B No. 1157 W d/ 28th April 1887.

Communicated to officers concerned for information.

Comm. to officers concerned for information.

22.4.87

25/4/87

28/4/87

Ch. Engr. for Irrign.
C. E. for I.
Consg. Engr. for Rys.
C. E. for Rys.
S. E. ~~V circle~~
S. E. V.
Exr. P. W. Accts.
Ex.

2/5

O.S. 98/IV. M. 25.4.87

C. 22-4-87 R. 27-4-87

Ew. 2/5 27/5

[6] P.W.C. No. 3069

Govt. of {188} Madras.

(5)

To

The Public Works Department

~~R/ 22.4.87~~

Proceedings, dated 14th April 1887.

No. 305 R.

~~B. No. 1157 W d/ 28th April 1887~~

Subject.

Communicating to the Depts. of the Secretariat the intimation re the opening of a Postal Combined Telegraph office at Bangalore Cantonment

---

P.W.C. No. 2767

Reference to Madras P. W. D. Code.

Paras.

B. No. 761 W 11-3.87
" 831 W 17.3.87
G. O. 950 W 30-3.87
" 2571 W 20.10.84
No. 523 C. 11.2.87
B. No. 287 W 4-2.87
G. O. 2920 W 5-11.86
" 242 W 27.1.87
" 2222 W 6.9.86
B. No. 439 W 12.2.87
" 2425 W 22.9.86
" 1993 W 10.8.86
" 1860 W 22.7.86
No. 2437 C. 10.7.86
" 2436 C. 10.7.86

O.S. 102/IV. M. 25.4.87

C. 23-4-87 R. 27-4-87.

2/5

Ew. 2/5

P. W. D. Form.
No. M 112.

orig. (6)

CENTRAL OFFICE OF ACCOUNTS.

Circle Fourth

Fund Provincial & Imperial

~~R/ 5.4.87 in dupl.~~

Provincial Statement of Objectionable Items in the Accounts, of Executive Engineers for the month of January 1887.

No. ______

Madras,
Dated 5th April 1887.

Forwarded for orders to the Secretary to Government, Public Works Department, Madras.

~~B. No. 1158 W d/ 28th April 1887~~

A. Hunter
Major R. E.
Examiner of P. W. Accounts,
Madras.

B 11/28/4

With orders ~~H.W.~~

With orders

[P. W. D. Form No. M 112—Inner Sheet.]

Provincial Statement of Objectionable Items in the Accounts of executive engineers for the month of January 1887 requiring the orders of Government.

Item No.	Particulars of each Item.	Month in the Accounts of which Objectionable Expenditure first appeared.	Comparison with Estimate.			Comparison with Appropriation of the Year.			Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
			Amount of Estimate.	Expenditure up to Date.	Excess over Estimate.	Amount of Appropriation.	Expenditure of the year.	Excess over Appropriation.			
	Provincial Without Estimate		Nilgiri Division								B. No 1158 Wd/28 April 188
1	Providing a lightning Conductor for the Protestant Church at Wellington	Jany 1887	"	376	376	"	"	-	376	Sanction to Estimate is awaited.	Estimate is awaited. Estimate is awaited
			West Coast Division								
2	Purchase of Mr. Brown's property for a Telegraph Office at Vayitri	March 1883	"	4,500	4,500	"	"	.		Sanction to the Estimate and recovery of the property under the Land Acquisition Act still awaited.	Attention is drawn to the remarks of the Examiner of P. W. Accounts in view to early steps being taken for the removal of objection to this item Attention is drawn to the remarks of the Ex. P. W. Accts in view to early steps being taken for the removal of objection to this item.
	Imperial Military Excess over Estimate										
3	Putting the Cannanore Fort into a state of defence.	March 1886	2,958	4,347	1,389	"	"	-		Same remark as in Objectionable Items Statement for Novr/86. Sanction to Revised Estimate awaited.	Vide orders against this item in the O. I. statement for December 1886 Vide orders against this item in the O. I. Statement for Decr 1886

Provincial statement of objectionable items in the accounts of executive engineers for the month of January 1887 requiring the orders of Government.

Item No.	Particulars of each item.	Month in the Accounts of which Objectionable Expenditure first appeared.	Comparison with Estimate.			Comparison with appropriation of the Year.			Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
			Amount of Estimate.	Expenditure up to Date.	Excess over Estimate.	Amount of Appropriation.	Expenditure of the Year.	Excess over Appropriation.			
	Imperial Military (Contd)		West Coast Dn (Contd)								
	Excess over Estimate (Contd)										
4	Annual Repairs to European Infantry Buildings at Cannanore	Jany 1887	5,458	5,975	517	"	"	.	761	The excess over Estimate is brought to the notice of Government. The total cost of work done to end of Jany/87 is Rs 6087 and the Executive Engineer reports work to be nearly completed.	The excess should be explained in the completion report. The excess should be explained in the completion report.
	Provincial Miscellaneous Irregularities - works for which Revised Estimates are likely to be required										
5	Improving the line of road from Calicut to Vayitri Puduvellam & Samaracherry Ghat	March 1886	319,788	93,674	"	–	–	.	10,723	The Executive Engineer reports that the Revised Estimates have been submitted to the Superintending Engineer. Sanction thereto is still awaited.	Item 5. Revised estimate of Rs 3,75,570 was sanctioned in G.O. No 950 W of 30th March 1887 Item 5. Revised estimate of Rs 3,75,578 was sanctioned in G.O. No 950 W of 30th March 1887
6	Improving the road from Vayitri to Gudalur	May 1886	410,000	5,302	"	"	–	–	423		

[P. W. D. Form No. M 112—Inner Sheet.]

Provincial statement of objectionable items in the accounts of executive engineers for the month of January 1887 requiring the orders of Government.

Item No.	Particulars of each item.	Month in the Accounts of which Objectionable Expenditure first appeared.	Comparison with Estimate.			Comparison with appropriation of the Year.			Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
			Amount of Estimate.	Expenditure up to Date.	Excess over Estimate.	Amount of Appropriation.	Expenditure of the Year.	Excess over Appropriation.			
	Provincial (Contd) Miscellaneous Irregularities (Contd) Want of Completion Reports		Coimbatore Division								
7	Repairing Overseer's shed at Dharapuram	Octr. 1886	113	90	"	-	-	-		Completion Report for this work is awaited.	Completion report for this work should be forwarded to the Examiner without further delay Completion report for this work should be forwarded to the Examiner without further delay
	Miscellaneous Advances Items outstanding for more than 3 months		West Coast Division								
8	Repairing the Sea wall at Beypore and protecting the shore from the actions of the sea	Octr 1884	Rs 5,159	-	-	-	-	-		Same remark as in Objectionable Items Statement for Septr/86 Orders of Government still awaited.	A report of the expenditure incurred by the Railway Company is awaited. A report of the expenditure incurred by the Railway Company is awaited.
9	Paid to Chief Engineer Travancore on account of annual repairs to Military Buildings Quilon	June 1886	Rs 540	-	-	-	-	-		Same remark as in Objectionable Items Statement for October/86 Adjustment still awaited.	Early steps should be taken for the adjustment of these items Early steps should be taken for the adjustment of these items
10	Paid to Chief Engineer Travancore on account of repairs to the floor of the Native Infantry Hospital at Quilon	July 1886	Rs 522	-	-	-	-	-			

1,000—21-3-87.

[P. W. D. Form No. M 112—Inner Sheet.]

Provincial statement of objectionable items in the accounts of executive engineers for the month of January **188**7 **requiring the orders of Government.**

Item No.	Particulars of each item.	Month in the Accounts of which Objectionable Expenditure first appeared.	Comparison with Estimate.			Comparison with appropriation of the Year.			Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
			Amount of Estimate.	Expenditure up to Date.	Excess over Estimate.	Amount of Appropriation.	Expenditure of the Year.	Excess over Appropriation.			
	Provincial (Contd)		Nilgiri Division								
	Miscellaneous Irregularities		(Contd)								
	Articles of European Manufacture obtained direct from England independently of the India Office.										
4	Wall papers obtained from England for Commandant's Quarters at Wellington	Novr 1886	Rs	192						The circumstance under which the paper was purchased direct from England has been explained by the Commandant Wellington in his letter No dated to the Superintending Engineer IV. Circle which was forwarded to the Chief Engineer P. W. Department with this Office Endorsement No dated and orders on which are now awaited.	Noted. Noted

1,000—21-3-87.

Provincial statement of objectionable items in the accounts of Executive Engineers for the month of January 1887 requiring the orders of Government.

Item No.	Particulars of each item.	Month in the Accounts of which Objectionable Expenditure first appeared.	Comparison with Estimate. Amount of Estimate.	Comparison with Estimate. Expenditure up to Date.	Comparison with Estimate. Excess over Estimate.	Comparison with Appropriation of the Year. Amount of Appropriation.	Comparison with Appropriation of the Year. Expenditure of the Year.	Comparison with Appropriation of the Year. Excess over Appropriation.	Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
	Provincial (Contd) Miscellaneous Irregularities (Contd) Delay in recovery of rents		Coimbatore Division								
~~12~~ 11	From Mr. ~~Spenser~~ Spencer for Sub Collector's Quarters at Hosur	June 1886	.	17.5.4						Vide remarks in previous Objectionable Items Statements. Mr. ~~Spensers~~ Spencer's return from furlough is awaited.	Noted Noted
	Contractors' Balance		West Coast Division								
12. ~~13~~	Messrs: S. Kader and P. Bareed for repairing Government Church at Cochin	Rs	626..5..8 from June 1886.							Same remark as in Objectionable Items Statement for Decr./86 The Executive Engineer reports that the item will be adjusted in February 1887.	Noted Noted
	Work for which Revised Estimates are likely to be required										
13. ~~14~~	Purchasing the Local Fund School House for the Sub Registrar's Office at Taliparamba									Same remark as in Objectionable Items Statement for October/86 Title deeds are still awaited.	Early steps should be taken for the submission of the title deeds to the Examiner Early steps should be taken for the submission of the title deeds to the Examiner 23.4.87

Major R.E.
Examiner of P. W. Accounts,
Madras.

25.3/4
4/4

Jolt
25/4/87
23/4

To The Supg. Engr. IV. Circle thro' the Examiner of P.W. accts

The Supdt. Engr. IV Circle thro' the Examiner of P. W. Acct

761 W 11.3.87
523 C 11.2.87
2571 W 20.10.84.
287 W 4.2.87.
242 W 27.1.87.
2222 W 6.9.86.
439 W 12.2.87.
437 W 12.2.87.
338/9 W 22.12.86.

212 W 22.1.87.

B. No. 831 W d/ 17th March /87.

B/

Recorded with reference to G.O. No. 761 W d/ 11th March /87.

Recorded with reference to G.O. No. 761 W dated 11 March 1887

Cu/

16.3.87

17/3/87.

B

17/3.

W/ 16/3

21/3

21/3

P.W.C. No. 2119

From.

D. C. Gordon Esquire
Examiner P. W. Accounts
Madras.

To.

The Chief Engineer
Public Works Depth.

B. No. 831. W d/ 17-3-87

Enclosure. 1.
Endorsement No. 310 A E 4.
Dated 14th March 1887.
R/ 15.3.87

Provincial Statement of Objectionable items in the accounts of Executive Engineers for September 1886. of 4th Circle.

Submits explanation for certain items in the ___

With order

761 vr 11.3.87.
523 C 11.2.87
2571 vr 20.10.84.
2 87 vr 4.2.87.
242 vr 27.1.87.
2222 vr 6.9.86.
439 vr 12.2.87.
437 vr 12.2.87.
3389 vr 22.12.86.

212 vr 22.1.87.

B. No 831. W d/17th March/87.

B/

Recorded with reference to G.O. No 761. W d/ 11th March/87.

Recorded with reference to G.O. No 761 W dated 11 March 1887

16.3.17

17/3/87

B

17/3

W/16/3

21/3

29/3

P.W.C. No 2119

From.

D. C. Gordon Esquire
Examiner P. W. Accounts
Madras.

To.

The Chief Engineer
Public Works Deptt.

B. No 831. W d/17-3-87

Enclosure. 1.
Endorsement No 310 S.E.4.
Dated 14th March 1887.
Rd 15.3.87

Provincial Statement of Objectionable items in the accounts of Executive Engineers for September 1886. of 4th Circle.

Submits explanation for certain items in the ___

With order

Enclosure No: 1 of Endorsement No: 310 W. E 4th 25/4/3/87

No. 88/E.W. Superintending Engr's Office, 4th C.
Coimbatore, 25 February/87

From

Colonel, J. Beatty. R.E.
Superintending Engineer.
IV Circle.

To

The Chief Engineer,
P. W. Departt.
thro', the Examiner of P. W. Accounts.

Sir,

Adverting to G.O. No. 3389/W of 22nd December 1886 I have the honor to report as follow:-

Item I. Putting the Cannanore Fort into a state of defence — Revised estimate sent to you with this Office No. 56 E.W. of 8th February, 1886.

Item 2. Quarters for the Serjeant Instructor Malabar Volunteer Rifles Calicut — The Officer Commanding Malabar Volunteer Rifles reports "that the "annual grant from Government has

14/3

house was given in G. O. No. 222W of 6th September/86.

EXAMINED
No. 310 ℞ 4.
18 FEB 87
P. W. A. O.

Item No. 20. Fountain for Adam Memorial at Ootacamund —— .	Sanctioned in G.O. No. 287W of 4th February/87.

I have the honor to be
Sir,
Your most obt Sert.

Captain R.E.
Exe: Engineer
for Supg: Engr. 4th Circle

JH

14/5

EXAMINED
No 310 S.E.4
28
ENCLOSURES
P.W.

From

Colonel J. Beatty R.E.
Supg: Engineer
4th Circle.

No. 1
PW. 2119/87

Dated 25th } February 1887
Received. }

No. 88/E.W.

Provincial Statement of objectionable items in the accounts of Executive Engineers for September 1886.

Submits explanations for certain items in the —

Endorsement No. 310 S.E.4
Dated 14th March 18

Forwarded to the Chief Engineer Public Works Department.

Items 1 and 2. No remark
Items 3 to 9. Completion Reports since received with the exception of items 4 and 7.
Items 10, 12 and 18 – Yes.
Items 13 and 13½ – Sanction to revised estimate still awaited
Item 16, 17 and 20 – Yes.

D. C. Gordon

Examiner P. W. Accounts
Madras.

14/3

Enclosure 1 –

E.G.
14/3

14/3

761 w 11.3.87 212 w 22.1.87
523 C 11.2.87
2571 w 20.10.84
287 w 4.2.87
242 w 27.1.87
2222 w 6.9.86
439 w 12.2.87
437 w 12.2.87
338/9 w 22.12.86

B. No. 831. W d/ 17th March /87

B/

Recorded with reference to G.O. No. 761. W d/ 11th March /87.

Recorded with reference to G.O. No. 761 W dated 11 March 1887

Cn/

16.3.87

17/3/87

B

17/3

W/ 10/3

Cdc 21/3

21/3

P.W.C. No. 2119

From

D. C. Gordon Esquire
Examiner P. W. Accounts
Madras.

To

The Chief Engineer
Public Works Deptt

B. No. 831. W d/ 17-3-87

Enclosure 1.
Endorsement No. 310 SE4.
Dated 14th March 1887
Rd 15.3.87

Provincial statement of Objectionable items in the accounts of Executive Engineers for September 1886 of 4th Circle. Submits explanation for certain items in the —

Dw/ W

With order

REFERENCE TO MADRAS P. W. D. CODE

PARAS.

439 w 12.2.87
437 w 12.2.87
523 C. 11.2.87
2571 w 20.10.84

14/3

P.W.C. No. 1806

P. W. D. FORM.
No. M 112.

CENTRAL OFFICE OF ACCOUNTS.

CIRCLE Fourth

FUND Imperial and Provincial

Rd 5.3.87 in duplo

Provincial Statement of Objectionable Items in the Accounts of Executive Engineers for the month of December 1886.

No. ______

MADRAS,
Dated March 1887

B. No. 761. W d/ 11-3-87

FORWARDED for orders to the Secretary to Government, Public Works Department, Madras.

B W/ 11/3

D. C. Gordon

Examiner of P. W. Accounts,
Madras.

Dw/ W

With orders

[P. W. D. Form No. M. 112—Inner Sheet.]

Provincial Statement of Objectionable Items in the Accounts of Executive Engineers for the month of December 1886 requiring the orders of Government.

Item No.	Particulars of each Item.	Month in the Accounts of which Objectionable Expenditure first appeared.	Comparison with Estimate. Amount of Estimate.	Comparison with Estimate. Expenditure up to Date.	Comparison with Estimate. Excess over Estimate.	Comparison with Appropriation of the Year. Amount of Appropriation.	Comparison with Appropriation of the Year. Expenditure of the year.	Comparison with Appropriation of the Year. Excess over Appropriation.	Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
	Imperial Military **Excess over Estimate**										
			West Coast Division								
1	Putting the Cannanore Fort into a State of defence	March 1886	2958	4,347	1,389					Vide remark in Objectionable Items Statement for November 1886. Sanction to revised Estimate awaited.	No [illegible] of 11 March/87 A revised estimate has been received & referred to the Military Dept ~~The~~ a revised estimate is has been received & referred to the military Department
	Provincial **Want of Estimate**										
2	Purchase of Mr Brown's property for a Telegraph Office at Vayitri	March 1883	„	4,500	4,500	.	.			Sanction to Estimate still awaited.	The matter is still under reference The matter is still under reference
			Nilgiri Division								
3	Stock Manufacture at Wellington	June 1886	.	1,836	1,836	.	.		16	Vide remarks in the Objectionable Items Statement for August 1886. The Executive Engineer reports that the operations are closed and that Stock has already been relieved of a large portion of the outturn.	Noted

[P. W. D. Form No. M. 112—Inner Sheet.]

Provincial Statement of Objectionable Items in the Accounts of Executive Engineers for the month of December 1886 requiring the orders of Government.

Item No.	Particulars of each Item.	Month in the Accounts of which Objectionable Expenditure first appeared.	Comparison with Estimate. Amount of Estimate.	Comparison with Estimate. Expenditure up to Date.	Comparison with Estimate. Excess over Estimate.	Comparison with Appropriation of the Year. Amount of Appropriation.	Comparison with Appropriation of the Year. Expenditure of the Year.	Comparison with Appropriation of the Year. Excess over Appropriation.	Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
	Provincial (Contd.) Miscellaneous Irregularities Works for which Revised Estimates are likely to be required.										
			West Coast Division								
4	Improving the line of road from Calicut to Vayitri Pudiwellam and Samaracherry Ghat	March 1886	3,19,788	82,951			.			The Executive Engineer states that the revised Estimates for these works are under preparation. Sanction thereto is still awaited.	Revised estimates for these works are awaited Revised estimates for them works are awaited.
5	Improving the road from Vayitri to Gudalur	May 1886	4,10,000	4,880	.	.	.	.			
			Coimbatore Division								
6	Constructing a close prison at Coimbatore	Septr 1886	21,935	10,852	.	.	.	.		The Superintending Engineer reports that Revised Estimate was submitted through the Inspector General of Jails with his Office No. 336 of 21st October 1886. Sanction to which is awaited.	The revised estimate has been received and is under disposal The revised estimate has been received and is under disposal.

[P. W. D. Form No. M. 112—Inner Sheet.]

Provincial Statement of Objectionable Items in the Accounts of Executive Engineers for the month of December 1886 requiring the orders of Government.

Item No.	Particulars of each Item.	Month in the Accounts of which Objectionable Expenditure first appeared.	Comparison with Estimate.			Comparison with Appropriation of the Year.			Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
			Amount of Estimate.	Expenditure up to Date.	Excess over Estimate.	Amount of Appropriation.	Expenditure of the Year.	Excess over Appropriation.			
	Provincial – (Contd) Miscellaneous Irregularities (Contd) Works for which revised Estimates are likely to be required – (Contd)										
			West Coast Division								
7	Purchasing the Local Fund School House for the Sub Registrar's Office at Taliparamba	.	.	.	.	.	.	.	.	Same remarks as in Objectionable Items Statement for October 1886. Title deeds are still awaited.	Noted
	Delay in recovery of rents										
			Coimbatore Division								
8	From Mr Spencer, for Sub Collector's Quarters at Hosur	June 1886	.	17.5.4	.	.	.	.	.	Vide remarks in Objectionable Items Statement for October 1886.	Noted Noted
	Miscellaneous Advances Items outstanding for more than three months										
			West Coast Division								
9	Repairing the Sea wall at Beypore and protecting the Shore from the action of the Sea	October 1884	5159	.	.	.	.	.	.	Same remark as in Objectionable Items Statement for September 1886. Orders of Government still awaited.	A report of the expenditure incurred by the Railway Company is awaited. A report of the expenditure incurred by the Railway Company is still awaited.

Provincial Statement of Objectionable Items in the Accounts of Executive Engineers for the month of December 1886 requiring the orders of Government.

Item No.	Particulars of each Item.	Month in the Accounts of which Objectionable Expenditure first appeared.	Comparison with Estimate. Amount of Estimate.	Comparison with Estimate. Expenditure up to Date.	Comparison with Estimate. Excess over Estimate.	Comparison with Appropriation of the Year. Amount of Appropriation.	Comparison with Appropriation of the Year. Expenditure of the Year.	Comparison with Appropriation of the Year. Excess over Appropriation.	Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
	Provincial - (Contd)										
	Miscellaneous Irregularities - (Contd)										
	Miscellaneous Advances outstanding for more than three months. (Contd)										
			West Coast Division (Contd)								
10	Paid Chief Engineer, Travancore, on account of annual repairs to Military buildings, Quilon	June 1886	540							Same remark as in Objectionable Items Statement for October 1886.	Early steps should be taken for the adjustment of these items.
11	Paid to Chief Engineer, Travancore, on account of repairs to the floor of the Native Infantry Hospital at Quilon	July 1886	522								
	Contractors' balance										
12	Messrs S. Kader and P. Barreed for repairing Government Church at Cochin	Rs 626-5-8 from June 1886								Same remark as in Objectionable Items Statement for November 1886. Early adjustment awaited.	This item should be adjusted without delay

Provincial Statement of Objectionable Items in the Accounts of Executive Engineers for the month of December 1886 requiring the orders of Government.

Item No.	Particulars of each Item.	Month in the Accounts of which Objectionable Expenditure first appeared.	Comparison with Estimate. Amount of Estimate.	Comparison with Estimate. Expenditure up to Date.	Comparison with Estimate. Excess over Estimate.	Comparison with Appropriation of the Year. Amount of Appropriation.	Comparison with Appropriation of the Year. Expenditure of the Year.	Comparison with Appropriation of the Year. Excess over Appropriation.	Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
	Provincial (Contd) Miscellaneous Irregularities—(Contd) Articles of European Manufacture obtained direct from England independently of the India Office.										
			Nilgiri Division								
13	Wall paper obtained from England for Commandant's Quarters at Wellington	Nov 1886	-	192			-	-		The objection here is in regard to the paper having been obtained direct from England independently of the India Office, but ~~But~~ in G.O. No. 439 W. dated 12th February 1887 the item was sanctioned as a local purchase, which does not appear to be correct. O. P. Gordon Examiner Pub. Works Accounts Madras	The report called for from the Supg Engineer in G.O. No 437 W. dated 12-2-87 is awaited Joh 10/3/87. Cu 9. 3. 87 12/3/87

A.W.C. 3/3

J.S. 4/3

To The Supg Engr IV Circle
Thro The Exer. Engr P.W. Accts

[P. W. D. Form No. M. 112—Inner Sheet.]

Provincial Statement of Objectionable Items in the Accounts of Executive Engineers for the month of 188 requiring the orders of Government.

Item No.	Particulars of each Item.	Month in the Accounts of which Objectionable Expenditure first appeared.	COMPARISON WITH ESTIMATE.			COMPARISON WITH APPROPRIATION OF THE YEAR.			Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
			Amount of Estimate.	Expenditure up to Date.	Excess over Estimate.	Amount of Appropriation.	Expenditure of the Year.	Excess over Appropriation.			

Provincial Statement of Objectionable Items in the Accounts of Executive Engineers for the month of requiring the orders of Government.

Item No.	Particulars of each Item.	Month in the Accounts of which Objectionable Expenditure first appeared.	COMPARISON WITH ESTIMATE.			COMPARISON WITH APPROPRIATION OF THE YEAR.			Expenditure during the Month.	Opinion of the Superintending Engineer, with final Remarks by Examiner.	Orders by Government.
			Amount of Estimate.	Expenditure up to Date.	Excess over Estimate.	Amount of Appropriation.	Expenditure of the Year.	Excess over Appropriation.			

Examiner of P. W. Accounts,
Madras.

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of [1887] Madras.

PUBLIC WORKS.

Dated March, 30*th*.

Recd. *Encl.*

G.O., 30th Mar. 1887, No. 950 W.

MARCH.

Calicut-Vayitri Road

Revised estimate of Rs. 3,75,578, for improving the —, sanctioned.

30th March 1887, No. 950 W., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following letter from Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 15th March 1887, No. 131 E.W. :—

With reference to paragraph 4 of G.O., No. 2373 W., dated 12th October 1885, I have the honor to submit, for sanction, a revised estimate, amounting to Rs. 3,75,578, for improvements to the Calicut-Vayitri road.

2. The revision has been necessitated by excesses arising from omissions * and insufficient † provision for certain items in the original estimate. These, I find, have all been fully explained in the Executive Engineer's report, except items 1 and 8, blinding and superintendence.

3. With regard to blinding, only one inch of gravel was allowed, in the original estimate, over the metal, and experience has shown that two inches are most necessary. The revised estimate therefore provides for two inches of gravel over the 12 feet breadth of metal for the whole length of the road.

4. In regard to the item superintendence, insufficient provision was made in the original estimate for work establishment, because it was then expected that the greater part of it would be charged to a special head of temporary establishments provided in the budget; and, under present circumstances, the percentage has had to be increased from 2 to 6 per cent. The latter percentage may seem high, but the special circumstances of the work, in a particularly unhealthy locality, where it is most difficult to obtain or keep superintendents, clerks, &c., must be borne in mind. The item superintendence includes the pay of an experienced mechanic, Mr. Wiggins, who has been engaged to superintend the erection of the iron work.

5. With regard to increase under the head of maintenance, before the road was handed over to this department, the insufficiency of the provision for this item was foreseen. Only Rs. 11,000 per annum were allowed in the original estimate, while I found, from inquiries made, that *the Local Fund Board had spent on it annually Rs. 16,000*, which had been insufficient to keep it in tolerable order. The Executive Engineer's proposal amounts to Rs. 15,650 annually, and on this head very full information is given in the report. *The average income from tolls is Rs. 18,413.*

6. The excess of Rs. 55,790 ‡ over the original estimate will be seen to be chiefly on the following items:—

I. Blasting rock.
II. Picking or breaking up the old surface.
III. Revetments and parapets.
IV. Mile and furlong stones.
V. Maintenance of road while the improvements are in progress.
VI. Superintendence.

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* *Vide* items 9 to 13, statement B, accompanying this letter.

† *Vide* items 1 to 8, statement B, accompanying this letter.

‡ About 17 per cent. of the original sanction of Rs. 3,19,788.

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of (1887) Madras.

PUBLIC WORKS.

Dated January, 27th.

Recd. *Encl.*

G.O., 27th Jan. 1887, No. 242 W.

JANUARY.

Government Church at Cochin

Estimate of Rs. 20,680 for renewing the roof of the —, sanctioned and an appropriation of Rs. 9,000 for the work, made.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following letter from Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 15th March 1887, No. 131 E.W. :—

With reference to paragraph 4 of G.O., No. 2373 W., dated 12th October 1885, I have the honor to submit, for sanction, a revised estimate, amounting to Rs. 3,75,578, for improvements to the Calicut-Vayitri road.

2. The revision has been necessitated by excesses arising from omissions * and insufficient † provision for certain items in the original estimate. These, I find, have all been fully explained in the Executive Engineer's report, except items 1 and 8, blinding and superintendence.

* *Vide* items 9 to 13, statement B, accompanying this letter.

† *Vide* items 1 to 8, statement B, accompanying this letter.

3. With regard to blinding, only one inch of gravel was allowed, in the original estimate, over the metal, and experience has shown that two inches are most necessary. The revised estimate therefore provides for two inches of gravel over the 12 feet breadth of metal for the whole length of the road.

4. In regard to the item superintendence, insufficient provision was made in the original estimate for work establishment, because it was then expected that the greater part of it would be charged to a special head of temporary establishments provided in the budget; and, under present circumstances, the percentage has had to be increased from 2 to 6 per cent. The latter percentage may seem high, but the special circumstances of the work, in a particularly unhealthy locality, where it is most difficult to obtain or keep superintendents, clerks, &c., must be borne in mind. The item superintendence includes the pay of an experienced mechanic, Mr. Wiggins, who has been engaged to superintend the erection of the iron work.

5. With regard to increase under the head of maintenance, before the road was handed over to this department, the insufficiency of the provision for this item was foreseen. Only Rs. 11,000 per annum were allowed in the original estimate, while I found, from inquiries made, that *the Local Fund Board had spent on it annually Rs.* 16,000, which had been insufficient to keep it in tolerable order. The Executive Engineer's proposal amounts to Rs. 15,650 annually, and on this head very full information is given in the report. *The average income from tolls is Rs.* 18,413.

6. The excess of Rs. 55,790 ‡ over the original estimate will be seen to be chiefly on the following items:—

‡ About 17 per cent. of the original sanction of Rs. 3,19,788.

I. Blasting rock.
II. Picking or breaking up the old surface.
III. Revetments and parapets.
IV. Mile and furlong stones.
V. Maintenance of road while the improvements are in progress.
VI. Superintendence.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following papers :—

From Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department (through the Venerable the Archdeacon of Madras), dated Cannanore, 24th August 1886, No. 321 E.W.

As directed in G.O., No. 1257 W., of 18th May 1886, I have the honor to submit, herewith, a revised estimate for putting in thorough repair the Government church at Cochin.

2. The report accompanying the estimate gives a history of the circumstances under which this estimate was framed, from which it will be seen that the principal work to be done is that of renewing the roof which, through age and decay, had fallen into a dangerous state.

3. Two estimates are submitted—one shows the cost of renewing the roof with cedarwood planking under mission tiles on trusses, purlins, rafters and reepers of teakwood, and amounts to Rs. 21,290; the other estimate for roofing with corrugated iron and mission tiles on teakwood trusses, purlins, stiffeners and reepers, amounts to Rs. 20,000.

4. The more expensive work, with cedar planking, is preferred by the Chaplain and Lay Trustee, who have accordingly countersigned that estimate.

5. The Executive Engineer estimates the weight of the old Dutch roof per running foot to be 3,050 lb., and I estimate the new roof, with mission tiles and cedarwood planking, would weigh about 1,900 lb. per running foot, while the roof covered with iron and mission tiles would weigh about 1,725 lb. per running foot. The proposed new roof will therefore be much lighter than the old one.

6. It will be observed from the report, paragraph 14, that materials have been collected, and payments made to the extent of Rs. 3,228. Of this latter sum, Rs. 1,668 was spent in 1885-86; so that if the work is now sanctioned for execution on the estimate of Rs. 21,290, an allotment of Rs. 19,622 is required, and the Executive Engineer is of opinion that he could complete the repairs and improvements in two months.

7. The estimates are accompanied by a plan of the building and sections of the old roof and of the proposed new work. The walls are found to be of laterite in chunam throughout.

P.S.—The allotment now required, Rs. 19,622, may be met in part to the extent of Rs. 7,545 from savings on the allotment of the Coimbatore close prison, reported with revised estimate through the Inspector-General of Jails in my letter to the address of that officer, No. 257 M., of 18th August 1886.

From the Venerable J. F. BROWNE, B.D., Archdeacon of Madras, to the Chief Engineer and Secretary to Government, Public Works Department, dated Madras, 20th September 1886, No. 119.

I have the honor to forward a letter from the Superintending Engineer, IV Circle, submitting alternative estimates, amounting to Rs. 21,290 and Rs. 20,000, respectively, for re-roofing the Government church at Cochin.

2. In forwarding the above, I would remark upon the large sums asked for for re-roofing a church, in comparison with Government grants towards building churches, taken in connection with the number of members of the Church of England.

From Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 29th December 1886, No. 482 E.W.

With reference to your memorandum, No. 3460 C., of 6th October 1886, I have now the honor to report further on the proposed restoration of the roof of Cochin church, and to re-submit the plans and estimates, with a letter * from the Executive Engineer, West Coast division, giving information on the points referred to in your memorandum.

* No. 819, of 16th instant.

2. I may first mention, as it was omitted in the original report, that the present Protestant church of Cochin is one of the oldest churches in India, having been built, it is believed, about the year 1505, by the Franciscan Friars who accompanied Vasco da Gama's expedition. And that celebrated man died at Cochin on December 24th or 25th, 1524, and was first buried in this church of St. Francis; but his remains were, fourteen years after, removed to Portugal. It is understood that His Excellency Sir Grant Duff decided that the building should be restored and kept in repair, because of its age and history, though it is many times too large for the present congregation.

3. With regard to the general nature of the design of truss which was to take the place of the old decayed couples and collar beams, I agreed with Colonel Ross Thompson that it should be of the form given at plate XII of Hurst's Tredgold (which is the book in use at Cooper's Hill College, I believe) with some modifications; the principal being that Tredgold's scantlings should, *for appearance sake*, be increased more than was necessary for strength, and that as there was no tie rod, the feet of the trusses should be made to abut against the inner faces of the walls in a better manner than they do in the plate above mentioned, so as to check the tendency to spread. I also sent the Executive Engineer to help him in preparing his design, copies of the plans of trusses in the new churches at Wellington and Ootacamund.

4. As already reported, the Executive Engineer, through some misunderstanding, and believing the work to be emergent, proceeded with it, in anticipation of sanction, and before submitting the plans and estimates; and when these came before me, the whole of the timbers for the trusses had been prepared, so that I had no opportunity of altering the plan, and could only telegraph to stop all work until orders of Government were received. As the span of the chancel was much the same as that of the Wellington and Ootacamund churches, I expected that similar scantlings at least would be adopted; but this was not done, so that the trusses for the chancel will be very much stronger than is necessary.

5. As the whole of the woodwork for the trusses has been prepared but not the ironwork of straps and bolts, I am only now able to propose some trifling modifications which will be seen by reference to appendices 1 and 2 of this letter.

6. You will observe from the Executive Engineer's letter that he is satisfied there is no necessity for tie rods; that the walls are strong enough to bear the thrust, &c. But from information obtained on the spot at a recent inspection I am doubtful—

(1) It is believed the walls are not solid throughout; that there are pockets in them, possibly filled with rubbish; at any rate that they are not thoroughly sound and reliable.

(2) The feet of the trusses, as designed and timber prepared, do not abut against the inner faces of the walls so strongly as in the Wellington and Ootacamund trusses.

(3) It is true the walls have hitherto withstood the thrust of a heavier roof, but the weight of that roof was distributed very evenly over them; whereas in the case of the new roof it will be brought to bear on them at intervals of about 10 feet, and in some places where the wall is not directly supported by the buttresses.

(4) But my chief reason is that I consider the Executive Engineer has not made sufficient allowance in his calculation for wind pressure.

For these reasons I am of opinion that tie rods should be provided.

7. The following are my calculations:—

I take the weight of 10 running feet of roof, including one truss, at 16,000 lb., to which I add, for wind pressure, at 40 lb. per square foot on a vertical plane in line with the ridge of the roof, 26 × 10 × 40 = 10,400 lb. This makes a total pressure of 16,000 + 10,400 = 26,400 lb. = 11·6 tons; applying this in the formula—

$$H = \frac{W.\,S.}{4\,R.}$$

where H = tension of tie rod
S = half the span = $19\frac{1}{2}$ feet
R = rise = 26 feet

$$\text{then } H = \frac{26{,}400 \times 19\frac{1}{2}}{4 \times 26} = 4{,}950 \text{ lb.} = 2\tfrac{1}{4} \text{ tons nearly.}$$

A tie rod of 1 inch diameter, as proposed by the Executive Engineer, might be sufficient, but I propose one of $1\frac{1}{4}$ inch diameter as it is better to allow an excess of strength; and applying these values of H and W in the formula—

$$T = \sqrt{H^2 + \frac{W^2}{16}}$$

where T = thrust along the principal rafter

$$\text{we get } T = \sqrt{2{\cdot}25^2 + \frac{11{\cdot}6^2}{16}} = \sqrt{5{\cdot}06 + \frac{134{\cdot}56}{16}}$$
$$= \sqrt{5{\cdot}06 + 841} = \sqrt{13{\cdot}47}$$
$$= 3{\cdot}67 \text{ tons} = 8{,}220 \text{ lb.}$$

so that the principal rafter, having a section of 54 square inches, is superabundantly strong. But, as I mentioned above, in these Gothic trusses I believe it is usual, *for appearance sake*, to use scantlings much greater than is actually necessary.

8. Again, to determine the thickness of timber necessary at the weakest point * of the truss, taking, as the Executive Engineer does, half the maximum pressure, which I find to be 13,200 lb., and supposing it distributed over the lower, 16 feet of one side of the truss, supported at one end by the wall and at the other by the circular rib, I use the formula—

* Marked A in red ink on appendix 2.

$$D = \sqrt{\frac{WL}{8\,KB}};$$

where W = 13,200 lb. = 118 cwt. nearly
L = 192 inches
K = 19 for teak
B = 6 inches

$$\text{then } D = \frac{\sqrt{118 \times 192}}{8 \times 19 \times 6} = \frac{\sqrt{22{,}656}}{912}$$
$$= \sqrt{24{\cdot}84} = 4{\cdot}98$$
$$= 5 \text{ inches nearly,}$$

but the truss will be 15 inches thick at its weakest part, so it should be amply strong.

In the appendices I have given—

(1) The form of truss originally proposed.

(2) The form of truss now proposed.

(3) The form of truss at St. Thomas' church, Ootacamund.
(4) The form of truss at Wellington church.
(5) My calculation of the weight of roofing.
(6) Enlarged plan of stirrup and shoe.

9. As soon as it is finally decided what the truss is to be, and the description of tie rod, &c., I propose to have one of the principal trusses tested on the ground with its ordinary load; but of course this will not be a certain test of its standing the maximum pressure it would have to bear in a first-class storm or cyclone.

10. I have corrected the Executive Engineer's estimate, allowing extra for iron-work of ties and suspending rods, and Rs. 500 for scaffoldings. As the building is so wide and lofty, and the trusses so heavy, I think a provision for scaffolding allowable in this case.

11. As already explained in paragraph 3 of my letter, No. 321, of 24th August 1886, two estimates are submitted; one shows the cost of renewing the roof with cedarwood planking under mission tiles on trusses, purlins, rafters and reepers of teakwood,* and amounts, as revised, to Rs. 22,540; the other estimate provides for roofing with corrugated iron † and mission tiles on teakwood trusses, purlins, stiffeners and reepers, and amounts, as revised, to Rs. 21,250. The more expensive work, with cedar planking throughout, is preferred by the Chaplain and Lay Trustee, and they have countersigned that estimate.

* Malabar teak.

† In the nave, but cedar planking in chancel.

Note by the Chief Engineer, Public Works Department.

The estimates submitted by the Superintending Engineer, IV Circle, provide for renewing the roof of the Government church at Cochin.

2. The circumstances in which the work was commenced without the sanction of Government were noticed in G.O., No. 1527 W., dated 17th June 1886.

3. The Superintending Engineer submits two estimates—

(1) providing for cedar planking under mission tiles for the entire roof, amounting to Rs. 22,540; and
(2) providing for cedar planking for the chancel and corrugated iron under tiling for the nave of the church, the amount being Rs. 21,250.

4. Both estimates are large in amount, but it is desirable to restore the church on account of its historical associations, irrespective of the number of the congregation, for which it is admittedly too large.

5. The Chaplain and Lay Trustee prefer the larger estimate, but the undersigned considers that both on account of economy and durability, it would be preferable to use corrugated iron throughout the roof of the building. The second estimate has therefore been reduced to Rs. 20,680, and is recommended for sanction.

(Signed) J. O. HASTED, Colonel, R.E.,
Chief Engineer, P.W.D.

19th January 1887.

ORDER—dated 27th January 1887, No. 242 W., Public Works.

The estimate, amounting to Rs. 20,680, as amended by the Chief Engineer, for renewing the roof of the Government church at Cochin, is sanctioned.

2. A sum of Rs. 8,000 was allotted to the work in G.O., No. 2920 W., dated 5th November 1886, and a further appropriation of Rs. 9,000 is now made to it from the Provincial reserve with the Government. The balance required to complete the work will be provided in the budget for 1887-88.

3. This sanction has been registered as Provincial, No. 167 W. of 1886-87, and classified as Civil Buildings, Original Works.

(True Extract.)

(Signed) J. O. HASTED, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, IV Circle, with eighteen enclosures.
„ Examiner, Public Works Accounts, with duplicate abstract estimate.
„ Ecclesiastical Department.

Exd. P. L. Pereira.
Spare Copies

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1887} Madras.

PUBLIC WORKS.

Dated January, 27th.

Recd. *Encl.*

G.O., 27th Jan. 1887, No. 242 W.

JANUARY.

Government Church at Cochin

Estimate of Rs. 20,680 for renewing the roof of the —, sanctioned and an appropriation of Rs. 9,000 for the work, made.

BUILDINGS AND ROADS.
CIVIL WORKS.

Govt. of {1886} Madras.

PUBLIC WORKS.

Dated September, 6th.

Recd. *Encl.*

G.O., 6th Sept. 1886, No. 2222 W.

SEPTEMBER.

Road

Estimate of Rs. 5,265 for constructing a fair weather — to connect the municipal road from the railway bridge at Madura with the Palamedu road, sanctioned.

6th September 1886, No. 2222 W., Public Works.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

Read—the following paper :—

No. 195 M.D.

Note by the Superintending Engineer, VI Circle, on the estimate for constructing a fair weather road to connect the municipal road from the railway bridge at Madura with the Palamedu road; Rs. 5,265.

It is stated that the firewood and other carts that come in large numbers to the town from the direction of Palamedu are put to great inconvenience for want of fair road from the road to the causeway of the river; the Chairman of the Municipality therefore requests the Local Fund Board to provide a road from the railway bridge to Palamedu road, and the board, in their proceedings No. 142 of 1886, sanctioned the construction of a fair weather road with the necessary masonry works.

2. The road is one mile and one furlong with a top width of 18 feet and side slopes 1½ to 1, and gravelled over to a breadth of 12 feet and depth of 6 inches. Five tunnels of different dimensions are provided for where required. The tunnels are considered sufficient to pass the drainage. The road passes through dry lands, and a lump sum of Rs. 1,072 is provided for in the estimate for compensation.

3. The rates are fair and the estimate is recommended for sanction.

Kodaikanal,
11th August 1886.

(Signed) J. PENNYCUICK, Lieut.-Col., R.E.,
Superintending Engineer, VI Circle.

Order—dated 6th September 1886, No. 2222 W., Public Works.

The estimate, amounting to Rs. 5,265, for constructing a fair weather road to connect the municipal road from the railway bridge at Madura with the Palamedu road, is sanctioned.

2. This sanction has been registered as Local, No. 15 W. of 1886-87.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Financial Department (L.F.), with three enclosures.
" Superintending Engineer, VI Circle.

Exd. E. Fernandez.
Spare Copies

BUILDINGS AND ROADS.
MILITARY WORKS.

Govt. of {1884} Madras.

PUBLIC WORKS.

Dated October, 20th.

Recd. *Encl.*

G.O., 20th Oct. 1884, No. 2571 W.

OCTOBER.

Cannanore Fort

Estimate for putting the — into a state of defence sanctioned.

6TH SEPTEMBER 1886, No. 2222 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Civil Works.

READ—the following paper :—

No. 195 M.D.

NOTE by the Superintending Engineer, VI Circle, on the estimate for constructing a fair weather road to connect the municipal road from the railway bridge at Madura with the Palamedu road; Rs. 5,265.

It is stated that the firewood and other carts that come in large numbers to the town from the direction of Palamedu are put to great inconvenience for want of fair road from the road to the causeway of the river; the Chairman of the Municipality therefore requests the Local Fund Board to provide a road from the railway bridge to Palamedu road, and the board, in their proceedings No. 142 of 1886, sanctioned the construction of a fair weather road with the necessary masonry works.

2. The road is one mile and one furlong with a top width of 18 feet and side slopes 1½ to 1, and gravelled over to a breadth of 12 feet and depth of 6 inches. Five tunnels of different dimensions are provided for where required. The tunnels are considered sufficient to pass the drainage. The road passes through dry lands, and a lump sum of Rs. 1,072 is provided for in the estimate for compensation.

3. The rates are fair and the estimate is recommended for sanction.

KODAIKANAL,
11th August 1886.
(Signed) J. PENNYCUICK, Lieut.-Col., R.E.,
Superintending Engineer, VI Circle.

ORDER—dated 6th September 1886, No. 2222 W., Public Works.

The estimate, amounting to Rs. 5,265, for constructing a fair weather road to connect the municipal road from the railway bridge at Madura with the Palamedu road, is sanctioned.

2. This sanction has been registered as Local, No. 15 W. of 1886-87.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Financial Department (L.F.), with three enclosures.
" Superintending Engineer, VI Circle.

Exd. E. Fernandez.
Spare Copies

20TH OCTOBER 1884, No. 2571 W., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Buildings and Roads.
Military Works.

READ—the following papers :—

From Brigadier-General R. C. STEWART, Quartermaster-General, to the Secretary to Government, Military Department, dated Ootacamund, 3rd September 1884, No. 776-B.

I have the honor, by order, to forward, for sanction and transfer to the Public Works Department for disposal, the estimate below-mentioned, which has been approved by the Commander-in-Chief. The estimate has been countersigned—

Abstract and detailed estimate for putting the fort at Cannanore into a state of defence.

2. The total estimate amounts to Rs. 6,260, but of this sum only Rs. 2,958 would be required after striking out of the estimate the cost of a condenser and tank and their attendant contingencies, on which His Excellency the Commander-in-Chief does not recommend any expenditure at present.

3. The General Officer Commanding Western District reports that for this sum (Rs. 2,958) all cover would be denied to an assailant within effective rifle range, and the fort rendered secure from *coup de main* by deepening the ditch, making it an efficient obstacle, and continuing it right across the peninsula from sea to sea. By this means the ditch would also afford a safe sea-bathing place for soldiers, a long-felt and much-needed requirement at Cannanore, at a very small additional cost, if any.

4. His Excellency would therefore urge upon Government the necessity for providing funds at an early date for carrying out the several works recommended.

No. 4383, Military.

Approved and transferred to the Public Works Department for disposal.

(By Order.)

OOTACAMUND,
8th September 1884.
(Signed) A. R. KENNEY-HERBERT, Lieut-Col.
Offg. Secretary to Government.

No. 1631 D., Public Works.

Forwarded to the Superintending Engineer, IV Circle, for revision of the estimate in accordance with His Excellency the Commander-in-Chief's instructions.

Very early return requested.

(By Order.)

12th September 1884.
(Signed) C. BOWEN, Major, R.E.,
Deputy Chief Engineer, P.W.D.

From Colonel J. BEATTY, R.E., Superintending Engineer, IV Circle, to the Chief Engineer, Public Works Department, dated Coimbatore, 7th October 1884, No. 456 E.W.

In returning the order from the Secretary to Government, Military Department, bearing your endorsement, No. 1631 D., of 12th September 1884, I have the honor to forward a revised estimate, prepared in accordance with His Excellency the Commander-in-Chief's instructions, for putting the Cannanore Fort into a state of defence, amounting to Rs. 2,958.

2. The original estimate of Rs. 6,260, returned with the above endorsement, has now been reduced to Rs. 2,958, by striking out the cost of a condenser and tank and lowering the percentage of contingencies and petty supervision in proportion.

Order—dated 20th October 1884, No. 2571 W., Public Works.

The estimate, amounting to Rs. 2,958, for putting the Cannanore Fort into a state of defence, is sanctioned for execution when funds are available.

2. This sanction has been registered as Imperial Ordinary No. 40 W. of 1884-85, and classified as Military Original Works.

(True Extract.)

(Signed) J. SHAW-STEWART, Colonel, R.E.,
Secretary to Govt., P.W.D.

To the Superintending Engineer, IV Circle, with estimate.
" Examiner, Public Works Accounts.
" Military Department.

Exd. E. Fernandez.
Spare Copies

BUILDINGS AND ROADS.
MILITARY WORKS.

Govt. of {1884} Madras.

PUBLIC WORKS.

Dated October, 20th.

Recd. *Encl.*

G.O., 20th Oct. 1884, No. 2571 W.

OCTOBER.

Cannanore Fort

Estimate for putting the — into a state of defence sanctioned.