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MADRAS RECORD OFFICE.

Government of Madras.

Public (Edn.) DEPARTMENT.

Edn. 24-3-57

G.O. No. 507 Press —— Mis.-

Dated 20—3— 1857

Not to be folded or roughly handled

No. 30. Read the following letter from Colonel C. E. FABER, Chief Engineer; to H. FORBES, Esq., Acting Secretaryto Government, dated 2nd February 1857, No. 9946.

SIR,

In Extract from the Minutes of Consultation No. 2362, under date the 19th December 1856, orders were passed on the subject of connecting the Hill Stations on the Neilgherries, with a proposed branch from the Madras Railroad.

2. That despatch treats of the communications between the Hills, Stations and the plains both to west and the east, it first takes into consideration a correspondence originating in a suggestion by Mr. J. Ouchterlony to connect the Western Coast with Ootacamund by means of a cart road and then proceeds to review another series of correspondence respecting the communications between the Hills, Stations and the plains to the *eastward*. My present object is to reply only to the latter orders of Government, so far as the subsequent correspondence will enable me to do so, and this with reference more particularly to the following observations contained in paras. 17 and 18 of the Extract from Minutes of Consultation already alluded to, viz.

17. "Under the very full report furnished by Colonel Pears of which a summary has been "given above and the strong opinions expressed by him in favor of the proposed line, the "Governor in Council directs that an estimate be framed for a first class road in Captain "Francis' trace, as modified by Colonel Pears and terminating at Seerumoogay, the Chief "Engineer will issue the necessary instructions for the preparation of such an estimate, "with the utmost possible despatch; with a view to its entry in the Budget of 1857-58.

"18. In paras. 34 to 49 Colonel Pears adverts to Captain Ouchterlony's project for forming "a Railway down the eastern slopes of the Neilgherries, which was referred to him as well "as to Colonel Faber in Extract Minutes of Consultation 3rd October last. The Govern- "ment will reserve their observations on this part of the subject until the receipt of the "Chief Engineer's report."

3. The correspondence since received on this subject, includes a report by Captain Francis on the road alluded to in para. 17 just quoted, together with an estimate for its construction which provides for a width of 10 yards, and amounts to Rupees 6,80,000 at the rate of nearly 13,000 Rupees a mile, for a road 54 miles in length, in lieu of one at a rate of 6,000 per mile for 47 miles, roughly estimated by Captain Francis, in his report, dated 7th January 1857, it also includes several letters as per margin on the subject of the Railway up the Neilgherries to be worked by water power.

Under date 7th January 1857.

1. From Civil Engineer Malabar, No. 839, dated 12th November 1856, herewith forwarded.
2. Do. do No. 850, dated 21st November 1856.
3. From Consulting Engineer for Railway, No. 7, dated 5th Jany. 1857.

4. In his letter No. 839, dated 12th November 1856, Captain Ouchterlony has submitted an estimate as follows:-

	Rs.
Capital to be expended in the construction of the rail setting up water wheels, storing water, &c.	11,00,000
Annual Returns...	1,40,000
Annual expenditure	1,30,000
Leaving a surplus of...	10,000

Rupees to form a reserve fund or to meet contingencies.

5. Captain Francis' estimate* is the result of detailed calculations, but is considered by him to be too high. I cannot however but think his reasons for considering it to be so, based as they are principally upon the uncertainty of details entered into previous to actual work, to be equally strong in favor of its being too low, they do not shake my faith in the value of the estimate which appears to have been carefully prepared, and considered. Captain Francis' experience enables him, it is true, to bring a rather more compendious method of estimating to bear upon the question; but I doubt if even his experience, is sufficiently extensive to render this method safely applicable, in the manner in which he used it.

* Rupees 6,80,000 in report of the 17th January 1857, herewith forwarded.

6. The advantages to be obtained by the construction of this road are undoubted.

7. Captain Ouchterlony's estimate† for the construction for a Railway of the Coonoor ghaut, is unaccompanied by details and its allowance of Rupees 65,000 a mile, I think liberal, the most expensive part of the work will doubtless be the excavations, and embankments, required to form the platforms on which the water wheels will have to be placed, for these must be numerous in order to provide for the requirements of so irregular a topography as that of the Coonoor valley, and also to enable the best system of light wheels, using the water again, and again being employed; after making every allowance however, for the number as well as extent of their several excavations and embankings, I am still of opinon that the estimate will prove sufficient.

† Rupees 11,00,000, in letter No. 839, dated 12th November 1856.

8. Captain Ouchterlony estimates, that the cost of carriage will be reduced by the Railway from Rupees 18-11-0 a ton which is its present cost to Rupees 8 a ton, while Colonel Pears estimates that a common ghaut, fit for bandy traffic, will reduce the cost of traffic from 20 Rupees to 6 Rupees a ton.

9. The latter estimate is based on simple, and well known data, the former depends upon the amount of traffic now in existence, and would go far to prove that there is not sufficient traffic at present, for so expensive a Railway as one costing 65,000 Rupees a mile, and I am decidedly of opinion that if a Railway cannot compete with a common road, the common road should be first constructed, the Railway may follow afterward, when there is sufficient traffic to make it pay.

10. The investigations with respect to the Railroad are still so very incomplete, that it may yet be found that 30 or 40 thousand Rupees a mile would complete it. The road for which Captain Francis has estimated provides however for so much internal communication, on the Hills themselves by traversing the range from east to west, that I cannot but think, that it would be injudicious to compare the works, as if they were fitted to attain one and the same object.

11. I have therefore the honor, in expressing regret, that a pressure of other business in the Central office, should have prevented this project being prepared before the closing of the Budget; to recommend, if approved, that the sum amounting to Rupees (6,80,000) six lacs and eighty thousand, be entered in the Government office, Statement No. I, Coimbatore District.

12. I do not know of any Officer who could be spared to carry the investigations connected with the Railroad up the Hills, immediately, I will however keep the subject in view.

No. 31.

ORDER THEREON, No. 509; dated 20th March 1857.

In Extract Minutes of Consultation of the 19th December last, No. 2362, the Government had under consideration a report from the Consulting Engineer for Railways on the line of road selected by Captain Francis, to connect the Hill stations on the Neilgherries with the Rail road; and under the full report furnished by that Officer, and the strong opinions expressed by him in favor of the project, they desired (para. 17) that an estimate should be framed for a first class road on Captain Francis' trace, as modified by Colonel Pears, and terminating at Serumoogay. In para. 18, the Government adverted to the Consulting Engineer's report on Captain Ouchterlony's project for forming a Railway down the eastern slopes of the Neilgherries, and intimated that they would reserve their observations on the subject until the receipt of the Chief Engineer's report upon it.

2. With his letter above recorded, Colonel Faber submits a report* from Captain Francis, on the road proposed by him, with an estimate for its construction prepared by Mr. Williams, amounting to Rupees 6,80,000; being at the rate of about 12,600 Rupees a mile for a road 54 miles in length and 10 yards in width.

* 7th January 1857.

Para. 9. Captain Francis, confesses himself disappointed both at the results of Mr. Williams' closer measurement of distances, and with the estimated cost. He had calculated that the expence would not exceed 6,000 Rupees, or as he now modifies it, 7,000 Rupees a mile, for a road of 47 miles, 8 yards in width. From the experience which

he has had in making hill roads, he is of opinion that, with proper intelligent Superintendence, a road 8 yards wide ought not to cost more than 7,000 Rupees, or one 10 yards wide more than 9,000 Rupees a mile. The Chief Engineer thinks that Captain Francis' reasons for considering Mr. Williams' estimate to be high, based as they are on the uncertainty of details entered into, previous to actual work, are equally strong in favor of its being too low; and he expresses his confidence in the value of the estimate, and recommends that it may be entered in Statement No. 1 of the Budget. The Government are unable to comply with this recommendation. Looking to the large variation between Captain Francis' and Mr. Williams' calculation of the cost of the road, they are of opinion that the matter should be further investigated, and a detailed survey and estimate be made and submitted, in order that the project may be laid in a complete state before the Government of India.

3. Colonel Faber also submits two† letters from Captain Ouchterlony on the subject of a Railway up the Coonoor Ghaut, at a cost, roughly estimated at 11,00,000 of Rupees; together with a report‡ from the Consulting Engineer for Railways as to its practicability. Colonel Pears' sentiments on the project are stated in paras. 34 to 49 of his letter to Government dated 13th November last, in which he expresses an opinion in its favor, and strongly recommends that it should be investigated, and an Officer appointed to select the most favorable line and to take the levels. Colonel Faber considers Captain Ouchterlony's estimate of 65,000 Rupees a mile to be liberal, and thinks that it will prove sufficient. But adverting to the difference in the reduction of the cost of carriage by the Railway and by a common ghaut, as estimated by that Officer and the Consulting Engineer Colonel Faber concludes that there is not sufficient traffic at present for so expensive a Railway, and expresses his decided opinion that if it cannot compete with a common road, the latter should be first constructed, and the Railway follow when there is sufficient traffic to make it pay.

† Dated 12th and 21st November 1856.

‡ 5th January 1857.

4. The Government are unable to pass a definite order on this project, in the absence of a detailed survey and estimate. The establishment of a cheap and rapid means of communication between the Hills and the plains, is likely to be attended with important advantages; and adverting to the opinions on this subject expressed by Colonel Pears and Captain Ouchterlony, the Government are desirous that the subject should receive the fullest consideration. The Chief Engineer will therefore keep it in view, and nominate an Officer to carry on the necessary investigations, as soon as one can be spared for the duty. As the Government doubt whether Colonel Pears has had before him for selection the two projects of a road by Kotagherry and a Railway by Coonoor, they resolve to transmit an Extract from these proceedings together with the papers received from the Chief Engineer to that officer and to request his report upon the question now raised.

(Signed) H. FORBES,
Acting Secretary to Government.

in expressing regret, that as pressure of other business in the Central Office should have prevented this project being prepared before the Closing of the Budget; to recommend; if approved, that the sum amounting to Rupees/6,00,000/ Six lacs and eighty thousand be entered in the Government Office Statement No/ Coimbatore District.-

12. I do not know of any Officers who could be spared to carry the investigations connected with the Railroad up the Hills, immediately I will however keep the subject in view.-

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

Fort St. George
2d February 1857.

Lt Col Foster Colonel
Chief Engr

Lt Col Morris.

Dr
Cons. 23d Dec/56 No 5342
do 4th Mar/56 - 9810

No 30.

Copy to the Consulting Engr for Railways with 4 Engl Encls.
26 March/57.

6th July: & 16th & 23d 57 Inst

Public Works Dept
Rd to Cons: 24th March
No. 220
From.
The Chief Engineer
To
The Secty to Govt
Bo

Dated. 2nd
Received 3d Feb/57

No 9946

Inc. 4

Subject. Report on the Madras Railway Extension.

Forwarded with reference to Govt Public Works Department Letter No 2682 dated 19th Dec. 1856 Copy of Correspondence from the Chief Engineer & Madras Committee, & the Consulting Engineer Chairman on the subject of connecting the Hill Forts on the Carnatic with the Madras Railway - Report on the relative merits of the two Estimates Rs 680000 and Rs 1100000. Submitted for the proposal and for reasons assigned recommend that Govt be pleased to sanction the Estimate Rs 680000 for the Construction of the Line and be sanctioned - Should however Estimate of Rs 1100000 at present be adopted pending the investigation connected with the Railway expenditure but that the subject will be kept in view.

Sec'y Govt

Thos. Pringle Esqr
Secy to Govt
Bombay

Sir

I have the honor to transmit herewith for the information of Government a Report from the Consulting Engineer for Railways on the Estimates for the Madras Railway Extension to the Carnatic.

I have &c

Connecting the Railway
with the Interior.

No. 559

Extract from the Minutes of Consultation
Under date the 20th March / 6 / February 1857.

Read the following
Letter from the Chief Engineer

H.E. Sir Colin Campbell / Here enter 2nd February 1857 No 9946 /

Sir Extract Minutes
of Cons. of the 19th December
last - No 2369, the Govern-
-ment had under consid-
-eration a report from the
consulting Engineer for
Railways on the line of
road selected by Captain
Francis to connect the
Hill stations on the Neilgherries
with the Railroads, and
under the full report
furnished by that Officer,
and the strong opinions
expressed by him in favor
of

of the project, they desired (Para 17) that an estimate should be framed for a first-class road on Captain Francis' lines, as modified by Colonel Pears, and terminating at Seringapatam. In para 18, the Government referred to the consulting Engineer's report on Captain Cockburn's project for forming a Railway down the Eastern Slopes of the Neilgherries, and intimated that they would reserve their observations on the subject until the receipt of the Chief Engineer's report upon it.

2 With this letter above recorded, Colonel Graham submits a report from Captain Francis on the road proposed by him, with an estimate for its construction prepared by Mr Williams, amounting to Rupees 680,000, being at the rate of about 12,600 Rupees a mile for a road 54 miles in length and 10 yards in width. Captain Francis confesses himself disappointed both at the results of Mr Williams' closer measurements and with the estimated cost. He had calculated that the expense would not exceed 6000 Rupees, or as he now modifies it, 7000 Rupees a mile, for a road of 47 miles, 8 yards in width. From the experience which he has had in making hill roads, he does not consider that, with proper intelligent

17th January 1857.

Para 9.

Superintendence

Superintendence, a road 8 yards wide ought not to cost more than 7000 Rupees, one mile and a quarter or one 10 yards wide 9000 Rupees a mile. The Chief Engineer thinks that Captains Francis' reasons for considering Mr Williams' estimate to be high, based as they are on the uncertainty of details entered into previous to actual work, are equally strong in favor of its being too low; and he expresses his confidence in the value of the estimate, and recommends that it may be entered in Statement No 1 of the Budget. The Government are unable to comply with this recommendation. Looking to the large variation between Captain Francis' and Mr Williams calculation of the cost of the road, they are of opinion that the matter should be further investigated, and a detailed Survey and estimate be made and submitted, in order that the project may be laid in a complete state before the Government of India.

3 Colonel Fabervalso submits two* letters from Captain Cockerlang on the subject of a railway up the Coonoor Ghaut, at a cost, roughly estimated at 11,00,000 Rupees, together with a* Report from the Consulting Engineer for Railways as to its practicability. Col Pears. —

dated 12th & 21st Nov 1856.

* 5th January 1857.

Statements

sentiments on the project
are stated in paras 34 to
49 of his letter to Govern-
ment dated 13th November
last, in which he expresses
an opinion in its favor,
and strongly recommends
that it should be in-
vestigated, and an Officer
appointed to select the
most favorable line and
to take the levels. Colonel
Haber considers Captain
Cubbetson's estimate of
65,000 Rupees a mile to
be liberal, and that it
will prove sufficient. But
adverting to the difference
in the reduction of the
cost of carriage by the
Railway and by a common
Cart, as estimated by
that Officer and the con-
sulting Engineer, Colonel
Haber

Haber concludes that
there is not sufficient
traffic at present for so
expensive a Railway, and
expresses his decided opinion
that if it cannot compete
with a common road, the
latter should be first con-
structed, and the Railway
~~afterwards~~ follow, when there is
sufficient traffic to make
it pay.

4 The Government
are unable to pass a
definite order on this
project in the absence
of a detailed Survey and
estimate. The establish-
ment of a cheap and
rapid means of com-
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the Hills and the
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as the Government doubt whether Col. Pears has had before him for selection the two projects of a road by Nolughany and a railway by Connor, they resolve to transmit an Extract from these proceedings together with the papers received from the Chief Engr

power to that effect, and to request his report upon the question now raised.

Copies to the Chief Engr
Dec 28th

1 — Consulting Engr for Railways — with 4 Dupl Plans
Returned to the Chief Engr with Mr C Report

Cons. 23d Dec/50 No 55
— do 4th Nov/50 — 9 Items

Pub. Works 1857 Department
Dy to Cons. 24th March

No 509

Extract Mins of Cons:
Dated 20th March/57

From the Consulting Engrs for Railway
2/22nd Apl/57 Co No 8014 in Cs 5 Items
From the Chief Engineer 18 May/57 Cs 1 to 4 in
3 Items

Passing orders on the
line of road selected by
Captain Francis to
Connect the Hill Stations
on the Peachoriver with
the Railroad —

No 30 + 31.