Proceedings of the Madras Government, Public Works Department,
19th January 1874.

No. 249. Read the following letter from Colonel E. A. FOORD, R.E., Inspecting Engineer for Civil and Military Buildings, to Colonel G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Chepauk, 28th November 1873, No. 1,587 :—

1 Comparative Statement.
3 Plans.
2 Estimates.
2 Reports.

I HAVE the honour to forward, for the sanction of Government, plans and estimates for the undermentioned works in the Bellary District :—

	Rs.
I.—Comparative Statement for constructing Rifle Range Butts for the Native Infantry Regiment at Bellary	460
II.—Estimate for constructing four Ricochet Butts for do. do. ...	620
III.—Estimate for constructing twenty-four platforms for the Rifle Ranges of do. do.	354
Total...	1,434

2. The District Engineer has undertaken the construction of ricochet butts on emergency, as their completion simultaneously with the rifle range butts is said to be absolutely necessary by the local Military Authorities. An estimate of Rupees 2,510* was sanctioned in G. O., No. 3,157, dated 30th September 1869, for the rifle ranges, but no provision was made therein for the ricochet butts now required.

* Item 9 in current year's Imperial Budget.

3. The additional amount for the completion of the ranges sanctioned in the above quoted Government Order is wanted, as the original estimate provided for dry tamping. It has been found that wet tamping is absolutely necessary, as dry tamping was impracticable with the soil and slopes required.

4. The original estimate sanctioned in the Government Order already quoted provided for twenty-four platforms to a distance of 300 yards; and the present estimate is for an equal number of platforms for completing the ranges to a distance of 600 yards, which is the distance laid down for the practice of Native troops armed with Enfield Rifles.

5. The plans and estimates have been prepared at the request of the local Military Authorities, and have met with the approval of His Excellency the Commander-in-Chief. As there are no funds at the disposal of the District Engineer available for these works under the Minor New Works grant, Military, and as the works have been undertaken on emergency, I beg that the Government will be pleased to sanction the estimates and allot the necessary funds from the Reserve under Military.

6. I beg to add that as the estimate for the ricochet butts exceeded Rupees 500, I have called the attention of the District Engineer to paragraphs 75 and 76, Chapter V. of the Public Works Code, and requested him to conform in future strictly to the instructions therein given relative to the preparation of detailed estimates and plans.

[G.O., No. 269 W., dated 21st February 1911.]

S.G.
3-2-11.
R.K.
3-2-11.
P.V.
3-2-11.

PUBLIC WORKS DEPARTMENT.

To the Public Works Department u.o.

Deputy Secretary—

It will be observed from the comparative statement attached to the estimate, that originally an estimate for Rs. 2,920 providing for 1 head constable and 7 constables, was prepared and sanctioned by the Superintending Engineer, I Circle. The estimate was subsequently revised providing for 2 head constables and 9 constables and amounts to Rs. 4,500 which has been approved in Judicial.

2. A draft order approving of the proposed expenditure of Rs. 4,500 and forwarding the plans and estimate to the Superintending Engineer, I Circle, for disposal, is submitted.

S.G.
3-2-11.
R.K.
3-2-11.
P.V.
3-2-11.

To the Public Works Department u.o.

S. H. SLATER,
17-1-11.

P.R.
6-1-11.
V.K.M.
5-1-11.

Total ... 4,500

Rs.
4,183
210
107

Be average cost, namely Rs. $\frac{4,183}{\text{2 head constables + 9 constables}}$ or $\frac{4,183}{13}$ or Rs. 321 $\frac{10}{13}$ is in the limit of cost laid down in the type design (G.O., No. 1358 W., dated 15th ember 1908, viz., Rs. 298 to 446. Submitted that the proposal may be approved the case passed on to the Public Works Department. There is no provision for work in 1910-1911.

Proceedings of the Madras Government, Public Works Department,
19th January 1874.

No. 250. ORDER THEREON, 19th January 1874, No. 126.

MILITARY WORKS, No. 7.

His Excellency the Governor in Council sanctions the excess of Rupees 460 on the sanctioned estimate of Rupees 2,510 for the Rifle Ranges for the Native Infantry Regiments stationed at Bellary, as also the estimates of Rupees 620 and 354, respectively, for ricochet butts and platforms for the use of those Regiments.

2. No specific grants can at present be made, but the works may be completed and the question of the provision of the necessary funds will be considered later in the year.

(True Extract.)

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

To the Inspecting Engineer for Buildings.
" Distriet Engineer Bellary.
" Controller of Public Works Accounts.

Engd. S. T. Austin.
Spare Copies

Report to accompany the Estimate for Constructing 4 Ricochet Butts for Native Infantry Regiment at Bellary.

Amount of Estimate Rs. 620/354.

The Ricochet Butts are to be built agreeably to accompanying Plan, they are to be raised on a foundation 1.3 high and the whole to rest on a bed of Concrete 9 inches. The walls and Pillar are to be 7½ and 6¼ feet high respectively and 1½ in thickness. The foundation and walls above are to be built with hammer dressed Stone in chunam. The roof is to be of slab Stones 1½ x ½" covered with Concrete 1 thick. The flooring is to be of slab Stones 18 Square pointed with chunam. The earth next to the Masonry for a breadth of 4' is to be wet tamped, the remainder to be dry stamped.

William Ingleton, Lt. Bengal Engrs.
Executive Engineer.

Bellary 1st September 1873.

Sub Engineer D. P. W.

and to state that it is wanted

Proceedings of the Madras Government, Public Works Department,
19th January 1874.

No. 250. ORDER THEREON, 19th January 1874, No. 126.

MILITARY WORKS, No. 7.

His Excellency the Governor in Council sanctions the excess of Rupees 460 on the sanctioned estimate of Rupees 2,510 for the Rifle Ranges for the Native Infantry Regiments stationed at Bellary, as also the estimates of Rupees 620 and 354, respectively, for ricochet butts and platforms for the use of those Regiments.

2. No specific grants can at present be made, but the works may be completed and the question of the provision of the necessary funds will be considered later in the year.

(True Extract.)

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

To the Inspecting Engineer for Buildings.
" Districet Engineer Bellary.
" Controller of Public Works Accounts.

Report to accompany the Estimate for Constructing 4 Ricochet Butts for Native Infantry Regiment at Bellary.

Amount of Estimate Rs 620/-

The Ricochet Butts are to be built agreeably to accompanying Plan, they are to be raised on a foundation 1.3 high and the whole to rest on a bed of Concrete 3 feet

The walls and Pillars are to be 7½ and 6¼ feet high respectively and 1½ in thickness

The foundation and walls above are to be built with hammer dressed Stone in chunam

The roof is to be of slab Stones 1½×½ covered with Concrete 1 thick.

The flooring is to be of slab Stones 18" square pointed with chunam.

The earth next to the masonry for a breadth of 4' is to be wet tamped, the remainder to be dry stamped.

Bellary 1st September 1873.

Sub Engineer D.P.W.

Executed by S. T. Austin.
Spare Copies

Report to accompany Supplementary Estimate for constructing platform forms for Native Infantry Rifle Ranges.

Amount of Estimate Rs 354

The original Estimate only provides for 24 Platforms, 6 to each Range, at distances of 50 Yards apart, for 300 Yards. After these were completed, it was pointed out by the Military Authorities, that platforms would be required up to 600 Yards, at distances of 50 Yards apart.

No wooden platforms, to rest the iron targets upon, are provided for in the original Estimate. These are now stated to be necessary.

This Estimate provides for 24 earth platforms, placed at intervals of 50 Yards, commencing at 350 Yds from the Target; the platforms will consist of web tamped earth, with a Covering of Gravel.

Range No 1 } Checked by

Submitting Engr Officer's Remarks

Submitted.

Submitting Engr Officer's Remarks

Submitted.

Engr Officer's Remarks

Submitted.

Engr Officer's Remarks

Submitted.

Numbered Slabs will be laid down
each platforms.

Provision is also made for 4.
Teak wood platforms, for the
Barrack to rest upon

Lieut Colonel R.E.
Chief Engineer D.P.W.

Military

ICT ESTIMATE.

Ilary District.

lett Butt for Native Infantry
e District Engineer docket No 881 d/27th
August 1873.

ork.	Rate.	Amount.	A mount of each part.
Cyds	" 2 "	" 10 7	
"	3 1/2 "	16 9 10	
Cft	" 2 9	81 " 1	
Rft	" 12 "	5 4 "	
"	" 6 "	13 2 "	
"	" 6 "	3 " "	
amping Cyds	" 4 "	" 7 "	
Sft Slabs	Sft 12 8 "	9 9 5	
" Rft pointing the walls	" 1 12 "	5 4 "	
Cyds of Earth work & tamping with water around the Butt	Cyds " 3 3	7 7 5	
" of earth and dry tamping	" " 2 "	6 15 9	
Total		148 15 1	
Sundries about 5 per Cent		6 11 " 11	
Total for one		155 " "	620 " "
Total Estimate Rupees for four			620 " "

Lieut Colonel R.E.
Executive Engineer
Civil Building Division

Range No 1
Sheet No 1

Lieut Colonel R.E.
Executive Engineer

Bellary District

Enclosure in a letter
No: 1587 A/28th Nov/73
G.O 820: 126-19-1-74
P.W. 651 5/73

Report to accompany Estimate for constructing Shooting Platforms for the 1st Light Horse

Amount of Estimate Rs 354

"Revised"

Military

ABSTRACT ESTIMATE.

Bellary District.

Work Constructing Ricochet Butt for Native Infantry Regiment at Bellary; Vide District Engineer's letter No 861 A/27th August 1873.

Quantities.	Description of Work.	Rate.	Amount.	Amount of each part.
5.29	Cubic yds of Excavation ——— cubic yds	" 2 "	" 10 7	
4.43	" " of Concrete ——— "	3 12 "	16 9 10	
471.3/12	Cft. Stone in Chunam ——— Cft.	" 2 9	81 " 1	
7.	Rft. of Slabs 1½ x 3/4 ——— Rft.	" 12 "	5 4 "	
35.	" " of do 1½ x ½ ——— "	" 6 "	13 2 "	
8.	" " of do 2 x ½ ——— "	" 6 "	3 " "	
1.74	Cubic yds of gravel with tamping ——— cubic yds	" 4 "	" 7 "	
732	Sqr. ft. of flooring with 18 Sqr. ft. Slabs ——— Sqr. ft.	12 8 "	9 9 5	
3.	" " of Pointing the walls ——— "	1 12 "	5 4 "	
36.74	Cubic yds of Earth work tamping with water round the Butt ——— cubic yds	" 3 9	7 7 5	
55.87	" " of earth and dry tamping ——— "	" 2 "	6 15 9	
	Total		148 15 1	
	Sundries at 5 per Cent		6 14 " 11	
	Total for road		155 " "	620 " "
	Total Estimate Rupees for four			652 " "

Witness Engrossed

Bellary Range No 1
Engaged
Checked by

Executive Engineer
Bellary Division

Encls to Rep No 1071 of 73-74.

1873-74.

Bellary — District.

Bellary — Range.

Abstract Estimate amounting to Rupees ~~1567~~ —

for Constructing Pucka Butts for 51st Regiment at Bellary

Dated 1st September 1873.

Received ——— 1873.

Encls in a letter No 1687 dt 28th November 1873

P.W. 6515/73

3

G.C. No: 126-15-1-7

Sy Pg 8740

Ley Pg 8338

" 8504

With an Order

"New work" "Military"

ABSTRACT ESTIMATE.

District Bellary Talook Bellary Village Bellary

Work Constructing Platforms for the 1st Rifle Stores

Quantities.	Description of Work.	Rate.	Per.	Amount.	Amount of each Art.
475. 4	C.yds of Gravel and earth wet tamped	- 6 6	C.yd	193 2 1	✓
24.	Slabs 18 Sqr and numbered	1 - -	each	24 - -	✓
30	C.ft Teak wood wrought and put up or fixed	4 - -	C.ft	120 - -	✓
	Total			337 2 1	✓
	Sundries			16 13 11	✓
	Total Estimate Rupees			354 - -	✓

Qty not belonged R.E. for Buildings

Insp. Engr.

Written Estimate

Sub Engineer & V.V.

1 Bellary Range
Bellary October 1873.

Brigade Major
Commanding Mad. Artillery

Encls to Rep. No 1071 of 73-74

1873-74.

Bellary District

Bellary Range

Abstract Estimate amounting to Rupees [illegible]

for Constructing Quarters Butts for Artillery Regiment at Bellary

Dated 1st September 1873.

Received 1873.

Encld in a letter No 1687 dt 28th November 1873

P.W. 6575/73 3/1

G. C 120 : 126 - 15-1-7

Qty Rq 8740
Qty Ap 8338
" 8504

With an Order

1873-74.

From,

The Officer

In charge Bellary Range

To, District

The Superintending Engineer,

Bellary. 3rd Division.

Encl. in a letter No. 1587 dated 2nd November 1873

Dated October 1873

Received 26 & 19 January 1874.

P. W. 65/1873

Abstract Estimate amounting to

Rupees 351.

for Constructing Platforms for the N. I. Rifle Range at Bellary.

Sd No. 9572

No. 1587

Office of the Inspecting Engineer for Civil & Military Buildings

Chepauk 2nd November 1873.

From,

Colonel C. A. Foord R.E.

Inspecting Engineer for Civil & Military Buildings.

To,

Colonel G. W. Walker R.E.

Secretary to Government P.W.D.

Sir,

Enclosures 8.
1 Comparative statement
3 Plans
2 Estimates
2 Reports.

I have the honor to forward, for the sanction of Government, Plans and Estimates for the undermentioned works, in the Bellary District.

i Comparative statement for constructing Rifle Range Butts for the Native Infantry Regiment at Bellary ——— Rs. 460

ii Estimate for constructing 4 Ricochet Butts for ——do——— do ——— 620

iii. Estimate for constructing 24 platforms for the Rifle Ranges of ——do——do——— 354

Total Rupees 1434

2. The District Engineer has undertaken the

——— known, formerly

construction of Ricochet Butts on emergency, as their completion simultaneously with the Rifle Range Butts is said to be absolutely necessary by the local Military authorities. An Estimate of Rs 2510 was sanctioned in G.O. No 3157, dated 30th September 1869, for the Rifle Ranges, but no provision was made therein for the Ricochet Butts now required.

× Item 9 - in current year's Imperial Budget

3. The additional amount for the completion of the Ranges sanctioned in the above quoted G.O. is wanted, as the original Estimate provided for dry tamping. It has been found that wet tamping is absolutely necessary, as dry tamping was impracticable with the soil and slopes required.

4. The original Estimate sanctioned in the G.O. already quoted, provided for 24 platforms to a distance of 300 yards, and the present Estimate is for an equal number of platforms for completing the Ranges to a distance of 600 yards - which is the distance laid down for the practice of Native Troops armed with Enfield Rifles.

5. The Plans and Estimates have been prepared at the request of the local Military authorities and have met with the approval of His Excellency the Commander in Chief. As there are no funds at the disposal of the District Engineer available for these works under the Minor New Works grant Military, and as the works have been undertaken on emergency, I beg that the Government will be pleased to sanction the Estimates and allot the necessary funds from the Reserve under Military.

6. I beg to add that as the Estimate for the Ricochet Butts exceeded Rs 500, I have called the attention of the District Engineer to paragraphs 75 and 76, Chapter V of the Public Works Code, and requested him to conform, in future, strictly to the instructions therein given

relative

...ations to the preparation of detailed
...Estimates and Plans.

I have the honor to be
Sir
Your Most Obedient Servant
E A Bird Colonel R.E.
Inspecting Engineer for
Civil & Military Buildings

No 126

His Excellency the Governor in Council sanctions the excess of Rs 460 on the sanctioned Estimate of Rs 2510 for the Rifle Ranges for the N. S. Regt stationed at Bellary; as also the Estimates of Rs 620 & 354 respectively for Ricochet Butts and Platforms for the use of Rifle Regts

No specific grants can at present be made, but the works may be completed and the question of the provision of the necessary funds will be considered later in the year.

To Genl Staff for Engrs
" Dy Engr Bellary
" Civil Engr
" Civil Engr

Despatched 26/4/94.
wmr Thornhill

for information.

1. "I have had before me in Council your Excellency's letter dated 24th of the 26th March last, and papers therewith transmitted, from which it appears that in the matter of the Madras Water Works Project Mr Thornhill, former

ance to the preparation of detailed
Estimates and Plans.

I have the honor to be
Sir
Your Most Obedient Servant
E A Ward Colonel R.E.
Inspecting Engineer for
Civil & Military Buildings

No 126

His Excellency the Governor in Council
sanctions the excess of Rs 460 on the
sanctioned Estimate of Rs 2500 for the Rifle
Ranges for the N. S. Regt stationed at
Bellary; as also the Estimates of Rs 6204
354 respectively for Ricochet Butts
and Platforms for the use of Regt

No specific grants can at
present be made, but the works
may be completed and the question
of the provision of the necessary
funds will be considered later
in the year.

7. No 1 Co's for 1874
" 2 Co's Bellary
" 1 Co Bellary
Civil & Mily Secy

No 515

Govt. of 1873 Madras.

PUBLIC WORKS.

To The Inspecting Engr for Trichinopoly

Dated

Rec'd. Encl. 8

G. O. 19 Jany 1874 N 126

Nos. 249 & 250

Military Works at Bellary. Excess military incurred on the construction of Rifle Ranges for the 4. & Regts at Bellary, sanctioned, as also Estimates for Ricochet Butts & platforms for the use of those Regts.

215 1873

Proc of the Madras Govt

Under date the

Ordered that the undermentioned Extract from a Despatch from the Right Honorable the Secretary of State for India &c &c dated 4th June 1873 be furnished Mr Thornhill for information.

1. "I have had before me in Council your Excellency's letter &c 34 of the 26th March last, and papers therewith transmitted, from which it appears that in the matter of the Madras Water Works Project, Mr Thornhill, formerly