

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No. 2790.	Press
280-231	-Mis,
Dated 11-9-	1867.

Not to be folded or roughly handled

1

Proceedings of the Madras Government, Public Works Department,
11th September 1867.

No. 230. Read the following letter from the Superintending Engineer, 3.d Division, to the Secretary to Government, Public Works Department, dated Camp at Emmegamoor, Adony Talook, 23rd August 1867, No. 1,523 :—

1. With reference to paragraph 6 of a letter from the Collector of Kurnool, forwarded with G. O. No. 2,362, of the 5th instant, I have the honor to submit a copy of a letter from Captain Hunter, Executive Engineer of the Kurnool Range.

2. As regards paragraph 7 of the Collector's letter, I beg to say that I propose shortly to inspect the road towards Cuddapah, and will then submit a report on the same.

3. With respect to that part of paragraph 2, in which the Collector states that he regrets the road was not carried through the two largest towns in the Sirwell talook, viz., Sirwell and Alamoore, I beg to say that I am not aware as to who marked out the new line of road, but a reference to the Trigonometrical Map and to Scott's Road Book will show that the old line of road did not go through these places; and I can only suppose that the line through those towns was avoided in consequence of the number of streams that would have to be crossed. The line of country along which the road is taken is, I consider, the proper one in an imperial point of view, but for particular places loop lines might be constructed.

No. 231. ORDER THEREON, 11th September 1867, No. 2,790.

CIVIL WORKS, No. 25.

Recorded, with reference to G. O. No. 2,735, dated 5th September 1867.

(True Extract.)

(Signed) CHARLES A. ORR, Colonel, R. E.,
Secretary to Government.

To the Superintending Engineer, 3rd Division.
" Revenue Department.
" Board of Revenue.

Exd. S. T. Augustin.

Copy of a letter N^o 2680 of 16th August 1867 from the Officer
in Charge Murnool Range to the Superintending Eng^r 3:0^{pm}

Sir,

I have the honor to acknowledge
the receipt of your order N^o 1388 of the 10th Aug^t
1867, giving over to a Report from the Collector
on the Public Works of the District

2. The Collector here seems to disapprove
of every thing that has been done or is doing
from the laying out of the road from Murnool
to Chagumurry to the system of road repairs
now in force

3. As I am specially singled out for an
favorable notice in the latter case I trust that
I may be allowed to say a few words in defence of
the present system, against that recommended by
the Collector

4. Mr. Chase seems to think that the
allowance for the maintenance of the road is
only 150 Rupees per mile per Annum is an
insufficient reason for not metalling the road
with broken whin stone (a Scotch provincialism
for green stone or any other hard trap rock) and
says "surely it would be better to make some small
but really first rate repairs to the roads, than to
make such repairs to a great extent as is at
present the case"

5. After some consideration the only
conclusion I can come to as to the meaning of
this sentence, is that Mr. Chase advises that
the whole of the money sanctioned for keeping

a long line of road in decent working order for the entire year shall be expended in making a first rate road metalled with broken trap for a very short distance and that the rest of the road be left to take care of itself

6. Thus on the footy road there are 55 miles in this Range. the yearly allowance for the maintenance of this distance, at 150 Rupees per mile, is 8250 Rupees. Now the cost of broken stone metalling, using granite, gneiss or other quartzite rocks to be found here, is Rs 1-6-0 per cubic yard as per data marginally inserted.

7. If the metal be laid four inches thick and six yards wide a running yard of road will contain $6 \times 4 = 24$ or $\frac{2}{3}$ of a cubic yard and one mile then of metalling will cost $\frac{2}{3}$ of $1\frac{1}{2} \times 1760$ or 1466 Rs. 10-0-0 to this add grading and rolling at Rupees 6-6-0 per cubic yard or 465 Rupees per mile, and the total cost of a broken stone road using granite metal will be 2000 Rupees per mile.

8. If trap or the stone resembling whin stone be used these figures must be doubled for the material will often have to be carted for long distances and so hard as to be unbreakable except with sledge hammers.

9. Thus if Mr. Chase's scheme be adopted we shall be able to make $2\frac{1}{2}$ miles of road leaving 52 1/2 miles impassable. Is this reasonably advocated?

10. Mr. Chase too appears to be under-

14 Parahio stone (collected and carted at 20 Parahio for Rs 1-11-2)
12 Parahio break-
ing stone at 8 Rupees per Parahio - 8-0-0
Laying the stone - - - 1-4-0

the impression that this road once made will require no further repair, and the road will stand advance towards perfection at the rate of $2\frac{1}{2}$ miles per Annum, so that in 22 years a cart will be able to pass from end to end.

11. Such however is not the case as considerable sums will have to be spent on the maintenance of a road of this kind even when once made.

12. There is no doubt that the best material for road repair is broken stone and on portions of the road that have been exceptionally bad I have laid broken stone but think that I have shown that I cannot afford to do this for the whole length of the road.

13. It has been found by experience in the District that the Collyer Collyer round pebbles are an excellent substratum for a road; these round pebbles are really stones of all shapes less than an inch cube collected from the fields adjacent to the road and as far as possible selected for their sharp edges. These are laid with a thin layer of gravel and then whole then watered and beaten with rammers. I find that these stones bind very well and their displacement by the traffic means that they have been driven in by the heavy wheels.

14. I believe that next to broken stone this is about the best material that can be laid and is certainly better than the alternative black or white clay or even unmixe

a gravel.

15. The material now reprobated by the Collector is precisely that in use on the roads sanctioned from the famine relief fund under that Officer's direct orders. Not from Rapally to Jounagery and from Rapally to Rampoor.

16. The cost of a road in course of construction in the town of Turnool by the Collector and metalled with broken slate (notwithstanding the abundance of the best material in the world) is nearly 4000 Rupees per mile.

17. The meaning of the expression "the better the road becomes the better will become the conveyances used for traffic on the roads" is not quite clear. The original cart and bullock is not for heavy traffic, given way even to stone waggons on any long line of road in India however good, and, on the District roads of Turnool, it fear it will be long before we see anything but the bandy of the country and the Chaise in which the Collector is wont to strew a low body, four wheeled vehicle with one horse and light springs. to the singular infitnes of which for District roads is I believe mainly owing the violence of Mr. Chase's remarks.

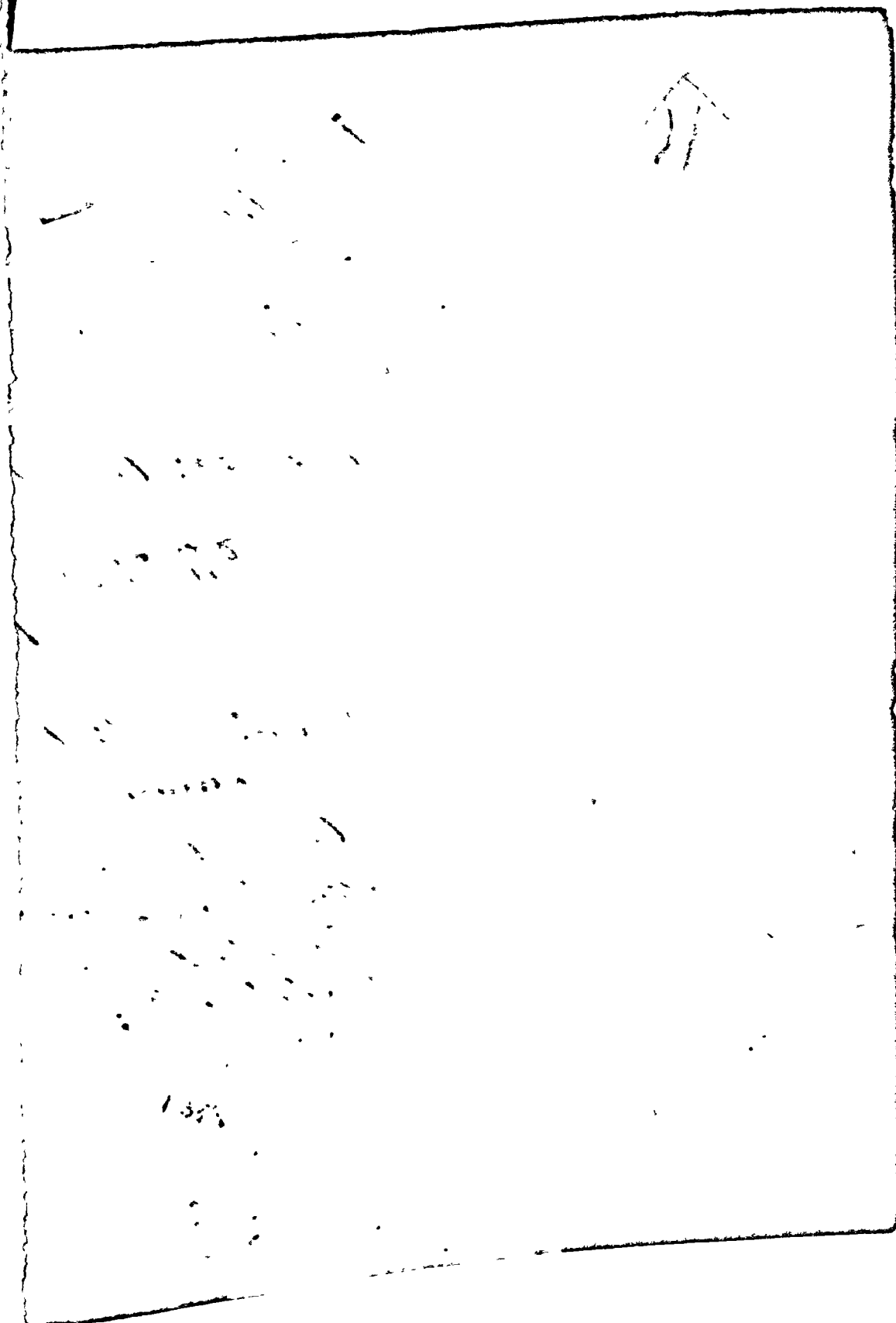
I have seen

Signed J. St. Hunter Capt. R. B.
Executive Dgo. in charge
Turnool Range -

W. A. M. Major R. B.
Superintending Engineer
3rd Div.

N: 1523

Copy of original of the 15th.
Cant. Bangalore



gravel.

From.
The Deputy Engineer
3:20.
To.
The Secy to Government
P.W.D.

Dated 23: Aug: 1867.
Res. P.W. 3321/67
Enclosure to N: 1523

Roads in the Kurnool
District

Copy of Captain Smith's
letter having reference
to the Collector's letter on
the state of the;

N: 1523

Sd/-y. Engineer Office 3:20.
Camp. Emmeganoor
Belonging to
Bellary District
23: August 1867

From.
The Superintending Engineer
3:20.

To.
The Secretary to Government,
P.W.D. No.

With reference to Para 6 of a letter
from the Collector of Kurnool forwarded with
N: 1523 of the 5th Instant. I have
the honor to submit a copy of a letter from Captain
Smith, Executive Engineer of the Kurnool Range
regarding para 7 of the Collector's letter.
I have to state that I have endeavored to direct the
road towards Cuddapah and will then submit
a report on the same.

With respect to that part of Para 2 in
which the Collector states that he regrets the road
was not carried through the two largest towns
in the Simell Taluk; viz, Simell and Alamin,
I beg to say that I am not aware as to who
demanded the new line of road, but a reference
to the Ingenometrical Map and to Scott's Road Book
will show that the old line of road did not go through
those places; and I can only suppose that the
line through those towns was avoided, in consequence
of the number of streams that would have to be
crossed. The line of country along which the road
is taken is, I consider, the proper one in an
engineering point of view; but, for particular

places loop lines might be constructed

200-231
845 1867. 2319

James
A. Aubrey Major 1866
Signal Engineer
3rd Division

1867-1868 - 231
No. 13332
June 1867

Shedding Engineer
3rd Div

The Secy. & Com.
1867

Recd 23d Aug 1867
Recd 2d Feb
Recd 1st

1867-1868
2790-1867
Recd in the presence
of the

Forwarded by a letter
from Captain Hamilton
explaining the reference
to the California letter
state of the same
instructing the Secy. & Com.
to make a copy of the letter
and send it to the Secy. & Com.

With see also

J. N.

Recorded, with
reference to 231 2735,
dated 15th September 1867 -

2790

1867

1867

Quoted as
1867

1867

Recd 12/19/67