GOVERNMENT of INDIA,
Public Works Department.

Sir,

In reply to your letter, No. 83/A.G., dated 21st July 1898, I am directed to state that the Superintending Engineers and selected Division officers consulted by this Government are almost unanimously opposed to the change proposed by the Government of India, the chief reason advanced being that the preparation of completion reports in detail would involve a considerable increase in the clerical work of Divisional offices, which are already overburdened with such work, and would result in no commensurate advantage. They point out that—

(1) the ruling in Code, Volume I, chapter IX, paragraph 40, was introduced at the instance of the Public Works Accounts committee to afford relief to Divisional offices;
(2) that there is a growing tendency to throw more work upon Divisional offices, and that much of the good done by the above committee bids fair to become vitiated;
(3) that the ruling in paragraph 40 already enables the "sanctioning authority," if he pleases, to order a detailed completion report for any particular work;
(4) that the "laxness" referred to by the Government of India should be prevented before, and not after, the excesses have occurred;
(5) that the Divisional officer, by means of his inspections and examination of his work register, has numerous opportunities of checking excess expenditure on sub-heads during the progress of a work;
(6) that the Superintending Engineer can, under Code, Volume I, chapter III, paragraph 43, exercise similar control by means of the "workslips" therein ordered, and also by the monthly progress reports submitted;
(7) that a completion report comes too late to be of use for any other purpose except that of regularizing expenditure.

2. With these opinions His Excellency the Governor in Council in the main agrees, and is convinced that the change—

(1) will involve additional clerical labour and demands for increased establishment;
(2) will not prevent the laxness referred to by the Government of India; and
(3) will not be of the benefit anticipated by the Government of India, because it will merely produce a mass of figures, which will vary so greatly and be so vitiated from various causes that no practical use thereof will be possible.

3. In the opinion of this Government the Code sufficiently provides already for the object which the Government of India desires to attain, and its provisions will be utilized for that purpose in future in this Presidency. A Government order has, with this intent, been issued. A copy is attached.

I have the honour to be,
Sir,
Your most obedient servant,
(Signed) W. B. deWINTON,
Secretary to Government.

Madras,
30th January 1899.

Exl. T. K. Narayana Aiyangar.