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MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.
Can 8/3/58

G.O. No.	523	Press
		Mis.
<i>74-95</i>		
Dated	8 — 3 —	18 — 58

Not to be folded or roughly handled

5-5-58

No. 94. Read the following letter from Colonel C. E. FABER, Chief Engineer; to J. D. BOURDILLON, Esq., Secretary to Government, dated 21st February 1859, No. 8076.

SIR,

Nos. 1862, 2046 and 2250, dated 10th September 4th and 26th October 1858.

E. M. C. No. 1862, dated 10th September 1858.

Adverting to the orders of Government marginally quoted, I have the honor to state, that the District Engineer of Malabar has submitted a report on the new Trace of the Tambracherry Ghaut, together with an Estimate for converting it into a Cart Road amounting to Rupees 2,04,000, including the sum of 10,000 already granted* for cutting the Trace, or Rupees 1,94,000 without that sum. The cost of the proposed Ghaut may, in round numbers, be stated at 2 Lacs of Rupees.

2. It appears that out of the total height of 2,200 feet, the ascent of 1,700 is made with little difficulty, but for the last 500 feet "masses of rock are encountered at every few yards, some in detached positions, others in the form of solid table rock, which will make the forming of a road a matter of great expense and difficulty. The zigzags also are very close to one another, and owing to the gradient and slope of the hills, will require great care in the construction of the road at the turns."

3. To obviate the difficulties above noticed, attempts were made to alter the line, but this was found impracticable unless at an extravagant expense, and Captain Bean seems to adhere to the present (new) Trace as the only one that is feasible, and of which the average gradient is one in eighteen.

4. It is however by no means conclusively established that the vicinity of Tambracherry and Luckady is the most desirable point for the establishment of a Cart Road at such heavy expense, as it appears that many planters object strongly to it, and as Captain Bean admits that a better direction can be obtained at a great decrease of expense, either to the North West or East of this line, it appears highly necessary that the point should be clearly determined before the Estimate is submitted to higher authority.

5. If it is true that a better and cheaper line can be found within fifteen miles of the Tambracherry Pass, there is not, in my opinion, any valid reason for adhering to that locality in particular, as there is no doubt that a road could be easily constructed from the head of any other line, to communicate with Luckady and the extensive Coffee Plantations in its neighbourhood. Altogether it appears to me that the subject demands further enquiry, and as the Superintending Engineer of the Circle has been instructed to visit the Tambracherry Pass in the course of his approaching tour to the Neilgherry Hills, I propose to await his report after personal investigation of the comparative advantages of the several lines that have been mentioned, for which purpose the Survey and Estimate will be referred to Lieutenant Colonel Lawford.

6. A copy of the Survey is herewith submitted for the information of Government.

Letter from Lieutenant J. BEAN, District Engineer, Malabar; to Colonel C. E. FABER, Chief Engineer, dated Malabar, 19th January 1859, No. 15.

SIR,

I have the honor to forward a Survey which has been made of the new Tambracherry Ghaut Trace, together with an Estimate, including an Appendix for Bridges, and large Drains, amounting to Rupees 2,04,000 for opening out the line throughout for wheel Traffic. I have not deducted the sum of 10,000 Rupees sanctioned by Government as per margin,* for the purpose of carrying on preliminary operations and making the Trace of a permanent character, but if this amount is to be excluded the total Estimate amounts to 1,94,000 Rupees.

2. The greater portion of the line was traced by Lieutenant T. E. Tennant, late Assistant Engineer, and it has been completed by Mr. H. B. Smith, but I have myself frequently in-

spected the line, the general features of the country in the neighbourhood, and the adjoining spurs of the hills, to see if a better Ghaut could be made, and I have satisfied myself that the present Trace, under all circumstances, is the most advantageous line which could be taken. I have measured the whole extent of Trace myself, and from it have prepared the Estimate which is enclosed. Before determining on this line, a Trace which was marked out by Surveyor Williams, was examined, and for which a palpably inefficient Estimate of Rupees 48,000 was framed. This line of Ghaut presented no one feature to recommend it in preference to the chosen line, it had very many zigzags extremely acute at the turns, and at the top would have had to be made in equally as difficult and rocky a soil, as in the Trace now estimated for. We also endeavoured to join the two Traces so as to combine the advantages of the two lines, but we found this nearly impossible, as a barrier of sheet rocks of great breadth separated the Traces, over which it would have been impracticable to work, unless at an enormous expense.

3. The line now estimated for presents few difficulties for a height of 1,700 feet out of the whole rise of 2,200 feet to Luckady, but for this latter portion, it must be confessed, masses of rock are encountered at every few yards, some in detached portions, others in the form of solid table rock, which will make the forming of a road a matter of great expense and difficulty. The zigzags also are very close to one another and owing to the gradient and slope of the hills, will require great care in the construction of the road at the turns.

4. To avoid these difficulties we endeavoured to carry the Trace either to the West or East of the line shewn in the Survey, but it was found that the ground in which the zigzags were taken was the easier soil, and bounded by masses of table rock, over which it was impossible to make a road, unless money was no object in the undertaking.

5. Mr. Smith has very lately been employed in endeavouring to make a Trace. Northwest from the top at Lackady, so as to avoid these zigzags, by forming one or two long Traces, and joining the line near the 1,700 feet of elevation referred to previously, but the same obstacles presented themselves as noticed in the last paragraph, and he had to abandon the idea.

6. Altogether, taking into consideration the different circumstances of the case, I am inclined to recommend the construction of the Tambracherry Ghaut, notwithstanding the expenses of the work. I am perfectly aware that a better direction of Ghaut, in some particulars, and at a great decrease of expense, can be obtained either to the Northwest or East of this line, probably near Teriote in one case, and 10 or 14 miles from Luckady in the other. I am also aware that many Gentlemen in Wynnad strongly object to the proposed Ghaut, and allege these circumstances as the reason, but I believe that there is no other spot so favorable for entering South Wynnad and so favorable for meeting the wants of the country, and that no other situation can counterbalance the advantages of Tambracherry on the score of the diminished expenditure in forming a Road. To the South East it is already proposed to open out the Carcoor Ghaut, and to the North we have already the Cootiaddy, a good bullock Ghaut, and further North still the Peria, a good Bullock and even a Bandy Ghaut. From Tambracherry also a direct line can be made via Kulputty and Sultan's Battery to Goondlepet in Mysore, thus opening out a straight line of communication between the Malabar Coast at Calicut and the Mysore country, other advantages might also be shown, but I only touch upon these matters briefly.

7. As regards the features which the Ghaut now traced present, I may state that the rise of the Wynnad Hills at the Luckady gap, where our line comes out, is 2,200 feet, and is the lowest point along the range for a considerable distance North and South. The Trace ascends most favorably with gradients averaging 1 in 18, through very favorable ground for a distance of 5 miles, 6 furlongs, to an elevation of 1,700 feet, where it meets the present old Ghaut. It then crosses and recrosses in zigzags averaging 420 yards each, for the remaining 500 feet for a distance of 1 mile and 7 furlongs, but with a gradient no where less than 1 in 18. The general nature of the ground as I have shown is here unfavorable, but there is no difficulty which cannot be overcome by a Company of Sappers and an energetic and experienced Officer. It will thus be seen that the whole Ghaut measures 7 miles and 5 furlongs, or to give it accurately, 7 miles, 5 furlongs and 97 yards, whilst the old Ghaut is barely 3 miles.

8. Owing to the great steepness of the spurs up which it ascends, the zigzags, when they occur, are very close and over one another which will require great care as the work is being

carried out. The turns also are objectionable from the same cause, and skill must be shown in the revetments and levels made for Bandies. The gradient of 1 in 18 may be considered rather steep, but I consider that it will be perfectly practicable for Carts and suitable for the expected Traffic. If we made a more favorable Trace the expenses in proportion at the top of the Ghaut, would be increased enormously. The average besides is 1 in 18 as in some places it is less steep.

9. The Ghaut at present ends in dense jungle about 2 miles from Poothoopaud, the village near the foot, as shown in the Survey. In order to connect it however with the Calicut and Tambracherry Road, Mr. Smith has been instructed to make trial lines through the jungle, and I believe the direct road will join somewhere near Mallapoorum. This work is being carried out as fast as the nature of the operation will permit, and when completed, an estimate shall be submitted for constructing and bridging the Road. The remainder of this line to Calicut by the joint assistance of the Gentleman Planters is being made practicable for wheel traffic.

10. As regards the estimate and rates charged for the work there is no doubt that the greater portion of the cost will be incurred in cutting through the upper 500 feet of elevation, where the larger masses of granite rock are found. There are about 2 running miles of rock chiefly solid blasting, which at the rate of 3 Rupees a yard will amount to Rupees 1,51,567-8-0 out of the estimate of Rupees 2,04,000. This rate I do not think too high when it includes building side revetments, and I believe it was adopted by Captain Francis.

11. There are no streams of any considerable size to bridge on the Ghaut, though there will be one or two on the road branching from the foot, I have only allowed for 8 or 9 of these bridges, and the works in great portion can be built of rubble masonry taken from the Ghaut cuttings.

12. Of smaller Tunnels I have allowed for 37 in number, agreeing with the number of streams found in the Ghaut. These with the bridges will make 46 masonry works, and if we add 21 under-drains to be built roughly of rubble masonry to relieve the flow from the upper side drains, we shall have 67 culverts or bridges in all, which for the whole length of the Ghaut, 7 miles, 5 furlongs, will make 9 Tunnels to every mile or one to every two hundred yards of Ghaut.

13. As the Monsoons are very severe on this Coast it will be necessary to provide abundance of water-way on such a Ghaut.

14. As the cuttings made in the spurs of the Hills serve to form the outer half or edge of the Road, a cutting of an average width of 4 yards might have been thought sufficient to form a road 7 or 8 yards wide, but I found that most of the Hills over which the Ghaut is to be carried were so exceedingly steep, that a less average than 5 yards would hardly prove sufficient. Indeed in many places, and where the rock occurs, the face is almost perpendicular, and the contours of the hills have proved in consequence a serious obstacle to the Trace and to the proper data being obtained on which to form an Estimate.

15. Mr. Smith, Executive Engineer, is now employed with Mysore Coolies in opening out the Trace 8 feet wide, if possible, so as to form a Bullock Ghaut, but the money recently granted Rupees 10,000 will only go a short way towards this object. We could only open out the Ghaut by putting up temporary Bridges over the streams, and in the Monsoon there is a great probability of these being washed away.

16. We have still to overcome the repugnance of the Natives to work on the spot from a dread of Fever, as yet, not a single Cooly can be induced to offer his services from Malabar, notwithstanding the promise of good Pay, and we have to trust to Mysore Coolies and Wudders who take the work on Contract. I trust however that with experience these difficulties may be lessened, and I look forward to great assistance being afforded by the Company of Sappers and Miners about to be ordered to Wynnad.

17. I have not thought it necessary to make Plans of the Bridges and Tunnels, but if they are required I can submit them with the least possible delay.

18. Before concluding, I may mention that I have not allowed for gravelling the Ghaut, as very much will not be required, and I did not wish to make the Estimate too large. The upper

Fort Saint George, Public Works Consultation of 8th March 1859.

portion of the Ghaut being through Rock and hard soil, sufficient material will be obtained in the cuttings to form a good surface. In the lower portion of the Ghaut, gravel and stony soil is met with nearly throughout the whole distance, and those portions which are in clay can be gravelled from material in the neighbourhood without much additional expense.

No. 95. ORDER THEREON, No. 523; dated 8th March 1859.

Government will await the Report of Colonel Lawford. Should the difficulties of the Tambracherry Pass be found as great as they appear from the District Engineer's report, it will be matter for consideration, whether a Road need be formed there, since there is already a good Road into Wynaad, by the Peria Pass to the North, and it is intended to make a second by the Carcoor Pass to the South.

2. Colonel Lawford will examine and report on both the Tambracherry and Cotia^d Passes, as well as any other line pointed out by Captain Bean or by the Planters. He will also state the number and extent of the Estates near each Ghaut. With respect to the question of expense also Colonel Lawford will confer with the Planters, and ascertain from them what rate of Toll they would be willing to pay for a good Ghaut.

(Signed) J. D. BOURDILLON,
Secretary to Government.

Central Office of P.W.
Fort St. George
21st February 1859.

N^o 8076.

From
The Chief Engineer.
To
The Secretary to Government. P.W.
Sir,

Public

1862, 2046
12250 1/10
Sept. 11 26
Oct. 1858.

1862, 2046
12250 1/10
Sept. 11 26
Oct. 1858.

1862, 2046
12250 1/10
Sept. 11 26
Oct. 1858.

Adverting to the orders of Government marginally quoted, I have the honor to state that the District Engineer of Malabar has submitted a report on the new Trace of the Tambracherry Ghaut, together with an Estimate for converting it into a Cart Road amounting to Rupees 2,04,000, including the sum of 10,000 already granted for cutting the trace, or Rupees 1,94,000 without that sum. The cost of the proposed Ghaut may, in round numbers, be stated at 2 Lacs of Rupees.

2. It appears that out of the total height of 2200 feet, the ascent of 1700 is made with little difficulty, but for the last 500 feet masses of Rock are encountered at every few yards, some in detached positions others in the form

form of solid table rock which will make the forming of a road a matter of great expense and difficulty. — The zigzags also are very close to one another, and owing to the gradient and slope of the hills will require great care in the construction of the road at the turn.

3. To obviate the difficulties above noticed attempts were made to alter the line, but this was found impracticable unless at an extravagant expense and Captain Bean seems to adhere to the present / new / Trace as the only one that is feasible, and of which the average gradient is one in eighteen.

4. It is however by no means conclusively established that the vicinity of Tambacherry and Luckary is the most desirable point for the establishment of a Cart Road at such heavy expense, as it appears that many planters object strongly to it, and as Captain Bean admits that a better direction can be obtained at a great decrease of expense either to the North West or East of this line, it appears highly necessary, that the point should be clearly determined before the Estimate

estimate is submitted to higher authority. —

5. If it is true that a better and cheaper line can be found within fifteen miles of the Tambacherry Pass, there is not in my opinion, any valid reason for adhering to that locality in particular as there is no doubt that a road could be easily constructed from the head of any other line, to communicate with Luckary and the extensive Coffee plantations in its neighbourhood. Altogether it appears to me that the subject demands further enquiry and as the Superintending Engineer of the Circle has been instructed to visit the Tambacherry Pass in the course of his approaching tour to the Kelcherry Hills, I propose to await his report after personal investigation of the comparative advantages of the several lines that have been mentioned, for which purpose the Survey and Estimate will be referred to Lieutenant Colonel Lawford.

6. A copy of the Survey is herewith submitted for the information

information of Government.

Tolson
21st Dec 1889

I have the honor to

Sir,
Your most obedt. Servt.

M
18.16

Wm. Lister Colville

Chief Engineer

To
The Secretary to
Government P.O.

No 15
 To
 The District Engineer
 Malabar
 To
 The Chief Engineer
 D. P. No.
 Sir.

I have the honor to forward a Survey which has been made of the new Sambracherry Ghaut Trace, together with an Estimate, including an Appendix for Bridges, and large drains, Amounting to Rupees 204,000 for opening out the line throughout for wheel traffic. I have not deducted the sum of 10,000 Rupees sanctioned by Government as per Margin for the purpose of carrying on preliminary operations and making the Trace of a permanent character, but if this Amount is to be excluded the total Estimate Amounts to 194,000 Rupees.

2. The greater portion of the line was traced by Lieutenant J. C. Tennant, late Assistant Engineer, and it has been completed by Mr. H. B. Smith but I have myself frequently inspected

* Extract Minutes of Consultation No 1862 dated 10th September/58

Case 14th September/58. Rs. 53.34
 " 5 October " 59.40
 " 19 " 189.102
 Copy in letter to Engineer dated 31st October. Rs. 100 of 1862.

Adm. 21st July 1854
 No. 228
 No. 230

23 March 1857
 No. 230
 23.523.84 March 1857

inspected the line, the general features of the country in the neighbourhood, and the adjoining spurs of the hills, to see if a better gradient could be made, and I have satisfied myself that the present Trace, under all circumstances, is the most advantageous line which could be taken. I have measured the whole extent of Trace myself, and from it have prepared the Estimate which is enclosed. Before determining on this line, a Trace which was marked out by Surveyor Williams, was examined, and for which a palpably inefficient Estimate of Pikes \$8000 was framed. This line of Gradient presented no one feature to recommend it in preference to the chosen line, it had very many Zigzags extremely acute at the turns, and at the top would have had to be made in equally as difficult and rocky a soil as in the Trace now estimated for. We also endeavoured to join the two traces so as to combine the advantages of the two lines, but we found this nearly impossible as a barrier of sheet rocks of great breadth

13
breadth separated the traces, over which it would have been impracticable to work, unless at an enormous expense.

3. The line now estimated for presents few difficulties for a height of 1700 feet out of the whole rise of 2200 feet to Luskady, but for this latter portion, it must be confessed, masses of rock are encountered at every few yards. Some in detached portions other in the form of solid table rock, which will make the forming of a road a matter of great expense and difficulty. The zigzags also are very close to one another and owing to the gradient and slope of the hills will require great care in the construction of the road at the turns.

4. To avoid these difficulties we endeavoured to carry the Trace either to the West or East of the line shown in the Survey, but it was found that the ground in which the zigzags were taken was the easier soil and bounded by masses of table rock, over which it was impossible to make a road, unless money was no object in the undertaking.

5. Mr. Smith has very lately been employed in endeavouring to make a trace. Northwest from the top at Luk Rudy, so as to avoid these zigzags, by forming one or two long traces, and joining the line near the 1700 feet of elevation referred to previously, but the same obstacles presented themselves as noticed in the last paragraph, and he had to abandon the idea.

6. Altogether, taking into consideration the different circumstances of the case, I am inclined to recommend the construction of the Tambacherry Ghaut, notwithstanding the expenses of the work. I am perfectly aware that a better direction of Ghaut, in some particulars and at a great decrease of expense, can be obtained either to the Northwest or East of this line, probably near Triste in one case, and 10 or 14 miles from Luk Rudy in the other. I am also aware that many gentlemen in Wynad strongly object to the proposed Ghaut, and allege these circumstances as the reason, but I believe that there is no other spot so favorable for entering South - Wynad and so favorable for meeting

15
meeting the wants of the Country and that no other situation can counter-balance the advantages of Tambacherry on the score of the diminished expenditure in forming a Road. To the Southeast it is already proposed to open out the Caroor Ghaut, and to the North we have already the Pootiaddy, a good bullock Ghaut, and further North still the Peria, a good bullock and even a handy Ghaut. From Tambacherry also a direct line can be made via Pulpatty and Sultan's Battery to Goondlepet in Mysore. Thus opening out a straight line of communication between the Malabar coast at Calicut and the Mysore Country other advantages might also be shown but I only touch upon these matters briefly.

7. As regards the features which the Ghaut now traced present, I may state that the rise of the Wynad Hills at the Luk Rudy gap, where our line comes out, is 2200 feet, and is the lowest point along the range for a considerable distance North and South. The trace ascends most favorably with gradients averaging

1 in 18 though very favorable ground for a distance of 5 Miles 6 furlongs to an elevation of 1700 feet where it meets the present old Ghaut. It then crosses and recrosses in Zigzags averaging 420 yards each for the remaining 500 feet for a distance of 1 Mile and 7 furlongs, but with a gradient no where less than 1 in 18. The general nature of the ground as I have shown is here unfavorable, but there is no difficulty which cannot be overcome by a Company of Sappers and an energetic and experienced Officer. It will thus be seen that the whole Ghaut measures 7 Miles and 5 furlongs or to give it accurately 7 Miles 5 furlongs and 97 yards whilst the old Ghaut is barely 3 Miles.

8. Owing to the great steepness of the Spurs up which it ascends, the Zigzags, when they recur, are very close and over one another which will require great care as the work is being carried out. The turns also are objectionable from the same cause, and still

must

17
must be shown in the reconnoitres and levels made for Bandies. The gradient of 1 in 18 may be considered rather steep but I consider that it will be perfectly practicable for carts and suitable for the expected traffic. If we made a more favorable trace the expenses in proportion at the top of the Ghaut, would be increased enormously. The average besides is 1 in 18 as in some places it is less steep.

9. The Ghaut at present ends in dense jungle about 2 miles from Poathopand the Village near the foot, as shown in the Survey. In order to connect it however with the Calicut and Sambracherry Road, Mr. Smith has been instructed to make trial lines through the jungle and I believe the direct road will join some where near Malapoorum. This work is being carried out as fast as the nature of the operation will permit, and when completed an Estimate shall be submitted for constructing and bridging the Road. The remainder of this line to Calicut by the joint assistance

afair time of the gentlemen. It is
whenever made practicable for wheel
traffic.

10. As regards the estimate
and rates charged for the work...
there is no doubt that the greater por-
tion of the cost will be incurred in
cutting through the upper 500 feet
of elevation, where the larger masses
of granite rock are found. There
are about 2 running miles of,
rock chiefly solid blasting, which
at the rate of 3 Rupees a yard
will amount to Rupees 15,567-8-
out of the estimate of Rupees 204,000.
This rate I do not think too high
when it includes building side-
roadments, and I believe it was
adopted by Captain Francis.

11. There are no streams of any
considerable size to bridge on the
ghat, though there will be one
or two on the road branching from
the foot, I have only allowed for
4 or 5 of these bridges and the work
in great portion can be built of
rubble masonry taken from the
ghat cuttings.

12. Of smaller Tunnels I
have allowed for 37 in number
agreeing

agreeing with the number of streams
found in the ghat. These with the
Bridges will make 46 masonry
works, and if we add 21 under-
drains to be built roughly of rubble
masonry to relieve the flow from
the upper side drains, we shall
have 67 Culverts or Bridges in all,
which for the whole length of the
ghat 7 Miles 5 furlongs, will
make 9 Tunnels to every mile or
one to every two hundred yards of
ghat.

13. As the monsoons are very
severe on this coast it will be
necessary to provide a bundance
of water way on such a ghat.

14. As the cuttings made in the
spurs of the Hills serve to form the
outer half or edge of the road, a
cutting of an average width of
4 yards might have been thought
sufficient to form a road 7 or 8
yards wide, but I found that
most of the Hills over which
the ghat is to be carried were so
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average than 5 yards would hardly
prove sufficient. Indeed in many
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places, and where the rock occurs, the face is almost perpendicular, and the contours of the hills have proved in consequence a serious obstacle to the Trace and to the proper data being obtained on which to form an Estimate.

15. Mr. Smith, Executive Engineer, is now employed with Mysore Coolies in opening out the Trace 8 feet wide, if possible, so as to form a bullock Ghaut, but the money recently granted Rupees 10,000 will only go a short way towards this object. He could only open out the Ghaut by putting up temporary Bridges over the streams and in the monsoon there is a great probability of these being washed away.

16. We have still to overcome the repugnance of the Natives to work on the spot from a dread of Leisler, as yet, not a single Cooly can be induced to offer his services from Malabar, notwithstanding the promise of good pay, and we have to trust to Mysore Coolies & Hudders who take the work on contract. I trust however that with

21
with experience these difficulties may be lessened and I look forward to great assistance being afforded by the Company of Surveyors and Miners about to be ordered to Wynaad.

17. I have not thought it necessary to make Plans of the Bridges and Tunnels, but if they are required I can submit them with the least possible delay.

18. Before concluding, I may mention that I have not allowed for gravelling the Ghaut, as very much will not be required, and I did not wish to make the Estimate too large. The upper portion of the Ghaut being through Rock and Hard soil, sufficient material will be obtained in the cuttings to form a good surface. In the lower portion of the Ghaut, gravel and stony soil is met with nearly throughout the whole distance, and those portions

which
you

which are in clay can be gravelled
from material in the neighbour-
hood without much additional
expense.

District Eng^r Office I have seen
Malabar Signed J. Deane
Lieut District Engineer
19th January 1889 Malabar

/ True copy /

Lawrence Lieut Col
Supy. Engineer S^r Circle

Comp^d M

good

Public Works Dept

N^o 523

Extract from the Minutes of Consultation

Under date the 8th March 1859.

Read the following
letter from the Chief Engineer

There enter 21st Feb 1859 1859/60

Government will
await the Report of Colonel
Saunders. Should the
difficulties of the Tambr-
-cherry Pass be found as
great as they appear from
the District Engineer's
report, it will be matter
for consideration whether
a road need be formed there,
since there is already a
good

At

2nd Division

Ally

1/6

Wk

2 of Land
with a main
road on both
sides of the
river

Copy in a letter to England
dated 31 October 1859

Extract from a letter from
the Chief Engineer
dated 31 October 1859

00000000

Extract from a letter from
the Chief Engineer
dated 31 October 1859

Copy

Copy of a letter from
the Chief Engineer
dated 31 October 1859

good road into the road by
the Eric Pass to the north,
and it is intended to make
a road by the Carcass
Pass to the south. ~~There~~
~~must not be~~
~~justified in driving~~
~~any large cutting for a~~
~~road into this~~
~~comparatively small tract~~
~~of country.~~

AA

2. Colonel Lawford will
examine and report on
both the Tambacherry and
Potandy Passes, as well as
any other line pointed out
by Captain Bean or by
the Planters. He will also
state the number and extent
of the Estates near each
Pass. With respect to the
question of expense, also,
Colonel Lawford will confer
with

but with a view to
suit the Chief Officer
of the - The difficulty
of the road is
a serious one but it is
to be remembered that the
road is not to be made
by the Government but
by the Planters. The
road is to be made by
the Planters and the
Government will only
be concerned in the
road being made.

the road is to be made
by the Planters and the
Government will only
be concerned in the
road being made. The
road is to be made by
the Planters and the
Government will only
be concerned in the
road being made. The
road is to be made by
the Planters and the
Government will only
be concerned in the
road being made.

with the Planters, and
ascertain from them what
rate of toll they would
be willing to pay for a
good road.

M.S. Copy to the Ch. Eng.
Dip. 28.
9th Dec. to No. 11.

The road is to be made
by the Planters and the
Government will only
be concerned in the
road being made. The
road is to be made by
the Planters and the
Government will only
be concerned in the
road being made. The
road is to be made by
the Planters and the
Government will only
be concerned in the
road being made.

Only in as letters to & replies
dated 31 October 1891
of 1862.

By
John Reed Esq.
19 May to June 22 25 m.

40. Thorne 1859 Sept. 17.
In the back of 1859 Sept. 17.
Cane: 82. Thorne.

Ms 23.

Extracts from the
Journal of David Hays.

*From the Chief Engineer of the
Army at Fort Vancouver 1857
April 30 & 1908 in Camp 20 - Sa-
132-8-133
From 20 April 1908*

*From Dr. J. W. R. 1850
\$12598 infano: 91. 30
From Dr. J. W. R. 1850
\$12598 infano: 91. 30*

Christening, Colonel

London & Leamington and

effort on both the Chamberlain

and certainly I fear in
Chalabhar as well as any

after line of road from foot

out his Christmas Dream or
the other.

by the Standard, to state the
more independent of the

arrived and before of me
 related me or each of them

Directed me at once
and is a certain for up to 10 minutes
and is a certain for up to 10 minutes

indicated that they were
willing to train for a good

the meeting at Longport
 18th March 1841

Ms. A.9.4.4.95.

es. March 7th