

(1) Number of pages 10
(2) Date of receipt
(3) Initials of the Referencer

MADRAS RECORD OFFICE.

Government of Madras.

Public Works DEPARTMENT.

G.O. No. 95

Press
Mis

Dated 11-1-1877

Not to be folded or roughly handled

No. 181. Read the following letter from E. H. PRINGLE, Esq., District Engineer, South Canara, to Major-General G. W. WALKER, R.E., Secretary to Government, Public Works Department, dated Mangalore, 21st December 1876, No. 61 :—

In reference to G.O., No. 982, of 15th April 1874, I have now the honor to submit the report called for therein.

2. My inspection of the Cooloor ghaut approaches was made at as early a date as was possible, after the conclusion of the case against the late Head Accountant, Mangalore Division, permitted me to leave Mangalore.

3. A reperusal of the order since my return has led me to believe that Government required me to report on not only the Canara portions of the road but those also in Mysore. If such is the case I can inspect the latter on my next visit to the north, for on my last I did not proceed further than the frontier stream at Lakshimpur and Bennati.

4. I find the road surface from the head of the ghaut to Lakshimpur in excellent order, with no impediments to cart traffic during dry weather save the somewhat heavy gradients at places. Roads with equally severe gradients are freely used by carts below the ghauts, and this therefore cannot well be the reason of the absence of wheeled traffic above.

5. A list of the permanent bridges remaining to be finished is appended, in which I give the nature of present crossing; the bridge provided in the original estimate, and what I propose to substitute for it with reasons for such change.

6. In 1872 and 1873 I retraced many of the steep gradients on this road. Some of the traces are partly opened, and but for a restrictive order of the Local Fund Board in 1873, the entire new line would have been completed by this time. During my recent visit, I completed tracing those portions that were left unfinished in 1873.

7. The sections of the road to be abandoned are as below :—

I.—From 21 m. 4 f. 102 yards to 22 m. 2 f. 108 yards, or 6 f. 6 yards in length. This is the portion of road near the district fund bungalow at Nagodi. Its present gradients have a maximum of $5^{\circ} 15'$. The new trace runs below the bungalow to the north and is 6 f. 11 yards in length with a maximum gradient of 1° .

II.—From 23 m. 7 f. to 25 m. 1 f. 120 yards, or 1 m. 2 f. 120 yards in length. The gradients noted on this section are $8^{\circ} 35'$, $5^{\circ} 57'$, $4^{\circ} 20'$, $7^{\circ} 30'$, $6^{\circ} 30'$, $4^{\circ} 55'$, $4^{\circ} 36'$, $4^{\circ} 5'$, and $3^{\circ} 48'$ where the road rises and falls over laterite

*Proceedings of the Madras Government, Public Works Department,
11th January 1877. No. 95.*

spurs. The new trace, part of which is opened 4 yards wide, has a maximum gradient of 2°, but runs for the most part at from 30' to 1° 30'. Its length is 1 m. 3 f. 12 yards.

III.—From 25 m. 6 f. 130 yards to 26 m. 6 f. 140 yards, or 1 m. 10 yards in length. This is the steep rise from Maraghat bridge with gradients 5° 10', 3° 45', and 3° 42'. The retrace is 1 m. 1 f. 37 yards in length with a maximum of 3° (the rise from Maraghat bridge).

8. The total length of road to be abandoned is therefore 3 ms. 136 yards against a retrace of 3 ms. 2 f. 60 yards, an increase of only 1 f. 144 yards gaining the reduction of all gradients above 3°.

9. I must remark that the timber platforms of the two large bridges on this road, the Gurtihalla and Maraghat, are both rotten, and traffic over them is suspended. The fords are good, but the approaches steep. The Local Fund Board in their present impecunious state cannot find funds to renew the wood work, and indeed object to the use of timber for bridge superstructures altogether. I think, however, that it would be advisable to keep the communication open throughout the monsoon, for the reason that there have been unusual exports of grain from South Canara this year, and there might possibly during the wet season, when the district is shut off from communication by sea, be a demand for food grains from Mysore.

10. The branch line to Bennati is nearly opened so far as it has been traced. The end of the present road is some furlongs from the bridge site chosen by Mysore Authorities, and I have now completed the trace to this spot. I met the Assistant Engineer, Nagar Division, at Bennati, and obtained from him some particulars regarding the bridge. It is to consist of 3 spans of 25 feet segmental arches, and the road will be 20 feet 6 inches above the stream bed. If the arches were made semi-circular it would be of advantage to the approach on the Canara side and would be also suitable to the Mysore approach. On the Canara side there is an outcrop of gneiss through which the approach must be blasted, and therefore increase in height of the roadway will save expenditure on the part of the Madras Government.

11. It is proposed that the bridge should be built of brick at a cost of from 5 Annas to 6 Annas per cubic foot. The Madras Government have to defray half the cost of this bridge, and I therefore trust it may not be deemed an interference on my part to suggest that if the admirable building stone at the site is used by the Mysore Government, in preference to the anything but first-class bricks that appear to be alone procurable near the place, a very large saving might be effected; while the cost of blasting the Canara approach to the bridge and procuring the stone for building would be one and the same, and might be equally divided between the two districts.

12. A considerable saving will be made on the new Bennati road, from which I anticipate the extension to the bridge can be carried out.

13. The proposal to utilize a considerable portion of the maintenance grant of the ensuing year on the opening of the retraced portions of the approaches to Cooloor ghaut will be made to the Local Fund Board, and, if agreed to, most of the heavy gradients now existing will be done away with during next monsoon.

*Proceedings of the Madras Government, Public Works Department,
11th January 1877: No. 95.*

List of the Culverts on the approach to the Cooloor Ghaut incomplete in November 1876.

Number.	Position from Wondse.			Name.	Nature of present crossing.	Original Design.	As proposed.	Remarks.
	Miles.	F.	Yards.					
1	22	6	143	Kalumani ..	Open drain ..	Laterite in chunam arch- ed 10 span. Do. 5' ..	One vent rough-stone drain 2½' X 4'.	Scarcely any water in monsoon.
2	23	3	183	Halgar ..	Temporary tim- bers, rough.	Do. 10' ..	One vent rough-stone 2½' X 3'.	Scarcely any water in height of mon- soon.
3	24	5	20	Karkamadi ..	Do. ..	Do. 14' ..	Laterite in chunam arch 20' span, rough stone in chunam foundation.	New trace crosses below junction of both these streams.
4	24	5	173	Gajhi ..	Open drain ..	Do. 8' ..	One vent rough-stone 2½' X 4'.	Not much water.
5	24	7	58	Tarimory ..	Temporary tim- bers, rough.	Do. 10' ..	Laterite in chunam arch 10' span, rough stone in chunam foundation.	
6	25	1	120	Wortakudlu..	Do. ..	Do. 8' ..	Laterite in chunam arch 8' span, rough stone in chunam foundations.	
7	25	2	120	Annemory ..	Do. ..	Do. 6' ..	One vent rough-stone Culvert 2½' X 3'.	No water except in monsoon.
8	27	3	95	Halmani ..	Temporary tim- ber, partly rough stone.			

MANGALORE,
21st December 1876.

(Signed) E. H. PRINGLE,
District Engineer, South Canara.

No. 182.

ORDER THEREON, 11th January 1877, No. 95.

CIVIL WORKS, No. 11.

THIS information will be recorded.

2. But it is not that called for in G.O., No. 982, of 15th April 1874; the slightest attention to which would have shown that what was called for was a report from personal inspection of the new line of approach to the Cooloor ghaut within Mysore territory, from the Shemoga Anantapoor road through Cooloor Cuttay. Such report at this late date would be valueless, and need not now be made.

(True Extract.)

Major-General, R.E.,
Secretary to Government.

To the District Engineer, South Canara.
" Financial Department.

Exd. E. C. Shunker.
Spore Copies

List of Culverts on the Approach to the Colonghant
incomplete in November 1876.

Number	Position from Colonghant	Name	Nature of original present Crossing	Original Design	As proposed	Remarks
1	22 6 1/2	Kalumani	open drain	Laterite in Chumam Arch. 10' span.	1 Vent rough stone drain 2 1/2' x 4'	Scarcely any water in monsoon.
2	23 3 1/2	Halgar	Temporary timber rough.	Do 5'	1 Vent rough stone 2 1/2' x 3'	Scarcely any water in height of monsoon.
3	24 5 20	Karkamadi	Do	Do 10'	Laterite in chumam Arch. 10' span, rough stone in chumam foundation	New transverse below junction of both these streams.
4	24 5 1/2	Gajhi	open drain	Do 14'		
5	24 7 58	Tarimory	Temporary timber rough.	Do 8'	1 Vent rough stone 2 1/2' x 4'	Not much water.
6	25 1 1/2	Wortakudla	Do	Do 10'	Laterite in chumam Arch. 10' span rough stone in chumam foundation	
7	25 2 1/2	Cannemory	Do	Do 8'	Laterite in Chumam Arch 8' span, rough stone in chumam foundations	
8	27 3 95	Kalman	Temporary timber partly rough stone	Do 6'	1 Vent rough stone Culvert 2 1/2' x 3'	No water except in monsoon.

Mangalore
21st December 1876

Colonghant
District Engineer
Mangalore

P.W.D.
281076
N.R. 9409

No. 61 South Canara District Engineer's Office,
Mangalore 21st December 1876.

From

The District Engineer
South Canara.

To

The Secretary to Government
D.P.W. Madras.

Sir,

In reference to G. O. No. 982 of 15th April 74,
I have now the honor to submit the report
called for therein.

2. My inspection of the Kallur Grant
Approach was made at as early a date as
was possible, after the conclusion of the
case against the late Head Accountant.
Mangalore Division permitted me to leave
Mangalore.

3. A refusal of the Order since my
return has led me to believe that Government
required me to report on not only the Canara
portions of the road but those also in
Mysore. If such is the case I can inspect
the latter on my next visit to the North,
for on my last I did not proceed further
than the frontier stream at Lakshimpur
& Pennati.

4. I find the road surface from the
Head

Head of the Ghant to Lakhimpur in excellent order, with no impediments to cart traffic during dry weather since the somewhat heavy gradients at places. Roads with equally severe gradients are freely used by carts below the Ghants & this therefore cannot well be the reason of the absence of wheeled traffic above.

5. A list of the permanent bridges remaining to be finished is appended in which I give the nature of present crossings; the bridge provided in the original estimate & what I propose to substitute for it with reasons for such change.

6. In 1872 & 73, I retraced many of the steep gradients on this road. Some of the traces are partly opened & but for a restrictive order of the Local Fund Board in 1873, the entire new line would have been completed by this time. During my recent visit, I completed tracing those portions that were left unfinished in 1873.

7. The sections of the road to be abandoned are as below:-

I. From $m. + 30$ to $m. + 30$ length. This is the portion of road near the District Fund Bungalow at Bazar. Its present gradients have a maximum of $5^{\circ} 15'$. The new trace runs below the

the Bungalow to the north & is 6.11 in length with a maximum gradient of 10° .
II. From $m. + 40$ to $m. + 120$ or $m. + 125$ in length. The gradients noted on this section are $8^{\circ} 35'$, $5^{\circ} 57'$, $4^{\circ} 20'$, $7^{\circ} 30'$, $6^{\circ} 30'$, $4^{\circ} 55'$, $4^{\circ} 36'$, $4^{\circ} 5'$, & $3^{\circ} 48'$ where the road rises & falls over laterite spurs. The new trace, part of which is opened 490 wide has a maximum gradient of 2° but runs for the most part at from $90'$ to $1^{\circ} 30'$. Its length is $m. + 30$ to $m. + 120$.
III. From $m. + 130$ to $m. + 140$ or $m. + 10$ in length. This is the steep rise from Maraghat Bridge with gradients $5^{\circ} 10'$, $3^{\circ} 45'$, & $3^{\circ} 42'$. The retrace is $m. + 30$ in length with a maximum of 3° (the rise from Maraghat bridge).

8. The total length of road to be abandoned is therefore $m. + 138$ against a retrace of $m. + 60$ an increase of only 1.144 gaining the reduction of all gradients above 3° .

9. I must remark that the timber platform of the two large bridges on the road, the Gurtihalla & Maraghat are both rotten & traffic over them is suspended. The fords are good but the approaches steep. The Local Fund Board in their present impecunious state cannot find funds to renew the woodwork & indeed object to the use of timber for bridge superstructures altogether.

altogether. I think, however, that it would be advisable to keep the communication open throughout the monsoon for the reason that there have been unusual exports of grain from South Canara this year and there might, possibly, during the wet season when the District is shut off from communication by sea, be a demand for food grains from Mysore.

10 The Branch line to Pennat is nearly opened so far as it has been traced. The end of the present road is some furlongs from the bridge site chosen by Mysore Authorities & I have now completed the trace to this spot. I met the Assistant Engineer, Nagar Division, at Pennat and obtained from him some particulars regarding the bridge. It is to consist of 3 spans of 25 segmental arches, and the road will be 20.6" above the stream bed. If the arches were made semi-circular it would be of advantage to the approach on the Canara side and would be also suitable to the Mysore approach. On the Canara side there is an outcrop of gneiss through which the approach must be blasted, and therefore increase in height of the roadway will save expenditure

3
expenditure on the part of the Madras Government.

11 It is proposed that the bridge should be built of brick at a cost of from 5 annas to 6 annas per cubic foot. The Madras Government have to defray half the cost of this bridge & I therefore trust it may not be deemed an interference on my part to suggest that if the admirable building stone at the site is used by the Mysore Government, in preference to the any-thing-but-first-class bricks that appear to be alone procurable near the place, a very large saving might be effected; while the cost of blasting the Canara approach to the bridge & procuring the stone for building would be one & the same, & might be equally divided between the two Districts.

12 A Considerable saving will be made on the new Pennat road from which I anticipate the extension to the bridge can be carried out.

13 The proposal to utilize a considerable portion of the maintenance grant of the ensuing year on the opening of the retraced portions of the approaches to Colthurghant will be made to the local Fund

I find Board & if agreed to most of the heavy grants now existing will be done away with during next session.

P.W.D.
26 DEC 76
No. 2409

I have the honor to be
Yours most obedt. servt.

Edmund
District Engineer
Madras

Qd 28-4-73 No 1202 & 1203
30-6-73 .. 1687 & 1688
13-3-74 .. 679 & 680
15-6-74 .. 982

Col. J. G. ...
Reporting the result of
inspection of -

Recd: 21st
Sept 22
Buckingham

At the Secretary's Office
11/9/76

The District Engineer
South Canara

From
J. G.

Ans. 9-1-77

C. K. 5

Public Works Department

PROCEEDINGS OF THE MADRAS GOVERNMENT.

Under date the 17th Feby. 1877
Read the following :-

From
The District Engineer
South Canara } (M. No 61 of 21st Decr 1876)

This information will be
recorded.

But it is not that called
for in G. O. No 982 of 15th April
1874; the chief attention to
which would have been given
what was called for was a
Report from personnel inspection
of the new line of approach to
the Cooloro Lyant within
Mysore territory, from the
Shemoga-Anantapur Road
through Cooloro Cuttany.
Such report at this late
date would be valueless,
and need not now be
made. But it is not creditable

that the attempt to make
it should have been delayed
so long, and the wrong
report sent in after all.

Copy

B. S. Canaw ✓
Faintly kept
Dispd 20-1-74

X¹ Attch. Aug-1-77

9409 ✓

Govt. of 1877 Madras.

PUBLIC WORKS.

To

12-27
The N. B. South Canara

Dated

Issued

Recd.

Encl.

G. O., 11th 1877, No. 95

Nos. 181 + 182. -

Civilian Shant Road.

Report of the Dist Commr
South Canara, on his
inspection of the
road recorded with remarks

South Canara

X. Att. Aug-1-77

Dist