(1) பக்கங்களின் எண்ணிக்கை 4.

(2) புதுக்கித் திருப்பிய நாள் 9.90

(3) ஆதாரங்குறிப்பவர் சுருக்கொப்பம்

தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

PWD துறை

15

அரசாணை எண்.
மு. கோப்புத் தாள் எண். 451

அச்சகம்
பலவகை

நாள் : 12-2-1892

198 .

மடிக்கவோ கண்டபடி கையாளவோ கூடாது

2 Sheets

ஆவண. கா-1—18,000—15-6-87.

25]

Public Department.

CHIEF SECRETARIAT. MADRAS.

451/1

PROCEEDINGS OF THE MADRAS GOVERNMENT.

READ the following paper:—

From the Superintendent Archaeological Survey, dated 29th January 1892 No. 50.

Order, 8th February 1892 R No. 170.

The Public Works Department will be requested to furnish an estimate as suggested in para 6.

(True Extract)

W. Brodie
Ag Under Secretary.

To

The Public Works Department.

(with current and sketch to be returned)

[6]

P. W. CURRENT No. 1359

Govt. of 18 | Madras.

To

The P.W.D

Encls: 2 (Plan)

Recd: 10.2.92

Proceedings, dated 8/2 189 2.
No. 170.

Subject.

Requesting P.W.D to furnish an estimate for reconstruction of portion of the Amaravati rail from Marbles now in the Madras Museum

B/No. 45 M dfse 2 Feby 92

Communicated to the Consulting Architect who will furnish the required Estimate

Sir

O.B.
4.2.92

(2)

9/2/92

The Con. Architect with
H. Con Architect's letter
plan & copy of G.O. 2.
dfse 28 Oct 91.

(2)

Govt. of {1892} Madras.

REVENUE.

Issued

Recd.

G.O., 9th February 189

FEBRUARY.

Please send the
note of Cho 839 - subject
Rules relating to the
fees by Court
18-2-92
18.II.92

File with C No 1577
sent to "W" 16-2-92" and
not yet returned to the
Consent Section - D.P.
18-2-92

ated to the
ver III circle
W
W

Season, Bellary.

Board's Proceedings submitting fortnightly narrative on the state of the season in the district for the period ending 9th January 1892, recorded.

2

To the S.E. III circle
& Chief Engr for Irrgn

(2)

A.C.

The file is to be R
up with C No 1716,
despatch of, when by
Reports reach the
Commissioner is
to me.

18 II 92

Gobt. of {1892} Madras.

REVENUE.

519 W dy 18-2-92

Issued

Recd. Encl.

G.O., 9th February 1892, No. 134.

FEBRUARY.

Season, Bellary.

Board's Proceedings submitting fortnightly narrative on the state of the season in the district for the period ending 9th January 1892, recorded.

Communicated to the
Supdtg. Engineer III circle

150 ovts
DW

To the S.E. III circle
& Chief Engr for Engr

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Taluks.	Dry cultivation.					Wet cultivation.				
	Sowings				Total for the year.*	Sowings				Total for the year.*
	During December.		April to December.			During December.		April to December.		
	Average.*	1891.	Average.*	1891.		Average.*	1891.	Average.*	1891.	
	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.
Adóni	27,660	25,293	308,347	304,763	327,057	166	126	3,278	1,540	4,013
Alúr	19,221	21,588	310,584	179,460	324,110	45	3	179	22	2.1
Bellary	20,176	25,665	405,522	169,071	411,071	152	273	4,414	4,113	5,226
Ráyadrug ..	9,295	27,435	241,870	177,270	251,001	466	1,377	8,596	9,225	16,099
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District average.*	88,458	130,550	1,848,330	1,414,301	1,912,121	1,974	2,606	40,546	37,108	49,892

* Average of three years for taluks and five years for the district.

For the whole district about 500,000 acres of dry land have not been sown. The early sowings were generally very poor. The late crop will yield a quarter outturn in a few places, but must fail generally. The principal crop—white cholum—is now in many parts being removed for fodder for which alone it is of value.

3. The condition of the cattle in the black soil taluks continues to deteriorate and numbers are being sold at nominal prices, whilst the difficulty of feeding the existing stock daily increases. The price of fodder is enormous and stocks are nearly exhausted, whilst the chances of bringing in supplies at any but prohibitive rates from Kistna and the Nallamala jungles appear to be small.

4. Since the date of the last report prices have generally become easier. Trade is active and the average price of cholum on the 9th current was below the scarcity rate for the district. No change has occurred in the condition of the people, but the numbers resorting to relief works showed a large increase during the week, especially in Adóni and Bellary, as noted on the margin. The number resorting to the test work opened at Kanekal in Ráyadrug is very small, from which it is evident that the mass of the people in that taluk have not yet felt any severe pressure. The Commissioner considers that the work should be left open until the reopening of the road work at Bommanahal which has been already sanctioned. Regarding the Alipur tank works the Board understands that Mr. Jones' project will be complete by the end of the current month, when it will be possible to put the work in hand if found necessary. It is, however, inadvisable to commence it unless experience at Bommanahal shows that work must be provided in that neighbourhood for considerable numbers. As the Public Works Department does not approve of clearing the silt from the Daroji tank channels the Collector's instructions for the transfer of the coolies employed in clearing the tank-bund there are approved.

Taluks.	Number.	
	2nd January.	9th January.
Adóni	2,186	2,649
Alúr	1,824	1,628
Bellary	864	1,888
Ráyadrug ...	Not given.	85
Total ...	4,874	6,250

5. The Commissioner has during the past four days travelled through the Alúr taluk, and spent three days in the vicinity of the Chippagiri works. There does not appear to be any great demand for employment at present which is not met by the Chippagiri works. There is in most villages still some slight agricultural employment in picking the very scanty crop of cotton or removing the cholum stalks, and the removal of nuth-grass from the fields must from what the Commissioner has seen be giving employment to some hundreds of men. The general condition of the people in the taluk is good.

(A true Copy and Extract.)

(Signed) P. RAJARATNA MUDALIAR,
Secretary.

To the Secretary to Government, Revenue Department.
„ Collector of Bellary.
Copy to the Government of India, Revenue and Agricultural Department.

ORDER—dated 9th February 1892, No. 134, Revenue.

Miscellaneous. Recorded.

(True Extract.)

(Signed) C. A. GALTON,
Secretary to Government.

To the Commissioner of Revenue Settlement, Land Records and Agriculture.
„ the Public Works Department (W).
„ the „ (I).

Exd. A. Aubert.

80 Copies.

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...xd. A. Aubert.

80 Copies.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 25th January 1892, No. 58:—

MR. CLOGSTOUN.

Read—the following fortnightly narrative, from the Collector of Bellary, for the period 1st to 9th January 1892, dated 12th January 1892, R.P.R. No. 37:—

STATE OF COUNTRY—*Crops*—*Mungári.*—Mungári, cholum, cumbu and sajja have been harvested. Yield in red and mixed-soil villages varies from 2 to 6 annas. Mungári in black-soil villages has almost failed. Thrashing and storing have not yet been quite completed in parts. Pulses have been partly harvested. Where they are still on the ground if the yield comes to anything at all, it will not exceed 1 anna.

Hingári.—Hingári is sure to fail except in a few isolated cases, and even then the yield will not exceed 4 annas. In many places, white cholum and cotton are in bad condition, and are fit for use only as fodder, and are being used as such.

Under wells.—Crops under well lands, such as ragi, onions, tobacco and vegetables, are in fair condition with prospect of fair outturn, though chillies in Adóni under wells are diseased.

Under tanks.—Earlier crops under large tanks, such as Kanekal and like tanks, have been harvested, and the later crops are on the ground in various stages of growth. Supply in Kanekal tank is sufficient for about a fortnight, and about 200 temporary wells have been constructed to aid the cultivation.

Smaller tanks are not up to the average. Dry crops are raised in many places. Cultivation of tank bed is not successful, save where it is possible to aid it by temporary wells.

Under channels.—Crops under channels have been partly harvested, outturn is about 12 annas; and the standing crops are also in fair condition with prospects of yielding a similar outturn.

Fodder.—Pasture and green fodder are practically *nil*. Stored fodder exists only in a very small quantity, and only with a few ryots. Dry grass is largely imported from Sandúr and other hill forests. Date and margosa leaves, thatch and prickly-pear are also used as fodder in some places. Price of fodder is very high. Cart-load of cholum stalk costs 10 to 12 rupees, while that of jungle grass costs 7 to 8 rupees. I have ascertained that the Nallamalla Hill grass was sold by the village officers of Maddikera at a rate fixed by the Kurnool District Forest-officer. It was a prohibitive rate, and no trade at that rate could succeed. I have now written to Mr. Kough, asking if he will be so kind as to give me an estimate of the actual net cost. I am trying to introduce the prickly-pear fodder, and many people seem anxious to give it a trial. I fear, however, that they may not have patience enough to persevere when they find the cattle unwilling to adopt it at first.

Water-supply.—Decidedly failing in parts. It is impossible at present to make any useful forecast of what difficulties the next few months may produce. All that can be said is that the probabilities point to extensive dearth of water-supply, and yet that up to the present almost all villages seem to be able to get water though sometimes with difficulty.

Agricultural operations.—A small amount of castor plant remaining on the ground is being plucked. The work under wells is increasing. Under Tungabhadra channels where first crop is harvested, land is being prepared for second crop. In black-soil

villages nuth grass is being removed here and there. In nearly all cases, however, the work is performed by the members of the cultivators' families and not by paid labour.

In the tract I am now in, north of the Alúr hills, a good many ryots are employing their labourers in deephoeing black-cotton fields.

Cattle.—Generally thin and emaciated, except in red and mixed-soil villages which had a fair mungari crop. In régad villages several have died of starvation. Water as well as fodder is becoming scarce. Cattle are brought to sale in large numbers, and are sold at cheap rates varying from 10 to 25 per cent. of their normal price. Hides also are sold in large numbers and their prices are 50 per cent. less than usual. The cattle market is very dull and purchasers are found mostly, if not exclusively, amongst butchers.

Foot and mouth disease in Hospet and parts of Sandúr. No disease anywhere else.

General remarks.—There is nothing to add to my last report. The *Hingári* crop is universally a complete failure.

Condition of people.—*On works.*—As a rule good. Amongst the 2,600 and odd at Nandavaram, I saw only a few bad cases. Chippigiri the same. As I say the worst were at the Bommanahal works now closed. I shall see the Tekkalakota work labourers on Tuesday and Gandiganur, Wednesday.

In villages.—Generally good, so far as I have seen.

Mortality.—None.

Sickness.—One case of cholera in Adóni taluk. No deaths. Fever spreading in Hospet taluk.

Remarks.—In the northern taluks, distress is daily becoming greater in parts, but the real pinch is not yet felt. I have been travelling in this tract during the fortnight and rarely see a case that looks like true famine emaciation, though there are some here and there, particularly amongst weavers. In the south and west Mr. Jardine reports still favorably much to the same effect; about the Bellary taluk I think the condition of people is not so satisfactory, but I shall be able to say more in my next report, as I am journeying through that tract this week. The worst cases I have yet seen were on the Bommanahal road works, now closed under orders, yet they are not so bad as to travel to the Kanekal works. I do not well understand this, I confess. All those people I saw must be at present unrelieved, and several were much emaciated, yet they certainly do not go the 17 miles south to Kanekal. On the other hand, in the Adóni taluk, people have come over 30 miles to the Nandavaram works and yet do not look much pulled down by famine.

Relief measures—

Relief works in what taluk open—

Adóni taluk.—Road work at Nandavaram. Number of coolies on 8th—

Men.	Women.	Children.	Total.
805	1,264	580	2,649

Alúr taluk.—Road work at Chippigiri. Number of coolies on 8th—

Men.	Women.	Children.	Total.
482	778	385	1,645

Bellary taluk.—Road work at Tekkalakota. Number of coolies on 8th—

Men.	Women.	Children.	Total.
128	252	133	513

Tank work at Gandiganur. Number of coolies on 8th—

Men.	Women.	Children.	Total.
142	216	42	400

Hospet taluk.—Clearance of prickly-pear on Daroji tank work. Number of coolies on 9th:—

Men.	Women.	Children.	Total.
400	458	150	1,008

Ráyadrug taluk.—Kanekal tank work. Number of coolies on 7th—

Men.	Women.	Children.	Total.
36	15	1	52

Poor-houses—in what places and the number at each.—Nil.

Village relief.—None.

Cases of death for want of food.—None.

Remarks.—Though the numbers on works is not large, some people have travelled long distances to get to the relief works. For instance, people from Hacholli have come 33 miles to Nandavaram, and people from Adóni went 26 miles to Chippigiri. At present there are cases of suffering and want in every village almost, but they are not yet numerous.

I should much like to see sanctioned the Sanitary Engineer's proposal to start work on the large bund of the Alipur tank near Bellary. This would afford relief to the people thrown out at Bommanahal, for I think they would travel the 12 miles or so to Alipur.

The Daroji tank work will soon be at an end, and the Superintending Engineer does not approve of the proposal to carry on silt clearances to the Daroji tank channels. I have therefore directed the Tahsildar to tell the coolies to go to the Tekkalakota road works or the Gandiganur tank works.

I should be glad of orders about the closing the Kanekal tank work for the present. It seems absurd to go on with it for such a small number, and yet it affords relief to those few persons, there being no other work for them at present nearer than Gandiganur, 47 miles off.

Grain-supply—*Private trade.*—Active. The Adóni merchants are selling cheap owing to the discovery that weevils are attacking the stock of dry grain—cholum—they imported from the Central Provinces.

Imports by rail.—Large quantities are imported by rail.

Known or estimated stock in taluks.—Ryots from 4 months to 1 year's supply. The coolies have of course none. There is ample supply with large land-holders and merchants.

State of Markets—

Taluks.	Rice.	White cholum.	Yellow cholum.	Ragi.	Cumbu.	Rising at	Falling at	Stationary at	Remarks.
Bellary	8·64	13·65	14·42	14·07	12·22	..	Bellary.	..	Prices have fallen slightly owing to large imports to Bellary, mostly from the Bombay side.
Ráyadrug ..	8·64	14·42	14·42	15·04	12·35	..	Ráyadrug.	..	
Hospet	8·10	13·39	13·91	15·52	13·30	..	Hospet.	..	
Kúdligi	7·56	..	15·45	15·52	..	..	..	Kúdligi.	
Hadagalli ..	7·	..	13·	..	..	Hadagalli.	..	..	
Harpanáhalli ..	8·64	..	15·45	19·40	..	..	Harpanahalli.	..	
Alúr	8·64	13·39	14·42	..	..	..	Alúr.	..	
Adóni	8·64	14·42	14·42	..	12·35	..	Adóni.	..	

A talukwar statement of loans in the prescribed form is sent.

Resolution—dated 25th January 1892, No. 58.

Submitted to Government.

2. There was practically no change in the state of the Bellary district during the period under report, but a more correct view of the situation is becoming possible. The cultivation returns for December, which are abstracted below, and may be taken as including practically the whole area that has been or can be sown this year, show that in Alúr, Bellary and Ráyadrug, and to a more limited extent in Hadagalli, there is

a very large area left unsown. In this district the wet lands are of very limited extent and of very minor importance, except where irrigation water is obtained from the Tungabhadra channels in Hospet, and to a very small extent in Bellary and Adóni. Nowhere are wells numerous, and in fact the district is dependent on the success or failure of its dry crops. For these there are two seasons, the early, or *Mungári*, during which the lighter soils are chiefly put under crop, and the late, or *Hingári*, which is the season for sowing the stiff black cotton soils. The deficiencies noted above have occurred chiefly on the latter class of soils:—

Taluks.	DRY CULTIVATION.					WET CULTIVATION.				
	Sowings				Total for the year.*	Sowings				Total for the year.*
	During December.		April to December.			During December.		April to December.		
	Average.*	1891.	Average.*	1891.		Average.*	1891.	Average.*	1891.	
	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.	ACS.
Adóni	27,660	25,293	308,347	304,763	327,057	166	126	3,278	1,540	4,013
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Ráyadrug ..	9,295	27,435	241,870	177,270	251,001	466	1,377	8,596	9,225	16,099
Hospet	905	3,292	81,608	75,840	86,282	772	409	13,441	12,890	14,153
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Harpanahalli ..	1,955	10,324	175,463	173,597	177,320	29	148	3,200	3,191	3,347
District average.*	88,458	130,550	1,848,330	1,414,301	1,912,121	1,974	2,606	40,546	37,108	49,892

*Average of three years for taluks and five years for the district.

For the whole district about 500,000 acres of dry land have not been sown. The early sowings were generally very poor. The late crop will yield a quarter outturn in a few places, but must fail generally. The principal crop—white cholum—is now in many parts being removed for fodder for which alone it is of value.

3. The condition of the cattle in the black soil taluks continues to deteriorate and numbers are being sold at nominal prices, whilst the difficulty of feeding the existing stock daily increases. The price of fodder is enormous and stocks are nearly exhausted, whilst the chances of bringing in supplies at any but prohibitive rates from Kistna and the Nallamala jungles appear to be small.

4. Since the date of the last report prices have generally become easier. Trade is active and the average price of cholum on the 9th current was below the scarcity rate for the district. No change has occurred in the condition of the people, but the numbers resorting to relief works showed a large increase during the week, especially in Adóni and Bellary, as noted on the margin. The number resorting to the test work opened at Kanekal in Ráyadrug is very small, from which it is evident that the mass of the people in that taluk have not yet felt any severe pressure. The Commissioner considers that the work should be left open until the reopening of the road work at Bommanahal which has been already sanctioned. Regarding the Alipur tank works the Board understands that Mr. Jones' project will be complete by the end of the current month, when it will be possible to put the work in hand if found necessary. It is, however, inadvisable to commence it unless experience at Bommanahal shows that work must be provided in that neighbourhood for considerable numbers. As the Public Works Department does not approve of clearing the silt from the Daroji tank channels the Collector's instructions for the transfer of the coolies employed in clearing the tank-bund there are approved.

Taluks.	Number.	
	2nd January.	9th January.
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Bellary	864	1,888
Ráyadrug ...	Not given.	85
Total ...	4,874	6,250

Gobt. of {1892} Madras.

REVENUE.

No. 519 Wdy 18 Febry 1892

Issued

Recd. *Encl.*

G.O., 9th February 1892, No. 134.

Communicated to the Superintending Engineer III circle

157 0013 DW

FEBRUARY.

Season, Bellary.

Board's Proceedings submitting fortnightly narrative on the state of the season in the district for the period ending 9th January 1892, recorded.

To The S.E. III circle & Chief Engr

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Total ...	4,874	6,250

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 25th January 1892, No. 58:—

MR. CLOGSTOUN.

Read—the following fortnightly narrative, from the Collector of Bellary, for the period 1st to 9th January 1892, dated 12th January 1892, R.P.R. No. 37:—

STATE OF COUNTRY—*Crops*—*Mungári.*—Mungári, cholum, cumbu and sajja have been harvested. Yield in red and mixed-soil villages varies from 2 to 6 annas. Mungári in black-soil villages has almost failed. Thrashing and storing have not yet been quite completed in parts. Pulses have been partly harvested. Where they are still on the ground if the yield comes to anything at all, it will not exceed 1 anna.

Hingári.—Hingári is sure to fail except in a few isolated cases, and even then the yield will not exceed 4 annas. In many places, white cholum and cotton are in bad condition, and are fit for use only as fodder, and are being used as such.

Under wells.—Crops under well lands, such as ragi, onions, tobacco and vegetables, are in fair condition with prospect of fair outturn, though chillies in Adóni under wells are diseased.

Under tanks.—Earlier crops under large tanks, such as Kanekal and like tanks, have been harvested, and the later crops are on the ground in various stages of growth. Supply in Kanekal tank is sufficient for about a fortnight, and about 200 temporary wells have been constructed to aid the cultivation.

Smaller tanks are not up to the average. Dry crops are raised in many places. Cultivation of tank bed is not successful, save where it is possible to aid it by temporary wells.

Under channels.—Crops under channels have been partly harvested, outturn is about 12 annas; and the standing crops are also in fair condition with prospects of yielding a similar outturn.

Fodder.—Pasture and green fodder are practically *nil*. Stored fodder exists only in a very small quantity, and only with a few ryots. Dry grass is largely imported from Sandúr and other hill forests. Date and margosa leaves, thatch and prickly-pear are also used as fodder in some places. Price of fodder is very high. Cart-load of cholum stalk costs 10 to 12 rupees, while that of jungle grass costs 7 to 8 rupees. I have ascertained that the Nallamalla Hill grass was sold by the village officers of Maddikera at a rate fixed by the Kurnool District Forest-officer. It was a prohibitive rate, and no trade at that rate could succeed. I have now written to Mr. Kough, asking if he will be so kind as to give me an estimate of the actual net cost. I am trying to introduce the prickly-pear fodder, and many people seem anxious to give it a trial. I fear, however, that they may not have patience enough to persevere when they find the cattle unwilling to adopt it at first.

Water-supply.—Decidedly failing in parts. It is impossible at present to make any useful forecast of what difficulties the next few months may produce. All that can be said is that the probabilities point to extensive dearth of water-supply, and yet that up to the present almost all villages seem to be able to get water though sometimes with difficulty.

Agricultural operations.—A small amount of castor plant remaining on the ground is being plucked. The work under wells is increasing. Under Tungabhadra channels where first crop is harvested, land is being prepared for second crop. In black-soil

villages nuth grass is being removed here and there. In nearly all cases, however, the work is performed by the members of the cultivators' families and not by paid labour.

In the tract I am now in, north of the Alúr hills, a good many ryots are employing their labourers in deephoeing black-cotton fields.

Cattle.—Generally thin and emaciated, except in red and mixed-soil villages which had a fair mungari crop. In régad villages several have died of starvation. Water as well as fodder is becoming scarce. Cattle are brought to sale in large numbers, and are sold at cheap rates varying from 10 to 25 per cent. of their normal price. Hides also are sold in large numbers and their prices are 50 per cent. less than usual. The cattle market is very dull and purchasers are found mostly, if not exclusively, amongst butchers.

Foot and mouth disease in Hospet and parts of Sandúr. No disease anywhere else.

General remarks.—There is nothing to add to my last report. The *Hingári* crop is universally a complete failure.

Condition of people.—*On works.*—As a rule good. Amongst the 2,600 and odd at Nandavaram, I saw only a few bad cases. Chippigiri the same. As I say the worst were at the Bommanahal works now closed. I shall see the Tekkalakota work labourers on Tuesday and Gandiganur, Wednesday.

In villages.—Generally good, so far as I have seen.

Mortality.—None.

Sickness.—One case of cholera in Adóni taluk. No deaths. Fever spreading in Hospet taluk.

Remarks.—In the northern taluks, distress is daily becoming greater in parts, but the real pinch is not yet felt. I have been travelling in this tract during the fortnight and rarely see a case that looks like true famine emaciation, though there are some here and there, particularly amongst weavers. In the south and west Mr. Jardine reports still favorably much to the same effect; about the Bellary taluk I think the condition of people is not so satisfactory, but I shall be able to say more in my next report, as I am journeying through that tract this week. The worst cases I have yet seen were on the Bommanahal road works, now closed under orders, yet they are not so bad as to travel to the Kanekal works. I do not well understand this, I confess. All those people I saw must be at present unrelieved, and several were much emaciated, yet they certainly do not go the 17 miles south to Kanekal. On the other hand, in the Adóni taluk, people have come over 30 miles to the Nandavaram works and yet do not look much pulled down by famine.

Relief measures—

Relief works in what taluk open—

Adóni taluk.—Road work at Nandavaram. Number of coolies on 8th—

Men.	Women.	Children.	Total.
805	1,264	580	2,649

Alúr taluk.—Road work at Chippigiri. Number of coolies on 8th—

Men.	Women.	Children.	Total.
482	778	385	1,645

Bellary taluk.—Road work at Tekkalakota. Number of coolies on 8th—

Men.	Women.	Children.	Total.
128	252	133	513

Tank work at Gandiganur. Number of coolies on 8th—

Men.	Women.	Children.	Total.
142	216	42	400

Hospet taluk.—Clearance of prickly-pear on Daroji tank work. Number of coolies on 9th:—

Men.	Women.	Children.	Total.
400	458	150	1,008

Ráyadrug taluk.—Kanekal tank work. Number of coolies on 7th—

Men.	Women.	Children.	Total.
36	15	1	52

Poor-houses—in what places and the number at each.—Nil.

Village relief.—None.

Cases of death for want of food.—None.

Remarks.—Though the numbers on works is not large, some people have travelled long distances to get to the relief works. For instance, people from Hacholli have come 33 miles to Nandavaram, and people from Adóni went 26 miles to Chippigiri. At present there are cases of suffering and want in every village almost, but they are not yet numerous.

I should much like to see sanctioned the Sanitary Engineer's proposal to start work on the large bund of the Alipur tank near Bellary. This would afford relief to the people thrown out at Bommanahal, for I think they would travel the 12 miles or so to Alipur.

The Daroji tank work will soon be at an end, and the Superintending Engineer does not approve of the proposal to carry on silt clearances to the Daroji tank channels. I have therefore directed the Tahsildar to tell the coolies to go to the Tekkalakota road works or the Gandiganur tank works.

I should be glad of orders about the closing the Kanekal tank work for the present. It seems absurd to go on with it for such a small number, and yet it affords relief to those few persons, there being no other work for them at present nearer than Gandiganur, 47 miles off.

Grain-supply—*Private trade.*—Active. The Adóni merchants are selling cheap owing to the discovery that weevils are attacking the stock of dry grain—cholum—they imported from the Central Provinces.

Imports by rail.—Large quantities are imported by rail.

Known or estimated stock in taluks.—Ryots from 4 months to 1 year's supply. The coolies have of course none. There is ample supply with large land-holders and merchants.

State of Markets—

Taluks.	Rice.	White cholum.	Yellow cholum.	Ragi.	Cumbu.	Rising at	Falling at	Stationary at	Remarks.
Bellary	8·64	13·65	14·42	14·07	12·22	..	Bellary.	..	Prices have fallen slightly owing to large imports to Bellary, mostly from the Bombay side.
Ráyadrug ..	8·64	14·42	14·42	15·04	12·35	..	Ráyadrug.	..	
Hóspet	8·10	13·39	13·91	15·52	13·30	..	Hospet.	..	
Kúdligi	7·56	..	15·45	15·52	..	..	..	Kúdligi.	
Hadagalli ..	7·	..	13·	..	..	Hadagalli.	..	..	
Harpanahalli ..	8·64	..	15·45	19·40	..	..	Harpanahalli.	..	
Alúr	8·64	13·39	14·42	..	..	..	Alúr.	..	
Adóni	8·64	14·42	14·42	..	12·35	..	Adóni.	..	

A talukwar statement of loans in the prescribed form is sent.

Resolution—dated 25th January 1892, No. 58.

Submitted to Government.

2. There was practically no change in the state of the Bellary district during the period under report, but a more correct view of the situation is becoming possible. The cultivation returns for December, which are abstracted below, and may be taken as including practically the whole area that has been or can be sown this year, show that in Alúr, Bellary and Ráyadrug, and to a more limited extent in Hadagalli, there is

Govt. of {1892} Madras.

REVENUE.

No. 519 Wdy 18 Febry 1892

Issued

Recd.

Encl.

Communicated to the Superintending Engineer III circle

157 0013 DW

G.O., 9th February 1892, No. 134.

FEBRUARY.

Season, Bellary.

Board's Proceedings submitting fortnightly narrative on the state of the season in the district for the period ending 9th January 1892, recorded.

To The S.E. III circle " Chief Engr for Irrign

P. W. CURRENT No. 1587

Govt. of {1892} Madras.

REVENUE.

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5. The Commissioner has during the past four days travelled through the Alúr taluk, and spent three days in the vicinity of the Chippagiri works. There does not appear to be any great demand for employment at present which is not met by the Chippagiri works. There is in most villages still some slight agricultural employment in picking the very scanty crop of cotton or removing the cholum stalks, and the removal of nuth-grass from the fields must from what the Commissioner has seen be giving employment to some hundreds of men. The general condition of the people in the taluk is good.

(A true Copy and Extract.)

(Signed) P. RAJARATNA MUDALIAR,
Secretary.

To the Secretary to Government, Revenue Department.
„ Collector of Bellary.
Copy to the Government of India, Revenue and Agricultural Department.

Order—dated 9th February 1892, No. 134, Revenue.

Miscellaneous. Recorded.

(True Extract.)

Secretary to Government.

To the Commissioner of Revenue Settlement, Land Records and Agriculture.
„ the Public Works Department (W).
„ the „ (I).

Exd. A. Aubert.

80 Copies.

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Taluks.	Dry cultivation.					Wet cultivation.				
	Sowings				Total for the year.*	Sowings				Total for the year.*
	During December.		April to December.			During December.		April to December.		
	Average.*	1891.	Average.*	1891.		Average.*	1891.	Average.*	1891.	
	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.	Acs.
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Alúr	19,221	21,588	310,584	179,460	324,110	45	3	179	22	201
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District average.*	88,458	130,550	1,848,330	1,414,301	1,912,121	1,974	2,606	40,546	37,108	49,892

*Average of three years for taluks and five years for the district.

For the whole district about 500,000 acres of dry land have not been sown. The early sowings were generally very poor. The late crop will yield a quarter outturn in a few places, but must fail generally. The principal crop—white cholum—is now in many parts being removed for fodder for which alone it is of value.

3. The condition of the cattle in the black soil taluks continues to deteriorate and numbers are being sold at nominal prices, whilst the difficulty of feeding the existing stock daily increases. The price of fodder is enormous and stocks are nearly exhausted, whilst the chances of bringing in supplies at any but prohibitive rates from Kistna and the Nallamala jungles appear to be small.

4. Since the date of the last report prices have generally become easier. Trade is active and the average price of cholum on the 9th current was below the searcity rate for the district. No change has occurred in the condition of the people, but the numbers resorting to relief works showed a large increase during the week, especially in Adóni and Bellary, as noted on the margin. The number resorting to the test work opened at Kanekal in Ráyadrug is very small, from which it is evident that the mass of the people in that taluk have not yet felt any severe pressure. The Commissioner considers that the work should be left open until the reopening of the road work at Bommanahal which has been already sanctioned. Regarding the Alipur tank works the Board understands that Mr. Jones' project will be complete by the end of the current month, when it will be possible to put the work in hand if found necessary. It is, however, inadvisable to commence it unless experience at Bommanahal shows that work must be provided in that neighbourhood for considerable numbers. As the Public Works Department does not approve of clearing the silt from the Daroji tank channels the Collector's instructions for the transfer of the coolies employed in clearing the tank-bund there are approved.

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P. W. CURRENT No. 15-87

Govt. of {1892} Madras.

REVENUE.

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G.O., 9th February 1892, No. 134.

FEBRUARY.

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o. 134, REVENUE.

MADRAS.

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H. E. I.
C. No 1587 was sent for
to countersinitials on the
15th instant, and has
not been returned yet,
Kindly hasten its return—
H.S.
17/2/92

× Subject— Season in Bellary

The paper is with E.I. now
and will be returned to-day
H.S.
17/2/92
17/2/92 BR
Rd.

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„ the Public Works Department (W).
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CHIEF ENGINEER FOR IRRIGATION. 15 FEB. 92 No.

E 1

Please Note take part of para 4 of proceedings - also in Collector Narrative on page 3

Exd. A. Aubert.

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E.J

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Re 15/2/92

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4. Since the date of the last report prices have generally become easier. Trade is active and the average price of cholum on the 9th current was below the scarcity rate for the district. No change has occurred in the condition of the people, but the numbers resorting to relief works showed a large increase during the week, especially in Adóni and Bellary, as noted on the margin. The number resorting to the test work opened at Kanekal in Ráyadrug is very small, from which it is evident that the mass of the people in that taluk have not yet felt any severe pressure. The Commissioner considers that the work should be left open until the reopening of the road work at Bommanahal which has been already sanctioned. Regarding the Alipur tank works the Board understands that Mr. Jones' project will be complete by the end of the current month, when it will be possible to put the work in hand if found necessary. It is, however, inadvisable to commence it unless experience at Bommanahal shows that work must be provided in that neighbourhood for considerable numbers. As the Public Works Department does not approve of clearing the silt from the Daroji tank channels the Collector's instructions for the transfer of the coolies employed in clearing the tank-bund there are approved.

Taluks.	Number.	
	2nd January.	9th January.
Adóni	2,186	2,649
Alúr	1,824	1,628
Bellary	864	1,888
Ráyadrug ...	Not given.	85
Total ...	4,874	6,250

5. The Commissioner has during the past four days travelled through the Alúr taluk, and spent three days in the vicinity of the Chippagiri works. There does not appear to be any great demand for employment at present which is not met by the Chippagiri works. There is in most villages still some slight agricultural employment in picking the very scanty crop of cotton or removing the cholum stalks, and the removal of nuth-grass from the fields must from what the Commissioner has seen be giving employment to some hundreds of men. The general condition of the people in the taluk is good.

(A true Copy and Extract.)

(Signed) P. RAJARATNA MUDALIAR,
Secretary.

To the Secretary to Government, Revenue Department.
" Collector of Bellary.
Copy to the Government of India, Revenue and Agricultural Department.

ORDER—dated 9th February 1892, No. 134, Revenue.

Miscellaneous. Recorded.

(True Extract.)

Secretary to Government.

To the Commissioner of Revenue Settlement, Land Records and Agriculture.
" the Public Works Department (W).
" the " (I).

CHIEF ENGINEER FOR IRRIGATION. 15 FEB. 92 No.

E 1

Please Note latter part of para 4 of proceedings - also in Collector's narrative on page 3.

Exd. A. Aubert.

80 Copies.

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

READ—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 25th January 1892, No. 58:—

MR. CLOGSTOUN.

Read—the following fortnightly narrative, from the Collector of Bellary, for the period 1st to 9th January 1892, dated 12th January 1892, R.P.R. No. 37:—

STATE OF COUNTRY—*Crops—Mungári.*—Mungári, cholum, cumbu and sajja have been harvested. Yield in red and mixed-soil villages varies from 2 to 6 annas. Mungári in black-soil villages has almost failed. Thrashing and storing have not yet been quite completed in parts. Pulses have been partly harvested. Where they are still on the ground if the yield comes to anything at all, it will not exceed 1 anna.

Hingári.—Hingári is sure to fail except in a few isolated cases, and even then the yield will not exceed 4 annas. In many places, white cholum and cotton are in bad condition, and are fit for use only as fodder, and are being used as such.

Under wells.—Crops under well lands, such as ragi, onions, tobacco and vegetables, are in fair condition with prospect of fair outturn, though chillies in Adóni under wells are diseased.

Under tanks.—Earlier crops under large tanks, such as Kanekal and like tanks, have been harvested, and the later crops are on the ground in various stages of growth. Supply in Kanekal tank is sufficient for about a fortnight, and about 200 temporary wells have been constructed to aid the cultivation.

Smaller tanks are not up to the average. Dry crops are raised in many places. Cultivation of tank bed is not successful, save where it is possible to aid it by temporary wells.

Under channels.—Crops under channels have been partly harvested, outturn is about 12 annas; and the standing crops are also in fair condition with prospects of yielding a similar outturn.

Fodder.—Pasture and green fodder are practically *nil*. Stored fodder exists only in a very small quantity, and only with a few ryots. Dry grass is largely imported from Sandúr and other hill forests. Date and margosa leaves, thatch and prickly-pear are also used as fodder in some places. Price of fodder is very high. Cart-load of cholum stalk costs 10 to 12 rupees, while that of jungle grass costs 7 to 8 rupees. I have ascertained that the Nallamalla Hill grass was sold by the village officers of Maddikera at a rate fixed by the Kurnool District Forest-officer. It was a prohibitive rate, and no trade at that rate could succeed. I have now written to Mr. Kough, asking if he will be so kind as to give me an estimate of the actual net cost. I am trying to introduce the prickly-pear fodder, and many people seem anxious to give it a trial. I fear, however, that they may not have patience enough to persevere when they find the cattle unwilling to adopt it at first.

Water-supply.—Decidedly failing in parts. It is impossible at present to make any useful forecast of what difficulties the next few months may produce. All that can be said is that the probabilities point to extensive dearth of water-supply, and yet that up to the present almost all villages seem to be able to get water though sometimes with difficulty.

Agricultural operations.—A small amount of castor plant remaining on the ground is being plucked. The work under wells is increasing. Under Tungabhadra channels where first crop is harvested, land is being prepared for second crop. In black-soil

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Secretary.

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„ Collector of Bellary.
Copy to the Government of India, Revenue and Agricultural Department.

Order—dated 9th February 1892, No. 134, Revenue.

Miscellaneous. Recorded.

(True Extract.)

Secretary to Government.

To the Commissioner of Revenue Settlement, Land Records and Agriculture.
„ the Public Works Department (W).
„ the „ (I).

CHIEF ENGINEER FOR IRRIGATION. 15 FEB. 92 No.

E.J

Please Note last part of para 4 of proceedings - also in Collectors Narrative on page 3

Re 15/2/92

Exd. A. Aubert.

80 Copies.

Can I already dealt with

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Agricultural operations.—A small amount of castor plant remaining on the ground is being plucked. The work under wells is increasing. Under Tungabhadra channels where first crop is harvested, land is being prepared for second crop. In black-soil

villages nuth grass is being removed here and there. In nearly all cases, however, the work is performed by the members of the cultivators' families and not by paid labour.

In the tract I am now in, north of the Alúr hills, a good many ryots are employing their labourers in deephoeing black-cotton fields.

Cattle.—Generally thin and emaciated, except in red and mixed-soil villages which had a fair mungari crop. In régad villages several have died of starvation. Water as well as fodder is becoming scarce. Cattle are brought to sale in large numbers, and are sold at cheap rates varying from 10 to 25 per cent. of their normal price. Hides also are sold in large numbers and their prices are 50 per cent. less than usual. The cattle market is very dull and purchasers are found mostly, if not exclusively, amongst butchers.

Foot and mouth disease in Hospet and parts of Sandúr. No disease anywhere else.

General remarks.—There is nothing to add to my last report. The *Hingári* crop is universally a complete failure.

Condition of people.—*On works.*—As a rule good. Amongst the 2,600 and odd at Nandavaram, I saw only a few bad cases. Chippigiri the same. As I say the worst were at the Bommanahal works now closed. I shall see the Tekkalakota work labourers on Tuesday and Gandiganur, Wednesday.

In villages.—Generally good, so far as I have seen.

Mortality.—None.

Sickness.—One case of cholera in Adóni taluk. No deaths. Fever spreading in Hospet taluk.

Remarks.—In the northern taluks, distress is daily becoming greater in parts, but the real pinch is not yet felt. I have been travelling in this tract during the fortnight and rarely see a case that looks like true famine emaciation, though there are some here and there, particularly amongst weavers. In the south and west Mr. Jardine reports still favorably much to the same effect; about the Bellary taluk I think the condition of people is not so satisfactory, but I shall be able to say more in my next report, as I am journeying through that tract this week. The worst cases I have yet seen were on the Bommanahal road works, now closed under orders, yet they are not so bad as to travel to the Kanekal works. I do not well understand this, I confess. All those people I saw must be at present unrelieved, and several were much emaciated, yet they certainly do not go the 17 miles south to Kanekal. On the other hand, in the Adóni taluk, people have come over 30 miles to the Nandavaram works and yet do not look much pulled down by famine.

Relief measures—

Relief works in what taluk open—

Adóni taluk.—Road work at Nandavaram. Number of coolies on 8th—

Men.	Women.	Children.	Total.
805	1,264	580	2,649

Alúr taluk.—Road work at Chippigiri. Number of coolies on 8th—

Men.	Women.	Children.	Total.
482	778	385	1,645

Bellary taluk.—Road work at Tekkalakota. Number of coolies on 8th—

Men.	Women.	Children.	Total.
128	252	133	513

Tank work at Gandiganur. Number of coolies on 8th—

Men.	Women.	Children.	Total.
142	216	42	400

Hospet taluk.—Clearance of prickly-pear on Daroji tank work. Number of coolies on 9th:—

Men.	Women.	Children.	Total.
400	458	150	1,008

Ráyadrug taluk.—Kanekal tank work. Number of coolies on 7th—

Men.	Women.	Children.	Total.
36	15	1	52

Poor-houses—in what places and the number at each.—Nil.

Village relief.—None.

Cases of death for want of food.—None.

Remarks.—Though the numbers on works is not large, some people have travelled long distances to get to the relief works. For instance, people from Hacholli have come 33 miles to Nandavaram, and people from Adóni went 26 miles to Chippigiri. At present there are cases of suffering and want in every village almost, but they are not yet numerous.

I should much like to see sanctioned the Sanitary Engineer's proposal to start work on the large bund of the Alipur tank near Bellary. This would afford relief to the people thrown out at Bommanahal, for I think they would travel the 12 miles or so to Alipur.

The Daroji tank work will soon be at an end, and the Superintending Engineer does not approve of the proposal to carry on silt clearances to the Daroji tank channels. I have therefore directed the Tahsildar to tell the coolies to go to the Tekkalakota road works or the Gandiganur tank works.

I should be glad of orders about the closing the Kanekal tank work for the present. It seems absurd to go on with it for such a small number, and yet it affords relief to those few persons, there being no other work for them at present nearer than Gandiganur, 47 miles off.

Grain-supply—*Private trade.*—Active. The Adóni merchants are selling cheap owing to the discovery that weevils are attacking the stock of dry grain—cholum—they imported from the Central Provinces.

Imports by rail.—Large quantities are imported by rail.

Known or estimated stock in taluks.—Ryots from 4 months to 1 year's supply. The coolies have of course none. There is ample supply with large land-holders and merchants.

State of Markets—

Taluks.	Rice.	White cholum.	Yellow cholum.	Ragi.	Cumbu.	Rising at	Falling at	Stationary at	Remarks.
Bellary	8·64	13·65	14·42	14·07	12·22	..	Bellary.	..	Prices have fallen slightly owing to large imports to Bellary, mostly from the Bombay side.
Ráyadrug ..	8·64	14·42	14·42	15·04	12·35	..	Ráyadrug.	..	
Hospet	8·10	13·39	13·91	15·52	13·30	..	Hospet.	..	
Kúdligi	7·56	..	15·45	15·52	..	..	..	Kúdligi.	
Hadagalli ..	7·	..	13·	..	..	Hadagalli.	..	..	
Harpanahalli ..	8·64	..	15·45	19·40	..	..	Harpanahalli.	..	
Alúr	8·64	13·39	14·42	..	..	..	Alúr.	..	
Adóni	8·64	14·42	14·42	..	12·35	..	Adóni.	..	

A talukwar statement of loans in the prescribed form is sent.

Resolution—dated 25th January 1892, No. 58.

Submitted to Government.

2. There was practically no change in the state of the Bellary district during the period under report, but a more correct view of the situation is becoming possible. The cultivation returns for December, which are abstracted below, and may be taken as including practically the whole area that has been or can be sown this year, show that in Alúr, Bellary and Ráyadrug, and to a more limited extent in Hadagalli, there is

P. W. CURRENT No. 631

No. 4888 Z.

FROM, G. D. Wyllrow Esqre
SUPERINTENDING ENGINEER
FIRST CIRCLE.

TO, THE CHIEF ENGINEER
PUBLIC WORKS DEPARTMENT.
Camp Bhadrachellam & DOWLAISHWERAM, 8th November 189/.

SIR, I have the honor to bring to your notice that from 1st March 1890 to the 31st March 1891, a watcher on a monthly salary of Rs 4 at Viravapatam Dn

425.C
Regd: 16-2-92

Rect'n "W" Branch
also

B 52540
18-2-92

Work — Rs.

P. W. CURRENT No. 1631

No. 488 V.Z.

FROM,

G. D. Wyllow Esqre

SUPERINTENDING ENGINEER

FIRST CIRCLE.

TO,

THE CHIEF ENGINEER

PUBLIC WORKS DEPARTMENT.

Camp Bhadrachellam & ~~DOWLAISHWERAM~~, 8th November 1891.

425 C

Regd: 16-2-92

Rect'd "W" Branch also

B 5256

18-2-92

SIR,

I have the honor to bring to your notice that from 1st March 1890 to the 31st ... 1891, a watcher on a monthly salary of Rs 4, was employed by the ... Vizagapatam Dn. Officer for watching the D.P.W. Bungalow at Ellamanchelli and an estimate was sanctioned, in May 1890 under "Provincial" Civil Buildings "Repairs" to meet the charge under para 964 of the P.W. Code. The Examiner P.W. Accounts has not audited the charge but has stated that the same should be debited to Establishment salaries under the Note of the above quoted para, as the Bungalow has been treated as a rest-house. I therefore request that you will be so good as to obtain the sanction of Govt authorizing the Examiner P.W. Accounts to pass the charge Rs 52 already incurred on that account. From the 1st April 1891

Date taken out.	For what purpose.			Initials of clerk taking the paper or of attender.	Date returned.	Initials of attender.
	Department.	C. No.	Year.			

[For Heads of Departments.]

Circular No. 1 Public Works.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

GENERAL.

Calcutta, the 5th February 1892.

Rate of conversion of English pay and remittances of British troops serving in India during the year 1892-93.

The following is forwarded to the Local Governments, Administrations and Officers noted on the margin, for information and guidance, in continuation of Public Works Circular No. I., dated 29th April 1891.

The Governments of Madras and Bombay, Public Works Department, General and Railway Branches.
The Governments of Bengal, the North-Western Provinces and Oudh, and the Punjab.
The Chief Commissioners of the Central Provinces, Burma, Assam and Coorg.
The Resident at Hyderabad.
The Agents to the Governor General for Central India, Rajputana and Baluchistan.
The Accountant General, Public Works Department.
The Director General of Railways.
The Consulting Engineers to the Government of India for Railways, Calcutta, Central Division, and Lucknow.
The Director General of Telegraphs.

By order,

G H Walker

Under Secy. to the Govt. of India.

GOVERNMENT OF INDIA.

MILITARY DEPARTMENT.

Army Circulars, India, dated 15th January 1892.

Rate of exchange during 1892-93 for the conversion of English pay and remittances of British troops serving in India, and the adjustment of financial transactions between the British and Indian Governments.

Clause 17.—It is notified that the rate of exchange governing the issue of pay to British troops in India and their remittances to England, and the adjustment of financial transactions between the British and Indian Governments during the year 1892-93, has been fixed by Her Majesty's Government at 1*s.* 4$\frac{3}{4}$*d.* the rupee.

To,
The Joint-Secretary to the Government of Madras,
P.W. Department, Railway Branch.

G. I. C. P. O. No 1398 P. W. D.—9-2-92—1,222.

With 425 C. W. 16/2

Corrigendum.

Alter the number of Public Works Department Circular No. 1, dated the 5th February 1892, regarding the rate of exchange during 1892-93 for the conversion of English pay and remittances of British troops serving in India, to I.

PUBLIC WORKS DEPARTMENT,
SIMLA;
The 13th August 1892.

G. H. D. WALKER,
Under Secy. to the Govt. of India.

Date taken out.	Department.	C. No.	Year.	Initials of clerk taking the paper or of attender.	Date returned.	Initials of attender

[For Heads of Departments.]

Circular No. 1 Public Works.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

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Calcutta, the 5th February 1892.

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... forwarded to the Local Governments, Administrations

G. I. C. P. O. No 1398 P. W. D.—9-2-92—1,222.

With 425C. 16/2

C.F. 73.

DEPARTMENT.

Paper taken out of the Records from the charge of the Referencer.

~~Press~~
~~Miscellaneous~~ No. 551/C 9.2.(87), dated _____ 19 .
~~Routine~~

Date taken out.	For what purpose.			Initials of clerk taking the paper or of attender.	Date returned.	Initials of attender.
	Department.	C. No.	Year.			
6.11.41	MRO	1257	7/41	DS/RW	20-11-41	[illegible]

DEPARTMENT.

Paper taken out of the Records from the charge of the Referencer.

Press
Miscellaneous No. _____, dated _____ 19 .
Routine

Date taken out.	For what purpose.			Initials of clerk taking the paper or of attender.	Date returned.	Initials of attender.
	Department.	C. No.	Year.			
11/1/26	WLRO		565 W	- Do/1/92 mcs		
	DSW		561 W	Do/1/92 mcs		
			533) 86 W	DS/1/92 mcs		
			[illegible]			

DM
11/1/26

F. 72.

Date taken out.	For what purpose.			Initials of clerk taking the paper or of attender.	Date returned.	Initials of attender.
	Department.	C. No.	Year.			

EXAMINED
No. 2761 A
28 JAN
P.W. ACCOUNTS

P.W. 5.1 1322 8/3/92

JUDICIAL DEPARTMENT.

Proceedings of the MADRAS GOVERNMENT.

Read the following paper:-

From the Inspector General of Jails dated 28th January 1892
No. 28.

With reference to office note from the Examiner of - Public Works accounts dated 11th July 1891 No. 3927 and para 3 of the order of Government recorded in G.O. No. 3395 S W dated 17th December 1891 communicated with Judicial order No. 78 dated 12th January 1892 it would seem that the accounts regarding the expenditure on Jail buildings can only be furnished about the 1st August annually.

2. Statement "A" of the appendices to the Administration report relates to the calendar year. I have therefore the honor to bring this to the notice of Government and to request that the information may be given by the examiner for the calendar year not later than 15th February to enable me to enter it in statement -- "A" which has to be submitted with my administration report.

Order 6th February 1892 No. 242.

Communicated to the Public Works Department, for issue of the necessary orders.

(True Extract)

Sd.
Ag. Under Secretary.

To the Public Works Department,
.. Inspector General of Jails.

No. 433 W dated 12th February 1892.

Communicated to the Examiner P.W. Accounts who will arrange -- accordingly.

Statement of Propositio … revision of Establishment.

Order Sanctioning present Establishment. Government of Department. No.	Date.	Office to which the proposition refers.	Nature of Change. Present Scale. No.	Designation.	Pay. Minimum.	Increment.	Maximum.	Average or Fixed.	Proposed Scale. No.	Designation.	Pay. Minimum.	Increment.	Maximum.	Average or Fixed.	Proposition. Permanent. Increase per month. Amount.	Permanent. Decrease per month. Amount.	Temporary. Increase per month. Period.	Temporary. Increase per month. Amount.	Temporary. Decrease per month. Period.	Temporary. Decrease per month. Amount.	Remarks by Local Government.
				Korattur Amcut and New Bangaru Channel and Chembaram Lakam Tank.																	
Nos 1619 2229	21-6-73 9-9-73	Chengalpet	1	Superintendent	"	"	"	12	1	Superintendent	"	"	"	14	2						
			2	Lascars at Rs 6 each	"	"	"	12	2	Lascars at Rs 6 each	"	"	"	12							
			3	Lascars at Rs 5 each	"	"	"	15	3	Lascars at Rs 5 each	"	"	"	15							
					Total Rs			39			Total Rs			41	2						

Supp Enquiry Office
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India Office,

London, 21st January 1892.

Public Works,
No.1.

TO HIS EXCELLENCY THE RIGHT HONOURABLE THE GOVERNOR
IN COUNCIL, FORT St. GEORGE.

My Lord,

I transmit herewith for your Excellency's information copy of a letter and its enclosures addressed to me by Mr.W.J. Addis, C.E., of Bassein, Burma, on the subject of the construction of a harbour at Vizagapatam.

I have &c.,

(Sd) Cross.

Inspector General of ...

No. 28.

With reference to office note from ...
Public Works accounts dated 11th ...
of the order of Government re...
17th December 189...
12th January 18...
expendi...
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TELEPHONIC MESSAGE.

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JUDICIAL DEPARTMENT.

P r o c e e d i n g s of the MADRAS GOVERNMENT.

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(True Extract)

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To the Public Works Department,
" Inspector General of Jails.

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Communicated to the Examiner P.W. Accounts who will arrange -- accordingly.

In P. W.

...s Inspector General of ...

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Order 6th February 1892 No. 242.

Communicated to the Public Works Department, for is... of the necessary orders.

(True Extract)

Sd.

Ag. Under Secre...

To the Public Works Department,
.. Inspector General of Jails.

No. 433 W dated 12th February 1892.

Communicated to the Examiner P.W. Acc... accordingly.

Don't send this to Record Section. Kindly see me & keep the m/p in connection with the letter

7/1/15

JUDICIAL DEPARTMENT.

Proceedings of the MADRAS GOVERNMENT.

Office of

Dated

11 Hours

MADRAS

TELEPHONIC MESSAGE.

From Supt Record Section P.W.D.

To M.R.O

Please send a copy of G.O.No 433 W dt 12-2-92 for a requisition from the accountt Genls Office

Reply

11a 7/1/15 Ref:- your U.O. of today for a c. of G.O. 433 W dt 12.2.92 for the A. G's offic. It is a mis U.O.! please say whether the original is required & if so, please quote the G.O. for which it is required

Date 7-1-15.

...rtment, for issue

(True Extract)

Sd. x x

Ag. Under Secretary.

To the Public Works Department,
.. Inspector General of Jails.

No. 433 W dated 12th February 1892.

Communicated to the Examiner P.W. Accounts who Will arrange ... accordingly.

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Bundle 41
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JUDICIAL DEPARTMENT.

GOVERNMENT.

To the

No. 433 W dated 12th February 1892.

Communicated to the Examiner P.W. Accounts who will arrange --
accordingly.

JUDICIAL DEPARTMENT.

OVERNMENT.

1892

Secretary.

92.

counts who will arrange

of Contract	Particulars of Orders.			Shipments (Quantity, Name of Vessel, and Date of Sailing); or Remarks.
	Date of Contract.	Name of Contractor.	Probable Date of Shipment.	
d.				
	1891		1891	
6	5 Aug	Buck & Co.	———	Shipped per ss Ganges (1 Oct) Supply awaits answer to Lie. by Madras P.W. Sec. dy. 27/8/91.
	14 Aug	Selig & Co.	———	Shipped per ss Ganges (1 Oct)
0 8	26 ..	Shaw & Co.	Nov	
	24 ..	Dimau Long & Co.	Oct	
4	25 Sep	T. Twyford		
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	Date of Contract.	Name of Contractor.	Probable Date of Shipment.	
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0 8	26 ..	Shaw & Co.	Nov	
	24 ..	Dorman Long & Co.	Oct	
14	25 Sep	T. Twyford		
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Number of Contract.	Particulars of Orders. Date of Contract.	Name of Contractor.	Probable Date of Shipment.	Shipments (Quantity, Name of Vessel, and Date of Sailing); or Remarks.
d.	1891			
1749	15 May	Howell & Co	———	Shipped per ss Rewa (14 Aug)
141.	4 June	Everitt & Sons	———	Shipped per ss Ganges (1 Oct)
6	16 May	Willing & Co.	———	
9	15 "	E. Smith	———	" " ss Rewa (14 Aug)
13/22.	15 "	Shelton & Co.	———	Shipped per ss Mombassa (28 Aug)
23.	16 "	—Do.—	———	" " ss Lindula (13 Sep)
2 9	10 June	Joicey & Co.	———	13 6/20 per ss Mombassa (28 Aug)
				Shipped per ss Mombassa (28 Aug)
				" " ss Coromandel (Oct)
27.	10 "	Hopkins & Co		
51.	25 "	Howell & Co	———	Shipped per ss Mombassa (28 Oct)

Particulars of Orders.				
Date of Contract.	Name of Contractor.	Probable Date of Shipment.	Shipments (Quantity, Name of Vessel, and Date of Sailing); or Remarks.
1891		1891	
3 Feb	Braithwaite & Kirk		Shipped to Calicut per ss Europa (9 Sep)
21	Dick Kerr & Co.		Shipped as before reported except that Tons 13-15-1-12 Rails were shut out of ss Rewa & shipped per ss Mombassa (28 Aug)
12 Mar	J. & W. Twyford	9	Shipped as before reported.
			Shipped per ss Golconda (24 Sep)
16	Clarke & Co.	Oct	20 per ss Mombassa (28 Aug)
		Oct	8 " ss Ganges (1 Oct)
		Oct	8 " ss Manoia (9 Oct)
15 June	Shand Mason & Co	Oct	
	Stone & Co		Shipped per ss Lindula (13 Sep)
28 May	Angus & Co.	9	

Service Madras Public Works

Bi-Monthly Return of Stores under provision by the Director-General of Stores for India up to 30 Sept 189/.

India Office,

London,

16 Oct. 189/.

J. PARKER,

~~A ABERCROMBIE JOPP,~~

Director-General of Stores.

N.B.—This Return includes all Stores under supply in England. Stores reported in this Return to have been shipped will not be inserted in future Returns.

Y 20143. 1000.—6/90. L 1283.

Indent or other demand. No.	Indent or other demand. Date— 1, of Indent; 2, of Receipt; 3, of Sanction by Sec. of State in Council.	Articles. No. of Item.	Description.	Quantity.	Estimated Cost in Indent; and Cost Prices.
					£
			Madras Public Works		
			For Vayitri Gudalur Road.		
V	4 20. 6. 90 8. 8. 90 11. 11. 90 (1.215)		Bridges W.I. pony truss Girder —		
			50 feet span. 14 ft. roadway	№ 2	878
			40 feet span.	4	
			For Brickfields.		
IV	12 16. 12. 90 6. 1. 91 24. 2. 91 (2.70)		Portable Railway, as demd	— —	380
			For Medical College.		
IX	13 3. 12. 90 20. 1. 91 10. 2. 91 (2.72)		Basins round tip up 14" white	№ 12	15
			Receiver round for Do	12	
			Fittings pivot " "	sets 12	
			Urinals	№ 3	
			Pipes for back outlet	sets 3	
			Pans i.e. commode 11" dia., 10" deep	№ 38	22
			Pots chamber, i.e.	" 10	
			For Protection of Public Offices at Chepâk, Madras.		
IX	15 3. 3. 91 8. 4. 91 28. 4. 91 (2.101)		Fire Engine steam with accessories complete	№ 1	649
			Hand Hose Reel for 600 ft. leather hose mounted on springs	" 1	
			Best copper lamps for Do including brackets	pair 1	
			Hose leather 2¾" in 40 feet lengths with couplings straps &c. complete	Lengths 15	69
			Hose suction I.R. 4½" int. dia. with couplings, in lengths of 9 feet each	" 4	14

P 20127. 5000.—6/90. I. 1240.

Indent or other demand. No.	Date— 1, of Indent; 2, of Receipt; 3, of Sanction by Sec. of State in Council.	Articles. No. of Item.	Description.	Quantity.	Estimated Cost Indent; and Con Prices. £ s.
18	4. 3. 91 contd	243/6	Steel cast flat of sizes	Cwt 11	
		247/52	" round "	" 9	449
		253/6	" square "	" 8	incl. item
		257/60	" octagon "	Tons 12	
		263/4 & 266	Wire hard copper of sizes, in coils	Cwt 7	
		265	" " $\frac{1}{14}$" in straight lengths	" 2	see item
		284/6	Gauges enam.d iron of sizes	No 42	40
		293/301	Tubes W.I. lapwelded "	Ft. 1050	
		302/10	Bends $\frac{1}{4}$ for do. "	No 100	
		311/19	Elbows " " "	" 100	34
		320/8	Ts " "	" 100	
			1st Circle Godaveri E. Divn		
			Dowlaishweram Workshops.		
		330/45	Iron plate of sizes	Tons 11 $\frac{3}{4}$	
		346/50	" square "	" 2 $\frac{3}{4}$	1288.
		351/61	" round "	" 9 $\frac{1}{2}$	including
		362/7	" angle "	" 6	156/76, 185/
		368/72	" plate 4' × 12' of thicknesses	" 20	455/73, 486
		376	Coke	" 10	506/19 ships which were in the prem
			2nd Circle Kistna E. Divn		see item
		377/81	Augers screw eyed of sizes	No 36	
		382/4	" shell "	" 18	
		386	Braces carprs' with 36 bits	" 3	
		387/8	" ratchet of sizes	" 5	see item
		389/95	Chisels carprs' firmer "	" 72	
		396	Gouges carprs' $\frac{1}{8}$ inch	" 3	
		397/421	Files of sorts as dem.d	" 756	see item

21	20. 4. 91		for Jt. Mt. Station. Madras.		
	13. 5. 91	1/3	Iron wrot. flat of sizes	Tons 1	341
	2. 6. 91	4/12	" round "	" 25½	
	(2. 137)				
22	20. 4. 91		Purchase Indent No 1 Dmn.		
	13. 5. 91	1	Wagon iron cut & fitting	No 10	
	9. 6. 91	¾	Factory protects. 12 ft. per yard	" 20	
	(2. 120)				
		4/5	30" gauge earth detention pt. complete Mile ½		475
			Switches 9 tents, right hand 3, left 3 each b		
			for Jt. Mt. Station. Madras.		
	20. 3. 91		for Government House. Madras.		
	10. 3. 91		Camp furnit for ed. Camp Office No 2	" 2	
	(2. 126)				
	23. 5. 91				
	29. 4. 91				
	(2. 122)				
	28. 7. 91				
17	24. 3. 91	1	Copper plate 1" × ⅛"	yds 880	100
	20. 4. 91	2	" " ½ × ⅛	" 880	
		520	Iron plate 14' × 3' × ⅜"	Tons 2	see item
			Letters Dmn		
		490/5	Packing leather, angle of sizes	K. ft. 700	47
		483/5	Flax sheet "	lbs 150	
		477/9	" cast "	" 12	see item
		474/6	Steel hexagon of sizes	Tons 2	5
		439	Wires round c.c. 35 feet 9x 4½"	" ½	
		433	" " 3"	" 3	
		431/2	Screw plates of sizes	No 2	5
		424/30	Steels with bars 4 dies of sizes	sets 4	25
		428	Pots glue earthen	" 3	
		427	Planes plough with 8 irons	" 6	see item
		425/6	Hammers engrs' of sizes	" 12	
		424	Glass cutter patent	" 2	see item
		422/3	Gimlets of sizes	No 12	

Y 20127. 5000.—6/90. I. 1210.

Indent or other demand. No.	Date— 1, of Indent; 2, of Receipt; 3, of Sanction by Sec. of State in Council.	Articles. No. of Item.	Description.	Quantity.	Estimated Cost Indent; and Con Prices. £ s.
			For Periyar Project Works.		
W. 2	1. 6. 91		Lubricators glass needle	Doz 1½	
	24. 6. 91		Arm belt shipper	" 1	
	14. 7. 91		Belt stretcher lever for belts		
	(2. 155)		up to 14"	No 1	3
			For the New Women's and		
W/3	29. 6. 91		Children's Hospital at Madras.		
	25. 7. 91		Girders, 26 feet	No 60	594
	12. 8. 91		23 "	" 8	
	(3. 3)		21 "	" 6	93
			For New Law Courts, Madras.		
W. 4	27. 7. 91		Lavatory Fittings &c., as demd	Various	135
	20. 8. 91				
	9. 9. 91				
	(3. 17)				
W 6	31. 7. 91				
	25. 8. 91		Hose rubber suction 5¼" ins. dia. 10' long	Lengths 4	70
	16. 9. 91				
	(3. 28)				
W 7	3. 8. 91				
	25. 8. 91		Girders steel plate 33' 4"	No 4	1921
	16. 9. 91		" combination steel 31'	" 2	
	(3. 29)		" rolled steel of sizes	" 113	

P. W. CURRENT No. 115771

5.9.91 – 2475 W
14.7.91 – 1929 W

S.S.C
Rec'd: 3.11.91
No. 2953 W dy 4th Nov/91

Communicated to officers concerned, and a copy forwarded to the Govt. of India in continuation of Endorsement No 2479 W dy/15 September 1891.

H.E. No 2954 W dy 4th Nov/91

Forwarded.

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" II – do ✓
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Y 20127. 5000.—6.90. I. T. P. Co.

Govt. of {1891} Madras.

PUBLIC.

No 3262 W dy 4 Dec /91.

Communicated to Officers of the P. W. Department in continuation of G.O. 3492 W dy. December 1889.

Issued

Recd.

G.O., 19th November 1891, No. 977.

NOVEMBER.

Petition Rules.

Communicating to the Departments of the Secretariat and to all heads of departments Notification of the Government of India adding a clause to rule 3, section III of the rules for submission of petitions to that Government.

[For General Distribution.]

3273

Circular No. 10 Public Works.

GOVERNMENT OF INDIA.

PUBLIC WORKS DEPARTMENT.

GENERAL.

Calcutta, the 17th November 1891.

The Government of Madras and Bombay, Public Works Department, General and Railway Branches.
The Governments of Bengal, the North-Western Provinces and Oudh, and the Punjab.
The Chief Commissioners of the Central Provinces, Burma, Assam, and Coorg.
The Resident at Hyderabad.
The Agents to the Governor General for Central India, Rajputana, and Baluchistan.
The Accountant General, Public Works Department.
The Director General of Railways.
The Consulting Engineers to the Government of India for Railways, Calcutta, Central Division, and Lucknow.
The Director General of Telegraphs.

The following is forwarded to Local Governments and Officers noted on the margin for information and guidance, in continuation of Public Works Circular No. 31, dated 16th November 1889.

By order,

G H D Walker

Under Secy. to the Govt. of India.

No. 1790, dated 30th October 1891.

NOTIFICATION,—By the Government of India, Home Department.

The following rule is added as clause (13) to rule 3, section III of the rules regulating the submission of petitions to the Government of India, published in Home Department Notification No. 1812, dated the 11th October 1889:—

"(13) When a petition relates to a subject on which the Local Government is competent to pass orders and no previous application for redress has been made to the Local Government."

To, The Secretary to the Government of Madras Public Works Department, Railway Branch.

nment of India Central Printing Office.—No. 785 P. W. D.—18-11-91—1,822.

P. W. CURRENT No. 11438

From
The Supdg. Engr.
4. Circle

No. 2619-20 W dated 30-9-91

Recd: 30.10.91
Recd-2-11-91
dated 28. } October 1890
Despd 29.

No. 561
W
Encls 3.

Statements of Surrenders + demands under Imperial + Provincial
Forwarding 3— mitted a request to obtain the orders of Government.

2977W

3262
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19TH NOVEMBER 1891, No. 977, PUBLIC.

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

READ—the following paper:—

Notification from the Government of India, Home Department (Public), dated Simla, the 30th October 1891, No. 1790.

The following rule is added as clause (13) to rule 3, section III of the rules regulating the submission of petitions to the Government of India, published in Home Department Notification No. 1812, dated the 11th October 1889:—

"(13) When a petition relates to a subject on which the Local Government is competent to pass orders and no previous application for redress has been made to the Local Government."

(Signed) C. J. LYALL,
Secy. to the Govt. of India.

No. 29—1791, Pub.

Copy forwarded to Local Governments and Administrations and to heads of departments under the Home Department for information and guidance in continuation of endorsement No. 30—1813-28A, dated 11th October 1889.

No. 29—1808-1813, Pub.

Copy forwarded to all Departments of the Government of India for information in continuation of endorsement No. 30—1828 B. to G., dated 11th October 1889.

(By order.)

(Signed) P. G. MELITUS,
Under Secy. to the Govt. of India.

To the Government of Madras.

ORDER—dated 19th November 1891, No. 977, Public.

Communicated to the Departments of the Secretariat and to all heads of departments in continuation of G.O., dated 18th November 1889, No. 931.

2. The additional rule will be published in English and in the several vernaculars in three successive issues of the Fort St. George and District Gazettes in continuation of the previous notification.

(True Extract.)

J. F. PRICE,
Chief Secretary.

To the Departments of the Secretariat.
" all Heads of Departments.
" all Collectors of Districts.
" the Translators to Government.
" the Superintendent, Government Press.

Exd. W. J. Lewis.

No 561
W

Supg. Engineer's Office, IV Circle,
28 October 1891.

From

Lt-Col. R. R. E. Drake Brockman R.E.,
Superintending Engineer,
4th Circle.
2977

To

The Chief Engineer,
P. W. Department.

Sir,

Encls 3

In forwarding herewith statement of Surrenders and demands under Imperial and Provincial, I have the honor to request you will be good enough to obtain the orders of Government thereon as early as possible.

I have the honor to be,
Sir,
Your Most obedt Servt,

R. E. Drake-Brockman
Lt-Col: R.E.,
Superintending Engineer IV Circle

P. W. CURRENT No. 132/

RAILWAY.

Govt. of {1891} Madras.

PUBLIC WORKS.

Dated November, 17th.

Recd. 8.2.92 *Encl.*

G.O., 17th Nov. 1891, No. 2752 R.

NOVEMBER.

Floods

Orders on report by Lieutenant Smyth, R.E., on — which occurred on the South Indian Railway during the third week of October 1891.

No. 402/W dt/ 11th February 1892

Communicated to the Supdg. Engineer 1st circle for report with reference to para 12 of Lieut. Smyth's inspection notes

Encls 3 (abstract)

connected by a masonry arch and the breach was caused by the earthwork sinking and slipping through the opening into the stream. To avoid a recurrence of this nature, the arch should be bricked up from the floor of the bridge.

8. At the north abutment, wes ing, the pitching was slightly damaged at the foot of the slope. The breach was quickly restored and the line re-opened for traffic.

9. The Malatar channel takes off from the north bank of the Ponniar river, about 5 miles above the bridge. The opening in the main river bund is unprovided with head works and flows independently to the sea.

10. Again in the early morning of the 23rd at 105/9 between Villupuram and Panruti the line was breached for 92 feet and covered by water to a depth of 2 feet 6 inches for half a mile south of this point. The railway approaches to the Ponniar bridge on both sides are laid on the natural surface of the ground and rise to the bridge over the river, the bed of which is above the level of the surrounding country.

11. The river is trained to the bridge by banks constructed by the Irrigation Branch, Public Works Department, and the bursting of the south bank, about 300 yards west of the bridge, caused the damage to the line. The railway approaches are pitched with stone and this in a great measure saved the line. The wire fencing was thrown down and a level crossing gate at 105/9 washed away. The estimated amount of damage done by the flood is about Rs. 400. Communication was restored by 11 A.M. on the 24th.

12. The river bund is being rapidly repaired by the Public Works Department, but as only sand is available for the purpose it should, I think, be protected by stone pitching if possible, as a recurrence of the flood would probably form a fresh breach in the same place.

MADRAS,
29th October 1891.

(Signed) W. C. SMYTH, Lieut., R.E.,
Attached to the office of the
Consulting Engineer for Railways, Madras.

Submitted to Government in continuation of this office endorsement No. 944, dated 24th October 1891.

ORDER—dated 17th November 1891, No. 2752 R., Public Works.

Paras. 4, 11 and 12 of the report will be referred to the Chief Engineer for Irrigation for necessary action.

2. The Consulting Engineer for Railways will draw the attention of the Agent to paras. 6 and 7.

3. Para. 12 will be considered in the General Branch.

4. A copy of these Proceedings will be forwarded to the Government of India with the following letter:—

(Here enter No. 2753 R., dated 17th November 1891.)

(True Extract.)

(Signed) W. H. COAKER, Lieut.-Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways.
" Chief Engineer for Irrigation.
" Public Works Department, General Branch.

Exd. C. A. Munisawmy.
Spare Copies

(Spare Copy)
Major RE
Under Secy to Govt PWD

P. W. CURRENT No. 1321

RAILWAY.

Govt. of {1891} Madras.

PUBLIC WORKS.

Dated November, 17th.

Recd. 8.2.92 *Encl.*

G.O., 17th Nov. 1891, No. 2752 R.

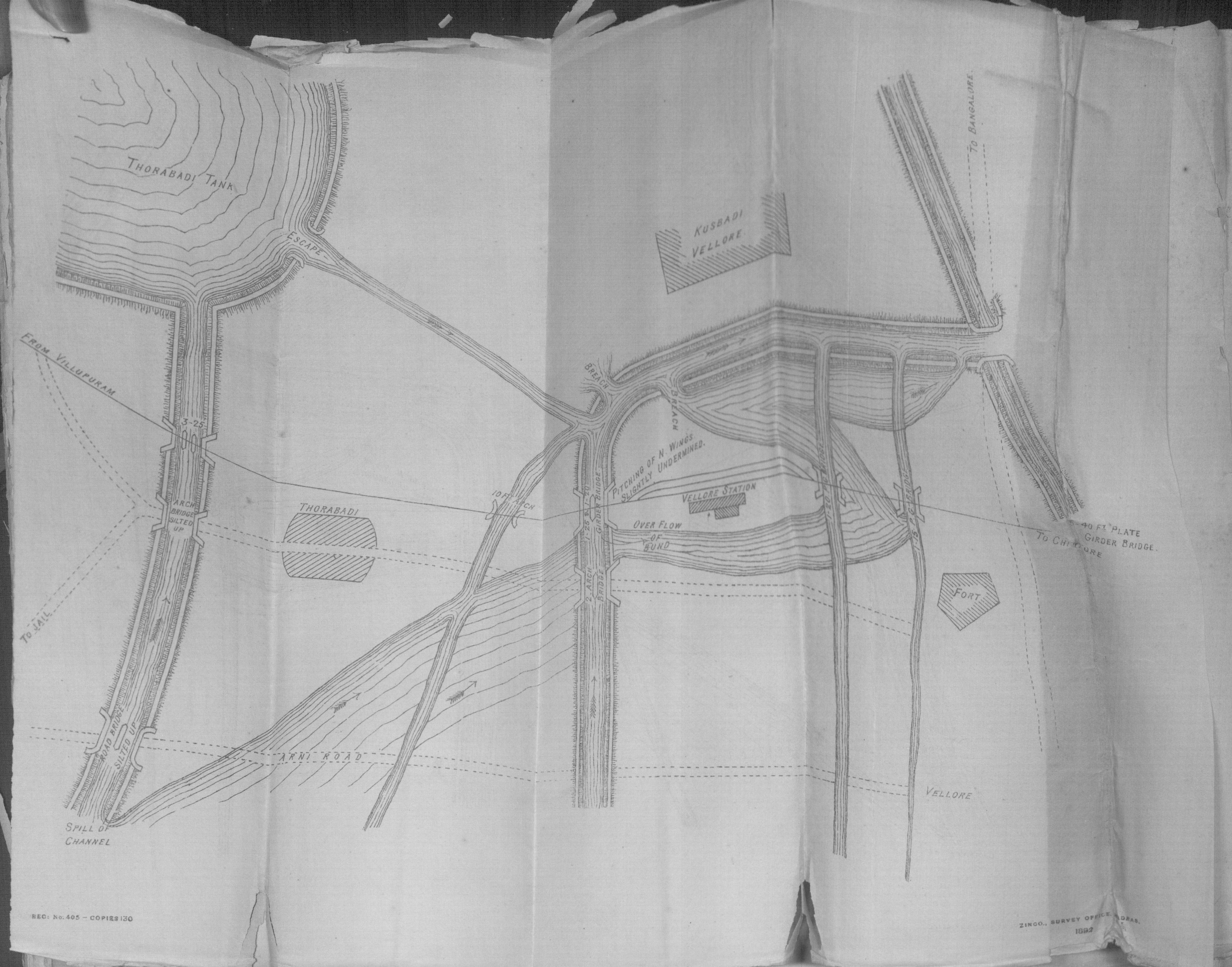
NOVEMBER.

Floods

Orders on report by Lieutenant Smyth, R.E., on — which occurred on the South Indian Railway during the third week of October 1891.

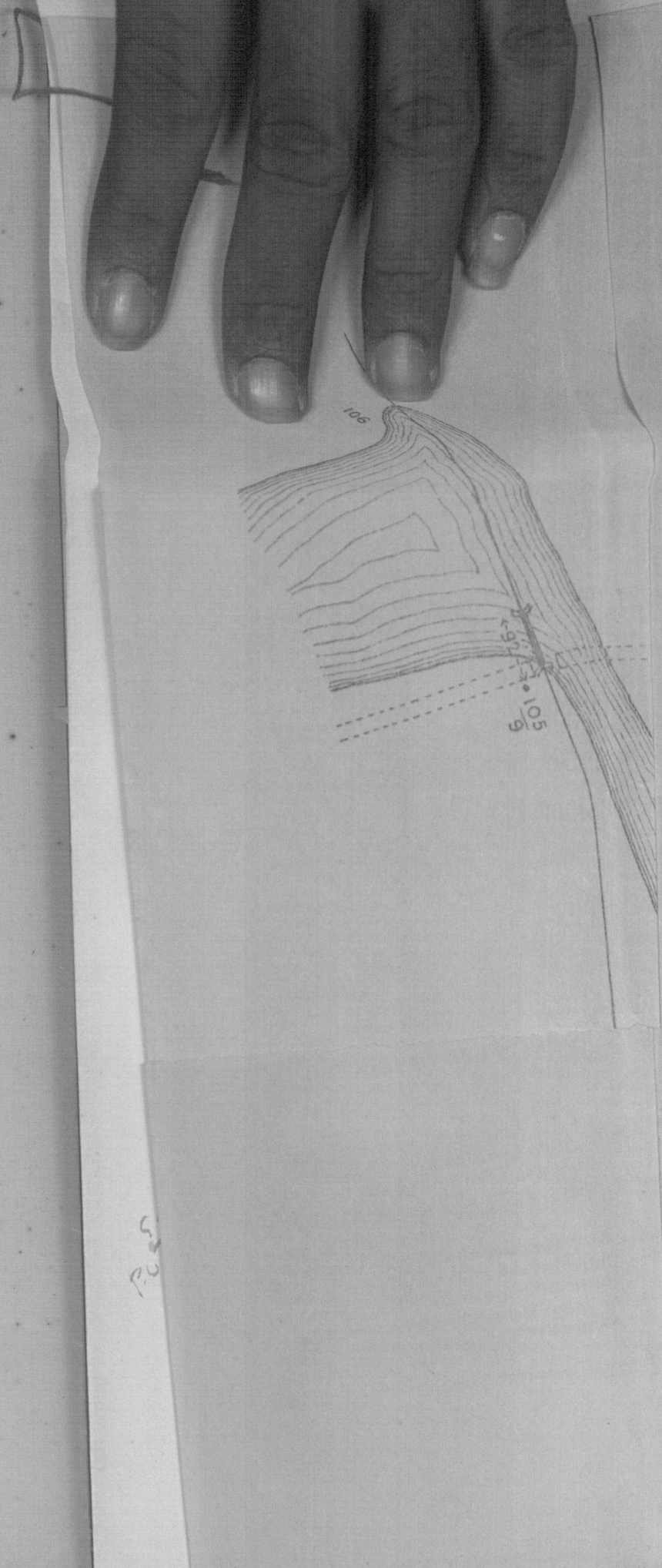
Coimbatore.

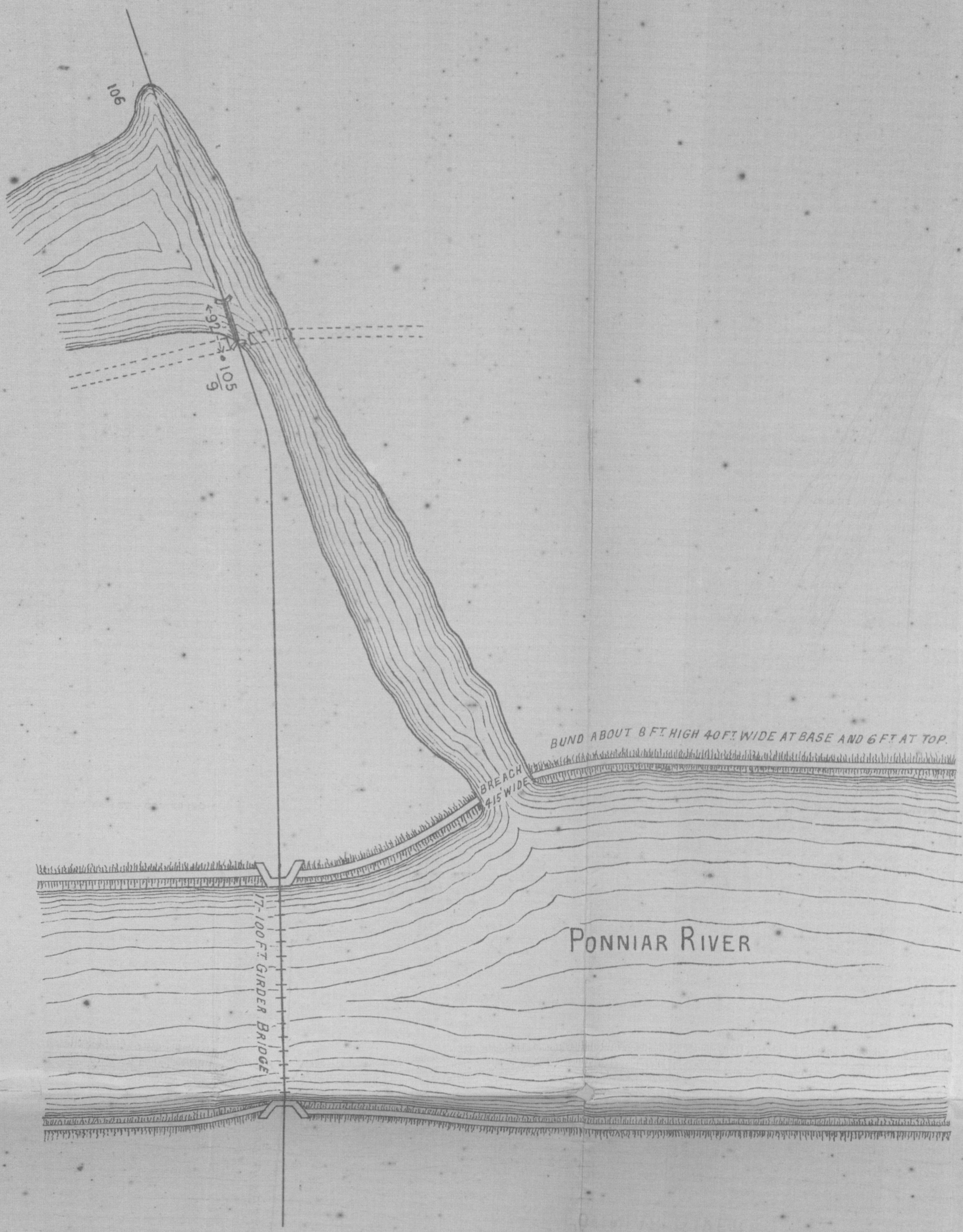
	Superintendence.										
1.	Original works. Civil Buildings.										
	Improvements to the secretariat offices in Stone House Hill Ootacamund	5,300	G.O. No 2210 dt/13th March 1892	61.	437	503	HH2	61.			
2.	Taluq Office at Kiellegod				290	290	10000	7000	3800	Only Rs 3000 will be expended in the collection of material during the close of the official year.	(2) 297/92
3.	Taluq Office at Virajpettai				860	860	10000	7000	3000	82	82
4.	Converting old Jail at Mettupollium into a Sub Registrar's Office	700	Reg. No 9236 of 1891-92		499.	201.	700	700		Grant under Major works requires the transfer of Rs 300 to Minor under Stores	
	Constructing Deputy Tahsildar's Office at Mannarpuram	9340.	G.O. No 328 dt/16 Feb 1888.	7973	833	734.	1136	303.	833.		



REG: No. 405 – COPIES 130

ZINCO., SURVEY OFFICE, MADRAS.
1882


106
105



REG: No. 405 – COPIES 130

ZINCO., SURVEY OFFICE, MADRAS,
1892

CHITTORE.

ZINCO., SURVEY OFFICE, MADRAS,
1892

RAILWAY.

Govt. of {1891} Madras.

PUBLIC WORKS.

Dated November, 17th.

Recd. Encl.

G.O., 17th Nov. 1891, No. 2752 R.

NOVEMBER.

Floods

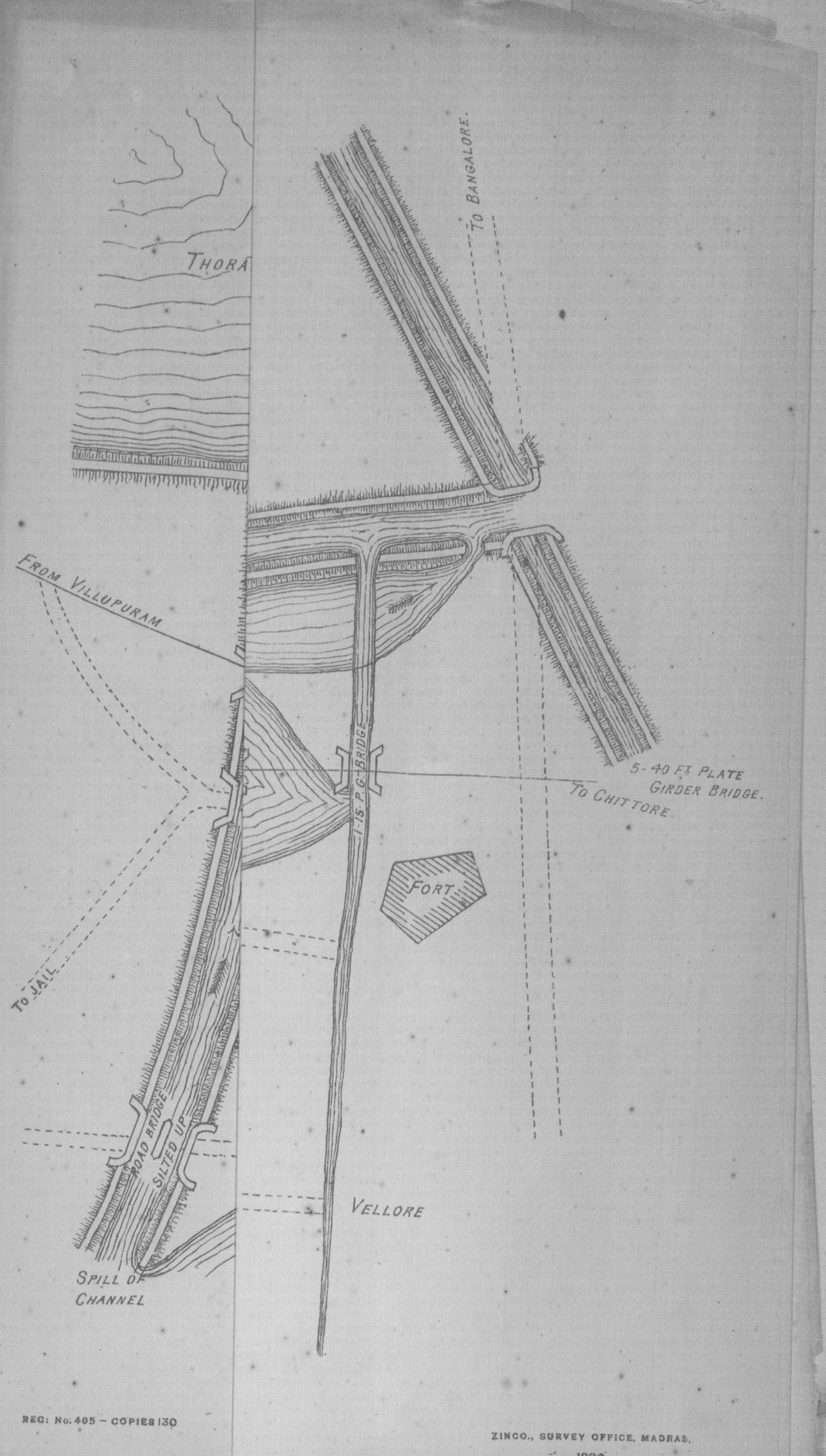
Orders on report by Lieutenant Smyth, R.E., on — which occurred on the South Indian Railway during the third week of October 1891.

Do ltr 21 W d/11 February 1892

Communicated to the Supdg: Engineer IV circle for report with reference to para 12 of Lieut: Smyth's inspection notes.

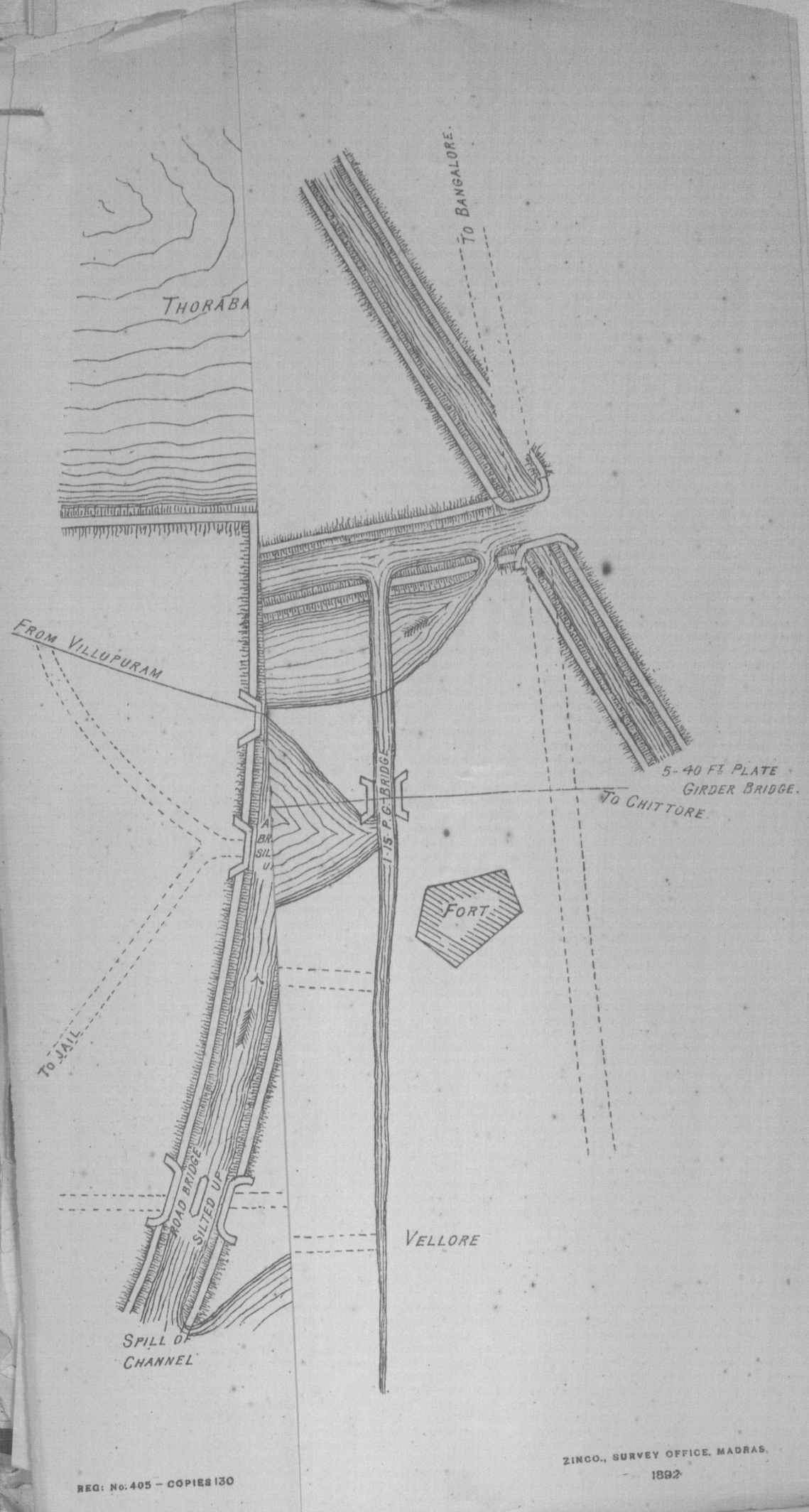
Sd/ o/B

To S E IV circle



REG: No. 405 – COPIES 130

ZINCO., SURVEY OFFICE, MADRAS.
1892



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ZINCO., SURVEY OFFICE, MADRAS.
1892

To:

connected by a masonry arch and the breach was caused by the earthwork sinking and slipping through the opening into the stream. To avoid a recurrence of this nature, the arch should be bricked up from the floor of the bridge.

8. At the north abutment, west wing, the pitching was slightly damaged at the foot of the slope. The breach was quickly restored and the line re-opened for traffic.

9. The Malatar channel takes off from the north bank of the Ponniar river, about 5 miles above the bridge. The opening in the main river bund is unprovided with head works and flows independently to the sea.

10. Again in the early morning of the 23rd at 105/9 between Villupuram and Panruti the line was breached for 92 feet and covered by water to a depth of 2 feet 6 inches for half a mile south of this point. The railway approaches to the Ponniar bridge on both sides are laid on the natural surface of the ground and rise to the bridge over the river, the bed of which is above the level of the surrounding country.

11. The river is trained to the bridge by banks constructed by the Irrigation Branch, Public Works Department, and the bursting of the south bank, about 300 yards west of the bridge, caused the damage to the line. The railway approaches are pitched with stone and this in a great measure saved the line. The wire fencing was thrown down and a level crossing gate at 105/9 washed away. The estimated amount of damage done by the flood is about Rs. 400. Communication was restored by 11 A.M. on the 24th.

12. The river bund is being rapidly repaired by the Public Works Department, but as only sand is available for the purpose it should, I think, be protected by stone pitching if possible, as a recurrence of the flood would probably form a fresh breach in the same place.

MADRAS,
29th October 1891.

(Signed) W. C. SMYTH, Lieut., R.E.,
Attached to the office of the
Consulting Engineer for Railways, Madras.

Submitted to Government in continuation of this office endorsement No. 944, dated 24th October 1891.

ORDER—dated 17th November 1891, No. 2752 R., Public Works.

Paras. 4, 11 and 12 of the report will be referred to the Chief Engineer for Irrigation for necessary action.

2. The Consulting Engineer for Railways will draw the attention of the Agent to paras. 6 and 7.

3. Para. 12 will be considered in the General Branch.

4. A copy of these Proceedings will be forwarded to the Government of India with the following letter:—

(Here enter No. 2753 R., dated 17th November 1891.)

(True Extract.)

(Signed) W. H. COAKER, Lieut.-Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways.
" Chief Engineer for Irrigation.
" Public Works Department, General Branch.

Exd. C. A. Munisawmy.
Spare Copies

17TH NOVEMBER 1891, No. 2752 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read again the following paper:—

G.O., dated 28th October 1891, No. 2470 R., Public Works.

Read also the following paper:—

From the Consulting Engineer for Railways, dated Madras, 29th October 1891, No. 952.

Report by Lieutenant W. C. SMYTH, R.E., on floods which occurred on the South Indian Railway during the third week of October 1891.

Traffic on the South Indian Railway was interrupted in four places by floods during the third week of October.

2. At Vellore very heavy rain fell on the night of the 21st, 8 inches being registered in two consecutive hours. The immediate result was a flood in the kusba nullah which flows under the line through a girder bridge consisting of one 25 feet and one 20 feet opening on the south side of Vellore station compound and then bends round parallel to the line forming the west boundary of the compound. The banks of the nullah are protected by bunds on either side along the west boundary of the station-yard, but although these bunds should have been kept in repair by the Municipality, they had been much neglected lately and were trodden down by cattle and foot-passengers going to and from Kusba village. The water in the nullah topped one of these openings in the bund and soon after a breach of 300 feet was formed and the station compound was flooded.

3. The water flowed parallel to the line and crossed it near the north distant signal, but little damage was done to the line beyond the washing away of the softer portions of the ballast, which was quickly repaired when the water fell. The wire fencing along the line suffered severely and was thrown down in many places by the rush of water carrying straw and grass which got entangled in the wires.

4. The intensity of the flood was caused by the overflow of the Thorabadi tank feeder which is not bunded and is not provided with sufficient waterway under the public roads. The Thorabadi tank should be restored or the banks of its feeder be bunded.

5. On the night of the 22nd October between Kátpádi and Ramapuram at G. 203/9 the railway bank was undermined and nearly breached by the wash caused by the bursting of a tank feeder bund. The feeder passes under the line at 203/9 by a single 25 feet girder bridge and the earthwork at the back of the north abutment was eroded for a length of 90 feet. The bank was quickly made up and was safe for traffic at 11 A.M. on the 24th.

6. The feeder was diverted and bunded by the Railway Company and will be restored and pitched for a short distance from the line. The protection works of the bridge have not yet been carried out, but the bank is pitched on the east side next the tank and should now be pitched on the west side also.

7. On the same night between Villupuram and Panruti at mile 103/8 the earthwork behind the south abutment of a three 40-feet girder bridge over the Malatar channel was scooped out to a depth of 11 feet below rail level, the hole being about 17 feet in length and 20 feet wide. The face of the abutment rests on two wells

Govt. of {1892} Madras.

MILITARY.

To

THE QUARTER MASTER GENERAL,
&c., &c., &c.

No. 429 W d/ 11 " Febuy 1892

Dated January, 28th.

Issued

Recd. *Encl.*

Comd & to officers of the P.W.D. for information.

Sd/ 10.2.92. DW.

G.O., 28th January 1892, No. 658.

JANUARY.
Nos. 383-384.

Commissariat Department—Transport.

Government Transport.—Memorandum addressed by the Government of India, Military Department, to the Revenue and Agricultural Department relative to the utilisation by the Civil authorities of — in time of peace, communicated to His Excellency the Commander-in-Chief for issue of the necessary orders.

To

CE for I
SE
Supt of Wks. P. Project
C. A. to Govt
CE for Rys

GOVERNMENT OF MADRAS.

MILITARY DEPARTMENT.

Commissariat Department—Transport.

Read the following paper :—

No. 333. *From Major-Genl. E. H. H. COLLEN*, C.I.E., *Secretary to the Government of India, Military Department, to the Quarter Master General in India; dated Fort William, the 16th January* 1892, *No. 221-D.*

Commissariat Department—Transport.

I am directed to forward the accompanying memorandum* addressed to the Revenue and Agricultural Department relative to the utilisation by the Civil authorities of Government transport in time of peace, and to request that, under the orders of the Commander-in-Chief, the General Officers Commanding Districts and officers in charge of the various cantonments may be instructed to give their careful consideration to the subject, and to co-operate with the Civil authorities in their investigation of this important question.

* No. 220-D, dated 16th January 1892.

No. 220-D.

OFFICE MEMORANDUM.

The question of the utilisation by the Civil authorities of Government transport in time of peace having been under the consideration of the Military Department, the undersigned is directed to request that the Revenue and Agricultural Department will be so good as to ask the several local Governments for practical suggestions in view to the furtherance of the scheme.

2. The Military Department consider it a matter of the highest importance that such portion of Government transport as is not already employed for military purposes should be suitably employed in time of peace in the different branches of the public service, although liable to be withdrawn when emergency arises.

3. Government mules and carts might with advantage be used by municipalities in large towns, in the Survey, Forest and Public Works Departments, in the carriage of heavy records and treasure by the Civil Department, and various other ways. The Military Department would therefore suggest that local Governments be invited to refer the question to committees composed of officers of the Postal, Public Works and Civil Departments, with an officer of the Commissariat-Transport Department in attendance, at such places as are considered suitable, to formulate proposals with special reference to the amount and description of transport that could be usefully employed instead of local or hired transport, and also to the terms and conditions under which it could be utilised.

FORT WILLIAM,
16*th January* 1892.

(Signed) E. H. H. COLLEN,
Secy. to the Government of India.

To the Revenue and Agricultural Department.

No. 221-D.

Copy, and of enclosure, forwarded to the Secretary to the Government of Madras, Military Department, with a request that, under the orders of the Governor in Council, similar instructions may be issued in the Madras Presidency.

* * * * *

(By Order.)

FORT WILLIAM,
16*th January* 1892.

(Signed) S. D. GORDON,
Asst. Secy. to the Govt. of India.

RAILWAY.

Govt. of {1891} Madras.

PUBLIC WORKS.

Dated November, 17th.

Read. *Encl.*

G.O., 17th Nov. 1891, No. 2752 R.

NOVEMBER.

Floods

Orders on report by Lieutenant Smyth, R.E., on — which occurred on the South Indian Railway during the third week of October 1891.

No. 421 W d/11 - 2 Feby 1892

Communicated to the Supdg. Engineer 1st circle for report with reference to para 12 of Lieut. Smyth's inspection notes

1/87 0013

DS

To

S.I. 1st circle

No. 384. ORDER THEREON, 28th January 1892, No. 658.

Communicated to His Excellency the Commander-in-Chief, for favour of the issue of the necessary orders.

(True Extract.)

(Signed) H. R. HOPE, Brigdr.-Genl.,
Secretary to Government.

To the Quarter Master General.
" Adjutant-General.
" Commissary-General.
" Controller of Military Accounts.
" Public, &c., Departments,
" Revenue Department,
" Public Works Department,
} for information.

Exd. T. K. Narayana Aiyangar.

Govt. of {1892} Madras.

MILITARY.

To

THE QUARTER MASTER GENERAL,
&c., &c., &c.

No. 429 W d/11 2 Feby 1892

Dated January, 28th.

Issued

Recd. *Encl.*

Comd to officers of the P.W.D. for information.

Sd/ O.W.B.
D.W.

G.O., 28th January 1892, No. 658.

JANUARY.
Nos. 383-384.

Commissariat Department—Transport.

Government Transport.—Memorandum addressed by the Government of India, Military Department, to the Revenue and Agricultural Department relative to the utilisation by the Civil authorities of — in time of peace, communicated to His Excellency the Commander-in-Chief for issue of the necessary orders.

To

C.E. for I
S.E.
Supt. of wks. D. Project
C.A. to Govt.
C.E. for Ry

RAILWAY.

Govt. of {1891} Madras.

PUBLIC WORKS.

Dated November, 17th.

Recd. *Encl.*

G.O., 17th Nov. 1891, No. 2752 R.

NOVEMBER.

Floods

Orders on report by Lieutenant Smyth, R.E., on — which occurred on the South Indian Railway during the third week of October 1891.

No. 421 W d/11 2 Feby 1892

Communicated to the Supdg. Engineer 1st circle for report with reference to para 12 of Lieut. Smyth's inspection notes.

/80 O.W.B.
D.W.

To

S.E. 1st circle

E.1
P.W 1366/9N

E. 1
P.W. 1356/9

	(*iii*) *For the block or blocks of quarters for staff non-commissioned officers and married class B sergeants not on the staff.*									7G	Ditto.
	1 seat for every 2 men, omitting fractions.										
	(*iv*) *For the sergeant-major*—										
	1 latrine for 1 seat	6	4	7	...	62	.....		...	17	Ditto.
	(*v*) *For the schoolmaster*—										
	Same as for sergeant-major	...	...	...	...	62	.....	.....	...		
	(*vi*) *For the schoolmistress*—										
	Same as for sergeant-major	...	...	...	...	62	.....	See item 46 (iii).			
	(*vii*) *For the gymnasium.*	...	...	...	...	...		As authorised for a head-quarters or a detached wing.			
	(*viii*) *For the quarter guard*	...	...	...	...	...		.....	...	64B	Ditto.
	1 latrine with 2 compartments, each for 2 seats, each	$5\frac{5}{12}$	$8\frac{5}{6}$	7	...	202	.....				
	Covered passage for sentry	$6\frac{1}{2}$	$4\frac{1}{2}$	7	...			See item 46 (vii).			
	(*ix*) *For the school*	...	...	...	...	...	.....	.....	...	71E	Ditto.
	Privy for boys	8	$8\frac{5}{6}$	7	...	177	.....				
	,, for girls	8	$8\frac{5}{6}$	7							
	Urinary for boys	$4\frac{1}{2}$	$3\frac{3}{8}$	...							
	Dry earth shed	$4\frac{1}{2}$	$3\frac{3}{8}$	...				.....	...	67	Ditto.
	(*x*) *For the sergeants' mess*—						.....				
	1 latrine of 2 seats	$5\frac{5}{12}$	$8\frac{5}{6}$	7	...	103	P. W. D. Cir. No. 74 of 1869.	Authorises provision of a latrine with 2 seats being given for every Sergeants' mess, but only when the mess happens to be a long way from any of the barrack latrines.			
480	LAVATORIES	...	...	...	...	...	.....	See items 45 and 327.			
	(*i*) *For single men's barracks*—										
	Each half-company lavatory—							.....	...	138	Ditto.
	1 washing room for 10 basins.	$13\frac{3}{4}$	14	8	...	385 each	.....	A half-company lavatory should be given for every 50 single rank and file, or fraction of 50, of the authorised strength of the depôt.			
	2 private ablution rooms, each	$5\frac{1}{2}$	$4\frac{2}{3}$	8							

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c.				
								Authority.	Particulars.	Standard plan.	Type plan.	
										No.	No.	Series.
			Feet.	Feet.	Feet.	Supl. ft.	Supl ft.					
		(*c*) SUBSIDIARY BUILDINGS—*concld.*										
	480	LAVATORIES—*contd.*										
		(*ii*) *For the quarter guard*—										
		1 lavatory with a washing-room for 8 basins	11	14	8	} ...	316	.....	.....	...	64B	B. I. modified.
		2 private ablution rooms, each	5½	4⅔	8	}						
	481	URINARIES	...	...	...	...	...	.....	See item 47.			
		(*i*) *For the single men's barracks*— Each urinary of 2 compartments	6½	5	7	...	33 each	.....	See item 328 (i). A two-compartment urinary should be given for every 50 single rank and file, or fraction of 50, of the authorised strength of the depôt.			
		(*ii*) *For the barracks for married rank and file and married class sergeants*— 1 urinary of 1 compartment for each block	6½	2½	7	...	16 each	.....	See item 328 (iii).			
		(*iii*) *For the gymnasium*—										
		(*a*) For officers— 1 urinary of 1 compartment	6½	2½	7	...	16	.....	.....			
		(*b*) For the men— 1 urinary of 1 compartment	6½	2½	7	...	16	.....	.....			
		(*iv*) *For the Institute*—	...	...	...	...	...	.....	See remarks against Item 214 (v).			
		3 compartments in one or more blocks as may be found convenient.	6½	7½	7	...	49					
		(*v*) *For the quarter guard*— 1 urinary of 2 compartments	6½	5	7	...	33					
		(*vi*) *For the school*— 1 urinary of 2 compartments	6½	5	7	...	33		This is for the men attending school.			
		(*vii*) *For the workshops*— 1 urinary of 1 compartment	6½	2½	7	...	16	M. D. Cir. No. 7 M. W., dated 4th December 1882.	Is not to be provided if a latrine or urinary exists conveniently near.			
		(*viii*) *For the regimental offices, orderly-room, &c.*— 1 urinary of 1 compartment	6½	2½	7	...	16					
		(*ix*) *For the regimental, or quarter master's, store*— 1 urinary of 1 compartment	6½	2½	7	...	16					

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c.				
								Authority.	Particulars.	Standard plan.	Type plan.	
			Feet.	Feet.	Feet.	Supl ft.	Supl. ft.			No.	No.	Series.
		(*c*) SUBSIDIARY BUILDINGS—*contd.*										
	477	COOK-HOUSES—*contd.*										
		(*vi*) *For the sergeants' mess*—										
		1 kitchen	9½	12	8	} ...	287	.....	.....	...	67	B. I. modified.
		1 cooking chamber	4	12	16							
	478	FUEL STORE FOR THE INSTITUTE	...	...	...	...	...	.....	This can be arranged for in the cook-house for the Institute, or in a verandah room of the Institute building.			
	479	LATRINES	...	...	...	...	...	.....	See items 46 and 326.			
		(*i*) *For the single men's barracks.*							A half company latrine should be given for every 50 single rank and file, or fraction of 50, of the authorised strength of the depot.			
		Each half-company latrine—										
		Privy	13 3/4	8 5/6	7	} ...	265 each	.....	.....	...	132	Ditto.
		Sweeper's room	8	5	7							
		Dry earth bin	5	3	...							
		(*ii*) *For barracks for married rank and file and married class C sergeants.*	...	...	...	...	...	.....	See item 326 (iii)	...	7G	Ditto.
		(*a*) For men—										
		1 seat for every 5 men or fraction of 5.										
		(*b*) For women and children—										
		1 seat for every 5 families or fraction of 5	...	...	...	...	...	.....	See item 326 (iii)	...	7G	Ditto.

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c.			Type plan.	
								Authority.	Particulars.	Standard plan.		
			Feet.	Feet.	Feet.	Supl ft.	Supl. ft.			No.	No.	Series.
		(*c*) SUBSIDIARY BUILDINGS—*contd.*										
	477	COOK-HOUSES—*contd.*										
		(*vi*) *For the sergeants' mess*—										
		1 kitchen	9½	12	8	} ...	287	.....	.....	...	67	B. I. modified.
		1 cooking chamber	4	12	16							
	478	FUEL STORE FOR THE INSTITUTE	...	...	...	...	...	.....	This can be arranged for in the cook-house for the Institute, or in a verandah room of the Institute building.			
	479	LATRINES	...	...	...	...	...	.....	See items 46 and 326.			
		(*i*) *For the single men's barracks.*							A half company latrine should be given for every 50 single rank and file, or fraction of 50, of the authorised strength of the depot.			
		Each half-company latrine—										
		Privy	13 1/24	8 6/6	7	} ...	265 each	.. ...	.....	...	132	Ditto.
		Sweeper's room	8	5	7							
		Dry earth bin	5	3	...							
		(*ii*) *For barracks for married rank and file and married class C sergeants.*	...	...	...	...	...	.....	See item 326 (iii)	...	7G	Ditto.
		(*a*) For men—										
		1 seat for every 5 men or fraction of 5.										
		(*b*) For women and children—										
		1 seat for every 5 families or fraction of 5	...	...	...	...	...	.....	See item 326 (iii)	...	7G	Ditto.

Convalescent Depôts—*contd.*

233

Accommodation authorised for Convalescent Depôts—continued.

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c.			
								Authority.	Particulars.	Standard plan.	Type plan.
		(*c*) SUBSIDIARY BUILDINGS—*contd.*	Feet.	Feet.	Feet.	Supl ft.	Supl. ft.			No.	No. Series.
	477	COOK-HOUSES—*contd.*									
		(*vi*) *For the sergeants' mess*—									
		1 kitchen	$9\frac{1}{2}$	12	8						
		1 cooking chamber	4	12	16	...	287	.....	.....	...	67 B. I. modified.
	478	FUEL STORE FOR THE INSTITUTE	...	...	...	...	...	.....	This can be arranged for in the cook-house for the Institute, or in a verandah room of the Institute building.		
	479	LATRINES	...	...	...	...	...	.....	See items 46 and 326.		
		(*i*) *For the single men's barracks.*									
		Each half-company latrine—							A half company latrine should be given for every 50 single rank and file, or fraction of 50, of the authorised strength of the depot.		
		Privy	$13\frac{1}{2}\frac{1}{4}$	$8\frac{5}{6}$	7						
		Sweeper's room	8	5	7						
		Dry earth bin	5	3	...	...	265 each	.....	.....	...	132 Ditto.
		(*ii*) *For barracks for married rank and file and married class C sergeants.*	...	...	...	...	...	.....	See item 326 (iii)	...	76 Ditto.
		(*a*) For men—									
		1 seat for every 5 men or fraction of 5.									
		(*b*) For women and children—									
		1 seat for every 5 families or fraction of 5	...	...	...	...	...	.....	See item 326 (iii)	...	76 Ditto.

	(*iii*) *For a depôt exceeding 554 men in strength.*	...	...	...	...	...	.....	Same as authorised for a battalion.				
	2 open sheds, each	37½	20	10	...	1,351						
	1 store-room	15	20	10								
	Chowkidar's hut	10	10	8	...	179						
	Barrackmaster's office	...	...	...	...	...						
458	GYMNASIUM	...	...	...	...	...	.....	See items 17 and 306		60	...	
	(*i*) *For a depôt not exceeding 200 men in strength.*	...	...	...	...	...	.....	As authorised for a battery of royal artillery.				
	(*ii*) *For a depôt in excess of the above strength.*	...	...	...	...	...	.....	As authorised for the following units:— 2 batteries. A wing. A battalion.				
459	INSTITUTE.	...	...	...	...	...	.....	See Items 19 and 307.		...	2, figures 3 & 4.	Hutted camps.
	(*i*) *For a depôt not exceeding 206 rank and file in strength.*	...	...	...	...	...	.....	As authorised for a detachment of two companies.				
	(*a*) *Liquor bar portion.*											
	Privates' room	18	20	10	...	1,763	.....					
	Bar or issue room, beer store	18	10									
	Corporals' room	18	8¾									
	(*b*) *Library portion.*											
	Book room	16	20	10	...	1,488	.....					
	Reading room											
	Librarian's quarters. 1 room	12	20*	10 Average	...							
	Librarian's quarters. 1 bathroom	6	7	9	...							
	(*c*) *Recreation and refreshment portion.*											
	Temperance room	18	20	10	...	4,691	.....	* If considered desirable, these rooms may be divided into two by longitudinal partition walls.				
	Billiard room	28	20									
	Theatre	31	20									
	Refreshment or supper room											
	Refreshment and issue and store-rooms.	9	10									
		9	8¾									
	Caterer's quarters. 1 room	12	20*	Average								
	Caterer's quarters. 1 bathroom	6	7	9	...							

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c. Authority.	Particulars.	Standard plan. No.	Type plan. No.	Type plan. Series.
			Feet.	Feet	Feet	Supl. ft.	Supl. ft.					
		(*b*) AUXILIARY BUILDINGS—*contd.*										
	459	INSTITUTE—*contd.*										
		(*ii*) *For a depôt exceeding 206 rank and file in strength.*	...	...	...	...	...	.....	As authorised for a head-quarters' wing.			
		(*a*) *Liquor bar portion.*										
		Privates' room	25	20	10	...	3,511	.....				
		Bar or issue room	21	20								
		Beer store	12	20								
		Corporals' room	12	20*								
		Sergeant's quarters. 1 room	12		Average							
		Sergeant's quarters. 1 bathroom	6	7	9	...						
		(*b*) *Library portion.*										
		Book room	10	20	10	...	2,428	.....				
		Reading room	27	20								
		Librarian's quarters. 1 room	12	20*	Average							
		Librarian's quarters. 1 bathroom	6	7	9	...						
		(*c*) *Recreation and refreshment portion.*										
		Temperance room	25	20	10	...	8,208	.....	* If considered desirable, this room may be divided into two by a longitudinal partition wall. † The theatre and supper room might be thrown into one.			
		Billiard room	28	20								
		Games „	20	20								
		Theatre†	41	20								
		Refreshment or supper room†	41	20								
		Refreshment, issue, and store-rooms.	12	20								
		Caterer's quarters. 1 room	12	20*	Average							
		Caterer's quarters. 1 bathroom	6	7	9	...						
	460	LINES OF MUSTERED FOLLOWERS	...	...	...	...	...	.....	See item 21.			
	461	MAGAZINE	...	...	...	...	...	.....	If a regimental magazine for *British* troops does not exist conveniently near for the storage (by enlargement, if necessary) of the ammunition for the depôt troops, a separate magazine should be built for the latter, capable of containing the authorised ammunition for the strength of the depôt.			
	462	ORDERLY AND COURT-MARTIAL ROOM.	...	...	...	...	...	.....	See items 22 and 148	...	60A to 60G, 61	B. I.
		(*i*) *For a depôt not exceeding a strength of 200 men.*	...	...	...	...	...	.....	See items 24 and 310.			
		Orderly-room	15	20	10	...	2,196	.....	As authorised for a detached wing.			
		Court-martial room	24	20	10							
		Room for officer on duty	18	20	10							
		2 bathrooms, each	6	7	Average 9							
		(*ii*) *For a depôt in excess of the above strength.*	...	...	...	...	...	.....	As authorised for a head-quarters' wing.			
		Orderly-room	15	20	10	...	2,635	.....				
		Court-martial room	24	20	10							
		Pay office	12	20	10							
		Room for officer on duty	18	20	10							
		2 bathrooms, each	6	7	Average 9							
	463	PARADE GROUND	...	...	...	...	...	.....	See item 25. A combined parade and cricket ground should be provided for each depôt.			
	464	PAY OFFICE		...	...	...	...	.....	See item 462.			
	465	PLUNGE BATH	...	...	...	...	...	.....	Not authorised,—*see* item 313.			
	466	QUARTER GUARD AND CELLS	...	...	...	...	...	.....	See items 28 and 314	...	See also 64A to 64D	B. I.
		(*i*) *For a depôt not exceeding a strength of 200 men.*	...	...	...	...	...	.....	As authorised for a detached wing.			

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c.		Standard plan.	Type plan.	
								Authority.	Particulars.			
			Feet.	Feet.	Feet.	Supl. ft	Supl. ft.			No.	No.	Series.
		(*b*). AUXILIARY BUILDINGS—*contd.*										
	466	QUARTER GUARD AND CELLS—*contd.*										
		Guard-room for 12 men	36	20	10	60			* If considered desirable, this room may be divided into two by a longitudinal partition wall. † A provost sergeant is allowed to a depôt when the strength of the troops is not less than 160 men,—G. O. C. C., dated 2nd March 1891.			
		Lock-up for 8 ,,	24	20	10	60						
		† Quarters for a provost sergeant { 1 room	12	20*	10 Average	282	2,620					
		† Quarters for a provost sergeant { 1 bathroom	6	7	9							
		4 cells, each	10	10	13	100	1,008					
		(*ii. For a depôt in excess of the above strength.*	...	...	...	...	...	.....	As authorised for a head-quarters' wing.			
		Guard-room for 12 men	36	20	10	60						
		Lock-up for 10 ,,	30	20	10	60						
		Quarters for provost sergeant. { 1 room	12	20*	10 Average	282	2,815					
		Quarters for provost sergeant. { 1 bathroom	6	7	9							
		6 cells, each	10	10	13	100	1,491					
	467	RATION SHEDS	...	...	...	...	...	.....	See item 315.			
	468	REAR GUARD	...	...	...	...	...	.....	See item 30.			
	469	REGIMENTAL OR QUARTERMASTER'S STORE.	...	...	...	...	...	.....	See items 31 and 317.			
		(*i*) *For a depôt not exceeding 200 men in strength.*	...	...	...	...	...	.....	As authorised for a detached wing.			
		Store-room	25	20	10	...						
		Quartermaster's office	10	20	10	...	1,622					
		Tailor's workshop	14	20	10	...						
		Dry store-room	12	20	10	...						
		(*ii*) *For a depôt in excess of the above strength.*	...	...	...	...	...	.....	As authorised for a head-quarters' wing.			
		Store-room	50	20	10	...						
		Quartermaster's office	10	0	10	...	2,209	.....				
		Tailors' workshop	14	20	10	...						
		Dry store	12	20	10	...						
	470	REGIMENTAL WORKSHOPS, VOLUNTARY.	...	...	...	...	...	.....	See item 318.			
		Carpenters' shop	24	20								
		Painters' ,,	10	20								
		Tinsmiths' ,,	10	20								
		Shoemakers' ,,	10	20	10	...	2,626	.....	As authorised for a head-quarters' or a detached wing.			
		Book-binders' ,,	12	9¼								
		Watchmakers' ,,	12	9¼								
		Printers' ,,	12	20								
	471	RELIGIOUS READING AND PRAYER ROOM.	...	...	...	...	...	.....	See items 33 and 319.	44	...	
		1 main room	15	20	10	...						
		1 side room	12	20	10 Average	...	852	.....	As authorised for a head-quarters' or a detached wing.			
		Porch	10	10	9	...						
	472	RIFLE RANGE	...	...	...	...	...	.....	See items 161 and 320.			
									As authorised for a battalion.			
	473	SCHOOL	...	...	...	...	...	.....	See items 35 and 321.			
		(*i*) *For a depôt not exceeding 200 men in strength.*	...	...	...	...	...	.....	As authorised for a detached wing.			
		Class room for 64 men	60	20	10							
		,, ,, 36 children	30	20	10 Average	...	3,088	.....				
		2 water-rooms, each	7¾	8	9							
		(*ii*) *For a depôt in excess of the above strength.*	...	...	...	...	...	.....	As authorised for a head-quarters' wing.			
		Class rooms for 80 men—										
		1 room	42	20	10							
		1 ,,	36	20	10							
		Class room for 36 children	30	20	10 Average	...	3,721	.....				
		2 water-rooms, each	7¾	8	9							

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of buildings.	Details of Orders, &c.				
								Authority.	Particulars.	Standard plan.	Type plan.	
			Feet.	Feet.	Fest.	Supl. ft.	Supl. feet.			No.	No.	Series.
		(*b*) AUXILIARY BUILDING—*concld.*										
	474	SENTRY BOXES	...	...	...	...	...	.....	See items 36 and 207	115	...	
		According to circumstances, each	3	3	...	...	...	.....				
	475	SERGEANTS' MESS AND RECREATION ROOM	...	...	...	...	...	.....	See items 37 and 323.			
		Mess room . .	24	20	10							
		Recreation room . .	28	20	10							
		Beer store	10	20	10	...	2,599	.....	As authorised for a head quarters' or a detached wing.			
		Caterer's room . . .	10	20	10							
					Average							
		Pantry in verandah . .	$7\frac{3}{4}$	10	9							
	476	SKITTLE ALLEY	...	...	...	...	...	.....	See item 324.			
		1 Skittle alley for each depôt .	$33\frac{3}{4}$	10	7	...	497	.....				
		(*c*) SUBSIDIARY BUILDINGS .	...	...	...	...	...	M. D. letter No. 900, M. W., dated 19th September 1883.	In the case of buildings not intended for occupation during the winter, Government do not consider it necessary to provide planking under the sheet iron roof coverings of servants' quarters and similar subsidiary buildin - at hill stations.			
	477	COOK-HOUSES	...	...	...	...	...	.....	See items 43 and 32 (*i*)	...	119A 119B	B. I. modified.
		(*i*) *For the single rank and file.* Each half-company cook-house—										
		1 kitchen . . .	13	12	8	...	341 each	.....	A half-company cook-house should be given for every 50 single rank and file or fraction of 50 of the authorised strength of the depôt.			
		1 cooking-place . .	4	12	18							
		(*ii*) *For the married rank and file and married class C sergeants.*	...	...	...	...	...	.....	See item 325 (iii). Cook-houses are not to be provided. Each quarter is to be fitted up with a Fitzwygram pattern cooking-stove.			
		(*iii*) *For the warrant officers* .	...	...	...	...	...	.....	See remarks against item 325 (iv). As a rule, cook-houses should not be provided; each quarter should be fitted up with a Fitzwygram pattern cooking-stove.			
		(*a*) *For the sergeant-major*— 1 kitchen . . .	$7\frac{3}{4}$	6	8	...	117	.....	.....	...	17	B. I.
		1 cooking-place . .	$7\frac{3}{4}$	$1\frac{1}{2}$	16							
		(*b*) *For the schoolmaster*— Same as for sergeant-major	...	...	...	...	117					
		(*c*) *For the schoolmistress*— Same as for sergeant-major	...	...	...	...	117					
		(*iv*) *For the block or blocks of quarters for staff non-commissioned officers and married class B sergeants not on the staff.*	...	...	...	...	...	.....	See remarks against item 325, (iv). As a rule, cook-houses should not be provided; each quarter should be fitted up with a Fitzwygram pattern cooking range.			
		For each man 1 compartment containing— 1 kitchen . .	6	$5\frac{3}{8}$	8	...	...	.....	.....	...	7A 7B	R. A. modified.
		cooking chamber .	5	$1\frac{1}{2}$	16							
		(*v*) *For the Institute*— 1 kitchen . . .	$9\frac{1}{2}$	12	8	...	287	.....	.....	...	67	B. I. modified.
		1 cooking chamber . .	4	12	16				No scale has been laid down: it is usual to give a cook-house of the same size as is authorised for the sergeants' mess.			

Convalescent Depôts—*contd.*

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c.				
								Authority.	Particulars.	Standard plan.	Type plan.	
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.			No.	No.	Series.
		(*c*) SUBSIDIARY BUILDINGS—*contd.*										
	477	COOK-HOUSES—*contd.*										
		(*vi*) *For the sergeants' mess*—										
		1 kitchen	9½	12	8	} ...	287	.....	.....	...	67	B. I. modified.
		1 cooking chamber	4	12	16							
	478	FUEL STORE FOR THE INSTITUTE	...	...	...	...	...	.....	This can be arranged for in the cook-house for the Institute, or in a verandah room of the Institute building.			
	479	LATRINES	...	...	...	...	...	.....	See items 46 and 326.			
		(*i*) *For the single men's barracks.*							A half company latrine should be given for every 50 single rank and file, or fraction of 50, of the authorised strength of the depot.			
		Each half-company latrine—										
		Privy	13 1/4	8 5/6	7	} ...	265 each	.....	.....	...	132	Ditto.
		Sweeper's room	8	5	7							
		Dry earth bin	5	3	...							
		(*ii*) *For barracks for married rank and file and married class C sergeants.*	...	...	...	...	...	.....	See item 326 (iii)	...	7G	Ditto.
		(*a*) For men—										
		1 seat for every 5 men or fraction of 5.										
		(*b*) For women and children—										
		1 seat for every 5 families or fraction of 5	...	...	...	...	...	.....	See item 326 (iii)	...	7G	Ditto.

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Convalescent Depôts—*contd.*

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c.				
								Authority.	Particulars.	Standard plan.	Type plan.	
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.			No.	No.	Series.
		(*b*) AUXILIARY BUILDINGS—*contd.*										
	454	DRY STORE-ROOM	...	...	...	...	...	.....	See item 302.	26	...	
		1 room	15	15	12	...	443	.....	Accommodation is given under same roof as the Quartermaster's (or regimental) store,—*see* item 409.			
	455	FIRE-ENGINE SHED	...	...	...	...	...	.....	Not necessary, *see* item 303.			
	456	FIVES' COURT	...	...	...	...	...	P. W. D. Cir. No. 29 of 1867.	Covered Fives' courts may be allowed generally at hill convalescent depôts.	33 & 34	...	
									Need not be provided, *see* items 14 and 304.			
	457	FURNITURE STORE	...	...	...	...	...	.....	See items 15 and 305.			
		(*i*) *For a depôt not exceeding 200 men in strength.*										
		1 open shed	30	20	10	} ...	1,105	.....				
		1 store-room	12	20	10							
		1 chowkidar's hut	10	10	8	...	179	.....				
		Barrackmaster's office	...	...	...	...	...	.....				
		(*ii*) *For a depôt exceeding 200 but not exceeding 554 men in strength.*	...	...	...	...	...	.....	Same as authorised for a head-quarters or a detached wing.			
		1 open shed	36	20	10	} ...	1,246	.....				
		2 store-room	12	20	10							
		Chowkidar's hut	10	10	8	...	179	.....				
		Barrackmaster's office	...	...	...	...	...	.....				

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Accommodation authorised for Convalescent Depôts—continued.

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c.				
								Authority.	Particulars.	Standard plan.	Type plan.	
		(*c*) SUBSIDIARY BUILDINGS—*contd.*	Feet.	Feet.	Feet.	Supl ft.	Supl. ft.			No.	No.	Series.
	477	COOK-HOUSES—*contd.*										
		(*vi*) *For the sergeants' mess*—										
		1 kitchen	9½	12	8	} ...	287	.....	.....	...	67	B. I. modified.
		1 cooking chamber	4	12	16							
	478	FUEL STORE FOR THE INSTITUTE	...	...	...	...	...	.....	This can be arranged for in the cook-house for the Institute, or in a verandah room of the Institute building.			
	479	LATRINES	...	...	...	...	...	.....	See items 46 and 326.			
		(*i*) *For the single men's barracks.*							A half company latrine should be given for every 50 single rank and file, or fraction of 50, of the authorised strength of the depot.			
		Each half-company latrine—										
		Privy	13 1/4	8 5/6	7	} ...	265 each	.. ...	.....	...	132	Ditto.
		Sweeper's room	8	5	7							
		Dry earth bin	5	3	...							
		(*ii*) *For barracks for married rank and file and married class C sergeants.*	...	...	...	...	...	.....	See item 326 (iii)	...	7G	Ditto.
		(*a*) For men—										
		1 seat for every 5 men or fraction of 5.										
		(*b*) For women and children—										
		1 seat for every 5 families or fraction of 5	...	...	...	...	...	.....	See item 326 (iii)	...	7G	Ditto.

PART II.

Accommodation authorised for Convalescent Depôts.

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c.		Standard plan.	Type plan.	
								Authority.	Particulars.		No.	No.	Series.
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.					
Convalescent Depôts.		*Note*—The accommodation shown in this statement has been approved by Government in Military Department letter No. 3023 M. W., dated 14th November 1891.						G. O. 52 of 1876. Letter No. 3188 C., dated 19th June 1891. From Adjutant General in India, to Director-General of Military Works.	BENGAL. The following warrant and non-commissioned *staff* is authorised :— I.—For each of the Depôts at Murree, Kasauli, Lanlour, and Darjeeling. *Warrant officers.* Sergeant-major . . . . . 1 Schoolmaster . . . . . 1 Schoolmistress . . . . . 1 — 3 *Non-commissioned officers.* Quartermaster sergeant . . . 1 Orderly-room clerk . . . . 1 Acting paymaster sergeant . . 1 Librarian . . . . . 1 Armourer's sergeant or assistant armourer sergeant . . . . 1 — 5 II.—For each of the Depôts at Dalhousie and Naini Tal. *Warrant officers.* Sergeant-major . . . . . 1 Schoolmaster . . . . . 1 Schoolmistress . . . . . 1 — 3 *Non-commissioned officers.* Quartermaster sergeant . . . 1 Orderly-room clerk . . . . 1 Acting paymaster sergeant . . 1 Librarian . . . . . 1 — 4 III.—For the Depôt at Pachmari. *Non-commissioned officers.* Quartermaster sergeant . . . 1 Acting orderly-room clerk . . . 1 — 2				

								Letter No. $\frac{2307}{1858}$, dated 13th July 1891. From Adjutant General, Bombay, to Director-General of Military Works.	BOMBAY. The following warrant and non-commissioned *staff* is authorised :— I.—For Deolali Depôt. *Warrant officers.* Sergeant-major . . . . . 1 — 1 *Non-commissioned officers.* Quartermaster sergeant . . . 1 Orderly-room clerks . . . . 2 Paymaster sergeant . . . . 1 Provost sergeant . . . . . 1 — 5 II.—For Colaba Depôt. *Warrant officers.* Sergeant-major . . . . . 1 — 1 *Non-commissioned officers.* Quartermaster sergeant . . . 1 Orderly-room clerk . . . . 1 — 2 III.—For Purandhar Sanitarium. *Warrant officers.* Sergeant-major . . . . . 1 Schoolmaster . . . . . 1 — 2 *Non-commissioned officers.* Quartermaster sergeant . . . 1 — 1 IV.—For each of the Sanitaria of Ghizree and Mount Abu. *Warrant officers.* Sergeant-major . . . . . — 1 — *Non-commissioned officers.* Quartermaster sergeant . . . 1				

Accommodation authorised for Convalescent Depôts—continued.

Convalescent Depôts—*contd.*

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c. — Authority.	Detail of Orders, &c. — Particulars.	Standard plan.	Type plan.	
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.			No.	No.	Series.
									MADRAS.			
								Letter No. 1600 B. A., dated 16th July 1891. From Adjutant-General, Madras, to Director-General of Military Works.	The authorised strength of the warrant and non-commissioned *staff* is:—			
									I.—At Wellington.			
									Warrant officers.			
									Sergeant-major . . . . . 1 Schoolmaster . . . . . 1 Schoolmistress . . . . . 1 — 3			
									Non-commissioned officers.			
									Quartermaster sergeant . . . 1 Paymaster sergeant . . . . 1 Orderly-room sergeant . . . 1 — 3			
									II.—At Poonamalle.			
									Warrant officers.			
									Sergeant-major . . . . . 1 Schoolmaster . . . . . 1 Schoolmistress . . . . . 1 — 3			
								P. W. D. Circular No. 57 of 1867. G. O. 52 of 1876 .	*Non-commissioned officers not on the staff.* These are allowed on the following scale:— *1 Class B sergeant for every 100 men or fraction of 100 men. 3 Class C sergeants for 80 rank and file. * This is the pay-sergeant referred to in G. O. 52 of 1876 (letter No. 2286 B. $\frac{\text{Accommodation for Troops}}{\text{European}}$, dated 5th June 1891, from Quartermaster-General in India, to Director-General of Military Works.)			
									Married and single rank and file. The strength of the married and single rank and file is to be decided in each case by the Commander-in-Chief and Government.			
		(*a*) PRIMARY BUILDINGS						Proceedings of a Special Committee assembled at Simla on 7th June 1887. M. D. letter No. 1562 M. W., dated 1st August 1887.	Fire-places are to be supplied, instead of stoves; iron stove-pipes may be used above the chimney breast, if considered suitable by the Director-General of Military Works.			
	444	Barracks for the Single rank and file.	...	...	...	...	...	Q. M. G. in India's letter No. 2286 B., dated 5th June 1891.	The strength to be provided for will, in each case, be decided by the Commander-in-Chief and Government. **See remarks against item 293.**	1 & 2	...	Hutted camp.
	445	Barracks for Married rank and file and married class C sergeants.	...	...	...	...	...	Q. M. G. in India's letter No. 2286 B., dated 5th June 1891.	The strength of married rank and file to be provided for will, in each case, be decided by the Commander-in-Chief and Government. 36 per cent. of the authorised strength* of class C sergeants for the depôt should be provided for as married men. * This is three sergeants per 80 rank and file. In addition, spare quarters to extent of 25 per cent. (on the total for married rank and file and married class C sergeants), are to be given in order to allow of men with large families being given two units, if necessary. **See remarks against item 294**	2	...	Ditto.

Arm of the service, Department, &c.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, &c.				
								Authority.	Particulars.	Standard plan.	Type plan.	
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.			No.	No.	Series.
		(*b*) AUXILIARY BUILDINGS—*contd.*										
	454	DRY STORE-ROOM . . .	...	...	...	...	...	.....	See item 302.	26	...	
		1 room	15	15	12	...	443	.....	Accommodation is given under same roof as the Quartermaster's (or regimental) store,—*see* item 409.			
	455	FIRE-ENGINE SHED . . .	...	...	...	...	...	.....	Not necessary, *see* item 303.			
	456	FIVES' COURT . . .	...	...	...	...	...	P. W. D. Cir. No. 29 of 1867.	Covered Fives' courts may be allowed generally at hill convalescent depôts.	33 & 34	...	
									Need not be provided, *see* items 14 and 304.			
	457	FURNITURE STORE . . .	...	...	...	...	...	.....	See items 15 and 305.			
		(*i*) *For a depôt not exceeding 200 men in strength.*										
		1 open shed . . .	30	20	10	} ...	1,105	.....				
		1 store-room . .	12	20	10			.....				
		1 chowkidar's hut . .	10	10	8	...	179	.....				
		Barrackmaster's office .	...	...	...	...	...	.....				
		(*ii*) *For a depôt exceeding 200 but not exceeding 554 men in strength.*	..	...	...	...	...	.....	Same as authorised for a head-quarters or a detached wing.			
		1 open shed	36	20	10	} ...	1,246	.....				
		2 store-room . . .	12	20	10							
		Chowkidar's hut . . .	10	10	8	...	179	.. ...				
		Barrackmaster's office . .	...	...	...	...	...	.....				

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, etc.				
								Authority.	Particulars.	Standard plan.	Type plan.	
										No.	No.	Series.
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.					
		(*iv*) *For Hospitals for Contagious Diseases.*	...	...	...	...	...	...	See item 630; the bath-rooms will answer the purpose.			
		(*v*) *For Hospitals for Followers* .	...	...	...	...	...	...	A latrine similar, as regards design, to that allowed for Native Infantry (see item 512), should be provided, the number of seats being reduced in proportion to the number of patients the followers hospital will accommodate.			
		(*vi*) *For Commissioned and Warrant Officers of the S. M. D.*— Type-plan of a latrine for 4 Medical Officers— Latrine	11	12	...	...	199, exclusive of screen walls.	M. D. letter No. 1593 M. W., dated 4th August 1887.	Government approve the type-plan.	...	13	Hosptial.
								P. W. D. Cir. No. 4 of 1875,	Authorises the provision of latrines for Commissioned and Warrant Officers of the S. M. D. The extent of accommodation to be allowed in any particular case will depend upon the number to be provided for.			
		(*vii*) *For Hospital Assistants* .	...	...	...	...	...	...	See item 636, as in the case of Hospital Storekeepers, latrines for Hospital Assistants should be provided at the expense of the Cantonment Funds.			
		(*viii*) *For Hospital Servants* .	...	...	...	...	...	M. D. letter No. 630 M. W., dated 12th July 1882.	Government decline to authorise the provision, at the expense of the State, of latrines for hospital servants.			
								Para. 690, I. A. R., Vol. VI.	The provision of the necessary latrine accommodation for the Native establishment attached to military hospitals, will be arranged for by the Cantonment Committee, and where existing latrines are inconveniently placed, or situated at too great a distance from the hospital, application will be made through the local military authorities for the construction of a special latrine for the use of the hospital servants.			
		(*ix*) *For Hospital Store-keepers* .	...	...	...	...	...	.....	See item 636: latrines for hospital store-keepers should be provided at the expense of the Cantonment Funds.			
		(*x*) *For the Hospital Guard-room*	..	...	...	...	....	.....	Not authorised.			
	652	LAVATORIES	...	...	...	...	...	.....	See remarks against item 45.			
		(*i*) *For Hospitals for Men* .	...	...	...	...	Included in that of the Hospital.	.....	These are to be provided under verandah roofs at the ends of the main buildings.	...	1A to 1F	Hospital.
									Separate out-door lavatories are not considered necessary.			
									Height of basin stands should be increased to 27".			
								P. W. D. Cir. No. 19 of 1866.	A separate lavatory (a small bath-room in the rear verandah would do) is authorised for the ward in which ophthalmic patients are treated.			

Accommodation authorised for Station Hospitals (British) in the Plains—continued.

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, etc.				
								Authority.	Particulars.	Standard plan.	Type plan.	
										No.	No.	Series.
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.					
		(*c*) SUBSIDIARY BUILDINGS—*contd.*										
	650	COOK-HOUSES—*contd.*										
		(*iv.*) *For Commissioned and Warrant Officers of the S. M. D.* Type plan of cook-house for 4 Officers—								...	13	Hospital.
		4 kitchens, each . .	7¾	6	11¼	...	640	M. D. letter No. 1593 M. W., dated 4th August 1887.	Government approve the type-plan . . .			
		4 cooking places, each .	7¾	1½	8½	...		P. W. D. Cir. No. 4 of 1875.	Government authorise the provision of cook-houses for Commissioned and Warrant Officers of the S. M. D.			
								P. W. D. letter No. 176 of 1876.	A separate cook-house is to be provided for Commissioned and Warrant Officers of the S. M. D.			
	651	LATRINES—	...	...	...	...	...	..	See remarks against item 46.	...	1 A. to 1 F.	Hospital.
		(*i*) *For Hospitals for Men*—	...	...	...	...	Included in that of the Hospital.	...	These are to be constructed as annexures to the main buildings.			
									Cross-ventilation (as shown in type-plans) is to be provided between the latrines and the main buildings which they serve.			
									Separate out-door latrines are not considered necessary.			
		(*ii*) *For Hospitals for Soldiers' Families.*	...	...	...	...	Included in that of the Hospital.	...	These are to be constructed as annexures to the main buildings.	...	3 and 4	Hospital.
									Cross-ventilation (as shown in type-plans) is to be provided between the latrines and the main buildings.			
									One seat in each latrine (for hospitals for soldiers' families) should be arranged for use by children with a step, 2′ wide and 6″ high in front of it.			
		(*iii*) *For Hospitals for Officers* .	...	...	...	...	...	...	See item 629; the bath-room will answer the purpose.			

Accommodation authorised for Station Hospitals (British) in the Plains—continued.

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, etc. Authority.	Particulars.	Standard plan. No.	Type plan. No.	Type plan. Series.
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.					
									The female sweeper should receive a quarter of the size authorised for a married hospital servant.			
		(*a*) PRIMARY BUILDINGS—*concld.*										
	635	QUARTERS FOR HOSPITAL SERVANTS—*contd.*						Clause 47 of I. A. Cirs. for 1887.	The following scale of transport bearers is authorised in cantonments:— For a battery of Horse, Field, Mountain, Heavy, or Garrison Artillery . . . 4 bearers. For a company of Royal Engineers 4 ,, For a regiment of cavalry . . 4 ,, For a battalion of infantry . . 4 ,, For a detached wing of cavalry or infantry . . . . 4 ,, Station hospitals under 100 beds . 4 ,, Station hospitals over 100 beds and upwards . . . . 8 ,,			
									The regimental bearers should be accommodated in a shed (20′×12′× 10′ high interior measurements) in the vicinity of the quarter-guard of each corps, the remaining men should be housed along with the other hospital servants.—(Letter No. 3004, *Buildings*, dated 27th August 1884, from the P. M. O., H. M.'s F., to the D. G. of M. W.			
								M. D. letter No. 987 M. W., dated 29th September 1884.	Government do not consider that quarters should be provided for the conservancy establishments* attached to station hospitals. Government explain that these establishments once belonged to the regimental dry-earth conservancy establishments allowed to British troops in quarters only, and the fact of their now being specially attached to station hospitals gives them no claims to privileges which they did not previously enjoy. * The establishments referred to are those sanctioned in Appendix No. 24, I. A. R., Vol. VI, the above order does not apply to sweepers of the A. H. N. Corps.			
	636	QUARTERS FOR HOSPITAL STORE-KEEPERS.	...	...	...	...	...	M. D.. letter No. 1297 M. W., dated 28th June 1887.	After full consideration of the subject, Government decide that it is essential to the efficient working of the purveying system that hospital store-keepers should live in the hospitals. The scale of quarters considered suitable for hospital store-keepers, is that laid down for hospital assistants, as per type plan No. 11, Native Infantry series. Government, therefore, sanction the addition of a building on this scale to the list of authorised accommodation to be provided in hospitals. Quarters for hospital store-keepers are to be provided, as soon as practicable, in all hospitals for British troops by the adaptation of existing buildings or by the erection of new quarters. When the requisite accommodation is ready, hospital store-keepers will in all cases be required to reside therein and compensation for quarters will cease.			
								M. D. letters Nos. 2348 and 2349, dated 18th November 1887.	Government decide— i.—that the provision of a couple of *chulas* in the verandah of each quarter will be sufficient for cooking purposes. ii.—that latrines for hospital store-keepers should (in accordance with the spirit of para. 650, B. B. R.) be provided at the expense of the Cantonment Funds; iii.—that compensation would not be claimable if the "zenana" compound were omitted.			
								Para. 558, I. A. R., Vol VI.	Quarters for hospital store-keepers are to be built within the hospital enclosure.			
		Quarters for a Hospital Store-keeper—										
		1 room	16	12	12	...	535, exclusive of courtyard.	.....	.....	...	11	N. I. 313
		1 bath-room	8	6	8	...						
		A verandah	16	6	8	...						
		An open "Zenana" courtyard .	32	16	8	...			For the number of store-keepers to be provided for in the case of hospitals of varying strength, see Appendix No. V, Vol. VI, I. A. R.			
		(*b*) AUXILIARY BUILDINGS.										
	637	BLOCK OF ADMINISTRATIVE OFFICES—										
		Block for a hospital of 124 beds, containing—										
		1 room for medical Warrant Officer on duty . . .	14½	20	17	...	4,237	P. W. D. letter No. 894 M. W., dated 7th November 1881.	Government approve the type plan.	...	5	Hospital.
		1 Surgery	14½	20	17	...						
		1 Medical store . . .	10	20	17	...						
		1 Receiving room . . .	14½	20	17	...						
		1 Office	14½	20	17	...						
		1 Hospital Store-keeper's office	14	20	17	...						

									store-keepers, is that laid down for hospital assistants, as per type plan No. 11, Native Infantry series. Government, therefore, sanction the addition of a building on this scale to the list of authorised accommodation to be provided in hospitals. Quarters for hospital store-keepers are to be provided, as soon as practicable, in all hospitals for British troops by the adaptation of existing buildings or by the erection of new quarters. When the requisite accommodation is ready, hospital store-keepers will in all cases be required to reside therein and compensation for quarters will cease.				
								M. D. letters Nos. 2348 and 2349, dated 18th November 1887.	Government decide— i.—that the provision of a couple of *chulas* in the verandah of each quarter will be sufficient for cooking purposes. ii.—that latrines for hospital store-keepers should (in accordance with the spirit of para. 650, B. B. R.) be provided at the expense of the Cantonment Funds; iii.—that compensation would not be claimable if the "zenana" compound were omitted.				
		Quarters for a Hospital Store-keeper—						Para. 558, I. A. R., Vol VI.	Quarters for hospital store-keepers are to be built within the hospital enclosure.				
		1 room	16	12	12	...	535, exclusive of courtyard.	.....	.....	...	11	N. I.	
		1 bath-room	8	6	8	...							
		A verandah	16	6	8	...							
		An open "Zenana" courtyard .	32	16	8	...							
									For the number of store-keepers to be provided for in the case of hospitals of varying strength, see Appendix No. V, Vol. VI, I. A. R.				
		(*b*) AUXILIARY BUILDINGS.											
	637	BLOCK OF ADMINISTRATIVE OFFICES— Block for a hospital of 124 beds, containing—											
		1 room for medical Warrant Officer on duty . . .	14½	20	17	...	4,237	P. W. D. letter No. 894 M. W., dated 7th November 1881.	Government approve the type plan.	...	5	Hospital.	
		1 Surgery	14½	20	17	...							
		1 Medical store . . .	10	20	17	...							
		1 Receiving room . . .	14½	20	17	...							
		1 Office	14½	20	17	...							
		1 Hospital Store-keeper's office	14	20	17	...							

Accommodation authorised for Station Hospitals (British) in the Plains—continued.

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, etc. Authority.	Particulars.	Standard plan.	Type plan.	
										No.	No.	Series.
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.					
									The female sweeper should receive a quarter of the size authorised for a married hospital servant.			
		(*a*) PRIMARY BUILDINGS—*concld.*										
	635	QUARTERS FOR HOSPITAL SERVANTS—*contd.*						Clause 47 of I. A. Cirs. for 1887.	The following scale of transport bearers is authorised in cantonments:— For a battery of Horse, Field, Mountain, Heavy, or Garrison Artillery . . . 4 bearers For a company of Royal Engineers 4 " For a regiment of cavalry . 4 " For a battalion of infantry . . 4 " For a detached wing of cavalry or infantry . . . . 4 " Station hospitals under 100 beds . 4 " Station hospitals over 100 beds and upwards . . . . 8 "			
									The regimental bearers should be accommodated in a shed (20'×12'× 10' high interior measurements) in the vicinity of the quarter-guard of each corps, the remaining men should be housed along with the other hospital servants.—(Letter No. 3004, *Buildings*, dated 27th August 1884, from the P. M. O., H. M.'s F., to the D. G. of M. W.			
								M. D. letter No. 987 M. W., dated 29th September 1884.	Government do not consider that quarters should be provided for the conservancy establishments* attached to station hospitals. Government explain that these establishments once belonged to the regimental dry-earth conservancy establishments allowed to British troops in quarters only, and the fact of their now being specially attached to station hospitals gives them no claims to privileges which they did not previously enjoy. * The establishments referred to are those sanctioned in Appendix No. 24, I. A. R., Vol. VI, the above order does not apply to sweepers of the A. H. N. Corps.			
	636	QUARTERS FOR HOSPITAL STORE-KEEPERS.	...	...	...	...	...	M. D., letter No. 1297 M. W., dated 28th June 1887.	After full consideration of the subject, Government decide that it is essential to the efficient working of the purveying system that hospital store-keepers should live in the hospitals. The scale of quarters considered suitable for hospital			

store-keepers, is that laid down for hospital assistants, as per type plan No. 11, Native Infantry series.

Therefore sanction the addition of a

Accommodation authorised for Station Hospitals (British) in the Plains—continued.

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, etc.				
								Authority.	Particulars.	Standard plan.	Type plan.	
		(*a*) PRIMARY BUILDINGS—*contd.*	Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.			No.	No.	Series.
	632	QUARTERS FOR LADY NURSES—*contd.*							*For all the ladies at any one station.* 1 common dining room, giving 90 square feet per lady. 1 common sitting room, giving 90 square feet per lady.			
								M. D. letter No. 3210 M. W., dated 4th December 1891.	The following special scale of accommodation has been sanctioned for the lady nurses at Quetta:— *For each lady.* 1 room . . . . . 16′ × 13′. 1 bath room not less than . . 8′ × 6′. *For all the ladies at Quetta.* 1 common dining room at 67 square feet per lady. 1 common sitting room at 67 square feet per lady. 1 store room . . . . . 13′ × 10′. 1 pantry . . . . . 13′ × 8½′.			
									A pantry, connected with the dining room, should be given in the verandah (Q. M. G. in India's memo. No. 1790B, dated 13th May 1891.)			
	633	QUARTERS FOR COMMISSIONED AND WARRANT OFFICERS OF THE S. M. D. Type plan shewing a block of quarters for the medical subordinates attached to a station hospital of 124 beds. This plan allows—										
		(*i*) *For an Apothecary*—										
		2 rooms, each . . .	18	16	17	...	6,369, exclusive of steps.	M. D. letter No. 586 M. W., dated 27th April 1886.	Government approve the type plan . . .	...	12	Hospital.
		1 room	18	10	17 Average.	...						
		1 bath-room . . .	9	10	9							
		1 ,, . . .	10	10	9							
		(*ii*) *For 2 Assistant Apothecaries, each quarter containing*—										
		1 room	18	16	17	...						
		1 ,, ...	16	10	17	...						
		1 ,, ...	18⅜	10	Average. 9⅜							
		1 bath-room . . .	10⅜	10	9⅜							
		(*iii*) *For 2 Sub-Assistant Apothecaries, each quarter containing*—										
		1 room	18	16	17	...						
		1 room (portion of which is to be used as bath-room.)	18⅜	10	Average. 9⅜	...						
								Clause 83 of I. A. Cirs. for 1884. Para. 177, B. B. Regulations.	Warrant medical officers in Military and Staff employment are to be provided with free quarters. The authorised accommodation is —			
									i.—For a Senior Apothecary, 1st grade. Same as for a Deputy Commissary or an Assistant Commissary, *viz.*:— 1 main room . . . . 24′ × 16′ 2 ,, rooms, each . . . 16 × 16 1 verandah room . . . 16 × 10 2 bath or store rooms	...	1	Warrant Officers.
									ii.—For a Senior Apothecary, 2nd grade. Same as for a Deputy Assistant Commissary, *viz.*:— 1 main room . . . . 24′ × 16 1 ,, ,, ... 16 × 16 1 verandah room . . . 16 × 10 2 bath or store rooms	...	2	Warrant Officers.
									iii.—For an Apothecary. Same as for a Conductor, *viz.*:— 2 main rooms, each . . . 18′ × 16′ 1 verandah room . . . 17 × 10 2 bath or store rooms	... ...	12 3	Hospital. Warrant Officers.
									iv.—For an Assistant Apothecary. Same as for a Sub-Conductor, *viz.*:— 1 main room . . . . 18′ × 16′ 1 verandah room . . . 18 × 10 1 ,, ,, . . . 16 × 10 1 bath or store room	... ...	12 3	Hospital. Warrant Officers.
								P. W. D. Cir. No. 63 of 1876.	*v.—For a Sub-Assistant Apothecary.** 1 main room . . . . 18′ × 16′ 1 verandah room . . . 18 × 10 A portion of the verandah room to be arranged for use as a bath-room. * Same scale as previously allowed to *passed* Apprentices.	...	12	Hospital.

Accommodation authorised for Station Hospitals (British) in the Plains—continued.

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, etc. Authority.	Particulars.	Standard plan. No.	Type plan. No.	Type plan. Series.
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.					
Station Hospitals—British—in the Plains—*continued.*		(*a*) PRIMARY BUILDINGS—*concld.*										
	635	QUARTERS FOR HOSPITAL SERVANTS—*contd.*							The female sweeper should receive a quarter of the size authorised for a married hospital servant.			
								Clause 47 of I. A. Circs. for 1887.	The following scale of transport bearers is authorised in cantonments :— For a battery of Horse, Field, Mountain, Heavy, or Garrison Artillery . 4 bearers. For a company of Royal Engineers 4 " For a regiment of cavalry . 4 " For a battalion of infantry . 4 " For a detached wing of cavalry or infantry . . . 4 " Station hospitals under 100 beds 4 " Station hospitals over 100 beds and upwards . . . 8 "			
								M. D., letter No. 987 M. W., dated 29th September 1884.	The regimental bearers should be accommodated in a shed (20'×12'×10' high interior measurements) in the vicinity of the quarter-guard of each corps, the remaining men should be housed along with the other hospital servants.—(Letter No. 3004, *Buildings*, dated 27th August 1884, from the P. M. O., H. M.'s F., to the D. G. of M. W.			
									Government do not consider that quarters should be provided for the conservancy establishments* attached to station hospitals.			
									Government explain that these establishments once belonged to the regimental dry-earth conservancy establishments allowed to British troops in quarters only, and the fact of their now being specially attached to station hospitals gives them no claims to privileges which they did not previously enjoy. * The establishments referred to are those sanctioned in Appendix No. 24, I. A. R., Vol. VI, the above order does not apply to sweepers of the A. H. N. Corps.			
	636	QUARTERS FOR HOSPITAL STORE-KEEPERS.	...	...	...	...	...	M. D., letter No. 1297 M. W., dated 28th June 1887.	After full consideration of the subject, Government decide that it is essential to the efficient working of the purveying system that hospital store-keepers should live in the hospitals. The scale of quarters considered suitable for hospital			

17TH NOVEMBER 1891, No. 2752 R., PUBLIC WORKS.

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read again the following paper :—

G.O., dated 28th October 1891, No. 2470 R., Public Works.

Read also the following paper :—

From the Consulting Engineer for Railways, dated Madras, 29th October 1891, No. 952.

Report by Lieutenant W. C. SMYTH, R.E., on floods which occurred on the South Indian Railway during the third week of October 1891.

Traffic on the South Indian Railway was interrupted in four places by floods during the third week of October.

2. At Vellore very heavy rain fell on the night of the 21st, 8 inches being registered in two consecutive hours. The immediate result was a flood in the kusba nullah which flows under the line through a girder bridge consisting of one 25 feet and one 20 feet opening on the south side of Vellore station compound and then bends round parallel to the line forming the west boundary of the compound. The banks of the nullah are protected by bunds on either side along the west boundary of the station-yard, but although these bunds should have been kept in repair by the Municipality, they had been much neglected lately and were trodden down by cattle and foot-passengers going to and from Kusba village. The water in the nullah topped one of these openings in the bund and soon after a breach of 300 feet was formed and the station compound was flooded.

3. The water flowed parallel to the line and crossed it near the north distant signal, but little damage was done to the line beyond the washing away of the softer portions of the ballast, which was quickly repaired when the water fell. The wire fencing along the line suffered severely and was thrown down in many places by the rush of water carrying straw and grass which got entangled in the wires.

4. The intensity of the flood was caused by the overflow of the Thorabadi tank feeder which is not bunded and is not provided with sufficient waterway under the public roads. The Thorabadi tank should be restored or the banks of its feeder be bunded.

5. On the night of the 22nd October between Kátpádi and Ramapuram at G. 203/9 the railway bank was undermined and nearly breached by the wash caused by the bursting of a tank feeder bund. The feeder passes under the line at 203/9 by a single 25 feet girder bridge and the earthwork at the back of the north abutment was eroded for a length of 90 feet. The bank was quickly made up and was safe for traffic at 11 A.M. on the 24th.

6. The feeder was diverted and bunded by the Railway Company and will be restored and pitched for a short distance from the line. The protection works of the bridge have not yet been carried out, but the bank is pitched on the east side next the tank and should now be pitched on the west side also.

7. On the same night between Villupuram and Panruti at mile 103/8 the earthwork behind the south abutment of a three 40-feet girder bridge over the Malatar channel was scooped out to a depth of 11 feet below rail level, the hole being about 17 feet in length and 20 feet wide. T[illegible] of the abutment rests on two wells

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man	Plinth area of building.	Detail of Orders, etc.				
								Authority	Particulars.	Standard plan.	Type plan.	
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.			No.	No.	Series.
		(*a*) PRIMARY BUILDINGS—*contd.*							At stations where the winter is severe, in the Punjab for instance, the maximum size of a ward should not exceed that required for 12 beds (Memo. by the P. M. O., H. M.'s F., dated 2nd April 1881).			
	627	HOSPITAL FOR MEN—*contd.*						M. D. letter No. 1876 M. W., dated 28th July 1891. D. G.'s Cir. No. 11B of 1891.	At stations for which lady nurses are authorised (see item 632) a small ward (say, of the size authorized for attendants) with an attached bath-room (latter can be given in back verandah) should be provided for the convenience of the ladies whilst on duty.			
								Para. 711, of I. A. R., Vol. VI.	Accommodation, equipment, and supplies for station hospitals of British troops will be allowed at the rate of 12 per cent. on the authorised strength of the garrison at the Stations mentioned below, and 10 per cent. at all other stations, excepting at Deolali, where special arrangements are made :— Agra, Ahmedabad, Ahmednagar, Bombay, Calcutta, Cherat, Delhi, Fort Lahore, Karachi, Kirki, Meean Meer, Meerut, Mhow, Mount Abu, Neemuch, Nowshera, Nusseerabad, Peshawar, Poona, Poonamallee, Purandhar, Quetta, Ramandrug, Satara, Wellington.			
								Para. 627, I. A. R., Vol. VI. P. W. D. Cir. No. 21 of 1871.	Wire-netting, or other suitable open screen, should be provided for the (upper Clerestory) windows when recommended by the Principal Medical Officer of the district.			
								Para. 628, I. A. R., Vol. VI. P. W. D. letter No. 841, of 1872.	A separate ward will, when practicable, be allotted to prisoners whom it may be necessary to admit into hospital for treatment.			
								Para. 98, of I. A. Cirs. for 1891, Clause 184.	"A hospital, or other proper place, for the reception of sick prisoners shall be provided in every prison,* or, when this is found impracticable or inconvenient, in some place outside the prison which shall have been set aside for the purpose, and declared by the Governor General in Council to be a part of the prison." * This refers to Military prisons.			

									At stations where there are Military prisons, special provision should be made, either in the prison itself or in the Station Hospital, for the number of prisoners the prison can contain, and on the scale laid down in para. 711, section VIII, I. A. R., Vol. VI (*see above*). At stations where there are no Military prisons, the prisoners will be treated in the Station Hospital (para. 628, section VIII, I. A. R., Vol. VI; *see above*), but no extra accommodation should be provided on their account, as the scale of 10 to 12 per cent. on the strength of the garrison (para. 711 of the same Regulations) includes the men in garrison and regimental provost prisons.			
								P. W. D. letter No. 841 of 1872.	Wards intended for prisoners should have grated doors and windows.			
								Para. 629, I. A. R., Vol. VI.	A ward will, when practicable, be appropriated for the treatment of eye diseases, and will be colorwashed an orange shade.			
								Para. 639, I. A. R., Vol. VI.	Where the requisite accommodation exists in Station * * * Hospitals, Commissioned and Warrant Officers may be admitted for treatment. At certain stations, special hospital accommodation has been authorised for Commissioned Officers, *see* item 629.			
								Para. 652, I. A. R., Vol. VI.	When special wards are not provided for the purpose, the Medical Officer in charge will apportion wards for the treatment of infectious or contagious diseases, lunatics, sick prisoners, ophthalmic or other special cases.			
								Para. 708, I. A. R., Vol. VI.	Station Hospitals are intended for the reception and treatment of sick from all British Corps in Garrison (including Non-Commissioned Officers and soldiers of the Unattached List and in departmental employment), seamen, marines, and such other Europeans as the Officer Commanding the Station may direct to be admitted therein.			
								Para. 713 A, I. A. R., Vol. VI.	Wherever suitable accommodation is available, Sergeants will be treated in wards separate and distinct from those occupied by other Non-Commissioned officers and privates. Except in case of — (i) Sick officers at stations where *special* accommodation has been authorised for them; and (ii) Sick prisoners *from Military prisons*, the authorised accommodation of 10 to 12 per cent. on the strength of the garrison, includes provision for the undermentioned requirements :— (1) Sick prisoners from garrison and regimental provost prisons.			

Accommodation authorised for Station Hospitals (British) in the Plains—continued.

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, etc.		Standard plan.	Type plan.	
								Authority.	Particulars.	No.	No.	Series.
			Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.					
		(*a*) PRIMARY BUILDINGS—*contd.*										
	627	HOSPITAL FOR MEN—*contd.*							(2) Ward for treatment of ophthalmic cases. (3) Wards for treatment of Commissioned and Warrant Officers. (4) Wards for the treatment of infectious or contagious diseases (*see* item 630.) (5) Wards for treatment of lunatics. (6) Wards for the treatment of special cases. (7) Wards for the treatment of men on the Unattached List, etc., see para. 708, of I. A. R., Vol. VI (*above*).			
									In designing hospital accommodation, a number of small wards (containing space for 2 to 4 beds) should be provided in order to meet the above-mentioned requirements.			
									As a rule an attendants' room should be placed between the smaller ward for special case, and the larger one for ordinary cases. An attendants' room should be given next to the ward for lunatics (Memo. dated 2nd April 1881, by the P. M. O., H. M.'s F.			
									Two pegs (as shown in type plans) should be provided for each patient, one for hanging his helmet on, the other for suspending the diet sheet to.			
								Q. M. G. in India's Cirs. No. 34 and No. 53 of 1883.	The wall spaces occupied by cots should be numbered serially, hospital by hospital. The tickets are not to be moveable. Metal tickets screwed to walls should be given.			
								P. W. D. Cir. No. 19 of 1866.	Government decides that the sub-division of a hospital into a number of very small buildings is objectionable on sanitary, administrative, and financial grounds.			

									Further, that there is no objection to placing 50 or 60 sick in one building, specially if the building is so designed that it shall not be covered by one continuous roof, but shall be separated into sections, each of which shall have as nearly as possible an independent ventilation.			
									The beds are to be arranged on the opposite sides of the room, between the doors, * * *; no more than two beds are to be placed in the wall space between two doors; the number of doors in a ward is not to be less than half the number of beds in that ward; doors are to be in equal numbers on the opposite sides of the wards.			
									For hospitals in the plains of India, the side openings should, as a rule, be doors * *. In certain localities in the plains, both doors and windows may be resorted to, the proportion of each being regulated by local conditions of climate, etc., etc.			
									In parts of the country in which the climate is exceptionally hot, throughout the year, it may perhaps be sometimes desirable so to arrange the wards that there shall only be one bed between two doors, or between a window and a door.			
									Space in main wards to be as follows:— 10 Running feet per bed. 24 " " width of wards. 20 " " height of wards from floor to wall plate. These dimensions give 120 superficial feet and 2,400 cubic feet per bed. The space in the small wards should average from 150 to 180 superficial feet per bed.			
									Unless there is ample spare space (after providing for all other primary and auxiliary purposes) dining-rooms are not to be given in addition to day-rooms.			
								P. W. D. Cir. No. 32 of 1867.	Directs that at all stations at which there is a possibility of their being required in the cold season, fireplaces should be provided in all the wards of hospitals. This order is not to necessitate any increase in the size of the wards, as the fireplaces are to be constructed (in the proportion of one to each small, and two to each large ward) in some of the wall spaces, the whole of which will never be occupied during the winter months when the hospitals have comparatively few inmates. The fireplaces, however, should have no projections, so that the openings may be covered, and the wall spaces used when required.			
								Para. 1179, I. A. R., Vol. VI.	Where no fireplaces exist in hospital buildings at stations where fuel is authorised, stoves, with pipes leading to the open air, will be provided.			
									Type plan of Hospital stove	...	1	Miscellaneous.

Accommodation authorised for Station Hospitals (British) in the Plains—continued.

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, etc.				
								Authority.	Particulars.	Standard plan.	Type plan.	
		(*a*) PRIMARY BUILDINGS—*contd.*	Feet.	Feet.	Feet.	Supl. ft.	Supl. feet.			No.	No.	Series.
	627	HOSPITAL FOR MEN—*concld.*						P. W. D. Cir. No. 28 of 1869.	In place of movable cupboards or almirahs (furniture), cupboards with sliding shelves and folding-doors (fixtures) should be given in the walls.			
									The cupboards would only be required in the day-rooms and rooms for attendants.			
								P. W. D. letter No. 347 M. W., dated 3rd March 1875.	Fan-lights over doors of hospitals are essential.			
								P. W. D. letter No. 699 M. W., dated 3rd November 1880.	Government do not approve of the introduction of circular domed wards for hospitals in India.			
	628	HOSPITAL FOR SOLDIERS' FAMILIES.						M. D. letter No. 2524 D., dated 20th June 1889. Para. 712, I. A. R.	Government sanction the adoption of the following revised scale of accommodation * * in hospitals for soldiers' wives and children :—			
									100 and under 250 troops, 1 woman and 2 children 250 „ 500 „ 2 women „ 2 „ 500 „ 1,000 „ 3 „ „ 3 „ 1,000 „ 1,500 „ 4 „ „ 4 „ 1,500 „ 2,000 „ 5 „ „ 5 „ Over 2,000 „ 6 „ „ 6 „			
		Hospital for Soldiers' families—										
		1 Ward for 10 beds	$51\frac{1}{6}$	24	20	$122\frac{4}{9}$	9,561 excluding steps, but including lamp-room and latrine and passages to the same.					
		1 „ „ 6 „	$33\frac{1}{6}$	24	20	$132\frac{2}{3}$						
		1 Lying-inward	19	24	20	228						
		1 Attendants' room	12	24	20	...						
		Quarters for a Matron—										
		1 Sitting room	18	24	20	...		.....	...	3	Hospital.	
		1 Bed-room	16	$11' 8\frac{1}{4}''$	...	...				1B. to 1F.	„	
		1 Bath-room	$11' 8\frac{1}{4}''$	$7\frac{5}{8}$	...	...						
		With private ablution rooms and lavatory at one end of the building under verandah roof.										

		Hospital for Soldiers' families.										
		1 Ward for 6 beds	$33\frac{1}{6}$	24	20	$132\frac{2}{3}$	7,624 excluding steps, but including lamp-room and latrine and passages to the same.					
		1 „ „ 2 „	15	24	20	180						
		1 Lying-inward	19	24	20	228						
		1 Attendants' room	12	24	20	...						
		Quarters for a Matron—										
		1 Sitting-room	18	24	20	...		...	.....	...	4	Hospitals.
		1 Bed-room	16	$11' 8\frac{1}{4}''$	...	...					1B. to 1F.	„
		1 Bath-room	$11' 8\frac{1}{4}''$	$7\frac{5}{8}$	...	...						
		With private ablution rooms and lavatory at one end of the building under verandah roof										
								P. W. D. letter No. 894 M. W., dated 7th November 1881.	Government approve the proposed type plans of hospitals for British troops in the plains.			
								P. W. D. Cir. No. 97 of 1869.	Although the provision of a separate women's hospital, with all troops, should be considered essential yet it is desirable that women and children should be treated, as far as may be practicable, in their own quarters, specially when they occupy family barracks on the standard plan. "In cases where hospital accommodation is required for only a very few female patients, it may be provided for in a separate ward in the men's hospital * *"			
								Para. 732, I. A. R., Vol. VI.	The hospital for soldiers' wives and children will ordinarily form a ward of the station hospital; when a special hospital has been provided, it will form a section of the station hospital * * .			
								Para. 739, I. A. R., Vol. VI.	At stations where hospitals for soldiers' families have not been established, a room in barracks (if available) will be allotted as a ward for the reception of such sick women and children as it may be deemed expedient to remove from their quarters * *.			
									The remarks made in the case of item 627 as regards— i—Double-storied buildings, ii—Wire-netting for Clerestory windows, iii—Ward for eye diseases, iv—Provision of pegs, v—Numbering of wall spaces, vi—Arrangement of beds, vii—Provision of doors and windows, viii—Space in wards, ix—Provision of fireplaces, x— Do. of cupboards, xi— Do. of fan-lights over doors, are generally applicable to hospitals for soldiers' families.			

Accommodation authorised for Station Hospitals (British) in the Plains—continued.

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Detail of Orders, etc.				
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Accommodation authorised for Station Hospitals (British) in the Plains—continued.

Station Hospitals—British—in the Plains—*continued.*

Arm of the service, Department, etc.	Item No.	Details.	Length.	Breadth.	Height.	Floor area per man.	Plinth area of building.	Authority.	Particulars.	Standard plan. No.	Type plan. No.	Type plan. Series.
		(*a*) PRIMARY BUILDINGS—*contd.*	Feet.	Feet.	Feet.	Supl. ft.	Supl. ft.					
	628	HOSPITAL FOR SOLDIERS' FAMILIES—*contd.*						Clause 190 of, I. A. Circs. for 1881.	In the case of small stations, the number of women and children may not be such as to warrant any expenditure for the erection of a separate hospital for soldiers' families as a substitute for domiciliary medical aid in their quarters (Letter No. 5877—A, dated 18th July 1881, from the P. M. O., H. M.'s F., to the D. G. of M. W.).			
									A matron is allowed for each hospital for soldiers' families.			
								Para. 1116A, Vol. VI, I. A. R.	Assistant matrons are allowed in the following scale:— 1 to each hospital for soldiers' families when the number of dieted patients exceeds ten. 1 for every additional ten or fraction thereof. Accommodation for 1 matron only need be provided in each hospital for soldiers' families (Letter No. 3109, dated 22nd July 1892, from P. M. O., H. M.'s F., to the D. G. of M. W.)			
	629	HOSPITALS FOR OFFICERS . . .	...	...	...	...	...		Special hospital accommodation for officers has been authorised for the following stations:—			
									Allahabad for . . 2 Officers.			
									Bareilly " . . 2 "			
									Benares " . . . 1 Officer.			
									Calcutta " . . . 2 Officers.			
									Cawnpore " . . . 1 Officer.			
									Delhi " . . . 1 "			
									Darjeeling " . . . 2 Officers.			
									Fyzabad " . . . 2 "			
									Ferozepore " . . . 2 "			
									Kasauli " . . . 2 "			
									Lucknow " . . . 2 "			
									Landour " . . . 1 Officer.			
									Meean Meer " . . . 2 Officers.			
									Multan " . . . 2 "			
									Mhow " . . . 2 "			
									Naini Tal " . . . 2 "			
									Nowshera " . . . 2 "			
									Nasirabad " . . . 2 "			
									Peshawar " . . . 2 "			
									Poona " . . . 4 "			
									Quetta " . . . 2 "			
									Rawal Pindi " . . . 3 "			
									Secunderabad " . . . 2 "			
									Sialkote " . . . 2 "			
									Sitapur " . . . 1 Officer.			
									Umballa " . . . 3 Officers.			

GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

Railway.

Read again the following paper:—

G.O., dated 28th October 1891, No. 2470 R., Public Works.

Read also the following paper:—

From the Consulting Engineer for Railways, dated Madras, 29th October 1891, No. 952.

Report by Lieutenant W. C. SMYTH, R.E., on floods which occurred on the South Indian Railway during the third week of October 1891.

Traffic on the South Indian Railway was interrupted in four places by floods during the third week of October.

2. At Vellore very heavy rain fell on the night of the 21st, 8 inches being registered in two consecutive hours. The immediate result was a flood in the kusba nullah which flows under the line through a girder bridge consisting of one 25 feet and one 20 feet opening on the south side of Vellore station compound and then bends round parallel to the line forming the west boundary of the compound. The banks of the nullah are protected by bunds on either side along the west boundary of the station-yard, but although these bunds should have been kept in repair by the Municipality, they had been much neglected lately and were trodden down by cattle and foot-passengers going to and from Kusba village. The water in the nullah topped one of these openings in the bund and soon after a breach of 300 feet was formed and the station compound was flooded.

3. The water flowed parallel to the line and crossed it near the north distant signal, but little damage was done to the line beyond the washing away of the softer portions of the ballast, which was quickly repaired when the water fell. The wire fencing along the line suffered severely and was thrown down in many places by the rush of water carrying straw and grass which got entangled in the wires.

4. The intensity of the flood was caused by the overflow of the Thorabadi tank feeder which is not bunded and is not provided with sufficient waterway under the public roads. The Thorabadi tank should be restored or the banks of its feeder be bunded.

5. On the night of the 22nd October between Kátpádi and Ramapuram at G. 203/9 the railway bank was undermined and nearly breached by the wash caused by the bursting of a tank feeder bund. The feeder passes under the line at 203/9 by a single 25 feet girder bridge and the earthwork at the back of the north abutment was eroded for a length of 90 feet. The bank was quickly made up and was safe for traffic at 11 A.M. on the 24th.

6. The feeder was diverted and bunded by the Railway Company and will be restored and pitched for a short distance from the line. The protection works of the bridge have not yet been carried out, but the bank is pitched on the east side next the tank and should now be pitched on the west side also.

7. On the same night between Villupuram and Panruti at mile 103/8 the earthwork behind the south abutment of a three 40 feet girder bridge over the Malatar channel was scooped out to a depth of 11 feet below rail level, the hole being about 17 feet in length and 20 feet wide. T[illegible] of the abutment rests on two wells

connected by a masonry arch and the breach was caused by the earthwork sinking and slipping through the opening into the stream. To avoid a recurrence of this nature, the arch should be bricked up from the floor of the bridge.

8. At the north abutment, west wing, the pitching was slightly damaged at the foot of the slope. The breach was quickly restored and the line re-opened for traffic.

9. The Malatar channel takes off from the north bank of the Ponniar river, about 5 miles above the bridge. The opening in the main river bund is unprovided with head works and flows independently to the sea.

10. Again in the early morning of the 23rd at 105/9 between Villupuram and Panruti the line was breached for 92 feet and covered by water to a depth of 2 feet 6 inches for half a mile south of this point. The railway approaches to the Ponniar bridge on both sides are laid on the natural surface of the ground and rise to the bridge over the river, the bed of which is above the level of the surrounding country.

11. The river is trained to the bridge by banks constructed by the Irrigation Branch, Public Works Department, and the bursting of the south bank, about 300 yards west of the bridge, caused the damage to the line. The railway approaches are pitched with stone and this in a great measure saved the line. The wire fencing was thrown down and a level crossing gate at 105/9 washed away. The estimated amount of damage done by the flood is about Rs. 400. Communication was restored by 11 A.M. on the 24th.

12. The river bund is being rapidly repaired by the Public Works Department, but as only sand is available for the purpose it should, I think, be protected by stone pitching if possible, as a recurrence of the flood would probably form a fresh breach in the same place.

MADRAS,
29th October 1891.

(Signed) W. C. SMYTH, Lieut., R.E.,
Attached to the office of the
Consulting Engineer for Railways, Madras.

Submitted to Government in continuation of this office endorsement No. 944, dated 24th October 1891.

ORDER—dated 17th November 1891, No. 2752 R., Public Works.

Paras. 4, 11 and 12 of the report will be referred to the Chief Engineer for Irrigation for necessary action.

2. The Consulting Engineer for Railways will draw the attention of the Agent to paras. 6 and 7.

3. Para. 12 will be considered in the General Branch.

4. A copy of these Proceedings will be forwarded to the Government of India with the following letter:—

(Here enter No. 2753 R., dated 17th November 1891.)

(True Extract.)

(Signed) W. H. COAKER, Lieut.-Colonel, R.E.,
Joint Secy. to Govt., P.W.D.,
Railway Branch.

To the Consulting Engineer for Railways.
,, Chief Engineer for Irrigation.
,, Public Works Department, General Branch.

Exd. C. A. Munisawmy.
Spare Copies

GENERAL.
ACCOUNT.

Govt. of {1892} Madras.

PUBLIC WORKS.

Dated February, 11th

Read *Encl.*

G.O., 11th Feb. 1892, No. 418 W.

FEBRUARY.

Half-yearly Returns of Tools and Plant and Stock

Certain proposals of the Examiner, Public Works Accounts, with some exceptions, regarding the submission of the — of divisions, accepted.

connected by a masonry arch and the breach was caused by the earthwork sinking and slipping through the opening into the stream. To avoid a recurrence of this nature, the arch should be bricked up from the floor of the bridge.

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GOVERNMENT OF MADRAS.

PUBLIC WORKS DEPARTMENT.

General.
Account.

Read—the following papers:—

Office-note from the Examiner, Public Works Accounts, dated Madras, 29th March 1890, No. 1772.

With reference to G.O., No. 545 W., dated 20th February 1890, approving of arrangements proposed by me for submission of divisional half-yearly returns of tools and plant and stock at different times from different circles, I think that, subject to any remarks that you and E.I. may wish to make, some such dates as the following will be found convenient for submission of the several returns:—

Returns from divisions in	For half-year ending	To reach Examiner on
I circle	31st Dec. and 30th June ..	1st Feb. and 1st Aug.
II do.	31st Jan. and 31st July ..	1st Mar. and 1st Sept.
III do. and Periyár	28th Feb. and 31st Aug. ..	15th Apl. and 1st Oct.
IV do.	31st Mar. and 30th Sept. ..	1st May and 1st Nov.
V do. and Presidency Architect.	30th Apl. and 31st Oct. ..	1st June and 1st Dec.
VI do.	31st May and 30th Nov. ..	1st July and 15th Jan.

The annual returns of count of materials at site of works to be submitted so as to reach Examiner on the dates noted in the last column.

2. Before proposing any definite arrangement for codification I should be glad if you and E.I. would consider and then let me know whether, as regards any particular circles, in which work may be peculiarly dependent on seasons and in which it may therefore be desirable to avoid any counting of materials or tools during the busiest season, there are any, and, if so, what, regular seasons of special pressure of work. If you will kindly state what those times of abnormal pressure are, I can fix the date so that the time for counting (which I think is more to be considered than the time for submission of returns) should clash as little as possible with the busy season.

3. Please also let me know whether, in your opinion, the dates should or should not be so fixed that the count of tools and the count of materials at site may fall together. To prevent crowding of work at one time it might be convenient to make the two counts fall at different times, but, on the other hand, if the two things have to be done in the same place, it might be convenient to make them fall together.

No. 71.

The dates proposed seem to me suitable except the one (1st January), which will clash with the Christmas holidays. It may be taken that everywhere *March* is an abnormally busy month.

3rd April 1890.

(Signed) G. T. WALCH,
Chief Engineer for Irrigation.

Office-note from the Examiner, Public Works Accounts, dated Madras, 12th May 1890, No. 2719.

[Your office-note No. 1935 C., dated 3rd April 1890.]

I have corrected the dates for the submission of the second half-yearly returns of tools and plant and stock of the divisions in the III and VI circles from the 1st April and 1st January, respectively, to the 15th April and 15th January, with reference to the remarks of the Chief Engineer for Irrigation and I would now request that Government be asked to issue, or to approve of my issuing, the necessary instructions for the submission of the next divisional returns in accordance with the revised dates, that is, that, with the exception of the divisions in the IV circle, the next returns for which would in ordinary course be submitted at the next ordinary half-yearly period, viz., 30th September, the divisions in each of the other circles should submit their next returns for the broken periods intervening between the last period for which the returns were due, viz., 31st March, and the revised half-yearly periods now fixed.

2. The divisions in the V circle would thus have to submit their next returns as for the period ended 30th April 1890 (or ending with the last day of the month current at date of receipt of instructions), while the divisions in the VI, I, II and III circles should submit their next returns for the periods ending 31st May, 30th June, 31st July and 31st August, respectively (or to end of month current at date of receipt), that is to say, for periods in each case a good deal short of six months. This will involve a certain amount of trouble in making the change, but, with a view to reducing the trouble to a minimum, the actual count of tools, &c., might, I think, be dispensed with in connection with the first returns due under the new system, the returns being based on recorded monthly transactions. As the next following returns will in each case fall due earlier than they otherwise would have, this will not, I think, be of much consequence.

3. I would have recommended dispensing entirely with the next return if possible, and I had indeed intended to do so, but, when I went fully into the matter, I found that the forms will not admit of reporting the transactions of a period longer than six months.

4. If the necessary subsidiary instructions are to be issued by me, I beg that such orders may be issued as will prepare the department for them, so that they may be acted upon without question, as, otherwise, much trouble may be caused.

Office-note from the Examiner, P.W. Accounts, dated Madras, 8th July 1891, No. 3833.

Office-note from the Examiner, Public Works Accounts, dated Madras, 3rd February 1892, No. 181 S.A.

[Your office-note No. 206 C. of 12th January 1892.]

I have carefully studied the proposal made in my predecessor's office-note No. 2719, dated 12th May 1890, and am of opinion that they have two decided advantages :—

(i) They will greatly facilitate the work connected with the audit of half-yearly returns of stock and tools and plant without throwing any additional work on divisional offices.

(ii) They will accelerate the disposal of discrepancy notes, &c., on the half-yearly returns, which, under the present procedure, cannot be issued until some time after the returns have been submitted for audit.

2. I am not aware of any order of the Government of India in which the 31st March and 30th September are specifically prescribed as the dates up to which these half-yearly returns should be prepared ; but, taking the 1st of April as the commencement of the official year, the expressions "at the end of the half-year" and "furnished half-yearly" (Public Works Department Code, volume II, chapter XIII, paras. 38

and 41) may be taken as indications of this intention, and this view would appear to receive confirmation (*a*) in the fact that the Government of India standard form (No. 13) of balance return is "for the half-year ending 31st March 1880" and (*b*) in the universal practice of preparing these returns for the periods mentioned at the commencement of this paragraph.

3. I, however, have no reason to suppose that the Government of India would object to the proposed change, as no principle either of executive control or of audit is vitiated or diminished by it; all that the Government of India *does* insist on is that stock shall be completely taken once during each official year and this can be effected without the smallest reference to the periods for which the half-yearly returns are prepared.

4. Looking to the latitude allowed by the Government of India to this province in connection with the adoption of the Public Works Department Code (*vide* G.O., No. 6 W. of 4th January 1892) as also to the fact that no principle is given up (para. 3), I do not think the Madras Government would exceed its powers in authorizing the change that has been proposed ; but, inasmuch as the Public Works Department Code has now been introduced in this province and that the procedure differs from that in force in other provinces, I would suggest that the matter be referred for the confirmation of the Government of India.

5. If the proposals be sanctioned it will be necessary to regulate the submission of returns for each circle and the following is submitted for approval :—

	For half-year ending	Due date.
I circle	31st December	1st February.
	30th June	1st August.
II do.	31st January	1st March.
	31st July	1st September.
III do.	28th February	1st April.
	31st August	1st October.
IV do.	31st March	1st May.
	30th September	1st November.
V do.	30th April	1st June.
	31st October	1st December.
VI do.	31st May	1st July.
	30th November	1st January.

It will be observed that by such an arrangement the work now done in this office at two periods of each year will be distributed over the whole twelve months.

6. If these dates be accepted by Government, returns for broken periods should be submitted as follows :—

	Due date.
V circle—	
For 1 month ending 31st October 1891	At once.
VI circle—	
For 2 months ending 30th November 1891	Do.
I circle—	
For 3 months ending 31st December 1891	Do.
II circle—	
For 4 months ending 31st January 1892	1st March 1892.
III circle—	
For 5 months ending 28th February 1892	1st April „

Thereafter, the returns should be submitted for a complete half-year on the dates specified above in para. 6.

ORDER—dated 11th February 1892, No. 418 W., Public Works.

The Government accepts the proposals in paras. 5 and 6 of the Examiner's office-note No. 181 S.A., dated 3rd February 1892, above recorded, except that the due dates for the submission of the returns for the periods ending 28th February and 30th

November will be altered to 15th April and 15th January respectively. With reference to G.O., No. 545 W., dated 20th February 1890, the following dates will accordingly be fixed for the submission of the half-yearly returns of tools and plant and stock :—

Returns from the divisions in	For half-year ending	To reach the Examiner on
I circle	31st December	1st February.
	30th June	1st August.
II circle	31st January	1st March.
	31st July	1st September.
III circle & Periyár No. I division.	28th February	15th April.
	31st August	1st October.
IV circle	31st March	1st May.
	30th September	1st November.
V circle and Consulting Architect.	30th April	1st June.
	31st October	1st December.
VI circle	31st May	1st July.
	30th November	15th January.

2. Returns for broken periods will be submitted on the dates mentioned in para. 6 of the Examiner's note of the 3rd February.

3. Any subsidiary instructions which may be necessary will be issued by the Examiner.

4. A copy of these Proceedings, with a copy of G.O., No. 545 W., dated 20th February 1890, will be forwarded to the Government of India for confirmation.

(Here enter No. 419 W., Public Works, dated 11th February 1892.)

(True Extract.)

Major, R.E.,
Under-Secy. to Govt., P.W.D.

To Superintending Engineers.
" the Consulting Architect to Government.
" the Superintendent of Works, Periyár Project.
" the Examiner, Public Works Accounts.

Exd. A. D. Xavier.
Spare Copies

GENERAL.
ACCOUNT.

Govt. of {1892} Madras.

PUBLIC WORKS.

Dated February, 11th

Recd *Encl.*

G.O., 11th Feb. 1892, No. 418 W.

FEBRUARY.

Half-yearly Returns of Tools and Plant and Stock

Certain proposals of the Examiner, Public Works Accounts, with some exceptions, regarding the submission of the — of divisions, accepted.

P.W. 2/1088/91

Provincial Service
Budget estimate of
the First Circle for the
year 1892-93

GENERAL.
ACCOUNT.

Govt. of {1892} Madras.

PUBLIC WORKS.

Dated February, 11th

Read *Encl.*

G.O., 11th Feb. 1892, No. 418 W.

FEBRUARY.

Half-yearly Returns of Tools and Plant and Stock

Certain proposals of the Examiner, Public Works Accounts, with some exceptions, regarding the submission of the — of divisions, accepted.

CURRENT No. 1175

PROVINCIAL.
CIVIL WORKS.

MADRAS.

399-40
1
P: 4-25

PRELIMINARY ISSUE.

Public Works Department.

BUDGET ESTIMATE

OF

REVENUE AND EXPENDITURE

UNDER

CIVIL WORKS

IN THE

MADRAS PRESIDENCY

FOR THE YEAR

1892-93.

MADRAS,
9th February 1892.

(Signed) J. PENNYCUICK, Colonel, R.E.,
Secretary to Govt., P.W.D.

C

Provincial services — First Circle

Revenue

Public Works Budget estimate — Government of Madras

Budget estimate of the Revenue that will be realized by or on account of Provincial services of the P.W. Department in the first circle for the year from 1st April 1892 to 31st March 1893.

	Budget estimate for 1892-93	Budget estimate for 1891-92	Revised estimate for 1891-92
Realized in the Public Works Department	*10,300	5,900	10,300

* Includes Rs 5000 on account of centage chargeable for works other than Provincial with reference to G.O. No. 2092 W dated 3rd August 1891.

Provincial services

Government of Madras

Public Works Budget estimate

Part I C Class A Works.

Detail of the Budget estimate for original works under Provincial services in the First Circle for 1892-93.

Head of classification	Executive Division	Locality	Item No.	Projects and works	Amount of estimate	Outlay: Actual to end of 1890-91	Outlay: Probable during 1891-92	Grant 1892-93: Amount	Grant 1892-93: Total	Item No.	Remarks and references
				Civil Buildings							
				(a) Major works							
6 Administration	Ganjam	Berhampur	1	Deputy Tahsildar's office	—	993	10,000 5,000	4,000		1	Estimate cannot be submitted till the Revised type design is received vide G.O. No. 2287 W dated 24.8.91. Item No. 1 Class A works Budget of 1891-92. The existing grant is Rs 10,000 of which Rs 5,000 will be surrendered.
	Vizagapatam	Korapat	2	Special Asst. Agent's office	10,300		8,000	2,300		2	G.O. No. 2181 W dt 12-8-91.
	Godavari Western	Ellore	3	Taluq office	25,300	210	12,000	13,000		3	Estimate was submitted to the collector with this office No. 845 C. dt of 25-7-90.
									19,300		Item No. 5 Class A works Budget of 1891-92. Revised estimate also will be submitted on receipt of revised type design. The Ex: Engr has surrendered the existing grant also in this office No. 366 Ct of 7/10/91
8 Law & justice	Godavari Western	Tanuku	4	District Munsif's court	18,440		10,000	8,440		4	G.O. No. 914 W of 14-1-90 Item No. 54 Class A works Budget 1891-92.
									8,440		
10 Jails	Vizagapatam	Parvatipur	5	Additions and alterations to the Hill Jail	25,500			10,000		5	Estimate submitted for sanction on 1st March 1891 to the Inspector General of Jails
									10,000		
								CO	37,740		

Head of classification	Executive Division	Locality	Item No.	Project and work		Amount of estimate	Outlay: Actual to end of 1890-91	Outlay: Probable during 1891-92	Grant 1892-93: Amount	Grant 1892-93: Total	Item No.	Remarks & references
									B/F	37,740		
16. Miscellaneous	Ganjam	Chatrapur	6	Residence for the Co	llector	24,900	"	10,000	14,900		6	G.O. No. 331 W of 18th Decer: 1890. Item 131. Class A works. Budget 1891-92. Revised estimate submitted with this office No. 862 Dt. dated 1st October 1891.
	Godavari Eastern	Prattipad	7	Sub-Registrar's office		3,400	"	2,400	1,000		7	G.O. No. 796 W of 18th March 1888. Item 132. Class A works Budget 1891-92.
				Minor Works								
	Vizagapatam	Anakapalli	8	Sub-Registrar's office		2,200	"	1,000	1,200	"	8	Revised estimate sent to the Inspector General of Registration for approval & return. Item No. 164 of A class works Budget 1891-92
										17,100		
				Communications								
				a) Major works								
1 Metalled road, raised & bridged	Ganjam		9	Itchapur Jarada road			"	5,510	18,000	6,000	9	Estimate will be submitted for sanction shortly. Item No. 174 of A class works Budget 1891-92.
	do		10	Road from Berhampur to Go	vindapur		"		6,000	50,000	10	Estimate will be submitted for sanction. In G.O. No. 2131 W dated 8th August 1891. Rs 50000 have been allotted. The Ex. Engr entered only Rs 6000 as his probable requirements for 1891-92. He will probably surrender Rs 44,000.
	do		11	Constructing Mahasinghi	Bridge	41,200	11,986	15,000	14,214	-	11	G.O. No. 2465 W dated 15th Sept. 1890
	do		12	Re-making Hiramandalam Road from the 8" to the 18th	Battili mile	11,520	4,710	5,000	1,810		12	G.O. No. 2070 W of 30th July 1890. item 171. A. class works Budget 1891-92. In G.O. No. 2132 W 8-8-91 Rs 8,000 allotted but Rs 3000 have been surrendered in this office application No. 3669 Dt of 7/10/91
	Vizagapatam		13	Constructing a road from to Korapur	Potinghi	280,205	238,869 238,682	40,000	1336 1523		13	G.O. No. 3162 W dated 7th Nov. 1889 and No. 675 W dated 9th March 1891. Item No. 175 of A class works Budget 1891-92.
									73,547	54,849		

Head of classification	Executive Division	Locality	Item No.	Project and work		Amount of estimate	Outlay Actual to end of 1890-91	Outlay Probable during 1891-92	Grant for 1892-93 Amount	Grant for 1892-93 Total	Item No.	Remarks & reference
									73547	54840		
1 Metalled Roads, raised & bridged	Vizagapatam		14	Extension of Road	from	97,600	"	"	20,000		14	Estimate submitted for sanction on 2nd Sept. 1891 with this office No. 385 V.2 21-9-91.
				Koraput to Nowrangapur						93547		
										148387		
				Class B-Works								
				Civil Buildings								
				Major works								
11 Police	Godavari Western	Tallapudi	1	Constructing a 2nd Class Police station house		2,360	"	"	2360	2360	1	Sanctioned by Supg: Engineer. Item No. 85 class A. Works Budget 1891-92. The transfer of Head quarter of Taluq is still under reference.
				Communications								
				Major								
1 Metalled Roads Raised & bridged	Ganjam		2	Constructing Road Tekkali to Anantagiri	from	23,500	10,071	650	12,779		2	G.O. No. 20 pw 6W of 31/7/90 1 class works Item No. 173 of pr Budget 1891-92.
	—Do—		3	Constructing Road Kallikota to Bobrani	from via Attagada		6,525	400	20,000	"	3	Estimate will be submitted for sanction. Item No. 172 A Class works Budget 1891-92
										32,779		
										35,139		

Statement showing the amounts of the estimated requirements in lump sum for the year 1892-93 under various heads of each Division in the first Circle.

Divisions	Minor works		Repairs			
	Civil Buildings	Communications	Miscellaneous Public Improvements	Civil buildings	Communications	Mis Public Improvements
Rushikulya	"	"	"	"	"	"
Ganjam	2,000	5,000 (b)	"	2,000	5,000 (c)	"
Vizagapatam	5,000	"	"	5,000	15,000 (a)	"
Godavari Eastern	2,500	"	"	4,000	"	300
Godavari Western	200	"	"	1,000	"	"
	9,700	5,000		12,000	20,000	300

(a) The amount is required for the maintenance of the following works.

Potunghi Ghat Road Rs 10,000
Turners Ghat Road — 2,000
Potunghi Korapat Road — 3000
15,000

(b & c) Required for Roads in Civil Agency Sub-Division.

Provincial service. First Circle

Detail of the Budget estimate for establishment Public Works under Irrigation and Navigation.

Number 1891-92	Number 1892-93	Particulars	Salary of Office	Estimate for 1892-93. Per mensem	Per annum	Total	Estimate for 1891-92	Remarks
		Irrigation Conservancy establishment						
		Godavari Delta System						
1	1	Anicut Superintendent	120	120				
		personal allowance	20	20				
1	1	——Do—— Maistry	18	18				
1	1	——Do——Do——	15	15				
1	1	——Do——Do——	12	12				
3	3	Clerks II Class 1st Grade	15 to 20	52½ x				x vide G.O No 1416 W of 25th May
1	1	Clerk ——Do——	15 to 20	17½				
1	1	Shroff II Class 2nd Grade	10 to 15	12½				
3	2	Delta Supts ———	80	160				
1	2	——Do——Do——	70	140				
10	10	——Do——Do——	55	550				
12	12	——Do——Do——	40	480				
6	6	Superintendents	8	48				
1	1	Peon	6	6				
3	3	Peons	5	15				
39	39	Lascars	6	234				
75	75	——Do——	5	375				
159	159	Total water regulation establishments Godavari Delta System		2275½	27,306			

Number 1891-92	Number 1892-93	Particulars	Salary of Office	Estimate for Per mensem	Per annum	Total	Estimate for 1891-92.	Remarks.
		C.O.			27,306			
		Irrigation Conservancy establishment (Contd)						
		Navigation establishment						
1	1	Boat-Superintendent	75	75				
2	2	Lock Superintendents	15	30				
18	18	——Do——Do——	12	216				
24	24	——Do——Do——	10	240				
1	1	——Do——Do——	9	9				
11	11	——Do——Do——	8	88				
147	147	Lascars ———	6	882				
87	87	——Do——Do——	5	435				
291	291	Total Navigation establishment Godavari Delta system		1975	23700	51,006	51,036	
		Irrigation & Navigation Works for which Capital and Revenue accounts are kept						
		Head & Tail Locks at Dummagudem						
1	1	Lock Superintendent	17	17				G.O. No 1592 W of 11th June 1891
1	1	Total		17	204	204	204	

Number 1891-92	Number 1892-93	Particulars	Salary of Office	Estimate for 1892-93 Per mensem	Estimate for 1892-93 Per annum	Estimate for 1892-93 Total	Estimate for 1891-92	Remarks
		Irrigation & Navigation Works for which neither Capital nor Revenue Accounts are kept						
		Ganjam Division						
		Water regulation						
4	4	Lascars	7	28				
1	1	Do	6	6				
10	10	Do	4	40				
1	1	Do	3½	3½				
16	16	Total water Regulation Estabt in Ganjam Dt		77½	930	930	930	
		Vizagapatam Dt						
3	3	Superintendents	12	36				
13	13	Lascars	5	65				
16	16	Total water regulation establishment Vizagapatam Dist		101	1,212	1,212	1212	
		Godavari District						
1	1	Lascar	9	9				
1	1	Do	7	7				
2	2	Total water regulation establishment		16	192	192	192	
					2,334	2,334	2,334	

Number 1891-92	Number 1892-93	Particulars	Salary of Office	Estimate for 1892-93 Per mensem	Estimate for 1892-93 Per annum	Estimate for 1892-93 Total	Estimate for 1891-92	Remarks
		Agricultural works River Conservancy establishment. Godavari District						
2	2	Superintendents	15	30				
8	8	Lascars	6	48				
10	10	Total River Conservancy establishment		78	936	936	936	
		Establishment of the Government Workshops Dowlaishweram.						
1	1	Maistry	50	50				
2	2	Do	30	60				
1	1	Clerk III Class 2nd Grade	50-60	55				
1	1	Clerk III Class 1st Grade	40-50	45				
1	1	Draftsman 2nd Class	35-50	47½				
2	2	Clerk III Class 3rd Grade	20-30	50				
1	1	Clerk V Class 1st Grade	15-20	17½				
1	1	Duffadar	9	9				
5	5	Gate peons	6	30				
1	1	Office peon	6	6				
4	4	Store lascars	6	24				
20	20	Total Workshop Estt		394		4,728		
						4,728	4,332	

Part IV.

Detail of the Budget estimate for Tools and Plant under Provincial services in the first Circle for the year 1892-93.

Divisions	Surveying & mathematical instruments	Machinery	Tools	Plant	Office furniture	Camp equipage	Live stock	Repairs & carriage	Total for 1892-93	Estimate 1891-92
Rushikulya	"	"	"	"	"	"	"	"		
Ganjam	"	"	"	"	"	"	"	"		
Vizagapatam	"	"	"	"	"	"	"	"	500	500
Godavari Eastern	"	"	500	"	"	"	"	"	1,000	1,000
Godavari Western	"	"	"	"	"	"	"	1,000	1,500	1,500
									"	"
Total Rs									3,000	3,000

7th October 1891

John Wylie
Asstt Engr
Pro Supg: Engineer 1st Circle

JK

E.2
P.W 1088/91

Provincial Service
Budget estimate of
the First Circle for the
year 1892-93

1

P. W. CURRENT No. 1175

Recd: 4.2.92

I think the amount
may as well go on -

The S.E. may have
more about two lacs
whom; at all events
if he does not he can
say so - The R.D.
orders must be communicated
Sims in my case -

S. -

E. I. Form No. 34-F.

GOVT. OF MADRAS. } 188 . { P. W. DEPT.

CHIEF ENGINEER FOR IRRIGATION.

Madras, 3/2 1892

OFFICE NOTE. 35

Circulation Register.

To	From	Despatch Date.	Receipt Date.
Sr	S		

KEEP-WITH.

No. dated 18 .

Your dupt- S.O m
S.O No 115 2/2/92.
(1) The permanent-supply
of Palta Cuddapah Tank-
Nec-steps are already
ready will come probably
to upwards of Rs 40,000
as long portion of it
masonry (Assist- Engineer
w/ 2
(2) Mr Jones Asst- drawing
Channel- Ukkarathi
about- & as must- have
some more information
about- it- before we call
M S. E to say what is being
done about- it.

For [illegible]

Govt. of {1892} Madras.

REVENUE.

Issued

Recd. Encl.

G.O., 2nd February 1892, No. 115.

B No: 394 W 8-2-92

FEBRUARY.

Season, Cuddapah.

Board's Proceedings submitting report of the Collector on the state of the season for December 1891, recorded with remark.

No 394 Way 8-2-92

Communicated to the Suptg Engineer III circle who will report what is being done in regard to the works referred to in para 13 of the Collectors letter.

SE III circle
CE for Irrign

E. f. Form No. 34-F.

GOVT. OF MADRAS. } 188 . { P. W. DEPT.

CHIEF ENGINEER FOR IRRIGATION.

Madras, 3/2 1892

OFFICE NOTE. 35

Circulation Register.

To	From	Despatch Date.	Receipt Date.
W	S		

KEEP-WITH.

No. dated 18 .

Low duff-S.O m
S.O Rev 115-2/2/92.
(1) The permanent tabby
of Patta Cuddalore Tak-
the steeples are nearly
will come probably
& upwards of Rs 40,000
as long portion of it
Masonry (Chunam-Cy
W/ 2
(2) Mr Jones Sent drawing
Channel Ukkuratta
about 4 or 5 months
some more information
about it before we call
M.S.E to say what is being
done about it.

Stations.	Seers of 80 tolas per rupee. Rice, second sort. 1891. October.	Novem-ber.	Decem-ber.	Normal for Decem-ber.	9th January.	Cholum. 1891. October.	Novem-ber.	Decem-ber.	Normal for Decem-ber.	9th January.
1	2	3	4	5	6	7	8	9	10	11
Chitvél	9·23	9·79	7·47	15·39	7·42	16·26	..	..	26·86	..
Pullampet	10·04	9·48	8·30	16·10	8 25	16·80	15·89	12 64	26·46	..
Sidhout	9·55	9·13	7·05	13·94	7·42	15·80	15·41	12·24	22 75	11·85
Badvél	9·13	8·50	7·47	14·22	7·42	18·17	17·38	12·54	26·27	12·05
Cuddapah	10·37	9·13	7·88	12·87	7·83	18·38	16·38	12·64	25·24	13·43
Kamalápuram	9·96	10·37	8·71	13·54	8·66	17·38	15·41	12·64	27·03	..
Proddutur	12·25	12·12	9·96	14·05	9·90	19·13	15·80	12·82	26 89	12·84
Jammalamadugu	9·88	9·48	8·38	12·61	7·83	21·17	15·58	13·35	25·01	13·43
Pulivendla	9·55	8·30	7·47	14·19	7·42	18·96	18·96	..	29·39	14·22
Kadiri	11·21	9·13	6·85	16·07	6·60	20·54	17·38	14·22	36·54	14·22
Ráyachóti	9·96	9·13	7·47	14·45	7·42	17·38	16·99	12·64	40·88	12·25
Pilér	9·13	8·71	7·47	17·93	7·01	16·59	17·38	11·85	..	15·80
Váyalpád	10·19	8·68	7·42	17·75	8·25	16·73	15·67	13·55	..	12·64
Madanapalle	10·36	8·71	7·47	17·20	7·83	16·02	15·01	11·40	37·48	11·85
District average ..	10·10	9·30	7·80	15·10	7·80	17·80	16·40	12·70	30·40	12·94
Scarcity rates ..	9·7					13·7				

Stations.	Seers of 80 tolas per rupee—*cont.* Cumbu. 1891. October.	Novem-ber.	Decem-ber.	Normal for Decem-ber.	9th January.	Ragi. 1891. October.	Novem-ber.	Decem-ber.	Normal for Decem-ber.	9th January.
	12	13	14	15	16	17	18	19	20	21
Chitvél	16·96	16·68	13·18	28·79	13·05	19·50	18·90	15·87	31·43	15·00
Pullampet	17·36	16·12	11·64	24·65	11·60	19·45	17·90	13·63	28·35	14·25
Sidhout	18·49	17·40	13·05	23·49	13·05	19·50	18·00	14·25	27·30	13·50
Badvél	17·04	16·12	11·41	23·82	10·88	21·18	19·13	13·12	27·03	13·12
Cuddapah	17·40	15·23	12·69	29·36	12·32	18·38	16·50	12·75	30·37	13·50
Kamalápuram	..	..	..	21·75	..	17·25	16·13	13·50	27·79	13·50
Proddutur	18·06	15·60	13·77	24·34	13·77	19·59	17·15	14·25	28·58	14·25
Jammalamadugu	..	..	..	26·61	..	21·00	14·11	11·10	27·04	12·75
Pulivendla	..	..	..	29·29	..	19·50	18·00	14·25	30·45	13·50
Kadiri	15·20	15·95	13·05	36·83	13·05	18·59	20·00	15·00	38·25	15·00
Ráyachóti	16·68	17·40	14·50	34·52	13·77	19·50	19·50	15·00	36·15	14·25
Pilér	12·50	15·59	14·14	39·44	12·32	18·93	18·93	15·37	42·30	13·50
Váyalpád	14·17	15·08	13·15	34·22	12·32	19·06	18·38	14·37	38·40	13·50
Madanapalle	14·50	13·41	12·48	34·67	11·60	21·05	18·38	14·04	44·24	13·50
District average ..	16·20	15·90	13·00	31·00	12·52	19·50	17·90	14·04	33·90	13·79
Scarcity rates ..	13·1					14·7				

The prevailing high prices are pressing on the poorer classes everywhere, except where field work at the harvest still remains, and it has been found necessary to start works for their employment in Badvél in the main division and in Ráyachóti and Madanapalle, two of the sub-division taluks. In Badvél 791 persons were employed on minor irrigation works on the 2nd January and in Ráyachóti 171, and since the commencement of the current month two road works have been opened, one at Nuliveed in the Ráyachóti taluk and one at Kalicherla in the Madanapalle taluk. The numbers resorting to each of these roads on the first four days are shown on the margin. In the sub-division taluks a considerable number of coolies still find employment on the railway works, in sinking wells

	Nuliveed.	Kalicherla.
First day	472	375
Second day	726	638
Third day	810	699
Fourth day	441	751

by the aid of State loans, for which large advances have already been made, and in grass cutting, and the numbers resorting to works just at present are no very accurate gauge of the numbers likely to need employment hereafter. It does not, however, appear to the Commissioner that there is at present any very severe distress in the sub-division, and he would put down 15,000 as the maximum number likely to need relief in the four sub-division taluks. The Commissioner in his recent visits to the sub-division saw no emaciated persons, and the condition of those resorting to the works was certainly good. It was noticed that the Pariah labourers, Malas and Madigas, who are generally the first to suffer, were hardly represented at all at the works, which were resorted to almost mainly by the small cultivators.

The Commissioner saw no reason to anticipate any failure of supplies of grain in the sub-division, though prices will probably continue very high. It will be necessary perhaps, at an early date, to open additional works in the affected centres in the sub-division taluks as well as in the southern part of Sidhout and in Badvél. The Collector has been called upon to submit a selected list of works for this purpose. He has started the clearance of prickly-pear at Badvél, and he urges that advantage should be taken of the opportunity to improve the sanitary condition of Cuddapah town, and the Board recommends that the Public Works Department may be urged to expedite the preparation of the estimates alluded to in paragraph 13 of his letter in view to the possibility of it becoming necessary to find work for large numbers there later on.

In the sub-division taluks further roads are not required except perhaps one or two short lengths, and the attention of the Sub-Collector should be directed to the minor irrigation works. Much useful work can be carried out on these, and the presence of the Public Works Department officer lately deputed to do duty in the sub-division will enable the Sub-Collector to satisfy himself that the labour spent on these works will not be thrown away.

5. Up to the 2nd January loans to the amount shown in the following statement had been made:—

Taluks.	Loans				Wells	
	For wells.		For the feeding, purchase of cattle and seed-grain, &c.		Completed.	Under construction.
	Sanctioned.	Disbursed.	Sanctioned.	Disbursed.		
	Rs.	Rs.	Rs.	Rs.		
Pullampet	5,100	4,400	200	200	11	12
Sidhout	525	525	..	..	..	4
Badvél	10,170	6,095	200	200	1	46
Cuddapah	6,300	4,625	606	506	16	43
Proddutur	100	50	100	100	..	1
Jammalamadugu	240	120	500	500	..	1
Pulivendla	1,175	750	730	650	1	9
Kadiri	13,435	9,345	3,450	850	1	53
Rayachoti	24,822	12,693	430	430	17	165
Vayalpad	20,958	12,296	2,200	1,770	11	174
Madanapalle	11,775	6,790	..	..	10	77
Total ..	94,600	57,689	8,416	5,206	68	585

Marked progress has been chiefly confined to the taluks of the sub-division, although there has been some in the eastern taluks of the district. Much credit is due to Mr. Atkinson for the interest taken by him in the promotion of well-digging, a work to which he is devoting all his energies with, as the Commissioner found, marked success.

(True Copies and Extract.)

(Signed) P. RAJARATNA MUDALIAR,
Secretary.

To the Secretary to Government, Revenue Department.
„ Collector of Cuddapah.
Copy to the Government of India, Revenue and Agricultural Department.

Order—dated 2nd February 1892, No. 115, Revenue.

Miscellaneous.

Recorded.

2. The Collector's suggestions in paragraph 13 of his letter will be considered in the Public Works Department.

(True Extract.)

(Signed) C. A. GALTON,
Secretary to Government.

To the Commissioner of Revenue Settlement, Land Records and Agriculture.
„ the Public Works Department.

Exd. A. Aubert.

75 Copies.

Govt. of {1892} Madras.
REVENUE.

Issued

Recd.

Encl.

G.O., 2nd February 1892, No. 115.

FEBRUARY.

Season, Cuddapah.

Board's Proceedings submitting report of the Collector on the state of the season for December 1891, recorded with remark.

Taluks.	Dry cultivation. Sowings During December. Average. *	1891.	April to December. Average. *	1891.	Total for the year. *
1	2	3	4	5	6
Pullampet	7,166	5,085	49,856	57,976	68,363
Sidhout	5,579	5,921	27,783	32,257	35,421
Badvél	7,212	5,162	67,067	70,975	74,444
Cuddapah	18,020	8,204	144,605	157,375	165,499
Proddutur	5,950	4,338	131,776	133,996	139,536
Jammalamadugu	2,643	12,938	175,103	181,424	178,924
Pulivendla	8,400	8,775	174,461	181,509	184,477
Kadiri	14,419	15,444	164,309	117,241	199,410
Ráyachóti	5,135	4,741	104,334	131,438	122,039
Váyalpád	7,779	4,347	87,758	93,756	102,570
Madanapalle	3,235	2,720	115,125	102,686	122,984
District *	96,432	77,675	1,247,878	1,260,633	1,386,823

Taluks.	Wet cultivation. Sowings During December. Average. *	1891.	April to December. Average. *	1891.	Total for the year.*
	7	8	9	10	11
Pullampet	2,144	2,847	14,032	17,793	29,366
Sidhout	1,282	2,239	9,654	9,290	12,639
Badvél	1,790	1,623	16,058	14,996	22,903
Cuddapah	4,070	2,361	20,261	20,088	23,458
Proddutur	484	923	8,946	8,688	9,711
Jammalamadugu	446	829	6,499	6,180	7,433
Pulivendla	792	807	11,217	7,061	10,097
Kadiri	894	1,216	8,799	8,105	17,702
Ráyachóti	2,164	1,433	12,116	11,854	19,328
Váyalpád	976	922	9,855	8,778	27,435
Madanapalle	1,861	1,200	11,885	10,187	27,319
District *	16,708	16,400	128,920	123,020	195,377

* Average of three years ending 1889–90 for taluks and five years ending 1890–91 for the district.

Agricultural operations still continue under wells, where also some sowings are still being made. Under wells and channels the crops are fair, but generally the standing crops are stated to be withering or withered over large areas in the sub-division taluks and Badvél, as well as in parts of Sidhout, Cuddapah, Jammalamadugu and Pulivendla taluks. In the sub-division taluks, however, the chief food-crops have been already harvested, and the standing crops are mainly horsegram and castor. The outturn of the main food-crops was, as stated in previous monthly reports, very poor, though there was no general total failure. The prospects of the cotton crop in the main division are poor and generally the cereals are yielding badly.

4. The prices of the two great staple food-grains of the district—cholum and cumbu—rose very greatly during the month, and, though those for cholum have been rather easier since its close, are generally above the scarcity rates; the exceptions now being for cholum at Pílér, Kadiri and Pulivendla and for cumbu at Ráyachóti and Proddutur. Cumbu is the staple crop of the sub-division and cholum that of the rest of the district. Ragi also sold everywhere except at Kadiri, Proddutur and in Pullampet above scarcity rates, whilst rice is dearer everywhere except at Proddutur. Particulars are given below.

CDN 1114

Govt. of {1892} Madras.

REVENUE.

No 394 Way 8.2.92

Communicated to the Suplg Engineer III circle who will report what is being done in regard to the works referred to in para 13 of the Collectors letter.

Issued

Recd. *Encl.*

G.O., 2nd February 1892, No. 115.

B No: 394 W 8.2.92

FEBRUARY.

Season, Cuddapah.

Board's Proceedings submitting report of the Collector on the state of the season for December 1891, recorded with remark.

SE III circle
CE for Irrign

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Ccn 1114

Govt. of {1892} Madras.

REVENUE.

No 394 Way 8.2.92

Communicated to the Suptg Engineer III circle who will report what is being done in regard to the works referred to in para 13 of the Collectors letter.

Issued

Recd. *Encl.*

G.O., 2nd February 1892, No. 115.

B No: 394 W & 8.2.92

FEBRUARY.

Season, Cuddapah.

Board's Proceedings submitting report of the Collector on the state of the season for December 1891, recorded with remark.

SE III circle
CE for Irrign

laborers in those parts where sugarcane is extensively grown. After the sugarcane harvest and the harvest of well lands, that is, at the end of March and beginning of April, there will, I anticipate, be a rush to relief works. I should not be surprised if there be 15,000 persons on relief in April and May.

In the whole sub-division presumably.

(Intld.) O. W.-M.

GRAIN-SUPPLY—

Private trade active or not, whether in rice or dry staple food-grains—

Kadiri.—Private trade not active.

Madanapalle.—Private trade not active.

Váyalpád.—Private trade not active.

Ráyachóti.—Private trade not active.

STATE OF IMPORTS BY RAIL OR SEA OF RICE OR OTHER STAPLE FOOD-GRAINS—

Kadiri.—Nil.

Madanapalle.—A private importation of 58 bags of rice by rail. Some importation by road by merchants.

Váyalpád.—The Railway line opened for traffic on 1st January. Rice being imported.

Ráyachóti.—Nil.

KNOWN OR ESTIMATED QUANTITY—

Kadiri.—Two thousand and five hundred putties.

Madanapalle.—Many of the rich ryots and merchants have large stocks, but the Tahsildar says it is difficult to estimate them.

Váyalpád.—Quantity not reported.

Ráyachóti.—Quantity not reported.

State of market.—The subjoined table shows the prices current during the several weeks of the month :—

—	For week ending 5th December 1891.				For week ending 12th December 1891.			
	Rice.	Ragi.	Cholum.	Cumbu.	Rice.	Ragi.	Cholum.	Cumbu.
1	2	3	4	5	6	7	8	9
Madanapalle	7·60	15·00	12·64	13·05	7·47	14·25	11·06	11·06
Váyalpád	6·72	13·60	15·34	14·87	7·51	14·50	14·66	14·09
Ráyachóti	7·47	16·50	12·64	15·22	7·47	16·27	12·64	15·60
Kadiri	6·60	16·50	14·80	14·80	6·60	16·50	14·80	14·80
Pilór	7·40	19·80	16·50	16·50	7·40	19·80	16·50	16·50

—	For week ending 19th December 1891.				For week ending 26th December 1891.			
	Rice.	Ragi.	Cholum.	Cumbu.	Rice.	Ragi.	Cholum.	Cumbu.
	10	11	12	13	14	15	16	17
Madanapalle	7·47	13·50	11·06	12·32	7·47	13·50	11·06	12·32
Váyalpád	7·22	14·67	13·30	12·52	7·28	14·56	12·64	12·42
Ráyachóti	7·47	15·75	12·64	14·50	7·47	15·75	12·64	14·50
Kadiri	6·60	16·50	14·80	14·80	6·60	16·50	14·80	14·80
Pilór	7·71	19·80	16·50	16·50	7·71	19·80	16·50	16·50

STATE OF LOANS.—The transactions relating to loans for sinking wells, &c., are detailed below.

I.—Loans granted for the repair and construction of wells.

Taluks.	Number of wells sanctioned.	Amount sanctioned.	Amount ordered to be disbursed for 1st instalment.	Amount ordered to be disbursed for 2nd instalment.	Number of wells completed.	Number in which recoveries have been ordered.
1	2	3	4	5	6	7
Madanapalle	89	Rs. A. P. 11,750 0 0	Rs. A. P. 6,000 0 0	Rs. A. P. 1,310 0 0	7	5
Váyalpád	196	20,538 0 0	10,269 0 0	3,748 0 0	11	3
Ráyachóti	214	24,242 0 0	12,121 0 0	2,482 8 0	24	14
Kadiri	99	14,110 0 0	6,717 8 0	106 0 0	1	3

Taluks.	Allotment.	Amount disbursed from 1st April to 31st December 1891.	Number of wells inspected by Tahsildar.	Number of wells inspected by Sub-Collector.	Number of pending applications.	
					Number.	Amount.
	8	9	10	11	12	13
Madanapalle	Rs. A. P. 15,630 0 0	Rs. A. P. 6,415 0 0	40	..	135	Rs. A. P. 18,614 0 0
Váyalpád	21,700 0 0	12,235 8 0	72	..	25	2,670 0 0
Ráyachóti	21,150 0 0	12,693 8 0		Not reported.		
Kadiri	15,370 0 0	5,157 8 0	8	39	Not reported.	

II.—Loans granted for cattle and seed-grains.

Taluks.	Number of applications sanctioned.	Amount sanctioned.	Purpose for which granted.	Allotment.	Amount disbursed since 1st April 1891.
Madanapalle	..	Rs. ..		Rs. ..	Rs. ..
Váyalpád	23	1,550	Purchase of cattle.	1,900	1,070
Ráyachóti	7	430		500	430
Kadiri	12	850		600	* 850

* The allotment has been exceeded; an explanation will be obtained and transfer of funds sanctioned.

Places visited—

Kadiri taluk.—Nil.

Madanapalle taluk.—Basinikonda, Machireddigaripalle, Rachunetivaripalle, Kottavaripalle, Kukkarazupalle, Mudived, Kurubulakota, Ongallu and Veligallu.

Váyalpád taluk.—Sangusamudram, Cheteboyanepalle, Cherlapalle, Amilepalle, Tarigonda, Váyalpád and Guramkonda.

Ráyachóti taluk.—Chinnamanderu, Gorlamudivedu and Ráyachóti.

Resolution—dated 21st January 1892, No. 43.

Submitted for the information of Government.

2. During December there was a fair amount of rain in the Madanapalli and Pullampet taluks and some of the eastern and northern villages of Sidhout which materially improved prospects in those localities, as well as some light showers in parts of Váyalpád and Pílér, which, though they have slightly improved the pasture, have

not been of much further value. There was also one light shower at Kadiri; no rain fell elsewhere. As shown in the subjoined table, this followed throughout the district a deficient south-west monsoon, a light rainfall in October, and an almost complete failure during November. Everywhere, except at Pílér in Váyalpád taluk, the north-east monsoon rainfall has been exceedingly deficient:—

Stations.	April to September.		October.		November.		December.		October to December.	
	Average.	1891.	Average.	1891.	Average.	1891.	Average.	1891.	Average.	1891.
Chitvél	16·32	12·70	11·39	4·75	6·99	1·10	2·82	2·22	21·20	8·07
Pullampet	19·24	11·58	10·26	5·20	8·38	0·81	2·81	0·79	21·45	6·86
Sidhout	20·93	14·73	7·30	2 24	4·73	0·75	1·20	0·72	13·23	3·71
Badvél	16·33	9·00	6·57	1·75	5·17	0·64	1·12	0·53	12·86	2·92
Cuddapah	22 24	12·93	6·82	2·55	3·82	0·22	0·87	..	11·51	2·77
Kamalápuram	17·06	12·84	6·62	1·82	3·73	0·97	0·54	..	10·89	2·79
Proddutur	18·80	9·33	4·42	3·02	2·25	..	0·44	..	7·11	3·02
Jammalamadugu	14·94	9·03	4·30	3·82	1·87	0·16	0·31	..	6·48	3·98
Pulivendla	13·83	4·22	4 91	2·08	2·41	1·91	0·36	..	7·68	3·99
Kadiri	17·74	5·16	6·34	4·22	2·59	0·20	0·47	0·26	9·40	4·68
Ráyachóti	14·88	4·80	5·38	2·03	4·15	..	0·94	..	10·47	2·03
Pílér	18·30	12·41	7·78	7·25	3·65	..	2·23	1·32	13·66	8·57
Váyalpád	15·22	8·96	6·35	1·89	4·41	0·17	1·27	0·74	12·03	2·80
Madanapalle	15·56	8·11	6·70	3·42	4·32	1·56	1·18	1·26	12·20	6·24
District average ..	17·21	9·71	6·39	3·29	4·02	0·61	1·02	0·56	11·43	4·46

3. The Collector reports that the southern portion of the Sidhout taluk, which did not benefit by the December rain, is in a bad state. In Badvél there has been no improvement since the report submitted with Board's Proceedings, dated 11th December 1891, No. 788, was made, and the situation becomes graver. In Cuddapah taluk the situation is not serious, nor is it in Proddutur or Jammalamadugu, as a good deal of crop has been secured generally, though in a few villages the loss has been large. In Pulivendla also there is no likelihood of general distress, and no anxiety need be felt regarding Pullampet; but in all the upland taluks of the sub-division the crops have been very poor and widespread distress is considered imminent. From the subjoined statement it will be seen that the area of dry land reported to have been sown up to December—say the 20th—was for the whole district in excess of the average, the Madanapalle and Kadiri taluks alone showing a deficiency. In the latter taluk the deficiency was very large. On the wet land the district sowings show only a small deficiency up to date, but as compared with the total year's wet sowings the deficiency is acres 66,500 or about 34 per cent., and so many of the tanks are dry that it is improbable that much more wet land will be brought under cultivation during the year. In the sub-division taluks where very few tanks have received any appreciable supply, the fact that the deficiency on this class of lands up to date is comparatively small is ascribed to the fact that dry crops have been raised on wet lands to a large extent. In Pullampet the area sown is in excess of the average up to December, but a large area of wet land has yet to be accounted for. In Sidhout and Badvél the area sown up to December is not greatly deficient, but there is a large area of wet land still lying waste in the latter taluk, which is not likely to be cultivated. In Cuddapah most of the wet land has been sown, and the Collector's remark that "there will be enormous remissions under wet waste" is not understood. In the remaining taluks the area of wet land is unimportant. Under the Kurnool-Cuddapah canal, which irrigates parts of the Jammalamadugu, Proddutur and Cuddapah taluks, the crops are said to be good, but no particulars as to the area of these are furnished. The Collector is requested to furnish this information in his next report. There is no reason why the area cultivated under the canal in the current year should not rival that cultivated in the last famine which amounted to 17,000 acres. Special endeavours should be made in the present season to facilitate the spread of irrigation. Elsewhere than under the canal, what paddy there is generally in poor condition.

Taluks.	Dry cultivation. Sowings During December. Average. *	1891.	April to December. Average. *	1891.	Total for the year. *
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Kadiri	14,419	15,444	164,309	117,241	199,410
Ráyachóti	5,135	4,741	104,334	131,438	122,039
Váyalpád	7,779	4,347	87,758	93,756	102,570
Madanapalle	3,235	2,720	115,125	102,686	122,984
District * ..	96,432	77,675	1,247,878	1,260,633	1,386,823

Taluks.	Wet cultivation. Sowings During December. Average. *	1891.	April to December. Average. *	1891.	Total for the year.*
7	8	9	10	11
Pullampet	2,144	2,847	14,032	17,793	29,366
Sidhout	1,282	2,239	9,654	9,290	12,639
Badvél	1,790	1,623	16,058	14,996	22,903
Cuddapah	4,070	2,361	20,261	20,088	23,458
Proddutur	484	923	8,946	8,688	9,711
Jammalamadugu	446	829	6,499	6,180	7,433
Pulivendla	792	807	11,217	8,799	10,097
Kadiri	894	1,216	8,799	7,061	17,702
Ráyachóti	2,164	1,433	12,116	8,105	19,328
Váyalpád	976	922	9,855	11,854	27,435
Madanapalle	1,861	1,200	11,885	8,778	27,319
District * ..	16,708	16,400	128,920	123,020	195,377

* Average of three years ending 1889–90 for taluks and five years ending 1890–91 for the district.

Agricultural operations still continue under wells, where also some sowings are still being made. Under wells and channels the crops are fair, but generally the standing crops are stated to be withering or withered over large areas in the sub-division taluks and Badvél, as well as in parts of Sidhout, Cuddapah, Jammalamadugu and Pulivendla taluks. In the sub-division taluks, however, the chief food-crops have been already harvested, and the standing crops are mainly horsegram and castor. The outturn of the main food-crops was, as stated in previous monthly reports, very poor, though there was no general total failure. The prospects of the cotton crop in the main division are poor and generally the cereals are yielding badly.

4. The prices of the two great staple food-grains of the district—cholum and cumbu—rose very greatly during the month, and, though those for cholum have been rather easier since its close, are generally above the scarcity rates; the exceptions now being for cholum at Pílér, Kadiri and Pulivendla and for cumbu at Ráyachóti and Proddutur. Cumbu is the staple crop of the sub-division and cholum that of the rest of the district. Ragi also sold everywhere except at Kadiri, Proddutur and in Pullampet above scarcity rates, whilst rice is dearer everywhere except at Proddutur. Particulars are given below.

Remarks.—The excessive mortality in Váyalpád taluk is due to fever and not in any sense to famine. I have brought the matter to District Surgeon's notice already and have ordered free distribution of fever medicines by Revenue Inspectors, Deputy Tahsildar, and Tahsildar.

Fever has been bad in Pílér for several months past for some unexplained causes, the cold and damp there no doubt helping it.

8th January 1892. (Intld.) O. W.-M.

RELIEF MEASURES.

Relief works in what taluks open—Kadiri, Madanapalle, Váyalpad, nil. The number of coolies employed in the week ending 26th December 1891 on irrigation works, &c., is given below:—

—	Major irrigation.	Minor irrigation works.	Roads, &c.	Railway.	On wells dug on loans.
Madanapalle	150	10	120	576	408
Váyalpád	..	..	128	200	1,640
Ráyachóti	..	72	152	..	40
Kadiri	..	.	..	1,500	200

Rayachoti.—A number of minor irrigation works in progress; the number of those employed on wells dug on loans, as given by Váyalpád Tahsildar, is misleading.

POOR-HOUSES—

Kadiri, Madanapalle, Ráyachóti and *Váyalpád.*—None.

VILLAGE RELIEF—

Kadiri, Madanapalle, Váyalpád, and *Ráyachóti.*—None.

NUMBER OF CASES OF DEATHS FROM WANT OF FOOD, WITH BRIEF NOTE OF CIRCUMSTANCES, IF POSSIBLE.—

Kadiri, Madanapalle, Váyalpád and *Ráyachóti.—None.*

REMARKS—

Kadiri.—The Tahsildar reports that the only persons for whom work will be wanted after railway work is over are Malas, Madigas, Boyas, Sugalies, Erikalas and Muhammadans, but remarks that things have not as yet come to such a stage as to induce workmen to accept work at famine rates of wages. The Tahsildar is, however, under the impression that not more than 1 anna 5 pies can be earned as famine wage. I have given him correct information.

Madanapalle.—The people in the north of the taluk are anxiously waiting for the opening of relief works. The Tahsildar, who is now in that quarter, reports that he expects 300 or 400 to attend the relief works as soon as opened and that these numbers will gradually increase. There is some cry for work towards the east of Madanapalle town and near Sampallem, but it is doubtful if they will come for famine wages yet. I will watch them carefully.

Váyalpád.—Works necessary in the north-west of the taluk. Part of this tract will be relieved by the work shortly to be opened at Kalicherla in Madanapalle taluk. Beforelong it will be necessary to open works in Váyalpád taluk itself about Saremadugu. Some of the Muhammadan gosha females suffer a good deal. The Tahsildar states that they want some help in the shape of money-dole. The question of opening kitchens will be considered. I think it is hardly necessary yet.

Ráyachóti.—The Tahsildar reports that the food supply with most people is getting reduced. The wealthier ryots who still hold stocks will not part with them. The poorer classes have next nothing to eat; some of them eat leaves of Devadari * (*Seethia Indica*) and vustikayalu and others live on one meal a day; still the taluk has got sufficient grain, which the Tahsildar expects will last till the end of February or at latest March.† Relief works will shortly be opened at Nulivedu. In many parts of all taluks there is work at present to be had in ploughing and sowing paddy and cholum under wells. Where wells are scarce the pinch is being felt. After the well cultivation will come the sugarcane harvest, which again will employ large numbers of

This Tahsildar is a new man and knows nothing of the taluk; his platitudes need not be regarded.

(Intld.) O. W.-M.

* They have been mixing these with their food ever since I came to the district and probably before.
† Or April or May?

Taluks.	Dry cultivation. Sowings During December. Average. *	1891.	April to December. Average. *	1891.	Total for the year. *
1	2	3	4	5	6
Pullampet	7,166	5,085	49,856	57,976	68,363
Sidhout	5,579	5,921	27,783	32,257	35,421
Badvél	7,212	5,162	67,067	70,975	74,444
Cuddapah	18,020	8,204	144,605	157,375	165,499
Proddutur	5,950	4,338	131,776	133,996	139,536
Jammalamadugu	2,643	12,938	175,103	181,424	178,924
Pulivendla	8,400	8,775	174,461	181,509	184,477
Kadiri	14,419	15,444	164,309	117,241	199,410
Ráyachóti	5,135	4,741	104,334	131,438	122,039
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Agricultural operations still continue under wells, where also some sowings are still being made. Under wells and channels the crops are fair, but generally the standing crops are stated to be withering or withered over large areas in the sub-division taluks and Badvél, as well as in parts of Sidhout, Cuddapah, Jammalamadugu and Pulivendla taluks. In the sub-division taluks, however, the chief food-crops have been already harvested, and the standing crops are mainly horsegram and castor. The outturn of the main food-crops was, as stated in previous monthly reports, very poor, though there was no general total failure. The prospects of the cotton crop in the main division are poor and generally the cereals are yielding badly.

4. The prices of the two great staple food-grains of the district—cholum and cumbu—rose very greatly during the month, and, though those for cholum have been rather easier since its close, are generally above the scarcity rates; the exceptions now being for cholum at Pílér, Kadiri and Pulivendla and for cumbu at Ráyachóti and Proddutur. Cumbu is the staple crop of the sub-division and cholum that of the rest of the district. Ragi also sold everywhere except at Kadiri, Proddutur and in Pullampet above scarcity rates, whilst rice is dearer everywhere except at Proddutur. Particulars are given below.

10. *Sickness.*—Fever is prevalent in a few villages of the Proddutur taluk. There was cholera in Jammalamadugu in the early part of the month. There have been no attacks since the 8th December.

11. *Remarks.*—*The condition of the people is generally good.*

III. RELIEF MEASURES.

12 to 15. No relief works opened.

16. *Remarks.*—*The harvest of cholum crop affords labour to the working classes. There is, therefore, no necessity to open relief works at present. When the poor find no labour in the fields, i.e., about the middle of the next month, some works will have to be started.*

IV. GRAIN SUPPLY.

17. *Private trade active or not.*—Not very active.

18. *Imports by rail or sea of rice or other staple food-grain if known.*—The Tahsildars of Proddutur and Pulivendla report that rice is imported in large quantities into their taluks by rail. The Jammalamadugu Tahsildar reports that the merchants in his taluk obtain supplies of rice from Vallai, Cuddapah taluk, by rail and cholum from Sholapur, Bombay Presidency. I have myself seen several wagons of rice, ragi and cholum imported to Muddanur, Jammalamadugu and Proddutur from Gundala, Bengal Presidency, and Raichur, Gulbarga, Tondur and Yadagiri and Sithapur of the Nizam's dominions. My inquiry disclosed that the grains were purchased at very low rates in the above places, but the Muddanur merchants sold them at exceedingly high rates in the Pulivendla and Simbadripalle markets.

19. *Known or estimated stocks.*—There is sufficient stock of all food-grains. The exact quantity cannot be stated. The Tahsildar of Jammalamadugu reports that there is six months' supply of grain in his taluk, while the Tahsildar of Proddutur says that the quantity may be estimated roughly to amount to 10,000 putties of 520 seers.

20. *State of markets.*—Prices at chief markets of principal food-grains:—

	Rice. 1st sort.	Rice. 2nd sort.	Cholum.	Ragi.	Cumbu.
Jammalamadugu	4½	4¾	8½	8½	..
Proddutur	0	6	8	9½	9½
Vontipenta	0	5	8	10	10
Pulivendla	0	4½	8½	9	10

V. AGRICULTURAL LOANS.

21. *Loans granted for the construction and repair of wells.*—No loans were granted during the month. The amount advanced up to the month is given below:—

Jammalamadugu 245; Pulivendla 725 up to the end of November; the Tahsildar has reported the total amount advanced under the Land Improvement Act and has not given the amount granted under the Special Well rules; the total amount he gives is Rs. 1,500; Proddutur, not reported.

22. *Loans granted for cattle and seed-grain showing particular for each class*—

Jammalamadugu	cattle	506
	seed-grain	...
Pulivendla	cattle	...
	seed-grain	650
Proddutur		Not reported.

ENCLOSURE No. 5.

REPORT on the state of season in the sub-division of Cuddapah during the month of December 1891, from the Sub-Collector, Cuddapah, to the Collector of Cuddapah, dated 5th January 1892, No. 32.

STATE OF COUNTRY.

Crops—Kadiri.—Harvest later sazza, average yield 4 to 6 annas, and unirrigated korra in parts, outturn not reported.

Standing crops.—Castor-oil fair, expected yield about 8 annas, except in parts where it is stunted, and outturn will be very poor; horse-gram, chama and korra are not flourishing, estimated yield 4 to 6 annas; cotton expected, outturn 8 annas; jonna, under a few wells, is in fair condition.

Madanapalle.—Harvest; paddy outturn 8 to 12 annas; sazza, ragi, jonna yielded, on an average, 4 to 6 annas crop in Madanapalle and Kottakota firkas and 2 to 4 annas crop in Buracoyalakota and Tamballapalle firkas, except on the Peddamandem side of Tamballapalle firka and Sompalle side of Buracoyalakota firka, where the yield was less than 2 annas; sugar-cane outturn 12 annas.

Standing crops.—Sugar-cane, paddy, ragi on dry lands, oil-seeds and pulses; sugar-cane is fair, estimated outturn 12 annas; paddy, expected outturn 12 annas; ragi, expected yield 4 annas; oil-seeds and pulses, on an average, 2 to 4 annas. The area on which wet crops are standing, including well cultivation, is only 470 acres.

Rayachoti.—Harvest; paddy under river channels, outturn not reported.

Standing crops.—Paddy, ragi, oil-seeds, cotton, sugar-cane and horse-gram. In Tsundupalle firka, the standing crops except horse-gram are estimated to yield 8-anna crop and horse-gram 4 to 8 annas crop as it has altogether failed in parts for want of rain. In Ráyachóti firka, horse-gram, oil-seeds, cotton and ragi on dry lands are going back. In Viravilli firka, oil-seeds, horse-gram and dholl are withering. Ragi and paddy under channels and wells are in good condition. In Nulived firka, oil-seeds, which were attacked with caterpillars, are said now to be free from that pest, but have begun to fade, and are said to be in hopeless condition; in fact out of the frying pan into the fire. Horse-gram is not thriving and sugar-cane is estimated to yield a 6-anna crop.

Vayalpad.—Sazza harvested, yield 1 to 8 annas, also ragi and paddy, yield 4 to 8 annas.

Standing crops.—Oil-seeds, dholl, green-gram, horse-gram, fair, in parts withered, in parts affected with insects, estimated yield 1 to 8 annas; sugar-cane and paddy in good condition, estimated yield 2 to 12 annas.

Fodder—Kadiri.—Fodder is running short. Hill grass is being cut and stacked.

Madanapalle.—Green grass is now available in almost all the villages and the rain, which fell during the month, kept the grass springing.

Váyalpád.—Available in Pílér and Yerravaripallem firkas; deficient in other parts.

Ráyachóti.—Available at present. Green grass is almost exhausted. Ryots are taking steps to cut and stack grass from reserved forests.

WATER-SUPPLY.

Kadiri.—Sufficient for drinking purposes except in a very few places. The quantity of rain gauged at Kadiri during the month was 26 cents against an average of 46 cents for the past 10 years, and the total rainfall up to the month was 10·13 inches against 17·48 in 1890, 29·08 in 1889, 18·33 in 1888, 29·82 in 1887 and 26·82 in 1886. There is very little water in the river Pápaghni.

Madanapalle.—Supply of drinking water is getting scarce in parts of the taluk where expenditure has lately been sanctioned from Local funds for the improvement of water-supply. In other parts drinking water can be had, but in no great abundance. Water in agricultural wells is getting low. Many of them are being deepened from State loans. No tanks received any supply this month and those that received partial supply in previous months are also getting dry. Except one or two tanks here and there, none received supply sufficient for cultivation purposes. There was 1·26 inches of rain at Madanapalle during the month against an average of 1·67 for past 10 years. This rain did not, however, extend to the northern parts of the taluk and put no water into irrigation sources, being a very light, though continuous, drizzle.

Ráyachóti.—There was no rainfall in the month. Water-supply is said to be generally sufficient except in some of the villages of Nulived and Ráyachóti firkas, where the wells have become dry and water is obtained with difficulty.

Váyalpád.—Fair in Pílér division; deficient on Gurramkonda side; wells deepened short time ago are failing. In jungles there is no water and cattle are being taken long distances for water. The rain gauged at Váyalpád during the month amounted to ·74 against an average of 1·71 for the past 10 years; second crop raised under some tanks near Pílér. The Tahsildar states that, as the supply in them was not supplemented, portion of the crop raised may wither and the rest may not give full harvest.

AGRICULTURAL OPERATIONS.

Kadiri.—Baling water for jonna under wells and harvest of korra.

Madanapalle.—Ploughing in parts for sowing jonna and paddy, watering sugar-cane and harvesting paddy and other crops.

Ráyachoti.—Watering and weeding standing crops and ploughing for paddy under wells and channels and harvest of paddy.

Váyalpád.—Sowing paddy, weeding, baling water to gardens and cutting grass.

CONDITION OF CATTLE.

Kadiri.—Fair for the time being; no diseases of any kind.

Madanapalle.—The cattle are getting better. No diseases.

Ráyachoti.—The cattle are being taken to the hills. There is cattle-disease in one village of Viracalle firka.

Váyalpád.—The survivors recovering.

Remarks.—

Kadiri.—The Tahsildar reports that there has been no improvement in the state of season and that the prospects are gloomy and that relief works will therefore be necessary in this month. The area under cultivation up to December 1891 is acres 126,050 against acres 174,996 in last year, showing a decrease of 48,946. The decrease has not been explained, but it is no doubt due to the season.

Madanapalle.—The Tahsildar reports that the cultivation accounts show that there has been a decrease of acres 19,532 under dry and an increase of 79 acres under wet compared with the extent cultivated last year. The decrease is due to the unfavorable season. The extent cultivated has yielded a poorer outturn than last year, though the extent of wet cultivation is greater than last year. The crops raised this year were mostly dry crops. The Tahsildar remarks that the season was, on the whole, a failure, and, in his opinion, relief works should be started.

Ráyachoti.—The Tahsildar reports that the concession granted that dry crops raised on wet lands will be charged with only dry rate of assessment has stimulated cultivation, yet even so the average is 127,889 this year against 137,633 last year. The total fall of rain registered up to 31st December 1891 is only 7 inches compared with 13 inches in 1890. The outturn of the crop as a whole cannot have been other than meagre with such a scanty fall. The Tahsildar adds that crops totally failed in some villages except under wells and in most villages they were bad; that the north-east monsoon is a total failure, that prospects are hopeless and famine is inevitable.

I doubt the accuracy of this register, but see my former season reports.
8th January 1892. (Intld.) O. W.-M.

Váyalpád.—Cultivation up to the end of December was—dry 93,670 acres against 92,640, wet 8,690 acres against 10,172. The Tahsildar states that, as the crops first raised failed, the ryots hoped to have a good horse-gram harvest and so sowed their fields; but in the north and north-east of the taluk this crop too has largely failed. He adds that relief works are necessary near Gurramkonda and in the north and north-east of the taluk.

CONDITION OF PEOPLE.

On works—Kádiri, Madanapalle, Vayalpád, no works opened; Ráyachóti good.

In villages.—Kádiri fair; Madanapalle fair; Váyalpád not good; cooly classes have no sufficient food; well-to-do classes who have grain in stock seem to withhold even to those who are their dependants; Ráyachóti good.

Mortality.

Kadiri.—Nil.

Madanapalle.—Increasing mortality from fever.

Váyalpád.—Fifteen deaths from cholera against 15 attacks; very heavy and increasing mortality from fever. The marginal statement gives total deaths and deaths from fever month by month since April.

	Total deaths.	Deaths from fever.
April	100	85
May	131	109
June	138	100
July	169	122
August	187	149
September	213	176
October	245	176
November	392	276
December	Not available.	

Rayachóti.—Four deaths from cholera against 6 attacks; increasing mortality from fever.

Sickness.—Kádiri none; Madanapalle *nil*; other than fever; Váyalpád, fever in Pílér and Yerravaripallem firkas, some cases proving fatal; Ráyachóti fevers.

Remarks.—The excessive mortality in Váyalpád taluk is due to fever and not in any sense to famine. I have brought the matter to District Surgeon's notice already and have ordered free distribution of fever medicines by Revenue Inspectors, Deputy Tahsildar, and Tahsildar.

Fever has been bad in Pilér for several months past for some unexplained causes, the cold and damp there no doubt helping it.

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Relief works in what taluks open—*Kadiri, Madanapalle, Váyalpad*, nil. The number of coolies employed in the week ending 26th December 1891 on irrigation works, &c., is given below:—

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POOR-HOUSES—

Kadiri, Madanapalle, Ráyachóti and *Váyalpád.*—None.

VILLAGE RELIEF—

Kadiri, Madanapalle, Váyalpád, and *Ráyachóti.*—None.

NUMBER OF CASES OF DEATHS FROM WANT OF FOOD, WITH BRIEF NOTE OF CIRCUMSTANCES, IF POSSIBLE.—

Kadiri, Madanapalle, Váyalpád and *Ráyachóti.*—*None.*

REMARKS—

Kadiri.—The Tahsildar reports that the only persons for whom work will be wanted after railway work is over are Malas, Madigas, Boyas, Sugalies, Erikalas and Muhammadans, but remarks that things have not as yet come to such a stage as to induce workmen to accept work at famine rates of wages. The Tahsildar is, however, under the impression that not more than 1 anna 5 pies can be earned as famine wage. I have given him correct information.

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(Intld.) O. W.-M.

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GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Extract

READ—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 21st January 1892, No. 43:—

MR. CLOGSTOUN.

Read—the following letter from O. WOLFE-MURRAY, Esq., Acting Collector of Cuddapah, to the Secretary to the Commissioner of Revenue Settlement and Director of the Department of Land Records and Agriculture, dated Balapanur, 9th January 1892, Ref. on C. No. 2914-Eng.:—

I have the honour to forward my report on the state of the season in the district for December 1891 with the Divisional officers' reports * and two statements.

2. *Sub-division.*—The condition of affairs has not mended, and the little rain that fell in Madanapalle, although it improved pasture and gram crops, did not increase the water-supply, which is a great difficulty there after the long drought and which must affect well irrigation, although the Sub-Collector is by constant advances getting the ryots to deepen their wells. Agricultural labour is still available in most parts, but no doubt the opening of the works settled at the Christmas conference by His Excellency the Governor and the Commissioner will attract many candidates. The condition of the people is reported good on the whole, though the Ráyachóti Tahsildar, who cannot be expected to know yet much of his people's habits, as he is new to the place, reports that the people are eating "Devadari" leaf and one meal a day. The latter, if a good meal, is quite sufficient to support a healthy person, even a European in this country, as I have seen in my own experience; and as to the "Devadari" leaves, it is customary to mix them in food in all bad times. There is, no doubt, a disagreeable tendency to withhold grain, but we must trust to the new rail and private enterprise to counteract this.

3. *Main Division, Cuddapah—Crops.*—With the exception of a few villages in which the crops withered, two of which, about seven miles from Cuddapah, I visited, and some villages in the west, there was a poor harvest of cholum and korra, nothing over a half and much under it owing to drought and blight. Standing crops under wells and channels are generally good, but some are withering along with much of the cotton and gram on dry lands.

4. *Fodder and pasture* are available still, but the latter is limited; of the former, the supply should hold out till the next harvest. The stalk all over the taluk, as far as I have seen, was tolerable.

5. *Water-supply* is failing in some villages.

6. *Agricultural operations.*— Plenty of work for every one since the middle of the month owing to the harvest and stalk-cutting.

7. *Cattle disease.*—None, but cattle losing condition from the dry season.

8. *General.*—There will be enormous remissions under wet waste; hardly a tank has a crop under it, wet or dry. Water was during the month run to the Patha Cuddapah tank ayacut.

* Sidhout Deputy Collector's No. 27, dated 8th January 1892.
Sidhout Deputy Collector's demi-official, dated 25th December 1891.
Cuddapah Deputy Collector's No. 29, dated 5th January 1892.
Sub-Collector's No. 32, dated 5th January 1892.
Head Assistant Collector's No. 3, dated 4th January 1892.
Head Assistant Collector's No. 3791, dated 23rd December 1891.

Remarks.—The excessive mortality in Váyalpád taluk is due to fever and not in any sense to famine. I have brought the matter to District Surgeon's notice already and have ordered free distribution of fever medicines by Revenue Inspectors, Deputy Tahsildar, and Tahsildar.

Fever has been bad in Pilér for several months past for some unexplained causes, the cold and damp there no doubt helping it.

8th January 1892. (Intld.) O. W.-M.

RELIEF MEASURES.

Relief works in what taluks open—*Kadiri*, *Madanapalle*, *Váyalpad*, nil. The number of coolies employed in the week ending 26th December 1891 on irrigation works, &c., is given below:—

—	Major irrigation.	Minor irrigation works.	Roads, &c.	Railway.	On wells dug on loans.
Madanapalle	150	10	120	576	408
Váyalpád	..	..	128	200	1,640
Ráyachóti	..	72	152	..	40
Kadiri	..	.	..	1,500	200

Rayachoti.—A number of minor irrigation works in progress; the number of those employed on wells dug on loans, as given by Váyalpád Tahsildar, is misleading.

POOR-HOUSES—

Kadiri, *Madanapalle*, *Ráyachóti* and *Váyalpád.*—None.

VILLAGE RELIEF—

Kadiri, *Madanapalle*, *Váyalpád*, and *Ráyachóti.*—None.

NUMBER OF CASES OF DEATHS FROM WANT OF FOOD, WITH BRIEF NOTE OF CIRCUMSTANCES, IF POSSIBLE.—

Kadiri, *Madanapalle*, *Váyalpád* and *Ráyachóti.*—*None.*

REMARKS—

Kadiri.—The Tahsildar reports that the only persons for whom work will be wanted after railway work is over are Malas, Madigas, Boyas, Sugalies, Erikalas and Muhammadans, but remarks that things have not as yet come to such a stage as to induce workmen to accept work at famine rates of wages. The Tahsildar is, however, under the impression that not more than 1 anna 5 pies can be earned as famine wage. I have given him correct information.

Madanapalle.—The people in the north of the taluk are anxiously waiting for the opening of relief works. The Tahsildar, who is now in that quarter, reports that he expects 300 or 400 to attend the relief works as soon as opened and that these numbers will gradually increase. There is some cry for work towards the east of Madanapalle town and near Sampallem, but it is doubtful if they will come for famine wages yet. I will watch them carefully.

Váyalpád.—Works necessary in the north-west of the taluk. Part of this tract will be relieved by the work shortly to be opened at Kalicherla in Madanapalle taluk. Beforelong it will be necessary to open works in Váyalpád taluk itself about Saremadugu. Some of the Muhammadan gosha females suffer a good deal. The Tahsildar states that they want some help in the shape of money-dole. The question of opening kitchens will be considered. I think it is hardly necessary yet.

Ráyachóti.—The Tahsildar reports that the food supply with most people is getting reduced. The wealthier ryots who still hold stocks will not part with them. The poorer classes have next nothing to eat; some of them eat leaves of Devadari * (*Secthia Indica*) and vustikayalu and others live on one meal a day; still the taluk has got sufficient grain, which the Tahsildar expects will last till the end of February or at latest March.† Relief works will shortly be opened at Nulivedu. In many parts of all taluks there is work at present to be had in ploughing and sowing paddy and cholum under wells. Where wells are scarce the pinch is being felt. After the well cultivation will come the sugarcane harvest, which again will employ large numbers of

This Tahsildar is a new man and knows nothing of the taluk; his platitudes need not be regarded.

(Intld.) O. W.-M.

* They have been mixing these with their food ever since I came to the district and probably before.

† Or April or May?

GOVERNMENT OF MADRAS.

REVENUE DEPARTMENT.

Extract

READ—the following Proceedings of the Board of Revenue (Revenue Settlement, Land Records and Agriculture), dated 21st January 1892, No. 43:—

MR. CLOGSTOUN.

Read—the following letter from O. WOLFE-MURRAY, Esq., Acting Collector of Cuddapah, to the Secretary to the Commissioner of Revenue Settlement and Director of the Department of Land Records and Agriculture, dated Balapanur, 9th January 1892, Ref. on C. No. 2914-Eng.:—

I have the honour to forward my report on the state of the season in the district for December 1891 with the Divisional officers' reports * and two statements.

* Sidhout Deputy Collector's No. 27, dated 8th January 1892.
Sidhout Deputy Collector's demi-official, dated 25th December 1891.
Cuddapah Deputy Collector's No. 29, dated 5th January 1892.
Sub-Collector's No. 32, dated 5th January 1892.
Head Assistant Collector's No. 3, dated 4th January 1892.
Head Assistant Collector's No. 3791, dated 23rd December 1891.

2. *Sub-division.*—The condition of affairs has not mended, and the little rain that fell in Madanapalle, although it improved pasture and gram crops, did not increase the water-supply, which is a great difficulty there after the long drought and which must affect well irrigation, although the Sub-Collector is by constant advances getting the ryots to deepen their wells. Agricultural labour is still available in most parts, but no doubt the opening of the works settled at the Christmas conference by His Excellency the Governor and the Commissioner will attract many candidates. The condition of the people is reported good on the whole, though the Ráyachóti Tahsildar, who cannot be expected to know yet much of his people's habits, as he is new to the place, reports that the people are eating "Devadari" leaf and one meal a day. The latter, if a good meal, is quite sufficient to support a healthy person, even a European in this country, as I have seen in my own experience; and as to the "Devadari" leaves, it is customary to mix them in food in all bad times. There is, no doubt, a disagreeable tendency to withhold grain, but we must trust to the new rail and private enterprise to counteract this.

3. *Main Division, Cuddapah—Crops.*—With the exception of a few villages in which the crops withered, two of which, about seven miles from Cuddapah, I visited, and some villages in the west, there was a poor harvest of cholum and korra, nothing over a half and much under it owing to drought and blight. Standing crops under wells and channels are generally good, but some are withering along with much of the cotton and gram on dry lands.

4. *Fodder and pasture* are available still, but the latter is limited; of the former, the supply should hold out till the next harvest. The stalk all over the taluk, as far as I have seen, was tolerable.

5. *Water-supply* is failing in some villages.

6. *Agricultural operations.*— Plenty of work for every one since the middle of the month owing to the harvest and stalk-cutting.

7. *Cattle disease.*—None, but cattle losing condition from the dry season.

8. *General.*—There will be enormous remissions under wet waste; hardly a tank has a crop under it, wet or dry. Water was during the month run to the Patha Cuddapah tank ayacut.

9. *Condition of people* is good generally, but Malas and Madigas of the affected villages are becoming thinner. Minor irrigation works will be opened during the current month in the affected parts and would have been commenced already in those two villages, seven miles from Cuddapah, which I mentioned above, but that the Executive Engineer returned me the estimates saying he could give no opinion on them without taking levels, on which I sent them back to him with an appropriate letter; meanwhile the work is not commenced.

10. In Cuddapah town there are 200 beggars shifting for themselves for the most part as best they can, but I have thirty and odd fed daily on relief kitchen rations at an endowed chattram managed now by Government. Sooner or later I suppose these useless and idle persons, who are consuming grain that would be much better eaten by the able-bodied, must come in a regular relief kitchen as private charity contracts unless they die in the interval. I see so far no decadence in their condition, though I have known a good few by sight these many weeks past.

11. The other usual headings of a season report are detailed in the Divisional officer's letter and call for no remarks by me.

12. For works there are some Rs. 11,000 of minor irrigation works scattered over the taluk, which, along with the works specified in the list sent up with my letter, Reference on C. No. 2895-Eng., dated 12th January 1891, will be sufficient for the present.

13. I cannot leave Cuddapah division without remarking, however, on the excellent opportunity we now have for improving the sanitary condition of the town, and I trust that the measures recommended may be carried out during the next six months. These are—

(*a*) The permanent supply of Patha Cuddapah tank by the canal to cost about Rs. 33,000, I believe. The Canal Engineer says he can do the work in six months.

(*b*) The breaching of the anicut at the jail and the levelling of the Boogari bed and the partial filling up the present supply channel of the Patha Cuddapah tank with spoil from the bed of the channel. For this work the Sanitary Engineer kindly sent me a sketch of the levels and I have asked the Executive Engineer to prepare estimates for the same. I have no idea of the cost of this scheme; I cannot think it is above a very few thousands.

(*c*) The digging of the great drainage channel (about 1 mile in length) outside the town as suggested by Mr. Jones; about this I do not know if estimates are under preparation. In all these works ordinary labour will find plenty of employment and I trust the present year may see them all completed.

14. *The Sidhout Division.*—The Divisional officer has sent no report, * but I enclose the Tahsildar's report and a demi-official from the Deputy Collector regarding matters in Sidhout.

* Since received and enclosed.

15. Generally I may say that Pullampet needs no remark: I saw its condition during the month; all well.

16. Badvél remains *in statu quo*; there was some drizzle about the 21st which did no good. Minor irrigation works have been started and between 800 and 900 persons resorted to them. There is no prospect of my getting there till towards the end of the month as an examination from the 20th onwards ties me to head-quarters. I have, however, applied for a sum to employ people at Badvél, near which there are no minor irrigation works and many unemployed laborers, but the Commissioner refused to sanction the money and the matter is under inquiry. I have asked for Rs. 1,600 for commencement of the prickly-pear clearance sanctioned by the Commissioner and ordered work to start forthwith. I shall know more of the taluk when I get there; torchlight dacoities have been very prevalent there.

17. As to Sidhout, during the month very fair rain fell in thirty villages on the east and north of the taluk, which have much improved in their condition. Curiously enough the cholum here was mostly planted late and this rain should do it much good; also there is enough water in several tanks to raise a dry crop. The south of the taluk is in a bad state however, the crops have mostly withered, and there is a great outcry for labour at Vontimitta where there are many poor. This has been satisfied by increasing the wage paid for 56 lb. of cut grass to 2 annas and 8 pies daily owing to the distance the people have to go to get it. The selling price will be raised accordingly. The work is supervised departmentally by Forest agency. I have also encouraged the ryots to go themselves to the forests and cut grass free, and I have little doubt, both here and Badvél, this will be taken advantage of. The grass-cutting will not last very long however, and beyond the deepening of a well at Vontimitta there is no other local work available; unless, therefore, I can induce the people to migrate to Pullampet side for the harvests, it will be necessary to open a road relief work soon; there is an estimate ready for a direct road from Sidhout to the Madras line, which the Railway Company have been agitating for for a long time. If it becomes absolutely necessary, I will apply for funds and staff to supervise it.

18. The Head Assistant Collector's division has been well inspected during the month. In Jammalamadugu there are 7 villages which fared badly, in Pulivendla some 12 or 13, and in Proddutur none. Crops generally varied much; some cholum gave a very poor outturn and some very fair. Cotton and gram are moderate to bad. In the north of Jammalamadugu, which I visited during the month, there are many Mala Christians of the London Mission; they weave and spin and looked well, but they may find it difficult hereafter to get on well. In the north-west of Jammalamadugu, which I have also visited, there are few Malas in the worst villages and most are ryots and laborers.

19. I am now just among the poor villages of Pulivendla, in which, however, the Surabhu valley, lately inquired after by the Commissioner, is not included, and it has had a tolerable season as far as dry crops go. On the whole but for Exeter Hall I would not stir a finger to start relief works in any part of this division; for 15 successive years the ryots admit they have had none but good seasons, and all classes ought, therefore, to be able to put up with one indifferent one. But owing to high prices it may go hard hereafter with some of the poor, and there is a list of works, chiefly or all minor irrigation, which can be put in hand. At the most it will come, perhaps, to commencing the minor irrigation works budget supplemented by a few extra works on March 1st instead of on April 1st, and I will apply in due course, with which remark I leave the matter. Some of the Head Assistant Collector's statements in his description of the condition of affairs are both instructive and amusing.

20. On the whole, therefore, the district has seven taluks which require much attention as regards works, viz., the 4 taluks of the sub-division, Badvél, Sidhout, and Cuddapah. I must, however, bring to notice that nearly everywhere throughout the district, except in the immediate neighbourhood of large towns, agricultural wages are invariably paid in grain and therefore the wages of labour have not fallen at all, but in parts where grain has been actually harvested have, in reality, risen much owing to the rise of the money prices of grain. A day's wage in grain will feed one person full for 3 days.

21. During the month I have been 15 days in camp in Sidhout, Proddutur and Jammalamadugu, and also inspected several villages in Cuddapah taluk in the south, west and north-east, and, with the exception of 2 days in Madras, worked all the Christmas holidays.

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ENCLOSURE No. 1.

Periodical No. 27-Eng., dated 8th January 1892.

REPORT on the state of season in the taluks of Badvél and Sidhout of the Sidhout General Charge Deputy Collector's division for the month of December 1891.

STATE OF COUNTRY.

1. *Crops*—

In Badvél taluk both wet and dry crops have almost withered away except under wells.

In Sidhout taluk dry crops under wells and tanks, which have received some supplies, are good. Cholum on dry lands in fair condition.

2. *Fodder.*—In Badvél taluk scanty. Dry fodder not procurable except in a very few villages in either taluk. Green grass and hill grass available in several places.

3. *Water-supply*—

Badvél taluk.—There is no water in tanks and channels. The supply in wells is scanty.

Sidhout Taluk.—Improved in wells in the majority of the villages in the Kondur firka and a few villages in the Obalam firka after the rain in the latter part of the month. In this tract tanks also received some supply varying from 5 days to 2 months.

4. *Agricultural operations*—

Badvél Taluk.—Irrigation of standing dry crops under wells. Harvesting of ragi. Cutting withered paddy crop.

Sidhout Taluk.—Ploughing operations under tanks for sowing ragi in some villages where there was rain on the 21st and 22nd of the month.

5. *Cattle*—

Badvél Taluk.—Becoming weak for want of sufficient fodder.

Sidhout Taluk.—In good condition in those parts where there is pasture. Fair elsewhere.

6. *General Remarks on the above*—

Badvél Taluk.—All crops have suffered much and fodder has become scanty. In about four villages bordering the Sidhout taluk there was rain from quarter to half an inch, while in the rest of the taluk there was but a drizzle. Water in wells is getting scanty even for drinking purposes.

Sidhout taluk.—Prospects have improved in about 35 villages out of 72 after the rains of the 21st and 22nd in the northern portion of the taluk. The standing cholum and ragi which were before on the point of withering have revived. The area under these crops is, however, not very large, that under cholum being about a fourth and that under ragi about one-ninth of the total extent of cultivation. These crops will be fit for reaping in about 1½ to 2 months. Till then there will be very little field labour for working classes. I have seen a small number engaged in weeding and planting ragi, but a good number of these were not coolies but members of the field owners' families. The outturn of ragi, which is mostly under wells, would be about half in about 35 villages and about a fourth or less in others, and that of cholum about half in about 25 villages and a fourth or less in others. Except in one or two villages the yield is not expected to exceed 8 annas. The harvesting operations will last from 10 to 0 days. Tank supplies having been very deficient, paddy which used to be cultivated to a pretty large extent was not so cultivated. In places where it was cultivated, it withered for the most part owing to want of water. Some tanks, about 30 in number out of 106 in the taluk, received short supplies after the rain of the 21st and 22nd. But except about half a dozen which received from 1 to 2 months' supply none received more than a few days' (5 to 20 days) water. Not a single big tank was even half full. The largest tank in the taluk (viz., the Vontimitta tank) received no water at all in this month. The present supplies in the tanks, where there is any, is altogether insufficient to raise a wet crop. It is certainly beneficial for the standing dry crops under them, but it is doubtful whether it will save the tender crops which have been sown in the month after the recent rain and which depend entirely upon tank water.

CONDITION OF PEOPLE.

7. *On works.*—Good.

8. *In villages.*—Good.

9. *Mortality*—

Badvél Taluk.—There were 7 cases of death from cholera.

Sidhout Taluk.—Forty-five deaths from the said cause.

10. *Sickness.*—None in both the taluks except cholera and a few cases of local fever.

11. *Remarks.*—The health of the people is on the whole good in both the taluks though in Badvél taluk the laboring classes are said to be suffering for want of sufficient work.

RELIEF MEASURES.

12. *Relief works in what taluks open.*—Badvél and Sidhout.

13. *Kitchens in what places open and the number fed at each.*—None.

14. *Village Relief.—Number of villages in each taluk for which reports have been received.*—None.

15. *Number of cases of death from want of food with brief note of circumstances.*—None.

16. *Remarks.*—Relief (minor irrigation works) have been opened in Badvél and Sidhout taluks; 30 works have been started in the former and 10 in the latter.

17. GRAIN-SUPPLY.—*Private trade, active or not, whether in rice or dry staple food-grains*—*Badvél taluk.*—Active in rice and in dry staple food-grains. I have seen large quantities of ragi being imported into the taluk from the Sidhout taluk and Nellore district.

Sidhout taluk.—Active in dry staple food-grains.

18. *State the imports by rail or sea of rice or other staple food-grains if known.*—Not known.

19. *Known or estimated stock in taluks.*—I cannot say that the local supplies have been altogether exhausted. Some well-to-do ryots and a few merchants have got some stock, but the latter are unwilling to expose it for sale in hopes of getting higher prices in future and the former are afraid to do so thinking there will be a great famine next year.

20. *State of markets—Prices at chief markets of principal food-grains*—

Badvél taluk.—In Badvél and Pórumámilla—

Second sort rice	4½	Local seers per rupee.
Cholum	7½	
Ragi	8¾	
Cumbu	7¾	

Sidhout taluk.—In Sidhout—

Second sort rice	4½	Local seers per rupee.
Cholum	7¾	
Ragi	9½	
Cumbu	9	

AGRICULTURAL LOANS.

21. *Loans granted for the construction and repair of wells*—

Badvel taluk.—Rs. 610 in the month and Rs. 6,645 up to the end of the month.

Sidhout taluk.—Rs. 200 in the month and Rs. 525 up to the end of the month.

22. *Loans granted for cattle and seed-grains showing particulars for each class.*—None in both the taluks.

23. *Taluks and places visited during the fortnight*—

Pullampet taluk.—Nandalúr.

Badvel taluk.—Badvél.

Sidhout taluk.—Darzipalli, Gollapalli, Dontarampalli, Narasannagaripalli, Mukundapuram, Vontimitta and 4 of its hamlets. Razagudipalli, Kotapad, Madhavaram and 3 of its hamlets. Kurguntapalli and 4 of its hamlets. Mantapampalli, Bhakarapetta and Kanamalapalli.

The Badvél Tahsildar's report was received yesterday. Hence the delay in the submission of this report. Explanation has been called for from the Tahsildar.

T. RAMA RAU,
Deputy Collector.

8th January 1892,
Periodical No. 27-Eng.

ENCLOSURE No. 2.

From M.R.Ry. R. GOVINDA ROW Naidu Garu, General Charge Deputy Collector, Cuddapah Division, to the Collector of Cuddapah, dated 5th January 1892, Disposal No. 29.

I have the honour to report on the state of season in this division for the month of December 1891.

1. STATE OF COUNTRY—*Crops.*—Cholum and korra were harvested in certain parts. Cholum failed in the parts to the south (Chinnakampalli side) and west (Palagiri side) of the taluk, and in the parts where there was outturn the yield was poor, ranging from 2 to 8 annas, and korra yielded on the average 8 annas. The standing crops under tanks—very little paddy, ragi and korra—are in a precarious condition. Ragi and turmeric under wells are for the present, thriving; but in the Palagiri side ragi under some wells withered and is withering. Those under the river and spring channels are also good except in a few cases. Horse-gram, cotton on dry lands have already to some extent withered. The crops under the Kurnool-Cuddapah canal are fair.

2. *Fodder.*—Green fodder is available in small quantities. Cholum and ragi having been recently harvested, stalks are available to some extent throughout the taluk and may last for about three months. The dry fodder is sold at very high prices, four times that in ordinary season. Along the Kurnool-Cuddapah canal green grass is available as usual. In some parts of the taluk old fodder stalks still remain and may last till the next harvest.

3. *Water-supply.*—Supply of drinking water is fair along the Pápaghni and Pennér rivers and also along the Kurnool-Cuddapah canal. There is no water in tanks except a few which are now commanded by canal. The water in wells and channels has gone down. In some villages—Nallingayapalli, Yerraguntla, Alidena, Talpanur, Ippapenta and Chinnakampalli—the water-supply has begun to fail.

4. *Agricultural operations.*—People were engaged in harvesting cholum and green-gram, transplanting ragi in some places, and removing silt from wells. Ragi and turmeric under wells being irrigated by driving mote extensively. In several places fodder is being collected and stored.

5. *Cattle.*—No disease or mortality for want of fodder during the month. In places where fodder is not plentiful, cattle look thin owing to under-feeding, and probably also owing to over-work in driving motes.

6. *General remarks.*—The general state of the division is, for the present, not very bad, though there is reason for apprehending anxiety for water very soon as the wells and springs are falling low and soon expected to be dried up. There is a considerable wet waste under tanks owing to the deficient fall of rain, and consequently a large amount of remission will have to be granted. Dry crops have almost entirely failed in the villages of Chinnakampalli and the villages around it, and also in the villages of Palagiri and others west of Tangedupalli. Some wells in these villages have already dried up.

7. CONDITION OF PEOPLE—*On works.*—No works are going on in the division except the railway bridge work at Kamalápuram which furnishes employment for a few, and these are in good health.

8. *In villages.*—The labouring classes find work enough in cholum harvesting and storing cholum, and here and there people are employed in sinking wells for which loans were granted. The people in villages around the Municipality find work in it. Málás, Mátikás living in the hamlets of affected parts look thin, probably owing to insufficient food.

9. *Mortality.*—Normal.

10. *Sickness.*—No epidemic, except cholera of a mild type in the village of Mamillapalli, 5 miles south of Cuddapah town; slight fever prevails here and there as usual in this season.

11. *Remarks.*—The general condition not bad for the present; but as soon as the cholum and ragi harvest is over, which will be in a fortnight or so, the labouring classes may suffer for want of work. The people on the Chinnakampalli and Ippapenta side have already felt want of employment, and are looking for employment in remote villages where harvest of cholum and ragi is going on.

12. RELIEF MEASURES—*Relief works.*—Not opened as yet anywhere.

13. *Kitchens.*—None. A few—about 30—helpless persons are served with one meal in the Muthyala Seshu's choultry, which is now under Government management.

14. *Village relief.*—None.

15. *Deaths from want of food.*—None.

16. *Remarks.*—Private charity has already diminished to an appreciable extent and minor irrigation works may be opened in the affected parts as relief works, especially in the Chinnakampalli and Palagiri sides.

17. GRAIN-SUPPLY—*Private trade.*—Not active. Import has gone down.

18. *Imports by rail.*—Not exactly known, but some quantities of cholum were imported into Cuddapah town.

19. *Estimated stock.*—Rich land-owners and sowcars have reserved large quantities of grain, enough to supply the people until another harvest, but all reserved for use in future as they expect still further rise in prices.

20. STATE OF MARKET—*Prices at chief markets* :—

	Cuddapah town.	Kamalápur.
	LOCAL SEERS.	LOCAL SEERS.
Rice, second sort	4¾	5
Cholum, white	8	8¼
Do. yellow	8¼	Not sold.
Ragi	9	9
Cumbu	8½	Not sold.

21. *Agricultural loans.*—Loans granted for the construction of wells in the month :—

	RS.	A.	P.
Under special well rules	525	0	0
Do. ordinary do.	75	0	0
Total ...	600	0	0

22. Loans granted for cattle and seed-grains—

	RS.	A.	P.
Purchase of cattle	100	0	0
Do. of seed-grains	*Nil*		

ENCLOSURE No. 3.

From MUHAMMAD RAZA KHAN SAHIB, Esq., Head Assistant Collector of Cuddapah, to the Collector of Cuddapah, dated 23rd December 1891, No. 3791.

I have the honour to report the result of my inspection of the state of season of the Proddutur taluk.

2. At the outset I must note that this taluk is very fortunate in having the Kurnool canal as its chief irrigation source, 25 villages being supplied thereby. In the east of the tract dependent on the canal are the regions interspersed with the offshoots of the Nallamalais. Here too the country is good. In this portion there are seven villages supplied with hill springs, which, though not as plentiful as usual, have yet such quantities of water as would keep up the cultivation under them in a healthy condition. Here too are most of the rain-fed tanks of the taluk; the Mydukúr tank has had the best supply (¾) this year. Other tanks have had very small quantities. The only tank dependent on the Yerramalais—Kalamada—received a partial supply. Of the tanks in Duvúr and Velavali, the former, a large one, had no supplies. But both these villages are situated in the canal tract.

3. The Pennér runs through the southern border of the taluk, supplying seven villages with channels. The supply of water in these, less abundant than usual, there having been no good freshes in the river, is such as will last till the crops under them are matured. Of course, in the month of June last, there were freshes in it waist deep. I find the country between Proddutur-Nandyalampet road and the Pennér to be prosperous, more so than in the canal region, having been favoured with timely rains. The portion of the taluk needing any attention is that stretching to the west of the *Kundu* and bordering on Jammalamadugu. Here the villages are entirely dry, the soil being regur.

4. This portion is, I must note, not at all bad. I inspected a number of villages; most of them were in an excellent condition, the jonna having yielded more than the average outturn—16, 12 and 8 annas. The failure of crops, which is the howling cry of every ryot whom I meet, like a booming owl in a deserted village, is too partial and local. The villages represented to be the worst are Parlapad, Chowdur, Nandyalampet, Settivaripalle, Yellampalle, Chennarzupalle, Varipenta and Ganjikunta In the first two villages the yield of jonna ranges from 8 to 4 annas, while in the rest the outturn is not less than 4 annas. One curious fact in these villages is that in one field the crop is good, while in an adjoining field or portion of it the crop is withering. My observation leads me to conclude that the late sown crops have not properly matured, while the more wary ryots who were profited by the earlier rains have been well favoured owing to the care and labour bestowed on ploughing their lands. The fall of rain up to October (12 inches in the cusbah; it must have been more to the east of it) was not disappointing. It was in November, at a period when the crops should be maturing, that there was a failure affecting the outturn. Rich soils requiring more manure and moisture are stated to fail, while other soils have been able to keep up.

5. The result is that the average yield in these lands will be less. In the area bordering on Jammalamadugu, cholum, cotton and indigo are most grown. The outturn of cholum grown this side, which should supply the needs of the taluk, will be two-thirds in some parts and half in others, such as Korrapád, Arakatavemula, Gopavaram, Kamanur, Nakkalapalle, Velavali and Chinna Settipalli. The effect on the cotton crop does not seem very marked. It will be seen from the annexed statement that the acreage (for the entire taluk) under cultivation has not decreased.

6. It must be submitted that the crops under wells in all the villages inspected by me are very prosperous; in most the outturn looks bumper.

7. The ryots have been worrying me for dry remissions. Their request is decidedly arbitrary as established by my inspection and observation. There has been no total failure on any large perceptible scale. They are also greedy to have their kists suspended. I must respectfully assure you that all such applications are made through the setting up of wily and mean village officers as proved by my experience gained in my recent tourings. Remissions will have to be granted for wet waste, which is considerable. There will be a corresponding deficit under tirwajasti and fasaljasti. The probable remissions may not exceed Rs. 18,000 as estimated by the Tahsildar.

8. The prices of food-grains are high. The jonna, which is the staple food-grain, has risen above the scarcity rate and also second-sort rice. These high prices, which have been steady for some time, tells hard on the landless poor and the agricultural labourers. But there is no such distress nor real famine as to invoke State intervention. I have not received a single complaint of starvation nor have I noticed any emaciated in my constant riding about from village to village for the last seven or eight weeks.

9. If these high prices continue to rise abnormally through the base and lawless combination of the mercenary Komati grain sellers, whom I do not hesitate to describe as blood-suckers, and if the cotton and indigo crops fail totally, it will be a question to consider how to protect the needy

and indigent labourers. I see at present no hope of any fall in the prices; the demand from outside for local produce is likely to be much pressing, considering the scarcity in the neighbouring districts.

10. The failure of crops having been purely local and partial, there will not be many, requiring aid. The construction of the supply channel at Proddutur, and remetalling the road between Jammalamadugu and Proddutur, already provided for in the budget, will amply answer any present requirements. I have already requested you, in my report about the Jammalamadugu taluk, to direct the Local Fund Engineer to begin to carry out those two works about the end of February next There is no failure of drinking water in the villages visited by me. Cattle are healthy, people generally fatty and strong, quite ready to commit riots, and to fill up the pockets of vakils with any amount of money to defend them before magistrates as verified by my continuous travelling about. There is ample fodder and the few comparatively so-called distressed villages can find any quantity in the adjacent villages. I was surprised to find recently in Narlapad and Chowdur, which are represented to be the worst villages, four or five bandy-loads of straw being vended to certain ryots of Chinna Kemerla and Kothapalle in Jammalamadugu taluk.

The Local Fund Engineer has already been addressed about these two works.

(Initld.)

26th December 1891.

11. I submit, herewith, three statements exhibiting the cultivation, rainfall and prices of food-grains for the last five years.

ENCLOSURE No. 4.

From MUHAMMAD RAZA KHAN SAHIB, Esq., Head Assistant Collector of Cuddapah, to the Collector of Cuddapah, dated 4th January 1892.

Adverting to your reference on Current No. 2920-Eng., dated 18th December 1891, I have the honour to submit a report on the state of season in the three taluks of my division for the month of December 1891.

I. STATE OF COUNTRY.

1. *Crops*—

Jammalamadugu.—Cholum has been harvested. It is reported to have yielded an outturn varying from 4 to 12 annas. Horse-gram is under the sickle and is estimated to yield an outturn of 8 to 4 annas. The standing crops are paddy, cotton, bengal gram and oil-seeds. They promise a yield of 8 to 12 annas.

Proddutur.—Cholum is reported to have yielded in some villages the full average outturn of 16 annas and in others 8 to 12 annas. The worst affected villages had also 4-anna crop. The other dry crops are in good condition.

Pulivendla.—Paddy, ragi and cholum under channels and wells are in good condition. The crops on unirrigated lands are good in the northern and western parts of the taluk. They have withered or are withering in the villages of the south-eastern parts between Pulivendla and Vempalli. In the other parts of the taluk they are middling. In the Surbha valley, the cumbu crop, which is the staple food crop, has yielded a good outturn. The other dry crops are also in good condition and are likely to yield an outturn of 4 to 8 annas. A separate report has been submitted on the season in this valley.

2. *Fodder.*—There is no scarcity at present of fodder in any taluk, though it is more costly than in the normal years.

3. *Water-supply* sufficient for drinking purposes. Tanks are dried up. There is a scanty supply in the river channels. The spring channels in a few villages of the Pulivendla taluk are said to contain no water. There is good supply in wells.

4. *Agricultural operations.*—Cholum and korra are being harvested and fields irrigated. Ragi is being transplanted in Pulivendla taluk.

5. *Cattle.*—Cattle are in good condition. No disease prevails.

6. *General remarks.*—Owing to the deficient fall of rain during the year, a considerable extent of wet ayacut has been left waste. Remissions will be granted after due inquiry in the ensuing jamabandi. The dry crops have not generally failed. They have yielded a fair outturn. The failure of dry crops is confined to very few villages. There is, therefore, no apprehension of distress for the present.

II. CONDITION OF PEOPLE.

7. *On works.*—No relief works have been opened.

8. *In villages.*—People are healthy. No reports of starvation or emaciation received.

9. *Mortality.*—No cases of mortality from starvation have been reported.

understand the matter the object of a detailed completion report is to show whether the work has or has not been executed in accordance with the sanctioned plans and estimates; and if that is so, I fail to see what the amount, more or less, of the excess, if any, over estimate, has to do with the matter. Moreover, I fail to see why, because the estimate is exceeded by 5 per cent., it should be necessary to submit a detailed report explaining the savings and excesses on every item when the significant excess may be all in one item. The accounts of one work, completed within the estimate, may, when examined in detail, show much more irregularity than those of a work of which the estimate has been exceeded by 6 per cent. In the latter case, the excesses may all be satisfactorily explainable; in the former, large savings on the estimate may have been improperly devoted to additional work not provided for in the estimate, and which should never have been executed at all.

207. It seems to me that, if it is necessary that the superintending engineer should have an assurance that a work is executed in accordance with the details of plan and estimate—and that, I take it, is, according to the presently accepted theory, the object of a completion report—then he should get it in every case, for all works not within the executive engineer's own powers of sanction, and he should get it whether the estimate is exceeded or not; and it should not then be necessary to explain any difference, unless an explanation is called for by the superintending engineer. But if, on the other hand, this is not the object of the completion report—if the completion report is required only in connection with excesses—then a detailed completion report ought, I think, to be submitted whenever any *item* of an estimate is exceeded by more than a certain amount; because the net excess on the total of the estimate is no guide whatever to the extent of irregularity. *The first step, however, ought to be to settle what is the purpose and object of completion reports.*

208. I think the proposal (paragraph 392) to omit from completion certificates of departmental officers all reference to plan and estimate is a mistake. It may be, and probably is, desirable to make the intention somewhat clearer, either by amplifying the certificate itself, or by adding a foot-note indicating the points with reference to which the departmental officer is expected to certify or remark; but it seems to me that general agreement with the plan and estimate, as approved by the department concerned before putting the work in hand, is just the very thing that the departmental officer ought to certify to. For instance if the department wanted, and the sanctioned estimate provided for, a building with a tiled roof, and containing four rooms of specified dimensions, it would certainly be the business of the departmental officer to see that he did not get a thatched building containing three rooms only, or four rooms of considerably less than the specified dimensions, which is essentially a question of agreement with plan and estimate. In the Madras form of certificate there is no reference to agreement with plan and estimate, and the vagueness of the certificate certainly does not prevent departmental officers from enlarging upon matters which do *not* concern them, any more than it helps them to understand what are the points that *do* concern them. Here again, however, the first question ought to be: *What is the object of a completion certificate?*

209. I think the points to be considered by the departmental officer should be made clear, and perhaps it might, with advantage, be ruled, that if the departmental officer cannot sign the certificate, he should at once report the matter for inquiry and orders, through the head of his department, to the chief engineer, informing the executive engineer accordingly. It is not an uncommon thing to explain excessive delays in submission of completion reports by stating that the departmental officer will not sign the completion certificate, and this sort of deadlock is apt to last for an indefinite time, without any indication of who is right and who is wrong. I cannot imagine how it can be expected, that the prevention of unnecessary or improper remarks by the certifying officer, can be secured by deliberately excluding words of which the *intention*, at any rate, is to indicate what he has to certify to. If the words are wrong, alter them by all means; but surely there should be *something* in the certificate to show what *is* wanted.

[50—6-1-90.]

No. 328 D.

Government of Madras.

PUBLIC WORKS DEPARTMENT,

Ootacamund, 21. VI 1890

OFFICE NOTE.

From W.

To C.

Please read the accompanying letter from the Govt of India N° 884 A of 11. 6. 90, and favour me with your opinion whether with reference thereto, the proposal made in your office note N° 3329. 97. 6. 90 requires modification.

JR RRD 20/6

No. 5399/90

Mr. Saunders's report

Mr. Woodburn's report on Committee's proposals appears to be on his table

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Note by the Examiner, Public Works Accounts, Madras, on the report of the Committee on Public Works Accounts, 1889.

I.—Preliminary Remarks.

1. In the later paragraphs of this note—from para. 16 to the end—I have ventured to consider and criticise in detail such of the Committee's proposals and remarks as seem to require special notice, but it will, I think, be convenient to preface those detailed criticisms by a few general remarks, in the light of which they will perhaps be more readily understood.

2. First of all, however, I must explain that I have gone into the various matters much more fully than I otherwise should have, because I understand that the position of the Madras government, with reference to the Committee's report and to the conclusions adopted by the government of India, is somewhat peculiar. Madras was originally excluded from the scope of the Committee's investigations, and I understand that, as the Madras government already has its own code, and to a great extent its own forms, the conclusions adopted by the government of India for incorporation in the government of India code will not necessarily be binding on the Madras government, and that though great weight will of course be attached to such conclusions, each point will have to be independently considered. At any rate it is certain that each change will have to be separately codified with careful reference to already existing differences of rules and procedure. For this codification I shall be responsible; and I fear that the difficulty of carrying it through successfully may be seriously increased, if the resolutions of the government of India on the various matters dealt with by the Committee are accepted in every case without any consideration of local circumstances.

3. I regret that so much of my note should be devoted to criticisms and objections; but as to this I would point out that, whereas identity of opinion on any point can be expressed in two or three words, it may easily take as many pages to fully explain and justify any difference of opinion. At any rate I have thought it my duty to state my views fully and freely, and all the more so because it seems to me that the Committee's proposals have not otherwise been subjected to any criticism whatever from the point of view of those most interested in, and most affected by, many of their proposals, that is to say, examiners and accountants. No doubt each point is carefully considered before each resolution of the government of India is issued; but I submit that those who influence the decisions of the government of India, by the mere fact of their not being in actual touch with the work affected, are to a great extent disqualified from taking a complete and sufficient view of the issues in question. I believe the present opportunity is one which, properly taken, may bring about a great deal of good, much relief to executive officers—especially subordinates—and greatly improved accounting; but I am very strongly of opinion that certain of the Committee's proposals regarding really important matters are decidedly ill-advised, and that their adoption would make matters worse instead of better; and it seems to me that as regards accounts proper, they have entirely overlooked the real fault of the present system (?), that is to say the unmethodical fashion in which, professedly and according to rule, the accounts are made up.

4. One point to which I particularly wish to draw attention is the frequency with which the Committee express opinions, and make proposals, regarding rules and procedure, without any reference or relation to any definite understanding as to the object aimed at. Take for instance their remarks about vouchers (as to which see also my para. 41); their proposals about accounting by sub-heads and the procedure (muster rolls, ten-day reports, &c.) connected therewith (see my para. 43 *et seq.*); their remarks about count of cash (my 67 *et seq.*); their proposals to abolish separate forms for schedules (my 122 *et seq.*); as to treatment of

objectionable items (my 155); as to adjustment of stock values (my 87); and as to completion reports (para. 207). In referring to this matter I am not actuated by any pedantic fondness for logical sequence and method. Unquestionably there are matters—though not as many as would generally be supposed—as to which the object in view is perfectly obvious, and in connection with which it would be mere foolishness to insist on having a formal statement of objects and reasons before discussing procedure and rules. But this, I think, is not the case as regards any of the points indicated above.

5. Take vouchers for instance (para. 41*). At first sight it may seem that there can be no doubt about what you want vouchers for, but as a matter of fact vouchers are wanted for two distinct purposes, namely (*a*) protection against your creditors, and (*b*) protection against your own servants or agents. In certain classes of cases vouchers are required for both purposes; in others mainly if not entirely for one or the other, and a very little consideration will, I think, convince anybody that as regards almost every point in connection with which it is necessary to prescribe rules or procedure, the proper conclusion depends almost entirely upon which of the above-mentioned purposes you want the vouchers for.

6. Then as to accounting by sub-heads or items of works (para. 43 *et seq.*) I cannot find that, during all the years that accounting by items has been practised, any attempt has ever been made to state definitely what use is to be made of such accounts when prepared, or to ascertain whether or not it is possible to prepare them in time to be of use for the purpose—whatever it may be—that they are supposed to serve. For my own part—as I have argued at length further on—I am strongly of opinion that they never can be properly prepared in time to be of any real use, and that, even if they could be so prepared, their only use would be to give indications and suggestions which would lead to an examination of quantities of materials and labor used; an examination which, as I have endeavoured to show, could be systematically provided for without any sub-head or item accounts at all; and which, if properly provided for, would be made at a time when it would be really useful, instead of being made long after it is wanted. The abolition of work vouchers and of audit by sub-heads or items are very good things, but I venture to think we ought to go a good deal further and do away altogether with accounting by sub-heads.

7. In the matter of count of cash and submission of cash balance statements (para. 67 *et seq.*) everything depends upon whether cash is supposed to be counted (1) for the protection of the cashier, or (2) for the protection of government. When it is a question of multiplying and specializing forms, or of simplifying them and reducing their number, the first thing is to consider the position of the user and the conditions under which he works (para. 122 *et seq.*). Simplification under certain conditions is just as harmful as multiplication is under others. As regards objectionable items statements (156, footnote) the Committee seem to me to entirely lose sight of the object of such statements; and in the proposals regarding periodical adjustments of stock accounts, whilst they provide for doing something of which the use is not explained, and which in the absence of explanation seems to me to be generally useless, they make, I think, no provision—or at any rate no adequate provision—for the really essential thing, namely the periodical or occasional revision of rates (87). As regards completion reports it seems to me hopeless to attempt to prescribe what a completion report should contain without first settling what is the object of such reports (paras. 207 and 208).

8. Another very important point, to my thinking, is that the Committee seem altogether to overlook the fact that every restriction on an executive engineer's action is not necessarily a hardship to him and that, on the contrary, the removal of the restriction may be tantamount to the infliction of a serious burden on him, the true meaning and intention of the restriction being to shift on to somebody else a responsibility which must otherwise rest on the executive engineer. This is especially noticeable in connection with the Committee's proposals regarding

* This and similar references in paras. 5 to 12 are references to later paragraphs in this note in which the same subject is again dealt with.

pre-audit of establishment charges. I have not the slightest doubt that if the Committee's proposals are adopted, executive engineers will have cause to regret the additional responsibility thrown upon them, and the extra trouble and correspondence consequent on their inability to check properly the claims which they will be expected to pay before they are checked by the audit office (see below, para. 176 *et seq.* and 190 *et seq.*). The proposal to do away with the monthly certificate of examination of accounts is a proposal having much the same tendency. It is a proposal to substitute for a defined and intelligible responsibility—or one which might easily be made so—a responsibility altogether vague and unintelligible, and onerous in proportion to its vagueness (see below, para. 135 *et seq.*).

9. Another point is the apparent failure of the Committee to realize—they certainly take no account of it—that many of the demands made, nominally on the executive engineer, for statements, returns, accounts, &c., (1) are made entirely in his own interests, and (2) do not or need not give him *personally* any trouble whatever. In the first place, though they are prepared in his office, and though he may sign some of them, he is not supposed to be personally responsible for their correctness. The accountant is responsible for them—or might be made so—and most of the correspondence about them can be, and in course of time I hope it will be, conducted directly with the accountant. In the second place the object of preparing them is, either

(*a*) to enable the audit office to do something which the executive engineer would otherwise have to do himself, or
(*b*) to enable the executive engineer himself to do properly something that he is expected to do, but that he *cannot* do properly unless the material to work upon is prepared for him in a suitable shape.

10. Take for instance the watching of expenditure with reference to appropriations and estimates (para. 134) and the watching of the due adjustment of items in suspense (para. 135): these things, and many other things like them, are things for which the executive engineer is no doubt ultimately responsible, and if his executive work were much less than it is, or if it could be done under different conditions, *e.g.*, if he could be much more frequently at head-quarters, it might perhaps be easy for him to make every month, or even oftener, such a complete and systematic examination of his accounts as would enable him to act fully up to his nominal responsibilities; but as a matter of fact he has not time to do this, and, recognising this, the present system requires that such information shall be furnished to the audit office, as will enable that office to see that the needful things are done and to bring omissions to the notice of the executive engineer. For the sake of a reduction of scriptory work in the divisional office, and for a supposed reduction of check-work in the examiner's office, the Committee propose to largely reduce the information to be given monthly to the audit office, and the change is no doubt feasible, but it is necessary to remember that it must have one of two results, that is to say, either (1) the personal responsibility and the personal check and work of the executive engineer must be considerably increased, or (2) mistakes and omissions which are now detected and put right with fairly reasonable promptitude will be allowed to accumulate till the time of the annual clearing up. For my own part I do not think it is at all desirable to ask anything more from the executive engineers themselves; indeed I do not believe it could be got from them without sacrificing more important considerations; I feel sure that any change in the direction of withdrawing from the audit office the means of doing what the executive engineer cannot readily do for himself, must lead to large accumulations of objectionable items, which will be doubly difficult to deal with, when they do come to be dealt with because of (1) their number and (2) their age, and I am convinced that the extra correspondence which must result would be a serious burden to everybody. Matters which if dealt with at the time would have been disposed of by a few routine words (in an audit note or similar document) between the audit office and the divisional accountant, without any appreciable trouble to any one, will if neglected become so tangled and complicated as to require the personal intervention of the examiner and the executive engineer, if not of the superintending engineer and of government.

11. I do not mean to assert that the present ways of obtaining the information required are in all cases the very best that could be devised. I dare say they may admit of simplification and improvement of details; but I submit that the general principle of the present system is a sound one, *and that to the utmost possible extent the audit office should relieve the executive engineer himself, as distinguished from the divisional office, from all work, the proper doing of which involves systematic examination of the divisional accounts.* To sacrifice this principle for the sake of a little reduction of scriptory work in divisional offices would, I think, be a great mistake.

12. With reference to para. 9 (*b*) above I may instance the objectionable items statement, and the stock balance statement, suggested in my para. 88, as statements to be prepared mainly if not entirely for the assistance of the executive engineer. I do not see how the executive engineer is to come by a knowledge of irregularities committed by his sub-divisional officers and other subordinate officers, except through an objectionable items statement, and (see also para. 181 note) I do not see how the statement can be prepared in time to be of any real use unless it is prepared in the divisional office. The statement of stock balances could not be prepared elsewhere than in the divisional office. There are many other things which, as it seems to me, it is simply impossible for an executive engineer to do properly, unless he has certain facts and figures collected for him in a suitable shape, and to talk, as is often done, about such statements as if they were really prepared by the executive engineer, and as if their abolition, or their preparation elsewhere, would be any relief to the executive engineer, shows, in my opinion, a complete misunderstanding of the case.

13. Closely related to the two points last noticed is the common mistake of looking upon every objection or inquiry made by the examiner as directed more or less *against* the executive engineer, whereas the real object in almost every case is to assist him, by bringing to his notice some irregularity or omission, or delay, for which he is technically responsible, and which, if neglected, may afterwards give him trouble, but which it is practically impossible for him to find out for himself, without a complete and systematic examination of the accounts, such as considering the conditions under which he works, he cannot be expected to make for himself. This matter is closely connected also with the question of the relations between examiner and executive or administrative officer, as to which see para. 16 *et seq.*

14. Another point in respect of which I venture to think the Committee's proposals open to grave objection is, the unnecessary introduction of options, alternatives, exceptions and qualifications such as are referred to further on in my para. 22, 56b and c, 60 and 64 (*f*). I am concerned with these mainly in connection with cases in which the action of the audit office is involved, and I will therefore first point out that, considering the agency by which and the conditions under which the detailed operations of audit are and must be conducted, it would be a physical impossibility for an audit office to apply rules such as would result from the adoption of some of the Committee's proposals—it would be a physical impossibility for the auditor to say which of the possible combinations of variations applies to any given case. But I further wish to point out that, if the audit office can properly apply such rules, all these alternatives, exceptions and qualifications become simply so many pitfalls for the unwary executive officer.

15. I submit that, in the interests of everybody concerned, it is best to make the rules as simple as they possibly can be made, and as little as possible open to misconception and misapplication. Now and then the result may be to give somebody a little trouble that he might have been spared; but in the long run I have no doubt it will save trouble to everybody.

II.—Relations between Examiners and Executive or Administrative Officers (31 to 36).*

16. With reference to para. 31 it seems to me that "when a question arises as to whether an officer has exceeded powers entrusted to him or not" the worst

* This reference and the similar references against subsequent section headings indicate the paragraphs of the Committee's report in which the subject is dealt with.

course that could possibly be adopted is that recommended by the Committee. I cannot conceive anything more calculated to cause dissatisfaction and unpleasantness than the practice of reporting matters to the superintending engineer or to government, without first obtaining a reasonable assurance that there really is something to report. As far as my experience goes executive officers are invariably "brought to account" if at all "by their own official superiors" and not by the auditor; but it seems to me essential that, before saying anything to their official superiors, the auditor should satisfy himself as to the facts. At any rate in code para. 358 (India code, chapter III, para. 130) he is at present distinctly told to do so. If this is wrong, it is the rule, and not the examiner, that is to blame.

17. I confess that I do not quite understand paras. 32 and 34. I should say that no examiner is likely to question the ruling of an administrative officer if it *is* within the general powers entrusted to him; but if on the other hand the administrative officer obviously exceeds his powers, I do not see how an examiner can overlook such transgressions simply because they happen frequently.* If however the Committee merely mean that the examiner should use his own discretion in such matters, I would observe that the first step must be to abrogate the rule of code para. 354 (India code, chap. III, para. 126), according to which "in all matters relating to the audit of charges for establishment and travelling allowances, and generally in cases in which fixed rules have been laid down . . . . *examiners are bound rigorously to act on those rules without admitting of any exception.*" Here again it is the rule and not the examiner that is to blame if anything is wrong; but for my own part I have grave doubts as to the expediency of altering this rule. If you do alter it, you must either give the examiner absolute discretion, or you must give him a strictly defined and limited discretion. As far as I can see, there is no third course. If you do the first, it comes to this, that government is to make rules and the examiner is to settle whether they are to be enforced or not. If you do the second you still get the hard and fast line somewhere, and I venture to think that it would be much simpler and better to draw the hard and fast line a little higher, and to give the full benefit of the increased latitude to executive and administrative officers, and leave the examiner out of the matter altogether. Moreover it seems to me that, when once you vest the discretion in the examiner, you go every near indeed to infringing the principle that executive and administrative officers should be "brought to account by their official superiors" only.

18. It is impossible to take exception to the remark in para. 33 that "remarks upon the accounts should be carefully reduced to sensible criticisms," &c. This is an obvious truism. The real difficulty, the practical question, is, how to do it. It is a physical impossibility to have every remark "carefully considered" by the examiner himself, or even by a gazetted officer of any considerable standing or experience. Practically the great majority of the remarks have to be made as a matter of routine by a very subordinate agency—an agency which is even now considered to be too highly paid, but whose efficiency will hardly be increased by a reduction of pay—and, in the majority of cases, as the remarks are made by this subordinate agency, so they have to stand, both as to substance and grammar or intelligibility, and, being made for the most part by men who have a very imperfect command of the English language, it is no wonder if they are very often far from sensible. The practical question is how to get over this difficulty, and how to bring a superior intelligence to bear upon these routine remarks; and here the Committee do not help us at all. The plan which I have myself endeavoured to introduce is to stereotype all ordinary and recurring remarks, and to require that every remark not thus provided for shall be specially passed by some superior officer if not by the examiner himself. I believe this to be the only effectual way of securing the object in view; but the stereotyping of these routine remarks in all sections of

* It may perhaps be thought that this is a perversion of the Committee's remarks. As to this I can only say that, after careful and repeated consideration, I cannot discover any interpretation which does not ultimately imply that, in some mysterious way, it is the fault of the examiner, and not of the executive or administrative officer, if audit objections are frequent. You lay down strict rules; you tell the examiner that he is bound to go by them "*without admitting of any exception*"; and yet apparently it is to be deemed his fault if audit objections are numerous.

audit is a very difficult and laborious process, and one which can hardly be carried to anything like perfection without a considerable amount of specialization and sub-division of work, which again is a thing that can only be done gradually.

19. With regard to para. 35 I may be allowed to observe that examiners are no more infallible than other people, and that it would be very strange indeed if they did not occasionally step beyond the limits of a province which is exceedingly indefinite; it is inevitable that they should sometimes do so absolutely; but much more often, I venture to think, they do it only in the opinion of the other party concerned, who is seldom in a position to take an unbiassed view of the matter. At any rate it seems to me that this is one of those things as to which it is perfectly useless to lay down general rules. It is not in the least likely that anybody will intentionally and knowingly transgress defined limits; and no rules can prevent mistakes and misunderstandings. If any executive or administrative officer thinks that the examiner habitually goes beyond his province, the proper remedy (failing remonstrance with the examiner) is for him to bring the matter specifically to the notice of government; and the examiner will probably be very glad if government thereupon restricts his responsibilities. My own experience has been that, in the rare cases in which these complaints *are* brought to the test of specific instances, government almost invariably upholds the action of the examiner; and I venture to think that the feeling referred to in paragraph 35 of the Committee's report would be more correctly described as a feeling that government looks to the examiner for action which, in the opinion of certain executive and administrative officers, would be better left to somebody else. If it is not so, it is difficult to understand why, if there is a widespread feeling about the matter, specific complaints are so very rare. The fact I take to be that these officers know that, though the examiner is doing something that they do not like—and which in all probability he does not like himself—he is only doing what government expect him to do.

20. In para. 37 the Committee apparently adopt the suggestion of para. 36-V to "restrict the examiner's action to duties of audit and account, and to leave the entire responsibility (for watching the regularity of progress on sanctioned work) for economical administration (and for settling the detail in which outlay on a work is to be recorded), to controlling officers." I have nothing to say against the Committee's proposals as regards the words which I have placed in parentheses, but I venture to question the expediency of making any change which would prevent, or tend to prevent, an examiner from criticising, or initiating inquiry into, administrative procedure in the interests of economy. It is well to remember that the possibility of useful action of this sort depends almost entirely on *opportunities for comparison*, and that as regards a host of matters the examiner is the only person who has any opportunities of instituting comparisons. Local authorities cannot have them to the same extent as a central one, and the only other central authority, the chief engineer, never sees anything at all of a multitude of things which come every day under the examiner's notice. No doubt examiners would personally welcome any change which would *definitely and distinctly* relieve them of any responsibility of this sort; but whether such a change would be advantageous to the state is, I venture to think, very questionable.

III.—Accountant's check of Calculations in Measurement Sheets (43 to 61).

21. The Committee's meaning is not quite as clear as it might be. In paras. 48 and 49 they refer to two classes of cases, and I presume the two classes are those mentioned in paras. 46 and 47, but it is just possible that there may be some reference to para. 45 also. Again, if I am right as to the cases meant, it is not at all clear whether the Committee base their proposals for differentiation of the accountant's action (1) on differences in the character of the work measured, or (2) on the fact that in one case the measurements are made by subordinates, and in the other by the executive engineer or (for this too is not clear) by some gazetted officer. If the proposal is based on differences in the character of the work, or on the difference between a gazetted or a non-gazetted subordinate, I fail to see the logic of it: for I do not think the accountant is the person on whom should devolve any responsibility of an executive subordinate. If in any case the executive subordinate

concerned is not to be entrusted with the responsibility for a given act, then the responsibility should be taken up by some executive superior. But if the distinction intended is a distinction between measurements and calculations by the sub-divisional officer and measurements and calculations by the executive engineer, and if the intention is to make the accountant, in the latter case, responsible for the check which would, in the former case, be exercised by the sub-divisional officer's clerk, then the proposal seems a reasonable one; but in any decision that may be come to the intention should be made perfectly clear; *and in any case it ought to be made quite clear that the executive engineer, and not the accountant, is responsible for seeing that the check is exercised;* and that if he or the sub-divisional officer makes or sanctions a payment without the accountant's check, he takes all responsibility.

22. With regard to para. 52 of the Committee's report, containing proposals for limiting the cases in which measurement sheets need be sent to the divisional office, I venture to point out that exceptions based upon conditions which vary almost from day to day are practically unworkable. One month the sub-divisional officer is an experienced, and the next month he is an inexperienced, upper subordinate; one month he is a gazetted officer, and the next he is not; and even as a gazetted officer he may be quite inexperienced; one month he has authority to make payments, and the next he has not. Any rule of exceptions based upon such a variety of differences as are indicated by the Committee will therefore almost certainly lead to one of two results; either the rules will be practically ignored, and measurement sheets sent to the divisional office either always or never; or else everything will be in confusion and nobody will ever know, from month to month, whether any given measurement sheet is or is not, or should be or should not be, in the divisional office. If then there is to be any rule of exceptions, I should say let it be something fairly plain and unmistakable, as for instance that details of measurements need not go beyond the officer who is authorized to make or order the payment that is based upon them.

23. For my own part I am disposed to think that the rules adopted in Madras, after careful consideration, are, both as regards record of measurements and check of calculations, likely to work satisfactorily without giving unnecessary trouble. Any rule based on average conditions must inevitably result in things being done in a certain number of cases which, as a matter of fact, are not really necessary in those particular cases, and which would not be required—because the rule would be made different—if the conditions obtaining in those cases were the normal conditions; but I venture to think that the little extra clerical work involved in these few exceptional cases,—for after all it is only a question of a clerk copying a few measurements at a cost of probably $1\frac{1}{2}$ anna per hour,—is a mere flea-bite compared with the confusion which must result from attempting to legislate for every one of the kaleidoscopic changes of conditions occurring in practice.

24. The matters dealt with in paras. 54 to 61 of the report hardly concern me as examiner; but with regard to the opinion expressed in para. 59 to the effect that notes and measurements should be in separate books, I venture to remark that personally I should very much prefer to have only one book, and to write my notes across the measurement book regardless of the form.

IV.—Contractor's Book (62 to 69).

25. Perhaps I have misunderstood the Committee's proposal, but as far as I am able to make out the intention, it seems to me useless and impracticable. I think that in all probability it would be a very excellent thing if every sub-divisional officer, and perhaps every subordinate who has any extensive charge, were required to keep a book in which, appropriating one or more pages, according to convenience, for each work under his charge, he would note on the work page concerned, either by a reference or in very brief detail, every event, actual or prospective, relating to each work. For instance, after measuring a work up, he would note on the proper work page the fact of measurement on a given date, with a reference to the measurement book. If he gave the contractor, or

anybody else, any order or instruction regarding the work, he would note the same in this book, giving a reference to his letter or memorandum, if the instructions were in writing. If he had occasion to fine a contractor, or if he issued materials to him, or paid anything on his account, it would go down in this book and so on. This book would be posted up periodically from the measurement book (his measurement-*cum*-note, book, *vide* para. 24) just as a ledger is posted from a journal or cash book, the entries in the note and measurement book, being, like those in a cash book, in strictly chronological order. Such a book as this would, I think, be of very great assistance to the subordinate, and would be specially valuable in preserving continuity of administration in cases, so frequent and so disturbing, of changes of *personnel*. I would not, at any rate not at first, prescribe any form for it, or at most I would require the references to correspondence, measurement books, &c., to be entered in a special column, and I would provide a separate column in which, when something has to be done (*e.g.*, a recovery to be made) the sub-divisional officer could indicate by his initials when the thing *has* been done, giving references if necessary. After six or twelve months' experience a form might be got out for future volumes. The use of the book should not be confined to contract works; it should be used for all works, and perhaps for more than that; there might be a page for each store or tools depôt, and even one for each subordinate working under the sub-divisional officer, on which the sub-divisional officer would note anything relating to the subordinate concerned. Code para. 1261 (India code, chap. IX, para. 11) enjoins the entry of notes of this sort in the note book, and the value of such notes would be greatly enhanced if they were periodically ledgered. It would be very much preferable to mere indexing, and the book might, as a rule, be posted by the sub-divisional officer's clerk from the sub-divisional officer's notes. It would be a simple re-arrangement in a convenient form (occasionally in detail but generally in abstract) of the matter in the sub-divisional officer's note and measurement book. It would *not* be in any sense an *account* record. It is essential, however, that the book should be a handy one, and this, it seems to me, the "Contractor's book" of the Committee cannot be. After examining the sketch form closely, I doubt very much whether the working form could be got into anything less than demi paper. It might possibly be got into a full sheet of foolscap, but only at the expense of a great extension of the depth of the entries in certain columns, which means waste of paper, increased bulk, and continual transfers to new pages. Other columns, besides those shown in the sketch, will, I think, be certainly required. The book therefore cannot possibly be a handy one.

26. From para. 62 and from the form, the intention appears to be that the quantities for each item or sub-head of the estimate, as collected from the measurement book (or sheet) shall be transferred directly to the "Contractor's Book" and there rated and moneyed out. If that is *not* the intention, I fail to see on what grounds the Committee can claim any economy of copying. If it *is* the intention, then I submit that the book is certain to be full of mistakes and corrections, which would be bad enough in any case, but would be quite intolerable if the book is to be used, as the Committee propose, for taking the contractor's acknowledgment of the correctness of his account.

27. Again the Committee do not explain and I entirely fail to see how this one book can "obviate the necessity of preparing *several* copies of contractors' certificates and bills" (para. 62); nor do I understand how it can satisfactorily take the place of even a single such copy if, as the Committee propose, it is not to remain permanently in the sub-divisional office (para. 67).

28. The above are comparatively trifling objections. A much more serious one is the inevitable bulkiness of the book. Here I find some difficulty in following the Committee. It would seem, from para. 63, that they think the normal case will be that in which a single page will suffice for entries of all transactions with a single contractor on account of all his works for some indefinite length of time; but if there is any meaning in the third, fourth and fifth columns of the form, and in the second clause of para. 68, and in para. 69, it is, I take it, quite certain that one page of the book will very seldom be more than sufficient for the entry of a single transaction (*i.e.*, one bill) on account of a single work, and very often indeed

quite insufficient for that. No doubt it would seem from para. 68 that the Committee do not contemplate the entry of details in cases in which contractors submit their own bills; but such cases are, I take it, almost everywhere quite exceptional, and in Madras they are practically unknown, and there is too (in Madras) a very general feeling that it is not desirable to encourage the practice. Moreover para. 69 quite takes away any little comfort that might be derived from para. 68. If para. 69 means anything, it means that details *ought* to be entered in every case. It seems certain therefore that the contractors' book, if kept according to the apparent intention of the Committee, must either be enormously bulky, or else must run in a very short time to a very inconvenient number of volumes.

29. Again it appears (as to which see also para. 263) that the Committee look upon the contractors' book as a substitute for the contractors' ledger. For my own part, I hold very strongly the opinion said, in para. 263, to be that of most officers, that the contractors' ledger is absolutely useless, and I have said so before; but I take it (see para. 263) that the Committee do not go as far as this, and that they are only prepared to part with the contractors' ledger on condition that the contractors' book is substituted for it. If this is so, I fail to see how they reconcile their proposal with the principles, elsewhere insisted on by them, that sub-divisional officers and subordinates should be relieved to the utmost possible extent of all accounts work, and that for such accounting as is necessary in the divisional offices the responsibility shall, as far as possible, be transferred from the executive engineer to the accountant. From the above, and from the fact that the contractors' acknowledgment is to be taken in this book, and also from the fact that they confine the use of the book to *contract* works, it seems clear that they intend it as *an important account record*. It also seems clear that the keeping of the proposed contractors' book by the sub-divisional officer will be a very much more formidable business than the keeping of the present contractors' ledger by the accountant. Why then make *the sub-divisional officer* keep it?

V.—Forms used for payments (70 to 105).

30. I do not think that the waste of paper, or of office space, entailed by keeping a stock of various forms should be considered for one moment in this connection. One rupee a year for the one, and two cubic feet of space for the other, would be most extravagant estimates of the waste. Otherwise I fully agree with the remark in paragraphs 71 and 72 as to the inconvenience of multiplicity of forms for use in connection with payments, and I have already said much the same in my note printed with G.O., No. 2855-W of 13-9-88. It seems to me, however, that the Committee, having stated the principle of simplicity, immediately proceed to violate it in their detailed recommendations. I can see no use in having more than one form of contractors' certificate, or in having one set of forms for payments on account and another for final payments.

31. The proposed form B, an alternative form of contract certificate or bill (so-called), is, I think, objectionable on several grounds. It is not a necessary variety, and therefore it offends against the general principle with which the Committee properly start. It is not a bill but a *compilation*, and as such it offends against the principle that sub-divisional officers and subordinates should be relieved from accounts work. If you make half a dozen bills into one, a mistake in one may make it necessary to re-copy the whole: and if you mislay one, you mislay all. The Committee do not explain, and I cannot see, under what circumstances any such compilation can be either necessary or useful. It has been practically decided to introduce here (in Madras) a form of bill and receipt to be used when a number of piece-workers are employed on a single work, and the introduction of the form has only been delayed * pending settlement—and this is now practically settled—of what a piece-worker is. Now *this* form will be useful, because the piece-workers on a single work are necessarily gathered together, more or less, and are generally and conveniently paid at the same time. But *contractors* do not herd together in the same way, and it is difficult to understand what is to be gained by

* The form has since been approved and is now in the press.

collecting the claims of two or more of them on a single bill. Moreover the importance of the voucher is very different in the two cases, owing to a difference between the legal status of a piece-worker and that of a contractor. The *bonâ fide* piece-worker is a labourer on public works, whose claim for wages is barred after six months by the Indian Limitation Act, whereas the contractors' claim is barred only after three years. This difference, and the comparative smallness of the piece-workers' claims, make the preservation of the voucher a much less important matter in one case than it is in the other.

32. Then as to the yellow form, I submit that anything like insistance on taking receipts for final payments in a particular form of words, or on a particular kind of paper, is trouble wasted; for the simple reason that you cannot compel anybody to give such a receipt. The law gives you no right whatever to demand such a receipt; indeed, as I believe, the law gives you no right whatever to demand a receipt of any sort or kind *as a condition of payment*. The Stamp Act gives you a right to demand a stamped receipt in certain circumstances after payment, and in the interests of the revenue it provides the means of enforcing that demand; and that is all. If you owe a sum, you have to pay it; when you have paid it, you may demand a stamped receipt if the amount exceeds Rs. 20; but you cannot dictate the terms of the receipt. Beyond that the payee is under no obligation, and if your tender of the sum due is accompanied by any condition, as for instance a demand for a receipt in particular terms, then, as I am advised by the government solicitor, the tender is vitiated. I take it, moreover, that even a receipt in "full of all demands" or "in final settlement" is no legal bar to any claim that the creditor may afterwards make. Nothing of course can bar him from bringing a suit; but I take it that, the suit being brought, it would not be dismissed on the mere production of a receipt "in final settlement." I take it that such a receipt would, at most, raise a presumption, which the claimant would have to rebut; which merely means that he would have to prove his claim, as of course he would.

33. I observe that in paragraph 134 the Committee suggest that a legal opinion be taken as to the value of attestation of signatures to receipts, and I would suggest that the same be done as to receipts in final settlement. I have a very strong impression that the whole thing is useless, in the sense, that is, of a thing which can be insisted on, and which may properly be made the subject of rules and obligations.

34. Then the Committee, not content even with form A and form B, suggest (paragraph 76) that in certain circumstances the receipt should optionally be taken in the hand receipt form, *i.e.*, Madras form M217. They call it *the* hand receipt form, as if it would really be one with the general hand receipt form indicated in paragraph 73. But I have no doubt that, if allowed at all, it would have to become, and very soon would become, an additional form. In paragraph 77, the Committee mention five details or particulars which must in such cases be embodied in the hand receipt form, to say nothing of a further precaution in the way of cross-marking the contractors' book; and I have very little doubt that a very short experience would show that several other particulars would be necessary. Now if the particulars are *necessary* they ought to be provided for on the form. If they are not provided for, some of them will be omitted, and the resulting correspondence will give more trouble than will be saved by substituting a comparatively simple form in lieu of the ordinary contract certificate form. If the particulars are to be provided for, then you have an additional form, and additional opportunities for using the wrong form, as to which see again paragraphs 71 and 72.

35. Then further the Committee would allow payments to be made on the "requisition" and "petty estimate" forms, again of course "*in certain circumstances.*"

36. I submit that all these options to suit trifling variations of circumstances (including indirectly and by implication all the variations referred to in paragraph 52, as well as those specifically mentioned in paragraph 74 *et seq.*) will prove simply so many pitfalls and opportunities for mistakes, and certain causes of troublesome correspondence, and that the Committee's proposals in this respect are

directly opposed to the principle correctly approved in paragraphs 71 and 72. I submit that the only forms really required are the following, namely:—

(1) One form of muster roll of labourers.
(2) One form of contractors' certificate, to be used for all cases in which payments have to be made whether for work done or for supplies delivered, according to description, quantity and rate, and to be used alike for payments on account and for final payments.
(3) One form of piece-workers' payment roll, in which could be included all payments to all piece-workers on a single work.
(4) One form of hand receipt or miscellaneous receipt, as it is called here (Madras form M217), for petty bazaar purchases, &c.
(5) One form of receipt for payments to maistries and others employed in petty supervision under Madras code, paragraph 935 (India code, vol. I, chap. IX, para. 15).

I cannot see what is the use of the proposed "Casual Labour Roll" (paragraph 120). It provides for nothing that cannot be shown in an ordinary muster roll. As far as I can see, all that can be said for it is, that it will occasionally save half a sheet of common paper at about Rs. 2 a ream of 480 sheets. On the other hand it is another opportunity for mistakes. The form of petty supervision receipt (5) of my list above is required, because the present rules allow the employment of the men in question on a number of works, and it is necessary, for booking purposes, to be able to show the allocation of the charges readily on the voucher, and it is also necessary to provide for the correct recovery of income tax, not (as far as I am concerned) because of the importance of such recoveries to the revenue, but because of the trouble and correspondence which must follow when mistakes are made.

37. I submit that five forms, as indicated above, can be made to provide completely for everything that can possibly be required in connection with *payments for works;* and that the purposes for which the several forms are to be used, and the distinctions between them, are so obvious that it is hardly possible that any subordinate, or any subordinate's clerk, should ever make the mistake of using one form when he ought to use another.

38. With regard to the Committee's other recommendations under this head, I submit, with reference to paragraph 93, that, provided necessary information is provided for and given in the contract certificate or bill form, it is a matter of practical indifference whether it is given in the form of a "certificate" or not (see paragraph 93).

39. The question of the limit below which vouchers should be required (paragraphs 100 and 101) is hardly a question of accounts. It is for government to consider whether the alleged tendency to encourage the manufacture of spurious vouchers, or the certain tendency of any relaxation of the rule to encourage the manufacture of spurious payments, is the greater evil.

40. With regard to the proposal (paragraph 102) that certificates of payment "should be freely accepted in all cases when the executive engineer can satisfy the examiner that there is a difficulty in getting a formal voucher," I am very strongly of opinion that the examiner is not the proper person to decide whether the executive engineer's explanation should be accepted or not, and I know from experience that the cases of really insuperable difficulty are so few that they can without inconvenience be referred periodically for the orders of government.

41. It appears to me however that such an opinion as that expressed by the Committee, regarding the value of certificates of payment, is of no value whatever when given, as it is, without any relation to any definite reason for requiring vouchers at all. It may be sound sense; or it may be void of sense. It all depends on whether you look upon a voucher as a means of preventing the manufacture of spurious charges, or as a means of proving payment at some future date, *i.e.*, whether you want it as a precaution against your own servants, or as a precaution against improper claims on the part of your creditors. In the former case a certificate by a trustworthy officer may be as good a voucher as any, but I do not see how it can ever be better than the creditors' receipt passed and initialled by

the same officer.* In the latter case the certificate is absolutely valueless; it is of no use as evidence of payment. I take it that the present rules regarding vouchers are based on the supposition that they are required as evidence of payment.†

42. As regards the custody of vouchers, I agree with the Committee that they had better remain in the examiner's office. I have been much astonished lately at the very small number of vouchers to be found in my own records for such comparatively recent periods as 1877 and 1878; but it ought to be very much more easy to keep vouchers securely and methodically in the examiner's office than in divisional offices, which are frequently abolished, amalgamated, or sub-divided.

VI.—Muster Rolls and Daily (or Ten-Day) Reports (106 to 129).

43. In my opinion it is mere waste of time and trouble to attempt to discuss the forms of muster rolls and periodical works reports, unless you first clear your ideas, and come to some definite understanding, as to the ultimate object of anything to be provided for in these forms, or in any possible substitutes for them. Now the primary and obvious object, the object which is always and everywhere present, is that of getting a basis for payments; but, over and above this, there is the object of getting, to use the somewhat vague language generally employed, some allocation of expenditure, or, to be accurate, *some allocation of either cost or quantity of labour and materials*. Now I take it that the first thing is to settle—

(*a*) the purpose or purposes for which such allocation is, or may be, required;
(*b*) the classes of cases in which it is necessary;
(*c*) the precise nature of the allocation required for each class of cases;
(*d*) the times at or by which each kind of allocation must be available, in order to be of use for the purpose in view; and
(*e*) which, depends upon (*d*), the stages at which, and the agency by which, the allocation must be made.

44. As to the first point (*a*) I submit that allocation of any kind, when made, is made for one of four reasons only, namely:—

(1) in order to obtain a basis for rates for future estimates, &c.;
(2) in order to control expenditure on actual work as it progresses;
(3) in order to obtain timely indication of the probability of serious ultimate excesses over estimates; and
(4) for the sake of uniformity, or for want of any intelligent guidance as to where to draw the line.

45. My experience leads me to think that the fourth and last reason is the most common of the four. In a good many cases I have found the executive engineer insisting on having the accounts of *every work in the division*, down even to works estimated at Rs. 200 each, kept by items of work; and I have sometimes had great difficulty in getting the practice stopped. Also as regards the register of works (which is simply the ultimate record of allocation), the code rules (whether Madras or India) make no distinction whatever between works under execution by contract and works under execution by departmental agency. Any rules which may now be adopted should certainly put a stop to allocation except for some useful purpose, that is to say, either—

(1) to get a basis for future rates; or
(2) to control actual expenditure on work in progress; or
(3) to get indications of ultimate excesses.

46. Now as regards the only three useful purposes that, as I understand the matter, can possibly be secured by allocation of any kind, I submit, in the first

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* The Committee say it is often "the *best* voucher of the payment."

† In the case of payments of petty contingent charges, a certificate by a responsible officer is probably as good a voucher as can be wanted; but in the case of a payment to a contractor it can hardly be said to be of any use whatever.

place, that at no stage whatever is there any the slightest use in having, otherwise than as a basis of payment, any record of allocation in connection with works executed by contract. I submit that as regards all such works the whole of the labour—and it is very great—expended in recording in the register of works the progress of quantities and cost is absolutely wasted. The only conceivable use of the register of works in such cases is to afford the executive engineer information of progress, but even under the most favourable circumstances as regards the posting of the register of works, the latest contract certificate will almost always give the information at least six weeks before it can be got from the register of works, and under no possible circumstances can the latter give any information later than that contained in the last certificate.

47. I submit, therefore, that any provision that may be made for getting at and for recording allocation (whether in the register of works or in any substitute for it) should be strictly confined to works under execution by departmental agency; and as regards such work, I further submit that, as regards the two first objects, mentioned at the end of paragraph 45 above, two broad distinctions should be drawn, thus—

(*a*) Whereas allocation of *cost* or *money expenditure* may possibly be required as a basis for future rates, the allocation required for the control of work in progress need seldom, or never, be any more than an allocation of *quantities* of labour and materials; and
(*b*) Whereas some control over work in progress is required for almost every work, it is quite useless to attempt to get rates for future guidance except from a few—a *very* few—large works specially selected for that purpose.

48. I submit that the only control that can be usefully exercised over expenditure on works in progress, is that afforded by a comparison of *quantities* of labour and materials employed with *quantities* of work done. Granting that, in dealing with large quantities of work executed in fairly long periods, the cost and rates will generally give useful indications of extravagance or the reverse, I submit that even then the *real control* must be exercised by comparison of *quantities* of labour and materials with *quantities* of work, and that, for the comparatively small quantities of work executed in the month of account, or still more in the ten-day period of the ordinary report, no useful indication of any sort or kind is to be got from moneyed results.

49. As regards the third purpose mentioned at the end of paragraph 45 that of anticipating ultimate excesses, I submit that, except perhaps in the case of really *very* large works, a large excess on which might possibly cause financial embarassment, or might suggest the abandonment of the work or some considerable modification of it—I submit that in all ordinary cases, with ordinary care on the part of the responsible executive officers, their personal knowledge of the conditions under which work is being executed, and their periodical check of quantities of work done, with reference to quantities of labour employed, will afford them the necessary indications of ultimate material excesses a very great deal earlier than they can possibly get them from any accounts however elaborate. As to this please see also my paragraph 149.

50. If then my premises are correct I submit

(1) that all forms of muster rolls and daily or ten-day or other reports of progress, should be drawn up on the distinct understanding that no allocation of cost is required except in a few very exceptional cases: the forms should probably contain such provision as may be necessary to allow of the moneying out of the allocation in the exceptional cases in which it is required, but it should be distinctly understood that no such moneying out is, under any circumstances, to be done by the subordinates who draw up the reports, and that when it is required at all it will be done in the divisional office:
(2) that such reports of progress should be absolutely divorced from the *accounts* of works, which should not be based upon them at all: the

the same officer.* In the latter case the certificate is absolutely valueless; it is of no use as evidence of payment. I take it that the present rules regarding vouchers are based on the supposition that they are required as evidence of payment.†

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(*a*) the purpose or purposes for which such allocation is, or may be, required;
(*b*) the classes of cases in which it is necessary;
(*c*) the precise nature of the allocation required for each class of cases;
(*d*) the times at or by which each kind of allocation must be available, in order to be of use for the purpose in view; and
(*e*) which, depends upon (*d*), the stages at which, and the agency by which, the allocation must be made.

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(2) in order to control expenditure on actual work as it progresses;
(3) in order to obtain timely indication of the probability of serious ultimate excesses over estimates; and
(4) for the sake of uniformity, or for want of any intelligent guidance as to where to draw the line.

45. My experience leads me to think that the fourth and last reason is the most common of the four. In a good many cases I have found the executive engineer insisting on having the accounts of *every work in the division*, down even to works estimated at Rs. 200 each, kept by items of work; and I have sometimes had great difficulty in getting the practice stopped. Also as regards the register of works (which is simply the ultimate record of allocation), the code rules (whether Madras or India) make no distinction whatever between works under execution by contract and works under execution by departmental agency. Any rules which may now be adopted should certainly put a stop to allocation except for some useful purpose, that is to say, either—

(1) to get a basis for future rates; or
(2) to control actual expenditure on work in progress; or
(3) to get indications of ultimate excesses.

46. Now as regards the only three useful purposes that, as I understand the matter, can possibly be secured by allocation of any kind, I submit, in the first

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*The Committee say it is often "the *best* voucher of the payment."

† In the case of payments of petty contingent charges, a certificate by a responsible officer is probably as good a voucher as can be wanted; but in the case of a payment to a contractor it can hardly be said to be of any use whatever.

place, that at no stage whatever is there any the slightest use in having, otherwise than as a basis of payment, any record of allocation in connection with works executed by contract. I submit that as regards all such works the whole of the labour—and it is very great—expended in recording in the register of works the progress of quantities and cost is absolutely wasted. The only conceivable use of the register of works in such cases is to afford the executive engineer information of progress, but even under the most favourable circumstances as regards the posting of the register of works, the latest contract certificate will almost always give the information at least six weeks before it can be got from the register of works, and under no possible circumstances can the latter give any information later than that contained in the last certificate.

47. I submit, therefore, that any provision that may be made for getting at and for recording allocation (whether in the register of works or in any substitute for it) should be strictly confined to works under execution by departmental agency; and as regards such work, I further submit that, as regards the two first objects, mentioned at the end of paragraph 45 above, two broad distinctions should be drawn, thus—

(*a*) Whereas allocation of *cost* or *money expenditure* may possibly be required as a basis for future rates, the allocation required for the control of work in progress need seldom, or never, be any more than an allocation of *quantities* of labour and materials; and
(*b*) Whereas some control over work in progress is required for almost every work, it is quite useless to attempt to get rates for future guidance except from a few—a *very* few—large works specially selected for that purpose.

48. I submit that the only control that can be usefully exercised over expenditure on works in progress, is that afforded by a comparison of *quantities* of labour and materials employed with *quantities* of work done. Granting that, in dealing with large quantities of work executed in fairly long periods, the cost and rates will generally give useful indications of extravagance or the reverse, I submit that even then the *real control* must be exercised by comparison of *quantities* of labour and materials with *quantities* of work, and that, for the comparatively small quantities of work executed in the month of account, or still more in the ten-day period of the ordinary report, no useful indication of any sort or kind is to be got from moneyed results.

49. As regards the third purpose mentioned at the end of paragraph 45 that of anticipating ultimate excesses, I submit that, except perhaps in the case of really *very* large works, a large excess on which might possibly cause financial embarassment, or might suggest the abandonment of the work or some considerable modification of it—I submit that in all ordinary cases, with ordinary care on the part of the responsible executive officers, their personal knowledge of the conditions under which work is being executed, and their periodical check of quantities of work done, with reference to quantities of labour employed, will afford them the necessary indications of ultimate material excesses a very great deal earlier than they can possibly get them from any accounts however elaborate. As to this please see also my paragraph 149.

50. If then my premises are correct I submit

(1) that all forms of muster rolls and daily or ten-day or other reports of progress, should be drawn up on the distinct understanding that no allocation of cost is required except in a few very exceptional cases: the forms should probably contain such provision as may be necessary to allow of the moneying out of the allocation in the exceptional cases in which it is required, but it should be distinctly understood that no such moneying out is, under any circumstances, to be done by the subordinates who draw up the reports, and that when it is required at all it will be done in the divisional office:
(2) that such reports of progress should be absolutely divorced from the *accounts* of works, which should not be based upon them at all: the

sub-divisional officer, or other responsible officer who controls the work, should be responsible for satisfying himself that the quantities of labour shown in the ten-day or other reports agree with the quantities billed for in the corresponding muster rolls (and both muster rolls and reports should be so drawn up for such corresponding periods as to make this possible) and, except in the case of the very few works for which special allocation of cost is required, the reports should not go beyond the sub-divisional officer, or other officer controlling the work, unless specially called for by the executive engineer for purposes of executive control:

(3) that in the case of special works for which special allocation *is* required, the reports should be sent on regularly to the divisional office, where they would be moneyed out, and where the required allocation would be made under special arrangements, by the accountant if so desired, it being however distinctly recognized *that such allocations are not accounts*, and that they do not require the accuracy of accounts: a cash book, journal or ledger *must balance to a pie*, but in allocations of expenditure or cost to items, sub-heads, or other sub-divisions of work, no notice ought to be taken of any discrepancy which is not sufficiently large to materially affect the particular purpose for which the allocation is required, and *if convenient* annas and pies might always be neglected except in stating small rates: I say if convenient because such omissions not unfrequently give more trouble in one way than they save in another.

51. I have implied above (para. 47*a*) that money allocation *may* be necessary in special cases with a view to data for future rates. I have very serious doubts, however, as to whether it is really necessary to make any provision for getting at rates in this way. I have a strong impression that rates for work are much better got by applying known rates of wages and prices of materials to ascertained data as to the quantity of labour and materials that should be required for units of work; and I believe that in practice they are almost always got in this way. If it is so, I am disposed to think that allocation of cost or expenditure by items of work might safely be confined to departmental agency works estimated to cost at least Rs. 30,000, or even Rs. 50,000 each, such allocation being then only required for the purpose of affording, as regards such works, timely indications of the likelihood of any *really serious* ultimate excesses over an estimate. I believe, moreover, that, even as regards the very largest works, by a rational use of the so-called normal cost system (see my paragraph 149) the necessity for any *continuous* allocation might be entirely obviated, and that all practical purposes would be secured by utilizing existing records of quantities, in order to get out when actually wanted—and then only—any required statement of cost of important items.

52. The adoption of the above views, or their adoption to any considerable extent, would lead to the practical abolition of the register of works,* which is simply a final record of allocation by items of work. In an ordinary division there would seldom be more than half or dozen works for which any allocation of cost would be required, and having regard to the purpose in view and the degree of accuracy required, the record might be in a much simpler form than that of the register of works.

53. I may refer here to the fact that the Committee also claim, by *their* proposal, to abolish the register of works (see item 30A of the table in para. 472); but the claim seems to me inadmissible. What the Committee really do is to substitute for the register of works either a so-called work ledger (form 218), which is really a glorified register of works, in a shape which I venture to think is altogether impracticable, or else (paragraph 232) an abstract work ledger which apparently is only the register of works under another name. As to this see also para. 109.

* Or of any substitute for it, as for instance the Committee's proposed works ledger so far as details by items or sub-heads are concerned.

54. Even if it is not possible to go to the full length here advocated, and to completely abolish continuous moneyed allocation by items of work, I submit that, at any rate—

(*a*) all moneying out by executive subordinates, or *their* clerks, might be abolished; any moneying out that is really required being done in the divisional office;

(*b*) that the moneyed allocation by items may be absolutely divorced from the accounts properly so-called, though it may, if convenient, be done by the accountant;

(*c*) that it is quite unnecessary to require in such allocations the absolute accuracy which is indispensable in the accounts proper.

As to (*a*) I submit again that, for purposes of current control, any comparison of actual expenditure with an ideal standard of cost is useless, if not positively misleading, when it is based on work and expenditure of such short periods as the ten-day, or even monthly, periods of the muster rolls and work reports, and the more so because such a comparison is not possible *at all* until the quantities and cost have been corrected with reference to outstanding dues and liabilities. I submit that, for any useful current control, the comparison ought to be between *quantities* of work and *quantities* of labour and materials; and that if executive subordinates (and *their* clerks) are relieved of all moneying out, and of the trouble of agreeing *in work reports* cost with expenditure (*i.e.*, accounting *therein* for outstanding dues and liabilities), the reports, containing all that is really necessary, or even useful, for the purposes in view, could be submitted much more punctually and regularly, and that the real object would therefore be much more effectually secured, with great relief to the subordinates concerned.* I submit that when moneyed allocation is required at all, if it is to be of any use whatever, it must be an up-to-date allocation, which can only be done satisfactorily in the divisional office, or in some office when records of previous work and expenditure are accumulated, and that, having regard to the purpose for which alone such allocation can be usefully required, the delay (if any) involved in leaving this allocation to the divisional office, is of no consequence at all.

55. In any case I submit that the first thing is to settle what are the purposes for which you require allocation of any kind; what kind of allocation (moneyed or other) you require for each purpose; what are the works or classes of works in connection with which the different kinds of allocation can be usefully applied; at what times you must have them; and by what agency they must therefore be made. When that is done—but not before—the best way of attaining the objects in view may be discussed with profit.†

* Suggestions as to the procedure for the exercise of such a control will be found in paragraph 94 *et seq.* in connection with the subject of "Materials at site."

† What we now do is this. We know that under normal circumstances a unit of any description of work requires the expenditure of certain quantities of certain descriptions of labour and materials; and we know that under normal circumstances the prices of such labour and materials do not fluctuate very much; we therefore take the prices at a given time, apply them to the known quantities, and so construct a schedule of standard rates, and when we want to know what a work is likely to cost—when we want to make an estimate—we ascertain the probable quantities required of the several descriptions of work and apply the standard rates to the corresponding quantities. Then when we execute the work, we record the quantities of the different descriptions of labour and materials employed on each description of work, and *with infinite labour* we reduce them all to the common denomination of rupees, and about six weeks after the work has been done—and often later—we produce, in the register of works, a statement of the actual cost of each description of work, from which rates of actual working may be got for comparison with the rates of the estimate. And what does this comparison do for us? Of itself nothing. Under favourable circumstances it *may* give us *an indication of something requiring further examination.* I say "may," because it is quite possible that, although something may be very wrong, the actual rate worked out may give no indication of it, a permanent excess in one direction being temporarily obscured by a temporary deficiency in another direction. But under favourable circumstances, if anything is wrong, we do get an indication of it, and then we go back to the original records of quantities expended and with considerable trouble—no forms or system being provided therefor—about three months or more after the work has been done, we produce some statement which really explains the excess. Surely, from every conceivable point of view, it would be very much better to keep the records of materials and labour expended in a shape which shall admit of a direct and current comparison of quantities actually expended with quantities estimated for: and to drop altogether the troublesome reduction of expenditure to rupees, annas and pies! I do not doubt that difficulties of detail would be found in working out a system such as that suggested, but I do not think they would be insuperable or even serious.

56. I submit the following remarks with regard to minor proposals of the Committee in connection with muster rolls:—

(*a*) Paragraph 125; signature by labourers certainly seems unnecessary, and I have never been able to understand how the rule requiring such signatures can be worked, when nobody can possibly tell whether the labourer can write or not.

(*b*) Paragraph 126; the proposed exception dispensing with muster rolls in case of work done on requisition *when the entries of daily labour are few* seems to me one of those useless exceptions which in the end give a great deal more trouble than they can possibly save. No two people will agree as to what number of entries is and what is not "a few," and if they did, nobody can tell with certainty beforehand whether the entries will be few or not; and in any case it is far more troublesome to think the matter out, than to stick to the general rule. In my opinion there are far too many proposals of this sort scattered, through the Committee's report. *I am firmly convinced that every exception, option and qualification which is not really* NECESSARY *is simply* A SOURCE OF CONFUSION AND A PITFALL FOR THE UNWARY.

(*c*) Paragraph 129; the above remarks (*b*) seem to me to apply, with perhaps special force, to the proposal to allow, in certain undefined cases, the use of a single muster roll for several works: the Committee do not explain what practical advantage is to be gained which can at all compensate for the probable confusion of the record.

VII.—Certificates and Signatures (130 to 134).

57. In my opinion it is not practicable to deal with this question in the wholesale manner attempted by the Committee in para. 130. Some—perhaps many—of the prescribed certificates are probably useless, or perhaps worse; but I submit that each case has to be considered on its merits.

58. In para. 131 the Committee do not explain, and I entirely fail to see, how it is possible to put an arbitrary limit on the number of signatures (or initials) of departmental officers. The Committee, I take it, recognize that the signature (or initials) of the responsible disburser is required; and you might define the term *responsible disburser* variously as meaning either (1) the executive engineer, or (2) the sub-divisional officer, or (3) the officer in whose *cash book*, or (4) the officer in whose *imprest cash book* the charge is brought to account; but in whatever way you define the term, the number of signatures (or initials) required must depend upon the number of subordinate officers (whether disbursers or not) through whose hands the voucher passes, and who exercise subordinate responsibility in connection with the transaction. What this number is or should be is a purely administrative question, having, as far as I can see, nothing whatever to do with accounts.

59. But if you cannot absolutely limit the number of signatures or initials, you can limit the number of those with which the examiner should concern himself. In my opinion, it should be distinctly laid down that, as far as the examiner is concerned, the only signature (or initials) required is that of the responsible disburser, however defined. If the responsible disburser, or any intermediate disburser, chooses to dispense with any link in the chain of responsibility between himself and the ultimate subordinate, that, in my opinion, should be looked upon as his concern only; every officer, from the examiner backwards, should concern himself only with the officer next to himself in the chain of responsibility.

60. As regards para. 132, I take it that, if the rules do not require the executive engineer's signature, no examiner is likely to take exception to the absence of such signature in a given case, simply because the executive engineer is in the habit of going beyond the requirements of the rule and signing some or all vouchers. But if the rules *do* require the executive engineer's signature, then I take it that, in the absence of any positive rule to the contrary, it should be the examiner's duty to take exception to the voucher; and I submit that it is not desirable to complicate the matter by requiring the examiner to consider whether

the responsible disburser, however defined, is a gazetted officer or a non-gazetted officer, or an upper subordinate, or a lower subordinate, with cross distinctions between experienced and inexperienced officers.* As to this see also my para. 56 (*b*).

61. With reference to para. 134 it certainly seems very desirable that the legal value of attestation of signatures should be considered as proposed by the Committee.

VIII.—Imprest Cash-books (135 to 145).

62. As stated by the Committee (para. 136), the imprest cash-book is not a suitable form for recording receipts of money other than recoupments of imprests; and when such sums are received complications and trouble arise. In my opinion, however, the difficulty is one which should never occur under proper rules. It should, I think, be laid down—

(1) that all sums (other than tolls and kindred collections) payable to government in the public works department are payable by the debtor to the executive engineer of the division;

(2) that with specified exceptions, such as earnest-money accompanying tenders—

(*a*) all sums exceeding a specified amount; say Rs. 10, must be paid into treasury to credit of the public works department, the treasury receipt being sent by the debtor to the executive engineer;

(*b*) sums not exceeding the specified limit (Rs. 10 or what not) must either be paid in cash to the cashier of the division or remitted by the debtor to the executive engineer (and to no one else) by postal money order.

All contracts, leases and agreements stipulating for any payment to government should be worded accordingly, and with the exception of toll collectors (of all kinds and however designated) and the cashier of the divisional office, all officers of the department might and should be absolutely prohibited from receiving any sum whatever on behalf of government. The rules should apply equally when the debtor is an officer of the department, and possibly himself an accounting officer. Sums thus received through the treasury should be brought to account at once, on receipt of the treasury receipt, by debit to the examiner, the treasury receipt being submitted as a voucher for the debit, and it should be left to the examiner to clear the account with the civil accountant-general.

63. With regard to the proposal in para. 140 to allow advances by imprest-holders without entry in their accounts, it seems to me—

(*a*) that, if there is any meaning in the word *responsibility*, the proposal is neither fair nor reasonable as regards the imprest-holder;

(*b*) that if the advance is really to be made from the imprest, and not out of the imprest-holder's own pocket, the proposal is incompatible with the condition (in para. 135) that the imprest-holder must be prepared at any moment to produce his balance in cash or vouchers, seeing that the *individual labourers* are seldom likely to give receipts;

(*c*) that nothing could well be more objectionable than the encouragement, or even the recognition, of the practice of making payments without bringing them to account.

I submit that if the advances are proper they should be brought to account both by the imprest-holder and by the executive engineer under due precautions for watching their recovery.

64. With regard to the proposal (para. 141) to treat the passed imprest account as a full voucher for the payment in recoupment of imprest, I submit—

* It is necessary to remember that these things have to be dealt with in audit, as a matter of routine, by a very subordinate agency which has really no means whatever of ascertaining all the facts by which, if such variety were admitted, audit action would have to be determined.

(*a*) that it is incompatible with the proposal (para. 142), in which I fully concur, to dispense with details in the cash-book; if the imprest account is sent to audit there will then be no local record of details;

(*b*) that the proposal offends against the principle of Madras code, para. 1642, that whenever possible separate vouchers should be taken for separate works;

(*c*) that it would be impossible to tell where any given voucher should be looked for if and when wanted, *i.e.*, whether in the divisional or in the audit office;

(*d*) that assuming the vouchers to be such as the rules would otherwise require to be sent to audit, there seems to be no logical ground for excepting them simply because the payment is made from an imprest;

(*e*) that there is no practical advantage to be gained by adopting the proposal; the detailed voucher being *ex hopothesi* in existence;

(*f*) that, finally, the proposed exception is one of the kind referred to in my para. 56 (*b*), as giving, in the long run, a great deal more trouble than they save.*

IX.—Divisional and Sub-divisional Cash-books (146 to 151).

65. With reference to para. 148, it has been practically settled in Madras that the cashier, if there is one, and otherwise the head clerk, shall keep his own cash-book, and be personally responsible for all moneys passing through his hands. In my opinion this is the only reasonable principle on which to work. In most divisions an executive engineer is absent from head-quarters twenty days or more in every month, and is sometimes away for six weeks together; and in these circumstances it seems unreasonable to attribute to him any more responsibility for the cash of the divisional office than for the cash of a sub-divisional office. I submit that, in both cases, his direct responsibility should be limited to seeing that the funds advanced to the disburser are kept within suitable limits, and that suitable means are provided for their safe custody.

66. I concur in the opinion (para. 149) that alternate cash-books are undesirable. I think copies of cash-books should be submitted on uniform tri-monthly dates prescribed for general adoption. It is only on this condition that the work of a divisional office can be methodically laid out, and, within reasonable limits of punctuality, one prescribed date must be just as convenient as another for the sub-divisional officer.

X.—Count of Cash and Cash Balance Statements (152 to 161).

67. I submit that a clear distinction should be drawn between count of cash by the person in actual charge of it, and count of cash by any superior officer. It should

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* It has been suggested to me that the Committee's para. 141 probably means that the recouping (sub-divisional) officer may either submit to the executive engineer his imprest account with the vouchers relating thereto, initialling only the imprest account, which in this case will be considered by the executive engineer as the voucher; or retain the imprest account and submit only the vouchers relating thereto, initialling each one of the latter; in other words, the entry in the sub-divisional officer's cash book of a recoupment would be supported either (1) by the imprest-holder's imprest account and vouchers attached, or (2) by the vouchers alone without the imprest account. On which the officer making the suggestion remarks: "If this be the meaning, the sub-divisional officer's cash book might contain an entry like the following:—

Paid A.B. in recoupment of his imprest account dated——

	Rs.
Original works	220
Repairs	300
Tools and plant	50

But, in the absence of the imprest account, it would be necessary in the divisional office to wade through all the vouchers in order to ascertain what the payments were for. The arrangement will give executive engineers trouble and probably cause confusion, and I do not see what advantage is sought to be gained by it."

In any case it seems to me that proposed change must give much trouble, and I fail to see what is gained by it, except that the sub-divisional officer is saved the trouble of initialling a voucher which however he is still supposed to examine. Surely the trouble is too infinitesimal to be worth considering!

be understood, I think, that the former operation is one to be done solely in the interests of the officer himself, to secure the record in his cash-book of each and every disbursement made by him, it being distinctly understood that he is personally responsible for any missing sums. He *ought* to count it frequently; and a regular cashier *ought* to count his cash *every day;* he need not then count the whole of it; all that he need count every day is the working part of his balance; the rest he need only count when he draws upon it. Whether he does count it or not is, I submit, a matter of indifference to government, and rules for periodical counts by the officer himself are, I submit, unnecessary and useless. It should be sufficient to let the officer concerned know, that he will be held personally responsible for any sum not accounted for.

68. Occasional check of cash by a superior officer is desirable in order to prevent the more or less permanent alienation of any part of the book balance, but such a check is generally useless unless the count is made unexpectedly; any rules for *periodical* count for this purpose are therefore worse than useless. The rule, if any is laid down, should, I submit, prescribe fairly frequent counts at very irregular intervals, and the record of the count should be in a shape which will allow any inspecting officer to see whether the rule is attended to or not, and this I submit can be best secured by a form pasted inside the cover of the cash-book in which each officer (sub-divisional officer and executive engineer) can enter (each in his own column) the dates of his inspections, attesting each entry by his initials. No writing in the body of the cash-book should be required unless a discrepancy is found.

69. Any report whatever, by anybody to anybody, of count of cash, whether in a special form or by note on a form required for another purpose, seems to me useless.

70. The divisional cash balance statement (form No. M31, India form No. 20 A) should, I think, be reduced to a statement of what is necessary for agreement of P.W.D. and treasury balances, but this statement should be submitted *with* the monthly accounts, and not before them, as now required; or preferably it should be incorporated in some other necessary form such as the cash account current or any account that may be substituted therefor.

71. Government, I believe, attach importance to the periodical inspection of sub-divisional offices prescribed in code para. 317, this is quite a different matter from count or check of cash; but the check over the regularity of these inspections is now exercised by means of the dates reported in cash balance statements, and if the continuance of any such check is desired, it would, I think, be best to provide for reporting dates of inspections in the executive engineer's journal, when the facts would be reported under the executive engineer's own signatures and not, as is now often or generally the case, under that of the accountant.

XI.—Payments into Treasury (162 to 167).

72. I agree with the Committee in thinking that the payment of all miscellaneous receipts into treasury is a perfectly useless formality, and I think it is much more troublesome than the Committee seem to suppose, because of the necessity which the rules impose on the examiner of seeing that all such receipts are so got rid of. The retention of miscellaneous cash receipts, or their prompt payment into treasury, should be settled in each case on a consideration of the risk involved in, and of the responsibility imposed on the cashier, by the keeping of an unnecessary balance.

73. As regards India form 20 C, the remittance book (Madras form No. M 66), I am disposed to think that the convenience of all concerned would be promoted by doing away with it as well as the consolidated treasury receipt, the treasury (or sub-treasury) giving proper receipts for all payments made, which receipts should be submitted to the examiner as vouchers for the executive engineer's accounts, and by the examiner to the civil accountant-general, as vouchers in support of the total debit to him; the accountant-general being bound to accept all debits supported by such receipts.

XII.—Stock Accounts (168 to 196).

74. I think the present system is most unnecessarily complicated and involves a quantity of abstracting and compilation which serve no useful purpose whatever. The system sketched by the Committee would be an improvement, but there is room, I think, for further considerable improvement and simplification.

75. The starting point should be a rule, such as that in the Committee's para. 182, to the effect that nobody should be allowed to obtain any article whatever from store, or (though this is not in the Committee's proposal) to send any article into store, without giving the storekeeper a written order or voucher in a prescribed form showing *inter alia* the work or service for which the articles are required, or the source from which they have been obtained; and (this with reference to the last sentence of the paragraph quoted) for reasons which will appear further on* it *is* in my opinion necessary that the order shall be given in a prescribed form.

76. I do not mean to say that under very exceptional or emergent circumstances the rule might not be occasionally disregarded, but such cases should be quite exceptional, and the storekeeper should himself have a supply of the blank form in which in such exceptional cases he should himself enter, or get the persons taking or bringing the stores to enter, as far as possible, the particulars required by the form.

77. The form should be somewhat as follows:—

Issuer's no. _____
Storekeeper's no. _____
Divisional office no. _____
To the storekeeper.

Issue to / Receive from _____

The stores detailed below:—

Description.	Unit.	Quantity.

Issuer's no. _____
Storekeeper's no. _____
Divisional office no. _____
To the storekeeper.

Issue to / Receive from _____

The stores detailed below:—

Work or service for which required or source from which obtained.

Description.	Unit.	Quantity indented for.	Quantity actually issued.	To be filled in divisional office.* Rate.	To be filled in divisional office.* Value.	Issuer's valuation of returned stores.

N.B.—Issuer means the person issuing the order.

If practicable, the form should be supplied in counterfoil books. Whether this is or is not practicable will depend upon whether it is or is not considered that the subordinates, to whom the forms would be issued, could count upon generally having their own counterfoil books by them when they have occasion to write an order.

78. The only account of any kind to be kept by the storekeeper would be a book in the following form:—

Date of issue.	Order number.	Quantities of each description. Bricks. 1,000	Teak timber. Cubic feet.								Divisional office file number of order.
1·12	18	10	...								
5·12	19	...	25								

N.B.—The last column would only be necessary on the copies or extracts sent to divisional office, and would be filed in divisional office.

* See the last sentence of my para. 83 below.

A copy of this in the same form would be sent periodically to the divisional office. If the books were foolscap size a single page could easily contain columns for as many descriptions of articles as are likely to be operated on in any one period, and more.* One page might be used for issues and the opposite page for receipts, or different parts of the book might be used for them, according to convenience.

79. On issuing or receiving any articles the storekeeper would enter the "storekeeper's number" on the order (both parts); and post the same number, and the quantities of each article used, on a single line of his book, and would then file the order. When sending his extract to the divisional office, he would remove the right hand parts of all orders and send them with the extract. These extracts should be sent *direct* to the divisional office, that is to say, not through the sub-divisional office or any other intermediary.

80. On receipt of the extract in the divisional office, the accountant, after verifying the extract with the vouchers, would price the receipts with reference to bill rates, manufacture-estimate rates, &c., concerned, and then post the totals of each column (including total value in the case of receipts) directly into the stock ledger; after which he would rate and value the issues and receipts in the vouchers, which he would number with the divisional office number, either in a single series or in separate series for issues and for receipts, and file them in one or two series; and from these files, constituting a chronological record of all issues and receipts, he would periodically post the "works" and other volumes of his ledgers: or perhaps—and where transactions are numerous this would probably be the best plan—he would leave the numbering until the end of the month, or until receipt of the final extract for the month, and then sort the vouchers according to works before numbering them, so as to make the ledgering more easy, and would number them in the order as sorted. At whatever stage the numbering is done, the divisional office file number of the several orders would be entered in the last column of the extract against the entry to which it relates.

81. The accountant would have to obtain the approval of the executive engineer to the valuation of any returned stores; and instructions would of course be required as to the procedure to be adopted in cases of mistakes, omissions, discrepancies, &c.

82. Any information required by the sub-divisional officer would be furnished to him periodically by the divisional office; and each storekeeper would be similarly furnished monthly with a statement of his balances.

83. I venture to say that the system sketched above provides for everything that is necessary with a minimum of trouble to all concerned. There is not the slightest necessity that I can see for requiring the storekeeper to enter all the particulars indicated in the form in para. 175 of the report; it is nothing to him to whom or for what purpose he issues stores; all that he wants is a voucher that he can quote; nor does it seem at all desirable that the storekeeper should have to *compile* a return such as that of para. 176 at the end of the month, a proceeding necessarily involving delay, when he can post his issues at once into the form in which the information is finally required, and can keep his copy for submission to the divisional office posted up *pari passu*, so as to be able to submit it punctually on the due date. It also seems a considerable defect of the Committee's system that the divisional officer has no means of checking the storekeeper's statements of sources of receipt, and of works, &c., served, and there is considerable probability that the particulars furnished by him would often be insufficient for booking purposes.

84. In the divisional office the periodical extracts should, I think, be filed in a single series and not by sub-divisions as suggested in para. 186. A very simple index in the cover of the file could be made to show at a glance where to find the extract relating to any depôt for any period. It is not desirable to multiply separate files unnecessarily.

* That is in any ordinary division. Divisions such as the Presidency stores division, or a workshop division, must of course have special arrangements.

85. Under the existing system there is no such thing as a *stock ledger* in the divisional office, nor do the Committee's proposals provide for one. Such a ledger seems necessary. It would be in some such form as the following, a page being devoted to each description of articles :—

Description .....

Unit .....

Issue Rate .....

Particulars.	Quantities for each store depôt.			Total quantities.	Net transactions of each period.		Value for each store depôt.			Total value.	Net transactions of each period.	
					Receipt	Issues.					Debits.	Credits.

and would be posted (as explained in para. 80) from the periodical extracts furnished by storekeepers. *Values* would be ultimately necessary only in the total column, the depôt columns being filled up only when necessary as a means of arriving at the total; these columns would, therefore, be posted only in respect of receipts if, as would generally be the case, the issue rates are uniform for the whole division. The object of the "net transactions" column will be understood from para. 88 below.

86. A balance sheet should certainly be prepared every month to prove the correctness of the stock balance as per account, and being prepared it seems very desirable that it should be sent to audit instead of leaving possible discrepancies for annual inquiry and settlement. Also an annual balance statement should be prepared at least once a year for check and adjustment of rates, preferably *not* at the end of the financial year, unless under the orders of the government of India, the accountant-general requires, with the annual accounts, some certificate which can only be given on the basis of this balance return. It is desirable, as far as possible, to distribute annual operations to different periods of the year, instead of accumulating them all together.*

87. If there *must* be a periodical adjustment of book values with actual values, the procedure recommended in the Committee's paragraph 187 is probably the simplest, except that it is very undesirable to force into the supplementary accounts entries which have the effect of altering the balances of previous accounts. It seems to me, however, a useless formality to write off the differences at the end

* With reference moreover to the necessity of specializing and distributing work in examiner's offices, it is highly desirable that, in the absence of any conflicting requirement, annual and half-yearly operations should be fixed for different periods for different divisions or circles. The check of annual and half-yearly returns can be done most effectually, and at the same time most economically, by a special section of the audit office; but it is impossible to keep up a special section for work which only lasts for two or three months of the year; if therefore the returns all come in simultaneously, the check of them must be distributed among the divisional auditors, whose ordinary monthly audit work is thus seriously interfered with, whilst the annual returns are dealt with less efficiently and less economically than they might be.

of each year between book balances and supposed actual values of book quantities. In the nature of things these balances never can agree except for a few days after each annual adjustment; and it is difficult to see what is gained by forcing this temporary agreement; and after all the supposed actual values, to which the book values are adjusted, are the merest estimates. It seems to me that the essential thing is that there shall be *a periodical review of rates*, and that, on the occasion of such review, the new rates shall be so fixed as to prevent, as far as can be foreseen, any tendency to the continuance in the same direction of any considerable divergences between receipt and issue rates resulting in differences between book and actual values. Only in most exceptional cases should it ever be necessary to write off or adjust any such differences, and in most cases probably it would not even be necessary to alter the rates.

88. Holding this view as to the ultimate object, it seems to me that what we now have to do is to provide for the periodical preparation of a statement which shall enable the executive engineer to exercise *an intelligent review of the rates.* I would therefore have the statement drawn up in a form somewhat as follows :—

Description.	Book balances.		Rates.				Value of book quantities at market rates 2 × (5 or 7).	Total quantities. During year.		Proposed future rate.	Remarks.
	Quantity.	Value. Rupees only.	Existing issue rate.	Market rates. * Actual. Latest receipt rate.	Market rates. * Actual. Date of latest receipt.	Market rates. Estimated		Received.	Issued.		
1	2	3	4	5	6	7	8	9	10	11	12

The statement would first be prepared by the accountant, leaving columns 7, 8, 11 and 12 blank. The executive engineer would then himself fill in the "estimated market rates" (column 7) for all cases in which there had been no actual purchase within a reasonable time, say three months, after which the accountant would calculate and enter the values for column 8, and then with the completed statement before him the executive engineer would compare item by item (1) the existing issue rate (column 4) with the market rate (columns 5—7) and (2) the book value (column 3) with the estimated real value (column 8) and he would consider whether, having regard to the probable operations of the coming year (as suggested by columns 9 and 10, giving actuals for the past year), whether any, and, if so, what modification of the issue rate is necessary, and whether any write-off of excessive book value is necessary. In every case the first question really is: what will the state of things probably be at the end of the next year? It should never be necessary, and it does not seem desirable, to write off any excess value if it can probably be put right during the coming year by a reasonable and practicable increase of issue rates.

89. It will no doubt be said that all this would be a great deal more troublesome than the simple inventory proposed in paragraph 187 of the report; and so it would be *for the accountant;* but I submit that without some such statement as this it is not possible for the executive engineer to make any intelligent review of rates, and parenthetically I may remark that a great deal too often the fact is overlooked that statements prescribed as to be prepared by the executive engineer

(*i.e.*, in his office) are prepared mainly, and often entirely, for his assistance and information, to enable him to do something which otherwise he could not do properly. I may add that whilst it is hardly possible for the executive engineer to exercise an intelligent review of rates without some such statement as that suggested, *it would be quite possible to make the formal adjustment required by the Committee without doing anything whatever as regards the really essential thing;* it would be quite possible to write off a number of quite insignificant, and perhaps quite imaginary, differences of value, and yet to leave uncorrected the original fault—a faulty rate—which has caused some other really serious divergence of value, and which, if not corrected, will certainly cause it again.

90. I agree in thinking that the executive engineer should be able to alter his rates at any time (last line of paragraph 190); there can hardly be two opinions about that, provided the alteration is made for proper reasons, and not arbitrarily or for the benefit of some particular work; and in order to ensure that alterations shall be properly made, I would require them to be made always on the basis of a statement such as that suggested above, which would be prepared by the accountant at any time in respect of any article or articles specified by the executive engineer; and it would, I think, be well that the statement—the original statement, no copy being necessary—whether periodical or occasional, should be sent to the examiner (for perusal and return) after the executive engineer has completed his review. In the "remarks" column the executive engineer should note any anticipated considerable increase or decrease of operations, but otherwise the reasons for the modification or non-modification of any rates would generally be obvious from the statement, and would require no remark or explanation.

91. Write-offs and other adjustments necessitated by losses or detected deficiencies should, I think, be made quite independently of the review and revision of rates. Each loss should be dealt with when discovered.

92. With reference to paragraph 192, it appears to me that, as far as accounts are concerned, the classification of stock by sub-heads (building materials, timber, metals, &c.), and all the accounts procedure arising out of this classification are absolutely useless; and I very much doubt whether, except in such a division as the public works stores division, the classification is of any use for any other purpose.

93. With reference to paragraph 194, I submit that contracts for labour only can hardly ever be necessary. It may often be necessary, when the contract is for labour and materials, to stipulate that certain descriptions of materials shall be supplied by the executive engineer; but such materials should be issued to the contractor, and charged to his account, at scheduled rates; and he should be entirely responsible for them; and as far as the department is concerned, there should be no necessity for any account of materials at site when a work is executed by contract.

XIII.—Materials at Site (197 to 202).

94. In the Committee's remarks under this head I find a virtual recognition of the principle, on which I have insisted at length in my para. 43 *et seq.*, that the current control over work in progress should be based on quantities and not on moneyed results; and I am convinced that if the Committee had only extended to their logical conclusions the views faintly indicated in their para. 199, *et seq.*, there would be an end of all accounting by sub-heads or items. As the Committee say in para. 199, for every work * there should be worked out and recorded a statement showing the total estimated quantities of the different kinds of materials required for the work; but it should not be confined to materials; it should show the quantities of *labour* also. Such statements could be very easily prepared, because, as regards most kinds of work, they would be based on permanent normal data *previously settled and tabulated.* The rough statement would be prepared mechanically by the office estimator from the tabulated data, and modified here and there by the executive engineer (or other executive authority), with reference to the special circumstances of the particular work concerned. This statement would

* That is every work for which any detailed check is required.

form the basis of all current control over quantities of labour and materials used on the work; and, when necessary, it would be drawn up by sub-heads or items of work.

95. The information required for current control during the progress of work could then be recorded in periodical statements in a form somewhat as follows:—

Description of materials and labour.	Rate.	Total estimated quantity required.	Total used to date of last report.	Used since.	Total used to date 4+5.	Add materials lying at site.	Total material received up to date 6+7.	Deduct materials received since last report.	Balance = total to date of last report as per column 8 of that report 8—9.	Remarks.
1	2	3	4	5	6	7	8	9	10	11

Column 5 would be checked as regards labour with current muster-rolls, and column 9 could be checked with current bills and stores issues. The rates would be entered in column 2, not with a view to any moneying out, but as part indications of different classes of materials. I can see no necessity for any moneying out at all. In cases in which it is necessary to check expenditure of materials and labour by items or sub-heads of work, it would be necessary to detail the different description of materials separately under each sub-head; and with a view to reducing writing it might be convenient to arrange the form so as to show totals used up to date for a series of months (or other periods), providing on the front of the form for the account of materials, &c., used, and on the back for the account of materials at site: the statement in this form would pass backwards and forwards between the offices concerned. There would of course be a number of little details to settle in connection with the form; but I do not now propose to do more than give a general idea of the procedure suggested.

96. I submit that such a statement would furnish the means of controlling current expenditure much more effectually than any system of accounting by sub-heads; that the statements could be prepared very much more promptly than any sub-head accounts can be; and that the trouble to all concerned would be infinitely less.

XIV.—Works Liabilities (203 to 213).

97. The Committee's proposals on the subject of works liabilities seem to me somewhat illogical. They seem to say, in effect, though of course not in so many words: "It is most important that executive officers should keep their measurements and payments closely up to date; and superintending engineers and examiners should give special attention to this matter (paragraph 212): *let us therefore abolish the procedure by which alone any check over this matter is made possible.*" The Committee do not indicate, and I fail to discover, by what means either the superintending engineer or the examiner can exercise the contemplated check, unless there is some systematic record of the liabilities in question.

98. I fail to see anything in the least remarkable in the fact that "some of the strongest advocates of the full introduction of liabilities into the accounts are also the strongest advocates for giving up the record of outlay on works by sub-heads." The explanation is exceedingly simple. We say (1) that the only conceivable purpose for which item (or sub-head) accounts can be required is that of getting a rate, either (*a*) for future guidance, or (*b*) for purposes of immediate control, including prevision of excesses; (2) that as regards (*a*) it is immaterial whether you do or do not take account of liabilities, because, for this purpose, you do not want to strike the rates until the account of the work is closed, and by that time the liabilities will have disappeared; (3) that as regards (*b*) the only control that can be usefully exercised must be based on comparisons of quantities with quantities (see also my paragraph 48, *et seq.*), and that therefore rates based on item accounts are in any case perfectly useless, whether they are accurate or not; so

that in this case also it is absolutely immaterial, with reference to the object under consideration, whether you do or do not secure the accuracy of the rates by taking liabilities into account.

99. But whilst we contend that, for any purpose for which item accounts can possibly be required, it is absolutely immaterial whether you do or do not take account of liabilities; we also contend, and in doing so we do nothing either "remarkable" or illogical, that for a totally distinct purpose, namely that recognized by the Committee themselves in paragraph 212, and reproduced by me in my paragraph 97 above, a proper record of liabilities is most important, if not absolutely essential.

100. With regard to paragraph 210 it seems to me that the value of the opinion of an officer who thinks that he can get "all the information regarding rates that he requires" out of purely *cash accounts* depends entirely on what he does require. He may require, or expect, very little: he may, as I contend, expect *nothing useful* from them; and his statement may really mean that it matters nothing to him whether the item accounts are based on cash or on liabilities, they being equally useless either way; but if any officer were to tell me that that he could *count on getting reliable rates* out of such accounts—and that is what he ought to require, if (which I doubt) he really requires anything—then I should be strongly disposed to say that he was talking nonsense. He *might* get true rates *by pure accident*, because there *might* be no liabilities, or none of any consequence; but it would be absolutely impossible for him to tell whether this was the case or not.

101. I submit that the argument in paragraph 208 is grievously misleading. The argument is elliptical: but the meaning clearly is that if you swallow a camel you need not strain at a gnat: that if you must exclude "the bulk of the liabilities" it is not worthwhile to complicate the accounts in order to include the residue. I submit that it is not true, in any reasonable sense, that you *must* exclude the bulk of the liabilities. No doubt you must exclude most of the classes of *so-called* liabilities enumerated in paragraph 204; but then most of them are, either *not liabilities at all*, in the sense in which the word is used by accountants, or they are liabilities relating to a class of works not here in question. The Committee enumerate (paragraph 204) eight classes of liabilities. Of these, the first two classes are not liabilities at all: I submit that it would be just as reasonable to treat the full amount of the estimate as a liability, as soon as it is sanctioned. Another class (4) is a liability affecting only the stock account: it has nothing whatever to do with works, and moreover the committee apparently do not propose to abolish the record of it. Two other classes (7 and 8) relate to contract accounts, and have no relation whatever to an argument based upon the degree of accuracy required in calculations of rates of work; and a sixth class (3) either relates also to contract accounts, or else to inaccurate measurement of departmental work, and in either case it has no apparent relation to the argument.

102. As regards classes (7) and (8) I should perhaps have said, in order to be strictly accurate, that (7) *either* relates to contract works *or* is already included in (5), and as regards (8) that the first part relates to contract accounts whilst the last point is practically the same as (6). The result, however, is the same, and the result I submit is that classes (5) and (6) are the only two which have any relation whatever to the question at issue. The rest seem to be merely red herrings on the trail.

103. Divested of irrelevant matter the question is simply whether any record should be kept of outstanding *liabilities for materials received and labour employed on works*, but not paid for. As to this I submit that, on the Committee's own showing (paragraph 212), the record is necessary, and that, if the necessity is once admitted, it is an easy matter to devise a suitable procedure for the record of such outstandings, which will give much less trouble than the exceptional procedure advocated for special cases in paragraph 213, and without any necessity, the procedure being uniform, for hedging it round with special precautions against double debits. For my own part I entirely fail to understand how either the executive engineer or the superintending engineer can intervene exceptionally in special cases, as proposed by the Committee, except on the principle of shutting the stable

door after the horse is stolen, unless there is some uniform and systematic procedure which will ensure that any case requiring special attention shall in due course come under his notice.

104. As to the manner of keeping the record in question, that, I submit, must depend entirely on the view adopted as to the use and object of sub-head or item accounts. If it is held that these are to be used for getting at rates for purposes of current control, then the record of liabilities must appear on the face of the allocated account of expenditure by items, in order that the rates obtained may be true rates. If, on the other hand, it is held that, as I contend, any such rates are useless for current control, then nothing can be gained by introducing the record of liabilities into the work accounts; and the object in view, the check over the keeping of measurements and payments closely up to date (paragraph 212), can be effected much more easily, as regards the person who keeps the record, and much more conveniently, as regards the person (the executive engineer or the superintending engineer) who uses it for check, if it is kept as a distinct and separate record.

105. I will only add that, in paragraph 209, the Committee seem to practically recognize the correctness of my contention, that the real control must be exercised by comparison of quantities with quantities. They say "the executive officer, when he commences operations, settles what labour and quantities of materials he can authorize and issue, and this is a sufficient guide for some time to come." I submit that it should be the only guide for all time. I submit that, if the executive officer is satisfied that a given quantity of labour or materials is necessary and sufficient, he should neither allow a larger quantity because an estimate rate is not worked up to, nor stint the work, reducing the quantity, because the rate is being exceeded.

XV.—Works Ledger *v.* Day Books, &c. (214 to 241).

106. I fully concur in the Committee's condemnation of the day book and work abstract system and as to the expediency of substituting a *proper* ledger system. It is what I have always advocated, but I do not think that the system proposed by the Committee is a good one. It may be better than the present system of day book or work abstracts: indeed, in my opinion, it would hardly be possible to devise a system which would not be better than that; but I take exception to the Committee's proposals on two principal grounds, namely:—

(*a*) that they do not go far enough, in that they propose to apply the ledger system only to work accounts;

(*b*) that their particular manner of applying the system to work accounts is cumbersome and inconvenient.

107. As regards the first point let me first state what I hold to be the foundation of all correct book-keeping. I submit that correct ledgering, *i.e.*, the correct allocation or distribution of receipts and charges, or debits and credits, which is the ultimate object of all accounting, is a moral impossibility unless all the facts to be ledgered are first recorded or narrated chronologically (*i.e.*, in the order of their occurring or of their becoming known) in one or more series, in such wise that all the facts recorded in each series may periodically be distributed *exhaustively* (*i.e.*, item by item from beginning to end) to their appropriate ledger heads, with means of seeing whether each fact has or has not been so ledgered, and if ledgered where ledgered, the completeness of the ledgering being subsequently provable by comparing the totals of a balance sheet prepared from ledger accounts with corresponding totals of the original chronological accounts. I believe that nine-tenths of the trouble in connection with divisional accounts is due to the fact that this principle is consistently ignored; and I am sorry to see that the Committee propose to perpetuate this disregard of what I take to be the first principle of correct accounting, and to continue the present system—if it deserves to be called a system—under which the accountant makes up his accounts to a great extent by picking out odd bits of information from this source and from that.

108. The Committee propose to adopt the ledger system for works only; but I submit (1) that for correct accounting the ledger system is equally necessary for

all other accounts, and (2) that the system of picking out certain items from the original chronological record, and ledgering these items only, is a vicious system which is bound to cause mistakes. I say that if the ledger system is good for one account, it is good for another, and that if it is to be properly done it must be *exhaustive*. No doubt the posting of the cash and stock abstract books is an exhaustive process, which is to some extent a substitute for exhaustive ledgering; but I submit that this stock and cash abstracting is a back-handed process which had much better be done away with, substituting a proper system of ledgering. What we now do is this: first we extract and group the bare amounts from cash and stock books (without any details whatever), and so arrive at totals for each head in the cash and stock accounts current, and then we prepare a series of schedules working up to these several figures. I submit that the proper and business-like way of doing the work would be to ledger exhaustively day by day, or as nearly so as may be, with sufficient detail from the original chronological accounts, and so produce straight off the reel, a series of documents which would be either (1) the actual office copies of accounts to be sent to the audit office, or (2) documents from which such office copies could be produced at once by a simple process of collection. In the case of suspense accounts (most of them at any rate) and revenue heads the office copy would be produced directly by the ledgering, each separate schedule corresponding to a separate ledger head; but in the case of works the ledgering would be by works, and the totals of works would have to be collected from the ledger to produce the office copy of the schedule. The cash and stock abstract books would not be required at all. The ledger would be in a small number of separate volumes, each in a different form, to suit the classes of accounts to be included in it; works accounts in one volume; revenue heads in another; suspense accounts in a third; and manufactures in a fourth. Probably that would be all; but possibly, on working out the scheme in detail, one or two more might be found necessary.

109. I submit in the next place (with regard to (*b*) of para. 106) that, as applied to *works*, the ledger proposed by the Committee—the form is given in Appendix W—is cumbersome and inconvenient to a degree. I submit that whatever form is adopted should be based on a consideration of normal conditions, exceptional cases being separately provided for. Now works which have to be accounted for by items or sub-heads are the exception, and in future they will be more exceptional than they now are, even if they cannot be done away with altogether, as I hope they will. Why then adopt a form of works ledger which apparently assumes that accounting by sub-heads will be the rule? For at least nine works out of every ten the sub-head columns (see Appendix W of the Committee's report) would not be used at all; in fact the only columns used would be the first and last; for nine folios out of ten three-quarters of the folio would be wasted, and the book would be four times as bulky as it need be.* If there are any works which *must* be accounted for by items, I say let the detail by items be given in a separate work register; and if there is to be any distribution of outlay at all in the works ledger, let it be such a distribution as will be really useful to the accountant, *i.e.*, a distribution directed to *the localization of errors*. Instead of providing columns for the different sub-heads, which in nine cases out of ten will be useless, provide separate columns corresponding to the several original chronological records from which the ledgering is done; that is to say separate columns for cash and stock and book adjustments; and under cash possibly even separate columns for divisional and sub-divisional cash accounts; then, if the accountant makes a mistake in ledgering, he will at once be able to localize the mistake, and he will only require to revise his ledgering in respect of the particular column in which the mistake is proved to lie. Mistakes of this sort are continually occurring, and it is of great importance to be able to detect and correct them rapidly.

* The inconvenience will be intensified by the fact that, if the works ledger is to be at all convenient when the account *is* kept by sub-heads, it must be at least as large as the present register of works: whereas such a ledger as I would have could be and should be kept within foolscap limits. Handiness is one of the most important considerations.

XVI.—Records of Sub-divisional Offices (242 to 245).

110. I quite agree with the Committee's remarks as to the importance of reducing to a minimum the office work of sub-divisional offices, and I think the books to be kept by him might generally be reduced to—

(1) Measurement and note-book combined.
(2) A book, such as that described in my para. 25 above, which might be called a work-book.
(3) A register of movements of tools and plant, such as described in para. 167 below, for tools and plant for which he is personally responsible.
(4) A cash-book of some sort.
(5) A stock issue and receipt book, if he has personal charge of stock.

I have already stated my objections to the Committee's so-called contractors' book (see para. 25 *et seq.*). It seems to me unnecessary for a *sub-divisional* officer to keep a stock *ledger*, or to do anything in the way of *compiling* accounts whether of stock or cash: anything of that sort that he requires can be supplied to him from the divisional office.

111. In my opinion, however, what is much more important than settling what records, and what only, a sub-divisional officer should keep, is to provide some means of ensuring that he really does keep only such accounts as, after careful consideration, it is thought he should keep. Even now the code theory is that a sub-divisional officer should have little or nothing to do with accounts; but everybody knows that, as a matter of fact, a great deal of his time is taken up with them. I think every executive engineer's report on the inspection of a sub-divisional office should be required to state explicitly whether the sub-divisional officer keeps any, and if so, what, accounts over and above those prescribed, and if so, why; and the necessity of any such additional accounts, and the necessity of keeping them in the sub-divisional office instead of in the divisional office, should then be carefully considered; and, if it is not definitely approved by competent authority, the keeping of the accounts should be stopped for good and all. If something of this sort is not done, it is not, in my opinion, of the slightest use to lay down rules as to the maximum of account work in sub-divisional offices, because throughout the department, from top to bottom, there is a constant tendency on the part of the subordinates of every office to get as much work as possible done for them by the next subordinate office, instead of doing it themselves, a tendency which the head of the office cannot easily counteract. There is nothing new in the Committee's opinions: they have been held and expressed, I should think, by every officer in the department for many years, but somehow without much effect. It might be well to begin to try and find out whether they really are justified, and if so *how to give effect to them.*

If my proposals were adopted and acted on, one of two results would follow. Either (1) the accepted views, being found to be practicable, would be enforced; or (2) we should find out why, and in what respects, they are not practicable: and in the latter case, having ascertained what additional records really are required in a sub-divisional office, we should be in a position to provide for doing the work properly and systematically. I venture to think that much of the present trouble arises quite as much from want of proper provision for unrecognized work, as it does from merely having to do the work.

XVII.—Records of the Divisional Office (246 to 272).

112. *Cash and Stock Abstract Books.*—As already stated in my para. 108, I would do away with cash and stock abstract books, substituting a complete system of ledgering. If, however, the abstract books are retained, I would certainly keep separate books instead of combining them in one as proposed by the Committee (para. 254); indeed I should be inclined to keep a separate book for the adjustment book abstract also. Unless there is some very good reason indeed for it, it is never advisable to adopt any arrangement which makes it impossible for two men

to work simultaneously at two different parts of a job. Even if these abstracts are made in one book they must still be made in separate parts of it.

113. With reference to the Committee's para. 256, I am strongly of opinion that the process of abstracting, if it is to continue, should be done straight-forwardly, without any dodges and supposed short cuts. The essential thing is that what is done by one man should be readily checkable by another; but nothing is more difficult than for one man to follow the short cuts of another. If it is thought that entries relating to the same head of account are likely to follow one another consecutively to an extent which would make totalling in the cash-book an appreciable saving of labour, it would probably be best to provide a column in the cash book for such totals. If it is not worthwhile to provide for doing it readily, it is not, I think, worthwhile to provide for it at all.

114. *Registers of Sanctions and Appropriations.*—I agree with the Committee's remarks regarding the registers of sanctions and of appropriations (para. 261 *et seq.*), and I may add that in each of these registry provision should be made for showing that each estimate and each appropriation, is duly posted into the works ledger, or into register of works or any other book into which it ought to be posted.

115. As regards the contractors' ledger I have already expressed my opinion in my office note no. 850 of 18th June 1889, and to that opinion I adhere. I believe the contractors' ledger to be absolutely useless, whether the contractors' book is kept or not.

116. Referring to the Committee's para. 264, I think it would be quite useless trouble to try and get from each contractor an annual certificate of the correctness of his account. The real account with a contractor is a separate account for each work, and no useful purpose is secured by making out one general account for any contractor: on the contrary it introduces a possibility of error.

XVIII.—Returns to Examiners (273 to 297).

117. The Committee's proposals under this head appear to be as follows:—

(1) to substitute a classified abstract of receipts and charges for the present two accounts current, cash and stock (paragraphs 274 to 276);
(2) to reduce the number of separate forms of schedules (paragraph 274);
(3) to submit vouchers under separate covering dockets for each item in the classified abstract of receipts and charges;
(4) to do away with the separate list of documents [and vouchers] now submitted (paragraphs 277 and 281);
(5) to drop altogether the exhibition of totals to date, and totals of the year, and amounts of estimate and appropriation, in the schedule of expenditure or in its substituted equivalent (paragraph 279);
(6) to abolish the executive engineer's certificate of examination of accounts (paragraph 282);
(7) to dispense with the accountant's certificate on the present list of accounts submitted (paragraph 281);
(8) to keep suspense accounts in duplicate registers, and account monthly only for transactions of the month, leaving check of balances for test audit at inspections (paragraph 286-7); and
(9) to modify the statement of refunds (Madras form M61, India form 37) in some way not clearly defined (paragraph 295).

Subject to the remarks made below, I agree more or less with the first, fifth, sixth, seventh, eighth and ninth proposals; I dissent from the third proposal; and I desire to protest most strongly against the second proposal, if it really means what, on the whole, it seems to mean.

118. As regards (2) I understand that the Committee would do away with anything in the shape of a summary or condensation of the abstract (or other substitute for present schedules), showing totals by heads of account only. If so, and to that extent, I protest against the proposal. I submit—

(*a*) that such a summary is essential for correct and rapid booking in the examiner's office;
(*b*) that though not absolutely essential to the divisional accountant it would be most useful to him and that, as a matter of fact, most divisional accountants would, for their own convenience, prepare something of the sort, in some shape or other, whether prescribed or not; and that the absence of a suitable printed form in which to do it would really increase their work instead of reducing it; and
(*c*) that in any case the labour involved in the preparation of such a summary is exactly the same as that of carrying forward totals (paragraph 280) from sheet to sheet, or rather from a sheet dealing with one account to a sheet dealing with another.

I submit in short that the proposal will certainly make work in the examiner's office more difficult, whilst it cannot possibly reduce, and will almost certainly increase, work in the divisional office. I submit that what is required is—

A. a classified summary by heads of accounts (not necessarily *all* the heads and sub-heads of accounts in the present cash and stock accounts current*) showing debits and credits of the month only, and supported by
B. abstracts in suitable parts showing debits and credits of the month only to works, or other units of account.

119. The summary A might be all in one, or it might be in several parts, that is to say, it might perhaps consist of a general summary supported by several sub-summaries. The question is one to be decided with reference to the convenience of both parties concerned, *i.e.*, the divisional accountant and the examiner's office; it does not concern the executive engineer in the slightest degree. The labour of preparation will be precisely the same either way; but for convenience of booking in the examiner's office a certain amount of sub-division, corresponding with the distribution of work in that office, is most desirable; and for convenience of preparation in the divisional office it would probably be desirable to be able, on occasion, to distribute the preparation of different parts to different clerks.

120. With proper arrangements in other respects it should not, in my opinion, be necessary to distinguish either in A or B between cash, stock and transfers, that is to say it should be sufficient to show against each head of account in A and each work or other unit in B, the gross debits and gross credits of the month.

121. With regard to the Committee's second proposal I find great difficulty in making out what the Committee mean, or whether they really mean anything at all. In paragraph 274 they apparently propose to do away with the multitude of schedules enumerated in present form M64 (India form 31A), and in their summary in paragraph 472 (page 57) they certainly claim to do away with all these forms; but in paragraph 280 they recognize that, for the convenience of both offices, the so-called *single* abstract *must* be broken up into a number of parts each of which, whatever you may choose to *call* it, *is* a separate schedule and nothing else. Moreover, when they say in the same paragraph that "as far as possible the headings should be printed," they seem to reconstitute these parts, not only as separate schedules, but as distinct *forms*.†

122. For my part I desire to protest most strongly against any proposal to do away with separate forms of schedules, simply for the sake of reducing the number of forms in use. A vast deal of nonsense is talked and written about forms, and to some officers a form of any sort is like a red rag to a bull, chiefly because people do not take the trouble to clear their ideas as to what it is that a

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* See below para. 129.

† For my argument it is of no consequence that the Committee probably mean that only a word or two shall be printed on each form, the tabular arrangement—the arrangement of the columns—being the same for all parts. The inconvenience arising from multiplicity of forms (see my paragraph 124) is precisely the same whether the difference between different forms is great or small. Moreover nothing, in my opinion, could be more unwise than to court all the inconveniences of multiplicity for the sake of an utterly insignificant amount of specialization such as the printing of a word or two. If it is well to have separate forms at all, surely each separate form should be adapted as completely as possible for its special purpose.

form does, whether in the way of good or of evil, and to realize distinctly why, and under what circumstances, a form sometimes does become a nuisance.

123. There are three classes of persons, and three only, who are concerned with a form, namely—

(*a*) the persons who prepare returns, or put information into forms;
(*b*) the persons who check or verify the return; and
(*c*) the persons who make use of the return, or extract information out of it.

The convenience of every one of these three classes of persons is distinctly promoted in certain ways by having a suitable form for the returns, or what not, concerned. The person who prepares it is saved from mistakes and omissions, by having pointed out to him the precise items of information that he ought to embody in the statement, and his work is reduced because the form generally enables him to indicate by a single word what would otherwise require the entry of three or four words or more; whilst those who have to check the return, or to extract information from it, are enabled much more readily to pick out each or any item or particular required, or to see whether the required items are given. Moreover for the last two classes of persons a *suitable* form is, always and everywhere, an unmitigated convenience, and there never is any counterbalancing inconvenience.

124. On the other hand, though the person who prepares the return always derives the full measure of advantage from the specialization of the form, he is sometimes put to inconvenience in other ways by the multiplicity or diversity which is inseparable from specialization of individual forms; but this inconvenience is absolutely confined to him, and it arises as regards him, in two ways only, namely—

(*a*) because he is unable to keep all the different forms in such a way that he can at all times readily lay hands on the particular form that he wants; or
(*b*) because he is unable to discriminate between the different forms, and gives trouble both to himself and to others by using the wrong form.

These two causes may of course combine, and when they do combine the inconvenience is at its greatest.

125. Now, if the above is a correct statement of the case, there are evidently two ways of obviating the inconvenience when it does arise, namely—

(1) to abandon the advantages of specialization for the sake of the possibly greater advantage of simplicity; or
(2) to equip your man, or train him, as the case may be, suitably; that is to say, to give him the means of keeping his forms so that he *shall* be able to lay hands readily on any one of them; or, as the case may be, to train him so that he *shall* be able to discriminate between the different forms;

and in my opinion, for reasons given below, there should be no difficulty whatever in deciding which of these two courses to adopt in any case that we are likely to have to deal with.

126. As I have pointed out above the inconvenience is one which never affects anybody excepting the person who originally uses the form for the purpose of drawing up a statement or what not; and as far as we are now concerned the only users of forms, in this sense, are—

(1) executive subordinates who are more or less constantly on the move,* and whose real and proper business is not the drawing up of statements and returns, but the looking after the execution of works;
(2) the clerks attached to such executive subordinates, whose business no doubt is to draw up certain kinds of returns and statements, but who, from the circumstances of their recruitment and service cannot be properly trained to the business; and
(3) accountants and their assistants, who sit in an office,* and whose sole business is to use the forms.

* When it is a question of providing furniture, or other means of keeping forms suitably, it makes all the difference whether the user is generally in camp or works habitually in an office.

It seems to me quite obvious that, as regards the two first classes all other considerations should, as a rule, be subordinated to simplicity; but that as regards the third the proper course is to equip and train the accountants and their assistants, so as to be able to derive the utmost advantage from specialization of forms.

127. Forms are the accountant's tools and, provided he has proper means of keeping them ready for use, they are helps to him and not hindrances. I suppose that a dentist, in the exercise of his profession, uses a hundred, or a hundred and fifty, different instruments of various sorts, sizes and shapes; but, by keeping them in suitable trays, in which each has its appointed place, he is able to find each readily enough when he wants it. If, instead of this, he were to keep them in a confused heap, as for a game of spilikins, he would, I suspect, be in a position analagous to that of most of our accountants; but he would, I think, be a very indiscreet adviser, who should propose to facilitate his work by depriving him of all his instruments excepting one file and a single forceps. But this is exactly what, in the matter of these schedules, the Committee apparently propose to do by the accountants. On the other hand (see my paragraph 30 *et seq.*) when dealing with forms used by executive subordinates and their clerks, they show, as it seems to me, a decided tendency to sacrifice simplicity to specialization.

128. I submit that no greater mistake could be made than that of reducing to one uniform type all the different schedule forms now in use. A suitably specialized form ensures, as far as it is possible to do so, that all the different items of information required in connection with any class of transactions shall always be given; and to abandon such specialization would be to court mistakes and the trouble and correspondence that mistakes involve. It may, of course, be possible to simplify some of the forms, if some other proposals are adopted (*e.g.* (5) and (8) of my summary in paragraph 117 above) and it may be possible, without sacrificing any useful specialization, to make one form take the place of two or more forms thus simplified; but, in my opinion, it is far more probable that greater profit and convenience to everybody would be secured by taking advantage of the omission of some columns of the present forms in order to specialize still further in other directions; and I have not the smallest doubt, I *know* it from experience in my own office, that there need be no difficulty whatever in providing every accountant, at a comparatively trifling expense, with suitable means of keeping, so as to be always readily and immediately available, as many forms as, with the utmost specialization, he is at all likely to require.

129. I hold then very strongly to the opinion that if, and as far as, you require classification of items in the divisional office, it is a distinct advantage to everybody concerned to provide separate specialized forms for reporting transactions under different classes; but I am disposed to think * that classification of items in the divisional office is carried very much further than it need be. I think, for instance, that it is quite unnecessary that the executive engineer and the divisional accountant should have any concern with all the various remittance and transfer accounts and the numerous sub-divisions of them which are now represented by distinct heads of account in the cash account current. I think that, as far as divisional offices are concerned, nearly all of these separate accounts might with great advantage be merged in the one account "Transfers, Examiner's Division," leaving the examiner's office to carry out the necessary distribution of items. Similarly I consider that the present minute classification of expenditure on works is quite unnecessary in divisional offices; and that with suitable arrangements the necessary distribution could be very easily made in the examiner's office. The extent to which classification of works expenditure could be dispensed with in divisional offices depends, however, on two things, namely, (1) the amount of detail required by the Government of India in the monthly telegraphic summary of expenditure, and (2) the extent to which the system of appropriation for individual estimates is carried. The information required for the telegraphic summary must be given *by the divisional office* in all the detail required by the government of India; and accounts of works must therefore be kept in divisional offices under such account heads as will admit of ready preparation of the summary; but if the

* I am not at present prepared to express a decided opinion.

views expressed by the Committee in paragraph 303 are accepted, this detail will be very slight indeed. Also if, and as far as, the system of working against lump sum allotments or appropriations for classes of works is adopted, expenditure must be grouped in divisional offices under corresponding heads; but if the views expressed by me, in paragraphs 204 and 205 below, are accepted, appropriations for individual works will be the rule and there will be no necessity, on this ground, for any grouping or classification of expenditure in divisional offices. It seems to me almost obvious that it is easier to appropriate once or twice in the year for each work than to group or class the expenditure on every work every month; and if the executive engineer is made the appropriating authority, as suggested below in paragraph XVII. 5, appropriation will be a very simple matter. Further I am by no means sure that the number of separate suspense accounts to be recognized in divisional offices might not be reduced, as regards most divisions, to two only, namely, "Miscellaneous Advances" and "Deposits."

130. With regard to proposals (3) and (4) (as numbered in my paragraph 117 above), the proposal to submit vouchers under separate dockets for each work, instead of under one list, I submit—

(1) that as regards the divisional office, the single list involves considerably less writing, initialling, &c., than do the separate dockets;

(2) that the single list is very much more convenient to the examiner's office;

(3) that the separate docket system is highly inconvenient in all cases in which one voucher is common to two or more works or other account units; such vouchers have always been common; they have increased lately in consequence of the modification of the code rules about work establishment, which now allow one man to be charged to several works; and they would be further largely increased by the adoption of some of the proposals made by the Committee under the head of vouchers, or by the adoption of what I understand to be their proposals regarding vouchers for work transfers—see Committee's paragraph 295 and my paragraph 141 below.

131. As regards the *list of documents* (*i.e.*, schedules), as distinguished from the list of vouchers, I submit that it is exceedingly useful if only it is put to proper use; if, that is, the accounts as soon as received are at once subjected, as they now are here, to a preliminary examination in order to ascertain whether all documents, &c., purporting to have been sent, have really been sent. If this is not done there is no particular use in the list, but if it is done, and if missing documents are at once called for, much after-trouble is obviated. I would therefore certainly not do away with the list, the preparation of which, requiring merely the scoring out from a printed list of a few documents not submitted, gives absolutely no trouble that could be measured by the most delicate instrument for such measurements. Possibly, however, the general summary referred to in my paragraph 118 above, might be made to answer at the same time the purpose of this list.

132. As regards (5) I should have less hesitation about supporting the proposals to discontinue the exhibition of total outlay (of year and to date) in schedules of expenditure, if I were satisfied that a system of divisional accounts will be introduced which will afford a reasonable expectation that these totals shall be correctly brought out in the divisional record, whatever it may be; but at present mistakes under this head are so common that I doubt very much whether the information could be dispensed with, without seriously impairing the value of the audit against estimate and appropriation. Such mistakes must, of course, be detected in the end, but under the proposed arrangements they would be detected only as a consequence of the raising of an objection to some outlay in excess of estimate or appropriation, which might be many months after the mistakes were first made, and much too late to remedy the mischief.

133. For similar reasons I entertain very serious doubts as to the expediency of omitting information as to estimates and appropriations, unless other arrangements are made for reporting modifications of estimates and appropriations (especially the latter) actually taken to account during the month in the divisional record (whatever it may be) in which the comparison is effected between outlay and estimate

or appropriation. I think, however, that this might probably be arranged for; and I am disposed to think that the audit against estimate and appropriation might be materially facilitated by adopting an entirely new basis of comparison, namely *outlay to end of previous year* plus *appropriation of the year* which might be called the "*limit of outlay.*" On the assumption that the appropriation of the year is always within the estimate, or that an appropriation in excess of estimate is equivalent to sanction to the increase of the estimate, only one comparison would then be required, namely between the outlay up to date and the limit of outlay.*

134. I must point out that the proposals referred to in the last two paragraphs in so far as they involve a diminution of the check of the audit office, necessarily imply a corresponding increase of the responsibility of executive engineers. I think it very doubtful indeed whether it is worthwhile to throw on them any such additional responsibility for the sake of a trifling saving of clerical and other inferior work in divisional and examiners' offices.

135. As regards the certificate of examination of accounts (paragraph 282) I agree with the Committee in their condemnation of the present form. It is impracticable, in that it nominally commits the executive engineer to responsibility for a great deal that he cannot possibly even look into to any useful purpose, and at the same time it is useless, in that it does not definitely commit him to any definite responsibility for specific things that he ought to see to. I think, however, that it would be a great mistake to do away with the certificate altogether, simply because the present form is not a good one. There are some things that an executive engineer most certainly ought to look into, and for which he ought to be personally responsible; for instance if the Committee's proposals in paragraph 287 should be adopted (which I hope they will not) it will be very necessary for him to keep a real watch over certain suspense accounts, and there are some matters in connection with receipts which it is very desirable for the executive engineer to look to personally; but I submit that the aim should be to indicate, in the certificate, the things that the executive engineer really ought to see to himself, and to provide for them definitely and clearly. As for the check which the executive engineer ought to exercise himself, it is essential that he should exercise it promptly and punctually; the longer it is put off the more difficult it becomes; and if the executive engineer, who ought to have done it, puts it off too long, it may fall most unfairly and with greatly increased difficulty on his successor. I submit, that in the interests of executive engineers themselves, and in the interests of the possible successor of each, it is most desirable to have some means of making sure from month to month that the executive engineer really does exercise the check that he is supposed to exercise. I venture to think it is a mistake to introduce sentiment into the matter, and to talk about zeal and honor which, I submit, are not in question at all. The executive engineers who leave these things undone are very often the most zealous, but their zeal runs perhaps in another direction, or perhaps they err simply for want of definite indication of what it is that they are really expected to do.

136. The Committee's conclusions that the executive engineer should sign the accounts, and that his signature should imply acceptance of full responsibility for the accounts; and that, when he is unable to sign them, he should separately report his acceptance of such responsibility; are, I submit, somewhat illogical, in that, if responsibility for the accounts has any meaning at all, they would commit him to responsibility for individual entries in the divisional books, as to which the Committee themselves say (paragraph 282) that check by the executive engineer appears to them neither necessary nor desirable.

137. I submit that there is no reason whatever why the executive engineer should be held responsible for anything except—

(*a*) the propriety of payments authorized by himself, his executive subordinates being similarly responsible for payments authorized by them;

* I think it will really be very easy to work out arrangements by which the necessary check can be secured, without anything like the amount of detail now required (as regards expenditure on works) in the monthly schedules; but it seems to me that the Committee have entirely overlooked the necessity of some means of ensuring correspondence between results recorded in the two offices, and that it would be a mistake to adopt their proposal without very careful consideration.

to leave it to the superintending engineer. In Madras, where works are scattered all over large districts, the conditions of labor and of carriage, and all other factors that affect rates, vary from work to work, and in my opinion it is ridiculous to suppose that the examiner can exercise any check whatever over rates. As a matter of fact it never has been attempted.

148. The only direction in which, as far as the examiner is concerned, any attempt has ever been made, in Madras, to make any use of accounts by items or sub-heads, is that of obtaining an indication of probable large excesses over estimates. I do not think it would be advisable to relieve the examiner entirely of responsibility in this matter. There is no doubt whatever that in some respects executive engineers and superintending engineers can do it much better, and there is no doubt that they ought to do it; but experience shows that as a matter of fact they often do not do it. In my opinion, however, it is not at all necessary that the examiner should, for this purpose, be furnished with accounts by items of work, either in work voucher form or in any other form; in my opinion it is not even necessary that the accounts should be kept by items anywhere. I believe that all that is necessary or useful is that, as regards large and costly works, when the expenditure has gone on for a considerable time, or when it has reached a certain considerable proportion of the estimate, the superintending engineer or the examiner should from time to time call for a statement, very easily prepared, showing, in a form something like that of the work voucher, the quantities executed up to date, and the value of executed quantities at estimate rates. If this statement showed that the work, as far as executed, was costing a good deal more than the estimate, the superintending engineer would take such action as he thought proper, calling on the executive engineer for explanation, or possibly requiring a more detailed statement to be made out showing the actual approximate cost of *important* items, which could easily be done with all *necessary* accuracy, from the existing records of quantities of labor and materials employed. The examiner in like circumstances would simply draw the superintending engineer's attention to the matter, leaving it to him, at his discretion, to take or not to take action in the way of calling upon the executive engineer for explanation, or for more detailed statements of cost. This would be simply making use of the so-called normal cost system; but it would be making use of it in a way which would, I believe, be generally admitted to be really useful.

149. I submit, however, that the cases must be very few indeed in which the officer in responsible executive charge of a work, if he is any good, cannot, with sufficient accuracy for all practical purposes, explain all really material excesses over items of estimate without making up a detailed account at all. An estimate is presumably based on standard rates, which again are based on certain assumptions —which ought to be known and on record—as to the quantities of labor and materials required for certain descriptions of work, and on certain assumed rates of wages and prices of materials; and the explanation of any excess is always, either a deviation from the plan, &c., on which the estimate is based, or that higher wages or prices have to be paid, or that, for some reason or other, it is necessary to employ more labor or more materials. I submit that elaborate accounts, balancing to a pie, are seldom, if ever, necessary, or even useful for such explanations, and that if one-half of the time now wasted in keeping such accounts, *and in correcting them, and in corresponding about mistakes in them*, were devoted to real check over quantities of labor employed and materials used, the results would be very much more satisfactory.

XXI.—Objectionable Items (319 to 325).

150. With the single exception of the proposal to deal individually with the personal claims of certain officers, the Committee's opinions and proposals under this head are, in my opinion, ill-advised. I submit that in this, as in many other things, it is necessary to distinguish. There are objectionable items and objectionable items; and the procedure which is best for one kind may be very bad for the other. To a certain extent each class must be considered by itself.

151. I submit that the objectionable items statement in its present form, or something like it, should be retained for, but confined to, objections in respect of estimate and appropriation; and that as regards these objections it is most desirable that the objectionable items statement should be prepared in the divisional office, and come, as recently arranged here (in Madras), through the superintending engineer to the examiner (instead of through the examiner to the superintending engineer) with the executive engineer's and superintending engineer's remarks on it. Irregularities of these kinds differ from all others—at any rate from all other that I can think of just now—in that they are, and must be, committed sometimes more or less knowingly and intentionally, on the ground that a slight breach of technical rule is the less of two inconveniences, and also in that they are irregularities which necessarily continue and grow from month to month. If the thing is done knowingly and intentionally, there seems to be no reason whatever why the officer who does it should not then and there give his explanation. If on the other hand the thing is done inadvertently, or if, though done intentionally by a subordinate officer, it is done without the knowledge or approval of the executive engineer, it seems very desirable that he should have the earliest possible means of stopping it or regularizing it. Preparation of the objectionable items statement in the divisional office brings the irregularities promptly to the knowledge of the executive engineer if they are done without his knowledge, and also serves to bring them promptly under the notice of the superintending engineer.

152. It may be perfectly true (para. 325) that the objectionable items statement, even if prepared in the examiner's office, should reach the executive engineer in a month after submission of the executive engineer's accounts; but even this may easily be three months after the irregularity began, and, if the executive engineer is in camp and unable to deal promptly with the objectionable items statement, the delay in some of the more distant divisions may easily reach four months. I entirely fail to see what is gained by this procrastination, unless it is that the executive engineer is saved the trouble of jotting down a few words of explanation as regards such irregularities as have been committed with his knowledge and approval; and something of this sort the Committee must have had in their minds when they remarked (again paragraph 325) that: "Most of the causes of objection would probably by that time have been removed." But if this is to be seriously counted as an advantage to be set against the delay in bringing to the executive engineer's notice things done without his approval, and to the superintending engineer's notice things which when done he may not approve of, then I would ask, why not procrastinate a little more, why not allow another month for removal of more causes of objection; why in fact object at all; and why lay stress (paragraph 323) on the fact that the objectionable items statement, if prepared in the examiner's office, should reach the executive engineer within a month, &c.

153. The Committee say (para. 321) that it must "be borne in mind that when an executive engineer incurs any liability for which he has not sufficient authority, he should not wait, *and probably does not wait*, for the objectionable items statement to remind him of the necessity of regularizing the outlay." The italics are mine, and experience, I submit, shows that in far too many cases the expectation is not fulfilled. Moreover the Committee entirely ignore the fact that in many divisions—probably in nine out of ten Madras divisions—the executive engineer has only a very distant and second-hand control over outlay, and that the objectionable items statement, or something like it, is the only means of bringing *systematically* under *his* (the executive engineer's) notice irregular outlay by his subordinates.

154. Other kinds of objections are, in a different case: or perhaps I should rather say that there are kinds of irregularities which are in a different case; because, possibly, there may be one or two kinds which it would be desirable to treat in the same way as those referred to above. With these other kinds the only result of delay is that the irregularity is a little longer unremedied: it grows no bigger. An irregularity in respect of appropriation, which is a few hundred rupees at the end of January, may be a good many thousands by the end of March; but if a completion report is overdue on a given date, then a month later it is one month more overdue, and that is all; it is still only one completion report overdue. In

dealing with such objections there is no material advantage in hastening the initiation of the objection by a month or six weeks: and, on the other hand, there is a very decided advantage in leaving the initiation to the examiner's office, in that (1) in a central office it is possible to organize *systematic* check to an extent which is quite impossible in each divisional office, and (2) that in a large central office the facility for distributing different kinds of work to different individuals admits of very great specialization of forms, without causing any inconvenience from the multiplicity of forms which necessarily accompanies such specialization: you may have five hundred forms altogether, but no individual need have to use more than fifteen or twenty different forms.

155. In my opinion the curse of present system—or rather of the system which, I believe, is still uniformly followed elsewhere, but has now been to a great extent abandoned in Madras—is that there are practically only two instruments—the objectionable items statement and the audit note—for dealing with every kind of objection. Every objection has to be dealt with in one or other of these two monthly documents, with the result:—

(1) That no objection whatever is dealt with in a form which is really suitable and convenient for bringing out clearly and easily the particular points that have to be attended to in connection with objections of the particular kind concerned.

(2) That the initiation and disposal of every objection *have to run one prescribed course*—from the executive engineer through the examiner to the superintending engineer, and back through the examiner to the executive engineer or whatever it may be—without the slightest regard to what may really be the most expeditious and convenient way of disposing of the particular kind of objection in question.

(3) That objections, &c., are presented to everybody (executive engineer, superintending engineer, examiner, chief engineer or government) who has to deal with them at any stage, in a bewildering mass which makes it a physical impossibility for anybody to deal with them properly, or to give to any single item more than the most perfunctory and hasty notice, unless he is prepared to delay the complete disposal of the whole mass for weeks or even months.

(4) That in the examiner's office any rational distribution of work according to its kind is made impossible, and every single matter connected with any one division, or small group of divisions, has to be dealt with by a single accountant who, if he is to do it properly, must be, or at any rate ought to be, an universal genius, who must be paid at a very much higher rate than would be necessary in order to get the work done, *a great deal more thoroughly, and with far less inconvenience to all concerned*, by a number of individuals, each of whom, using special forms and appliances, and guided by special and very complete instructions, would deal with one or more specific kinds of business, either for all divisions or for a larger number of divisions.

(5) That it is a practical impossibility for the examiner, or any one else, to know, either for any division or for the whole presidency, what is, during or at the end of any given period, the extent of irregularity of any given kind.

(6) That any personal control by the examiner himself over the objections raised, whether as regards the kinds of things objected to or the manner of disposing of them, is made almost impossible.

156. I submit that the reform most required, and that which would be attended with the most beneficial results, is the separate treatment of different kinds of objections.* Here in Madras the government have already to a great extent

* I take for granted that the principal objects are, to prevent the occurrence of irregularities, and to reduce their duration to a minimum when they do occur. If there is anything to be said for the Committee's suggestion of procrastinating, so that irregularities may die a natural death (see para. 152 above), the reasonable course would seem to be to say plainly that an irregularity is not an irregularity until it has continued for certain length of time, and not to raise any objection until the period of grace expires.

accepted these views, and a good deal has already been done,—quite enough to prove, to me at any rate, the advantages of the system; but whether executive engineers and superintending engineers would express a similar opinion, if consulted *now*, is very doubtful; but the time has not, I think, arrived when executive engineers can be expected to give an unbiassed opinion on the question.

157. In Madras at any rate, and I believe careful enquiry would show that it has been the same elsewhere, the result, and in my opinion the inevitable result, of the old system has been the accumulation of a great mass of unremedied arrears of irregularity. I would say nothing about these arrears if I were not conscientiously able to assert at the same time my absolute conviction that they are the necessary and inevitable result of the old system, and not at all the result of personal neglect. Now the first result of the attempt to introduce the system of dealing separately with different classes of irregularities has been, to bring out more or less clearly the extent of the accumulated arrears of each kind; and the first efforts have necessarily been directed to clearing off those arrears. This has certainly entailed very heavy work in my own office; and I cannot doubt that it has given much trouble, and caused a good deal of annoyance, to executive engineers.

158. As an instance I may refer to the matter of overdue completion reports. Up to this time I have never been able to ascertain definitely the actual number of overdue completion reports at any definite date; all that I have been able to do, as yet, is to ascertain limits between which the numbers must lie. I have however not the slightest doubt that eighteen months ago there were over twelve hundred completion reports overdue more than six months. The number has already been very largely reduced; at the beginning of July it was somewhere between 500 and 1000, and probably about 700; and I hope that when the next quarterly report is submitted, when the number will I hope be accurately known, it will have been reduced to about 300, at the outside. Now it stands to reason that these arrears of completion reports cannot have been cleared off without a great deal of extra work in divisional offices, and a great deal of extra trouble to executive engineers themselves. Many of the works in question have been completed for years, and probably in every single case the difficulty of preparing the completion report has been very much greater than it would have been if done at the proper time.

159. Again when I came to apply a similar method to the suspense accounts, including under this head the contract and piece-work accounts, I found that in many divisions they were loaded with items, mostly very petty, outstanding without the smallest likelihood of adjustment, for months and months and even years. The clearing off of these items; in some few cases by searching out the creditors and paying them; in others by getting sanction of the superintending engineer or of government to credit them to deposits (under Code 1828), or to revenue (under Code 1750 or 1828); has necessarily given a great deal of trouble to executive engineers, and some also to superintending engineers.

160. It is the same with every other class of irregularity. The immediate result of applying the separate system is increased trouble and annoyance. Moreover any new procedure is necessarily in a great measure tentative and experimental. It is not possible in every case to hit at once on that way of doing the thing which is most convenient to everybody. Possibly also in some cases the irregularity may be noticed a little earlier than is absolutely necessary, and experience may show that a little more delay would be an advantage. For these reasons I submit that the time has not come when an impartial opinion could be obtained from executive engineers; but I believe that if the question is put to them eighteen months or two years hence, when the initial trouble, and the consequent irritation, have passed away, a large majority of them will admit that it is a great advantage to them to have all kinds of irregularities pointed out to them promptly, in reasonable doses and in suitable vehicles; and I have no doubt that those officers who are the most painstaking in such matters will thankfully acknowledge that the system largely relieves them of the troublesome task of periodically clearing off piles of arrears left by their predecessors.

161. Here I may be allowed to protest against the common, but, as I submit, quite erroneous view that every objection raised by the examiner is directed *against* the executive engineer. I do not believe that there is more than one objection in twenty of which this can be truly said. I believe that, in at least nineteen cases out of twenty, what the examiner's objection really does is, to bring to the notice of the executive engineer some irregularity on the part of some subordinate, for which the executive engineer is technically responsible, and which, according to the theory of the present system, ought to be detected by the executive engineer himself, or perhaps brought to his notice by his accountant, but which, as a matter of fact, the executive engineer cannot reasonably be expected to detect himself,* and in connection with which the divisional accountant's action cannot be relied upon.

162. Holding the views expressed above as to the necessity for separate treatment of different kinds of objections, I must protest most strongly against the proposal (paragraph 322) to add establishment objections to the mass of other objections dealt with in general objectionable items statements. The proposal has a very direct bearing on the economical working of the examiner's office. In my opinion, apart from reduction of work, of which there is here no question, the only way in which such economy can be secured is by specialization of duties. As far as audit is concerned the only specialization yet attempted is the separation of establishment audit from works and other audit. If the Committee's proposal to deal with establishment objections in the general objectionable items statement is adopted, either this specialization must be dropped, or there must, I am convinced, be a very great duplication of work in the examiner's office. The former would, without question, be fatal not only to economy but to efficiency. It is not only that the multitude and complexity of the rules regarding establishment matters essentially require, for their proper administration, an establishment specially educated in these rules. The inter-connection of travelling allowance questions with salary questions, and of the latter with questions relating to leave, service (promotion, &c.) and pension make it absolutely necessary that all these matters shall be dealt with in one self-contained branch. There *must* be a complete separation of establishment audit from other audit. If therefore all establishment objections are to be included in one general objectionable items statement, there must be a continual transferring by the establishment audit branch to the work audit branch of objections raised by the former for inclusion by the latter in the objectionable items statement and a retransferring of the executive engineers' replies by the latter to the former for disposal, and so on. I fail to see what possible advantage can be gained by the amalgamation, and I am sure that it will be the very reverse of a convenience to executive engineers or to divisional offices.

163. It is also necessary to remember that there are a considerable number of offices which are independent of any executive engineer. The heads of these offices must be directly dealt with.

164. I agree with the Committee in thinking that nothing is gained by passing such items through the miscellaneous advance account; but the labor *at present* entailed by this procedure is very trifling, the very great majority of such items being disallowed in the course of pre-audit, and therefore never paid. The trouble would however be very greatly increased if the Committee's proposals for the entire relinquishment of pre-audit were adopted, as I sincerely trust they will not be.

XXII.—Tools and Plant (326 to 331).

165. The essential thing seems to be that each storekeeper, or works subordinate, should have the means of keeping *a provable or checkable account* of the number and distribution of tools under his charge. This too is the only thing that presents any difficulty; and I submit that it is mere evasion of the question to say (as in paragraph 327) that "he should keep a *simple* list showing the distribution of his tools and plant in the custody of contractors or subordinates." I submit

* I mean that he cannot reasonably be expected to make such a complete and systematic examination of the accounts as would be necessary in order to discover *all* of them *with certainty*.

that this is just the very thing that cannot be done. The distribution is always altering; the simple list must be continually corrected, and in a very short time it becomes impossible to show and prove the correctness of the finally recorded distribution.

166. With such a system it would be practically impossible for the subordinate to reconcile, at the end of the year, his own statement with that furnished from the divisional office (paragraph 329), and the difficulty of effecting such reconciliations would, I think, lead to great difficulty and delay in the submission of the annual divisional statement to the audit office. It is obvious that a statement simply showing what *should be*, according to the divisional office, is quite useless for audit purposes.

167. I would suggest that every subordinate should be given a book in some such form as the following:—

Register of movements of Tools and Plant.

From					To				
Person, Work, Store, Depôt, &c.	Pickaxes.	Felling axes.	Mamotties.	Bill-hooks.	Person, Work, Store, Depôt, &c.	Pickaxes.	Felling axes.	Mamotties.	Bill-hooks.
Balance *	250	300	500	450	Here enter first of all the original distribution of the opening balance.	250	300	500	450
Divisional Store	50	...	25	...	A. Depôt	30	...	10	...
A. Depôt	30	...	...	...	B. Work	20	...	15	...
Contractor, C. D.	...	100	...	...	Contractor, A. B.	30	...	...	...
C. Work	13	...	...	25	B. Depôt	...	100	...	...
D. Work	14	...	...	...	Lost, destroyed, worn out or sold.	27	...	...	25

* Total number for which he is responsible on first starting the book.

The form should of course provide for quoting receipts of contractors and others, item numbers and other reference particulars. Beyond (1) keeping this original record of all movements, (2) sending a copy of it once a month to the divisional office *direct*, *i.e.*, not through the sub-divisional officer in the case of subordinates, and (3) checking once a month the distribution statement prepared in the divisional office, the sub-divisional officer or subordinate concerned need have nothing whatever to do.

168. In the divisional office a similar record should be kept, and also a ledger, the latter being in separate volume for each sub-divisional officer or other subordinate recognised as in responsible charge. Every entry in the divisional record, or in the monthly copy of a subordinate's record, should be posted into the corresponding ledger to debit or credit of some work, depôt, subordinate or contractor, for each of which and for each of whom a page, or more probably a section of a page, should be set apart.

169. When the ledgering is completed cross postings should be checked; that is to say debits to A. depôt, as per divisional volume of ledger, would be compared with credits to divisional depôt as per A. depôt volume of ledger, and so on, and any discrepancies would then be posted to debit as "error" head in the ledger in which deficient.

170. A statement of distribution (including "error") would then be prepared from each office and sent to the subordinates concerned for check. This statement should be in a form which would admit of posting the distribution for a number of months without re-writing the descriptions of depôts, individuals, works, &c., and it should go backwards and forwards between the divisional office and the subordinate concerned.

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166. With such a system it would be practically impossible for the subordinate to reconcile, at the end of the year, his own statement with that furnished from the divisional office (paragraph 329), and the difficulty of effecting such reconciliations would, I think, lead to great difficulty and delay in the submission of the annual divisional statement to the audit office. It is obvious that a statement simply showing what *should be*, according to the divisional office, is quite useless for audit purposes.

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The form should of course provide for quoting receipts of contractors and others, item numbers and other reference particulars. Beyond (1) keeping this original record of all movements, (2) sending a copy of it once a month to the divisional office *direct*, *i.e.*, not through the sub-divisional officer in the case of subordinates, and (3) checking once a month the distribution statement prepared in the divisional office, the sub-divisional officer or subordinate concerned need have nothing whatever to do.

168. In the divisional office a similar record should be kept, and also a ledger, the latter being in separate volume for each sub-divisional officer or other subordinate recognised as in responsible charge. Every entry in the divisional record, or in the monthly copy of a subordinate's record, should be posted into the corresponding ledger to debit or credit of some work, depôt, subordinate or contractor, for each of which and for each of whom a page, or more probably a section of a page, should be set apart.

169. When the ledgering is completed cross postings should be checked; that is to say debits to A. depôt, as per divisional volume of ledger, would be compared with credits to divisional depôt as per A. depôt volume of ledger, and so on, and any discrepancies would then be posted to debit as "error" head in the ledger in which deficient.

170. A statement of distribution (including "error") would then be prepared from each office and sent to the subordinates concerned for check. This statement should be in a form which would admit of posting the distribution for a number of months without re-writing the descriptions of depôts, individuals, works, &c., and it should go backwards and forwards between the divisional office and the subordinate concerned.

171. Each officer should of course explain at once any discrepancy carried to "error," and make any necessary entry in the next return.

172. The different descriptions of tools with which subordinates habitually deal are very few indeed, and there would be no difficulty whatever in providing columns for all of them in all the forms required. A single column for special plant with a "remarks reference" column would enable all operations on special tools and plant to be dealt with by remarks giving details, for which reasonable provision could be easily made. Movements of such plant are very few and far between.

173. Articles lost, worn out, destroyed or sold would remain at debit of the responsible officer until receipt of sanction of competent authority for writing off, or of purchaser's receipt for articles sold, when the write-off would be passed through the divisional office register of movements. Similarly with articles transferred to other divisions, which would be passed through the divisional register on receipt of acknowledgment. The monthly statement of receipts and issues would be posted from the divisional volume of the ledger, the latter (issues) from the page on which transfers and writes-off are posted.

174. It would save a great deal of trouble at the end of the year if each monthly return of receipts and issues were made to show the net increase or decrease to date since last annual return; and, especially if the descriptions of articles in ordinary use were printed, the monthly trouble to the divisional office would be very slight indeed.

XXIII.—Road Metal (332 to 339).

175. In Madras the department has little to do with roads, which are almost entirely under the local fund engineers. Any special consideration of road metal accounts is therefore unnecessary.

XXIV.—Salary, Travelling Allowance and Contingent Bills (340 to 356).

176. As regards salaries the Committee propose—

(1) The abolition of pre-audit.
(2) The amalgamation of the salary bill and the acquittance roll.
(3) The preparation of salary bills in convenient sub-divisions, according to payment groups, instead of in one bill for each division.

177. I submit that the entire abolition of pre-audit will simply throw a serious responsibility on executive engineers without any adequate necessity, and that what is really necessary, in order to remove any existing causes of hardship or inconvenience, can be effectually secured by improving the method of pre-audit. Putting aside divisions whose head-quarters are at the examiner's station, pre-audit is confined to cases of (1) promotion in all its phases, (2) return from leave, (3) transfer, and (4) new appointments. As regards the first it will not, I think, be seriously contended that an officer suffers any real hardship if he is kept for a few days more, say even a fortnight more, without the additional pay due to his promotion, provided he continues to draw, without interruption, the same pay as before; and as regards (2) and (3) the advances admissible in such cases under code rules are, I submit, a complete protection against any inconvenience that can arise under a *rational* system of pre-audit.

178. With new appointments the case is different, a newly appointed man is kept out of the whole of his pay. But if the appointment is a proper one, if the rules have been conformed to, and the claim is admissible, the delay, under a *rational* system of pre-audit, should not exceed a few days, say a week, or at the outside a fortnight in the case of distant divisions. If the appointment is *not* a proper one, and the claim is *not* admissible, then the case becomes a little difficult. There will then be no salary from which to recover the overpayment on next pay-day. How then is the recovery to be enforced? Is it to be made without question from the salary of the officer who is responsible for the payment? Or is it not to be made

at all? And how about any further claim that has accrued in the meanwhile? I take it for granted that when a claim for one period has been disallowed as inadmissible under the rules, the executive engineer is *ipso facto* precluded from paying any further claims that are subject to the same disqualification.

179. By a rational system of pre-audit I mean one under which claims requiring pre-audit are separately and promptly submitted for such audit, instead of being postponed in order that they may be submitted at the same time as a number of other claims which do not require pre-audit. I submit that the proper plan is to do as a matter of course in all such cases—cases mentioned in paragraph 177—what the Committee suggest *might* be done, at the discretion of the executive engineer, in doubtful cases; that is to say, to submit each such claim separately for pre-audit as soon as it becomes known that the claim will arise. Unless the case is one of quite unusual difficulty, a claim thus separately submitted need never be delayed in the examiner's office more than three days including the days of receipt and issue, always supposing that the claim is submitted in a complete and proper shape, which should be secured by the use of a proper form providing for everything that can be required. In cases of exceptional delay, or in dealing with the more distant northern divisions, authority to pay could be communicated by wire when necessary. Under such a system the delay need never exceed a fortnight at the outside. In the great majority of cases there would be no delay whatever, the authority to pay reaching the divisional office before pay-day; and the extreme delay of a fortnight could occur only in the case of the most distant division submitting a claim on the very last day of the month.

180. If this system were adopted all divisions should of course be put on the same footing. There would be no need to make any difference between those whose head-quarters are, and those whose head-quarters are not, at the examiner's station.

181. As regards the responsibility which the Committee's proposal would impose upon the executive engineer of a division, I submit that there is no necessity whatever for inflicting upon him any such burden. If you have an audit office, why not make a proper and sensible use of it?

182. I do not think the Committee have at all considered the difficulties that would follow from amalgamating the salary bill and the acquittance roll; or they would hardly say that there is no advantage in having separate forms (paragraph 342). In the first place the amalgamation would at once make the audit against authority (rule, sanction, or scale) inseparable from the audit against vouchers, with the secondary results that (1) the difficulty of retaining any specialization of audit in the examiner's office (see paragraph 162 above) would be enormously increased, and (2) that the audit against authority would always and necessarily be dependent on the receipt of the voucher, and would therefore be subject to all the delay—the very serious delay—frequently inevitable in the case of a voucher which has to circulate to a number of more or less peripatetic payees, scattered all over a division or sub-division.

183. I must point out that, even in the case of a division within one or two days' post of Madras, and assuming the punctual submission of accounts with vouchers (including acquittance rolls) complete, the audit can never by any possibility be completed in time to prevent an irregular payment of salary from running on into the third month. Thus in the case of an irregular payment made on the 1st of January, the audit objection could not by any possibility reach the executive engineer by the 1st of March, or anything like it, and on the 1st March the third payment would be made. Much more frequently irregular payment would run on to the fourth month; in the case of distant divisions it would *always* run on to the *fourth month;* and with a little unpunctuality in the submission of the voucher (salary bill *cum* acquittance roll) it would run on to the *fifth* month. This, I need hardly point out, means a very serious increase of the responsibility of the disbursing officers, and of the trouble of effecting recoveries, whereas, even with post-audit, but with prompt submission of a separate salary bill as at present, no improper payment need ever extend beyond the second month; and under a rational system of pre-audit, which need cause no inconvenience to anybody, and which

would relieve the executive engineer from all responsibility, no improper payment need ever be made at all.

184. I submit moreover that it is no kindness, but very much the reverse, to pay wrongly to anybody, and especially to an impecunious subordinate, a sum which is very likely a considerable one for him, to go on overpaying this sum for two, three, four and even five months, and then, when perhaps he has not only spent every pie of it but has incurred prospective liabilities in the reasonable expectation that the payment will continue, suddenly to call upon him to refund forthwith the whole amount overdrawn.

185. Therefore as against the Committee's assertion that there is no advantage in having separate forms for salary bills and acquittance rolls, I contend that there are the very gravest objections to combining the two, and that, so far apparently, nobody has even attempted to show that any advantage worth a thought is to be gained by it.

186. With reference to paragraph 343, I see no particular objection to the preparation of salary bills in parts, if it really would be any convenience to anybody. It would add a good deal to the work of the examiner's office and would complicate the audit registers by multiplying transfers, because the payment groups would in this connection practically take the place of the present divisions. However, if it would be any substantial convenience to any considerable body of officers, I do not think that this objection should stand in the way.

187. I doubt very much however whether the proposal will be pressed apart from the proposal to combine the salary bill and acquittance roll. I take it that what is really wanted is to have the acquittance roll in parts. This can be, should be, and as a matter of fact generally is, done at present.

188. With regard to travelling allowances the Committee propose—

(1) To deal with each officer's claims on individual or personal bills.
(2) To abolish pre-audit except by the controlling officer.

189. I think the first proposal (paragraph 346) is a good one. It will of course to some extent increase work in the examiner's office; but it will make a greater corresponding reduction in divisional offices, and will no doubt be a convenience to the individuals concerned. As the Committee say, the individual's claim must at some stage or other be separately stated by himself; to which I may add that the audit objection, if any is made, must also, at some stage and in some form, be separately presented to him. It is therefore desirable to avoid the double transcriptions.

190. I protest, however, against the proposal to do away with pre-audit. I submit that, as in the case of salaries, it would throw, quite unnecessarily, a most undue responsibility on an officer—in this case the controlling officer—who need have nothing whatever to do with the matter—all the trouble and responsibility which ought to fall, and in the end will still fall—for the thing will have to be done twice over—on the audit office. It will oblige the controlling officer to check the correctness of claims in respect of matters with which he ought not to be required to exercise any responsibility whatever. And, as in the case of salaries, I submit that it is no kindness to pay a sum which is not due, and then to demand its return.

191. I submit moreover that the change from a general divisional bill to personal bills will of itself very greatly reduce the delay in payments. At present the submission of the general bill in the first instance by the executive engineer to the superintending engineer must of necessity await the receipt of the last individual statement of claims; the despatch of the general bill by the superintending engineer to the examiner must similarly await the consideration and disposal by the superintending engineer of every claim in the bill; and finally in the examiner's office a dozen claims, as to which there is no question whatever, may be, and often are, unavoidably delayed on account of some difficulty about another claim. With personal bills these delays would disappear, and the average date of audit and, therefore of payment, would be very considerably advanced, more especially if controlling officers could be got to understand that they need not, and should not,

concern themselves at all with anything except the propriety of this or that journey or halt or other *act*, leaving entirely to the audit office the check with reference to rules, rates and arithmetic.*

192. It must also be remembered that pre-audit of travelling allowances is a perfectly well known condition of service; and therefore does not constitute any real grievance, unless the pre-audit and the procedure in general habitually produce *unnecessary* delay. At present I think it does do so; but with personal bills it should not. If, however, it is considered that officers have a claim to *immediate* reimbursement of their actual travelling expenses, or that it is desirable to concede such a claim as regards any class of officers—subordinates for instance—then I submit that the proper plan is to give them standing advances for the purpose, so long as they remain in posts involving a considerable amount of travelling and in divisions where delay of payments is at all considerable. The Committee's proposal that subordinates who happen to have imprests should be allowed to pay their travelling expenses out of such imprests is, I submit, objectionable and illogical. It is objectionable in that it must very seriously complicate imprest accounts by introducing recoverable charges, and I have no doubt that this would give much trouble to executive engineers; and it is illogical, in that it admits the justice of the claim to immediate reimbursement, but in practice makes the concession of the claim dependent on a mere accident,—the accident of whether the officer concerned has or has not been entrusted with an advance of public funds for a totally distinct purpose. If the circumstances of any officer's case are such that he really ought to have such an advance, then give him a standing one for the purpose, and let him keep it until he is transferred to an employment in which it is no longer necessary, or until he goes on furlough or retires.

193. In this presidency the number of separate disallowances made and sustained every month is now about three hundred. With irregular salary payments running on month after month (see paragraph 182 above) it would I think be at least four hundred. The recovery of all these disallowances, the watching of them and the correspondence about them, will give a great deal of trouble to all concerned. At present they give hardly any trouble, because only very few of them are paid at all.†

194. I am fully alive to the importance of accelerating payments by all practicable and judicious means. I have every desire to accelerate them; but I submit that the gain of a few days now and then in the case of salaries, or even every month in the case of travelling allowances, should not overbear all other considerations. I submit moreover that, when it comes to a question of accelerating the payment of allowances, there is a matter which is even more worthy of serious consideration, and that is the inconvenience to which many subordinates at outlying stations, and especially members of work establishments, are put month after month. Pre-audit of salaries probably does not, on an average, affect any given individual more than once in eighteen months or two years; pre-audit of travelling allowances only delays the payment of a comparatively small proportion of his aggregate allowances; but there are many subordinates who month after month receive the whole of their allowances a month, and often six weeks, after due date. Month after month many of these men have to wait until the sub-divisional officer, or whoever it is that actually disburses their allowances, happens to come their way.

195. I believe that this might be completely obviated by making a sensible use of the existing widespread agency for such payments, *i.e.*, the postal department. I believe that by this means it would be easy to make all such payments promptly and securely, and with a minimum of trouble to all concerned, directly from the divisional office. The money orders might be signed by the head clerk or cashier

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* There would in most cases be a further saving of time owing to the fact that, with separate bills no bill need pass through the superintending engineer at all unless he is the controlling officer of the person submitting it.

† The number paid, the number of items whose recovery has to be watched, probably does not reach twenty-five in a month; and the increase of trouble must be measured by the difference between 400 and, say, 25, not between 400 and 300.

as "remitter," and the executive engineer would have to sign only a single cheque for the total in favor of the postmaster.

196. Some time ago I suggested the establishment of a system of official money orders, at reduced rates of commission, for remittances from subordinates to executive engineers; and I cannot help thinking that if the postal department would be satisfied with a minimum profit on this business, which, being additional business, would cost them next to nothing, they could do it at a charge not exceeding 2 annas for Rs. 50. Such a charge, or even one considerably larger, would not be more than the fair interest on deferred payments, to which the payees might very reasonably assert a moral claim, and the charge might, I think, very well be borne by the department as an office contingency.

197. The only difficulty would be as to the voucher. The money order form does not afford any means of showing on what account the payment is made. But this difficulty might I think be very easily got over by suitably modifying the *coupon* part of the form. On the *black* side of the coupon,* the upper part (now headed "coupon to be retained by payee") should be used for entry by the remitter of the necessary particulars on account of which the payment is made. The whole of the coupon should of course be returnable to the remitter, the dividing lines on both sides being omitted. Receipts endorsed by the payees on postal money orders are exempt from stamp duty, under a notification of 1880; and all that is necessary in order to make such a receipt a complete and sufficient voucher, is provision for entry of the particulars of the liability discharged by the payment.

198. There would seem to be no reason why, under suitable arrangements with the postal department, the forms should not be printed departmentally, in which case the upper part of the *black* side might be printed to suit the particular class of payments for which the forms would be intended; and the name of the "remitter" might be printed as "the executive engineer of ——— division."

199. With regard to contingent bills (paragraph 354), I think the sending of divisional bills through the superintending engineer might be dispensed with, and also the *classification* of charges; but any other change seems to me undesirable.† Contingent charges are dealt with under special and distinct rules, and the economical working of the examiner's office requires that such charges shall be separately audited by a special establishment. Moreover the present system, or something very like it, *must* be followed as regards contingent bills of all offices other than divisional offices, unless these offices are to be dealt with through the executive engineer who recoups their standing advances, an arrangement which, I have no doubt, would be highly inconvenient to all concerned. I think therefore it would be very much better to adhere uniformly to the present system, except as regards classification and sending divisional bills through superintending engineers.

200. With regard to paragraph 356, I think not only the rules regarding travelling allowance, but also the rules affecting salaries, might very easily be reduced to a small compass and supplied in handy sheets. The system recently begun here of printed standing remarks on disallowance lists is a step in this direction; and I have always intended, as soon as the printed remarks have become fairly complete, to see what can be done in the way of translating them into handy guides for the use of those who prepare and submit the bills. I think that in most cases it will only be a question of modifying the wording to suit the altered point of view; but the completion of these standing remarks is necessarily a work of time. It is almost impossible to do it otherwise than by taking note of remarks actually made in manuscript, as not provided for in the printed form for the time being in use, putting these remarks into suitable standing form, and then printing them in the next issue of the form.

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* One side of the form is printed in black ink and the other in red.

† Contingent charges *must* be *collected* in some document or other, and whether you call that document a "schedule" or a "contingent bill" the labour of preparation will be precisely the same. I do not myself think that the classification of the charges is worth the trouble that it gives; but I ought to point out that the government in the financial department have recently directed the adoption of a classification uniform with that of the civil department. Apparently, therefore, the government attach some importance to it.

XXV.—Workshops (357 to 366).

201. The subject is, in my opinion, too large a one to be discussed as a mere section of public works accounts. I may, however, say that I think it is essential that the details of the accounts procedure *within the shops*, and not merely the returns to be submitted to audit should be prescribed, and that the practice in different shops of the same class should be uniform. If there is any point in respect of which a distinction can, with any *real* advantage, be made between large shops and small shops, by all means let it be made; but I think there should be at the outside two recognized classes, large shops and small, and the procedure for each class should be uniform. Whether the cost of any manufactured article can, as the Committee assert, "when necessary, be taken out specially from the records," will depend entirely on what records are prescribed and kept. If the records to be kept are not carefully regulated with reference to this contingency, the chances are that it will not be possible to get out the cost when wanted.

202. The question whether private work should be allowed or not, or encouraged or not, is hardly a question of accounts; but it has a very direct bearing on the question of the latitude to be allowed to superintendents of workshops in the matter of charges, percentage or other; and of the two questions, the former should, I think, be settled first. If government wish to attract work to their workshops, it would seem to be essential that the superintendents should have *absolutely free hands in the matter of charges*. A workshop cannot be conducted on commercial principles if it takes a month or six weeks to get authority to quote a rate. If, on the other hand, government desire, as I understand they at present desire, to scrupulously avoid competition with private enterprise, it would seem to be equally essential to allow little or no latitude, because the superintendent of a workshop is pretty certain to endeavour to attract work if he can.

XXVI.—Estimates (367 to 378).

203. The manner in which estimates should be prepared does not seem to me in any sense an account question. Accounts should follow estimates, not estimates accounts.

XXVII.—Appropriations for Works and Repairs (379 to 386).

204. I do not think that anything would be gained by adopting the Committee's proposal to appropriate lump sums for major works, or for other groups of individual works, and to conduct the appropriation audit against divisional totals; for the simple reason that appropriation for each account unit is, after all, the only practicable way of securing that current comparison of your coat with your cloth by which alone adherence to budget limits can be ensured. If you give the executive engineer lump sums, and make him responsible, he will have to break up the lump sums into individual appropriations. There is no other way in which he can really act up to his responsibilities in the matter. You may ignore it, if you like; but you cannot get over it; and any resulting saving of labour will simply be a delusion. The only seeming alternative is to have additional group-accounts corresponding to the appropriation unit; but the difficulty then would be that there might be half a dozen practically independent subordinate disbursers all operating on the same group, and the increase of labour of accounting would be much greater than the reduction of labour of appropriating.

205. In my opinion, therefore, the best plan is to stick to individual appropriations, but to place the lump sum (from which appropriations are to be made) at the disposal of the executive engineer making him the appropriating officer, instead of the superintending engineer or government. This would do away with most of the correspondence and difficulty. If this were done, there would be no necessity for deferring audit objections until after July.

XXVIII.—Completion Reports and Certificates (387 to 392).

206. I fail to see the logic of the Committee's proposals (paragraph 391) that "it should not be necessary . . . . . to submit a detailed completion report . . . . . if the total cost be within 5 per cent. of the estimate." As I

understand the matter the object of a detailed completion report is to show whether the work has or has not been executed in accordance with the sanctioned plans and estimates; and if that is so, I fail to see what the amount, more or less, of the excess, if any, over estimate, has to do with the matter. Moreover, I fail to see why, because the estimate is exceeded by 5 per cent., it should be necessary to submit a detailed report explaining the savings and excesses on every item when the significant excess may be all in one item. The accounts of one work, completed within the estimate, may, when examined in detail, show much more irregularity than those of a work of which the estimate has been exceeded by 6 per cent. In the latter case, the excesses may all be satisfactorily explainable; in the former, large savings on the estimate may have been improperly devoted to additional work not provided for in the estimate, and which should never have been executed at all.

207. It seems to me that, if it is necessary that the superintending engineer should have an assurance that a work is executed in accordance with the details of plan and estimate—and that, I take it, is, according to the presently accepted theory, the object of a completion report—then he should get it in every case, for all works not within the executive engineer's own powers of sanction, and he should get it whether the estimate is exceeded or not; and it should not then be necessary to explain any difference, unless an explanation is called for by the superintending engineer. But if, on the other hand, this is not the object of the completion report—if the completion report is required only in connection with excesses—then a detailed completion report ought, I think, to be submitted whenever any *item* of an estimate is exceeded by more than a certain amount; because the net excess on the total of the estimate is no guide whatever to the extent of irregularity. *The first step, however, ought to be to settle what is the purpose and object of completion reports.*

208. I think the proposal (paragraph 392) to omit from completion certificates of departmental officers all reference to plan and estimate is a mistake. It may be, and probably is, desirable to make the intention somewhat clearer, either by amplifying the certificate itself, or by adding a foot-note indicating the points with reference to which the departmental officer is expected to certify or remark; but it seems to me that general agreement with the plan and estimate, as approved by the department concerned before putting the work in hand, is just the very thing that the departmental officer ought to certify to. For instance if the department wanted, and the sanctioned estimate provided for, a building with a tiled roof, and containing four rooms of specified dimensions, it would certainly be the business of the departmental officer to see that he did not get a thatched building containing three rooms only, or four rooms of considerably less than the specified dimensions, which is essentially a question of agreement with plan and estimate. In the Madras form of certificate there is no reference to agreement with plan and estimate, and the vagueness of the certificate certainly does not prevent departmental officers from enlarging upon matters which do *not* concern them, any more than it helps them to understand what are the points that *do* concern them. Here again, however, the first question ought to be: *What is the object of a completion certificate?*

209. I think the points to be considered by the departmental officer should be made clear, and perhaps it might, with advantage, be ruled, that if the departmental officer cannot sign the certificate, he should at once report the matter for inquiry and orders, through the head of his department, to the chief engineer, informing the executive engineer accordingly. It is not an uncommon thing to explain excessive delays in submission of completion reports by stating that the departmental officer will not sign the completion certificate, and this sort of deadlock is apt to last for an indefinite time, without any indication of who is right and who is wrong. I cannot imagine how it can be expected, that the prevention of unnecessary or improper remarks by the certifying officer, can be secured by deliberately excluding words of which the *intention*, at any rate, is to indicate what he has to certify to. If the words are wrong, alter them by all means; but surely there should be *something* in the certificate to show what *is* wanted.