

(1) Number of pages _____

(2) Date of repair _____

(3) Initials of the Referencer _____

MADRAS RECORD OFFICE.

Government of Madras.

Public works DEPARTMENT.

G.O. No.	419	Press
168,169,		Mis.
Dated	17.2.	1873.

Not to be folded or roughly handled

No. 168. Read the following endorsement of the Chief Engineer for Irrigation, dated Fort St. George, 13th January 1873, No. 73:—

From the Chief Engineer of the Madras Irrigation and Canal Company, to the Chief Engineer for Irrigation and Joint-Secretary to Government, Public Works Department, dated Kurnool, 28th December 1872, No. 4.

IN reference to the correspondence regarding proposed alterations of the calingulah designs sanctioned in G. O., No. 937, of 9th April last, I have the honour to explain that they do not extend further than to modify the double column headed "altered calingulah discharges" in the table given in paragraph 6 of Captain Scott's memorandum printed immediately before the G. O., *excluding* the total discharge entered at the foot of the column, which will remain as before.

2. By the designs as sanctioned it is proposed to obtain a calingulah discharge sufficient to pass the greatest floods without raising the canal water above full water level; *i. e.*, above the old calingulah crests. Hence any unaltered calingulah and its outlet will be completely disused.

3. In the arrangement I now propose for modifying the calingulahs between Ulloor and Tangadancha (37th to 62nd miles), the existing outlets of all calingulahs will be utilized. To do this it is necessary to insert in an old calingulah a bay of 8 feet clear, having its crest 3 feet below full water level and discharging 20,000 cubic yards an hour at that level, for every 41½ feet run of the old crest which discharged 480 cubic yards per foot run when the water was at a flood level 1 foot above its crest.

4. The worst outlets to the old calingulahs are those of No. 2 of 4th section, and No. 20 of 3rd section. While No. 19 of 3rd section is not on the centre of the vagoo forming the outlet, as the wall close above it is. No. 1 Calingulah, 4th section, has an admirable natural outlet, and can easily drain the 192,000 cubic yards an hour from the area of 6.6 miles above Mudigutla, which Calingulah No. 20 could not take without a heavy excavation of an outlet through cultivated land. No. 19 Calingulah is in an open water-spread, in the centre of which is a wall on solid flags of rock, and this wall I propose to convert into a calingulah on the new principle, instead of touching the old calingulah.

5. Lastly, for the sake of the greater security thereby obtained, I propose to make Nos. 3 and 4 calingulahs in the 4th Section capable of taking *all* the drainage flowing into the water-spreads in which they are situated.

6. The modifications I now recommend, and which I have endeavoured to explain, are given in the following table. It will be seen that the drainage of the

Proceedings of the Madras Government, Public Works Department
7th February 1873.

45th to 51st mile will no longer have to pass down the double banked canal for above two miles.

POSITION OF CATCHMENT BASIN. MILEAGE ON CANAL.		Drainage area in square miles.	Discharge in cubic yards an hour (D=100,000 $\frac{1}{2}$.)	Total to be distributed.	ALTERED DISCHARGES.		Remarks.
From miles.	To miles.				No. of Calingulah.	Cubic yards an hour.	
36	42	3.0	208,000	672,000	18	280,000	Same as original dis- charge.
42	43	10.0	464,000		new	400,000	
43	45	6.6	352,000		20	160,000	
45	46	2.2	169,000	1	720,000		
46	51	6.5	349,000	345,000	2	340,000	40,000 more than ori- ginal.
51	54	6.4	345,000			480,000	
54	60	13.8	575,000			1,100,000	
60	62	35.6	1,082,000	1,657,000			Already constructed.
Total...					3,480,000	As before.	

7. It is of importance to lose no time unavoidably; and I trust that the manifest improvement in the mode of disposing of the drainage, and the explanation I have given that considerable expense in money and land for outlets will be saved, will enable you to give the proposed modification an early approval.

SUBMITTED for the consideration of Government with a recommendation that the alterations of the positions of discharge for flood waters between the 36th and 62nd miles of the Company's Canal, proposed by the Chief Engineer, Madras Irrigation and Canal Company, in this letter, be sanctioned.

2. It will be noticed that the capacity of discharge will remain the same as that sanctioned in G. O., 9th April 1872, No. 937.

(Signed) J. MULLINS, Lieut.-Colonel, R.E.,
Chief Engineer for Irrigation.

No. 169.

ORDER THEREON, 7th February 1873, No. 419.

IRRIGATION, No. 9.

THE Government sanction the alterations in the positions selected for the discharge of flood waters, between

the 36th and 62nd miles of Madras Irrigation and Canal Company's Canal, as detailed in the letter from the Chief Engineer of the Company recorded in these Proceedings.

(True Extract.)

Lieut.-Colonel, R.E.,

Joint Secretary to Government.

To the Chief Engineer for Irrigation.
" Agent and Manager of the Madras Irrigation and Canal Company.
Ed. S. T. Austin.

No. 73.

Letter from the Chief Engineer Madras Irrigation and Canal Company No. 4 dated 20th December 1872.

Submitted for the consideration of Government, with a recommendation that the alterations of the positions of discharge for flood waters between the 36th and 62nd miles of the Company's Canal, proposed by the Chief Engineer Madras Irrigation and Canal Company in this letter be sanctioned.

2. It will be noticed that the capacity of discharge will remain the same as that sanctioned in G.O. 9th April 1872 No. 937.

Fort St. George
13th January 1873

W. Mullins
Chief Engineer for Irrigation

To
The Secretary to Government
P. W. Department

Dec 9. - April 12 1893. 1893

P. 1873. Newark
P. 1873. Newark
P. 1873. Newark

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3m
West End Eng. in line

To the Secy to Govt

P. H. Rept.

Dated 13th January 1893.

Reed 15th 1893

Enclosures.

Submits letter No 1 from
the Chief Eng. in. S. etc. etc.
documents that the pro-

-posed alterations of the pro-

-visions of discharge in flood

-bedding between the 36 & 62?

miles of Hales Canal be

Sanctified

No 119-7 "Stacy 1893

No 168

1893

C.E. No 457
No 4. Regd.

From
The Chief Engineer
M. S. C.

Dated 20th Dec. 72

Recd. 2nd Jan 73.

P.W. 234/73.

Asks for sanction for
altering positions of
discharges of flood
trunks between 36 & 62
miles with reference
to G.O. No. 937, 9th April
/72

Madras Irrigation and Canal Co.
Chief Engineer's Office,
Munnool 28th December 1872.

No 4.

To

The Chief Engineer for Irrigation,
and Joint Secretary to Government,
Fort St. George,
Madras.

Sir,

In reference to the correspondence
regarding proposed alterations of the Calingulah
designs sanctioned in G.O. No 937 of 9th April
last, I have the honour to explain that they
do not extend further than to modify the
double column headed "Altered Calingulah
discharges" in the table given in para 6 of
Captain Scott's memo printed immediately
before the G.O.; excluding the Total discharge
entered at the foot of the column, which will
remain as before.

2. By the designs as sanctioned it
is proposed to obtain a Calingulah discharge
sufficient to pass the greatest floods without
raising the Canal water above full water
level, i.e. above the old Calingulah crests.
Hence any unaltered Calingulah and its
outlet will be completely disused.

3. In the arrangement I now propose
for modifying the Calingulahs between Ulloor
and

and Sangadancha (37th to 62nd miles) the existing outlets of all Calingulahs will be utilized. To do this it is necessary to insert in an old Calingulah a Vay of 8 feet clear, having its crest 3 feet below full water level and discharging 20,000 cubic yards an hour at that level, for every $4\frac{1}{3}$ feet run of the old crest which discharged 400 cubic yards per foot run when the water was at a flood level 1 foot above its crest.

4. The worst outlets to the old Calingulahs are those of No 2 of 4th section, and No 20 of 3rd section. While No 19 of 3rd section is not on the centre of the Vagoo forming the outlet, as the wall close above it is. No 1 Calingulah 4th section has an admirable natural outlet, and can easily drain the 192,000 cubic yards an hour from the area of 6.6 miles above Mindignitla, which Calingulah No 20 could not take without a heavy excavation of an outlet through cultivated land. No 19 Calingulah is in an open waterspread, in the centre of which is a wall on solid flags of rock: and this wall I propose to convert into a Calingulah on the new principle, instead of touching the old Calingulah.

5. Lastly, for the sake of the greater security thereby obtained, I propose to make Nos 3 and 4 Calingulahs in the 4th section capable of taking all the drainage flowing into the waterspreads in which they are situated.

The

6. The modifications I now recommend, and which I have endeavoured to explain, are given in the following table. It will be seen that the drainage of the 45 to 51 mile will no longer have to pass down the double banked Canal for above 2 miles.

Position of Catchment Basin. Mileage on Canal		Drainage area in square miles.	Discharge in cubic yards an hour ($D=100,000n^{2/3}$).	Total to be distributed.	Altered Discharges		Remarks.
From	To				Calingulah	Cubic yards an hour	
42	3.0	200,000	672,000		10	200,000	Same as original discharge.
43	10.0	464,000			new	400,000	
45	6.6	352,000	20	160,000			
46	2.2	169,000	1	720,000			
51	6.5	349,000	345,000		2	340,000	40,000 more than original.
54	6.4	345,000				400,000	
60	13.8	575,000	1,657,000			1,100,000	already constructed as before.
62	35.6	1,082,000					
Total						3,480,000	as before

7. — It is of importance to lose no time unavoidably: and I trust that the manifest improvement in the mode of disposing of the drainage, and the explanation I have given

given that considerable expense in money and land for outlets will be saved, will enable you to give the proposed modification an early approval.

I have the honour to be

Sir,

Your most obedient servant

John Watham.

Chief Engineer.

Under Secretary
J. W. Watham
Chief Engineer
21/1/73

Public Works Department

No. 119

Proceedings of the Madras Government

Read the following

From

The Chief Engineer
for Irrigation

(H. E. No. 438/13 Jan'y
1873)

The Government.
sanction the alterations in
the positions selected for
the discharge of flood
waters, between the 36 & 62
miles of Madras Irrigation
Canal Company's Canal, as
detailed in the letter from
the Chief Engineer of the
Company recorded in these
Proceedings.

W. E.

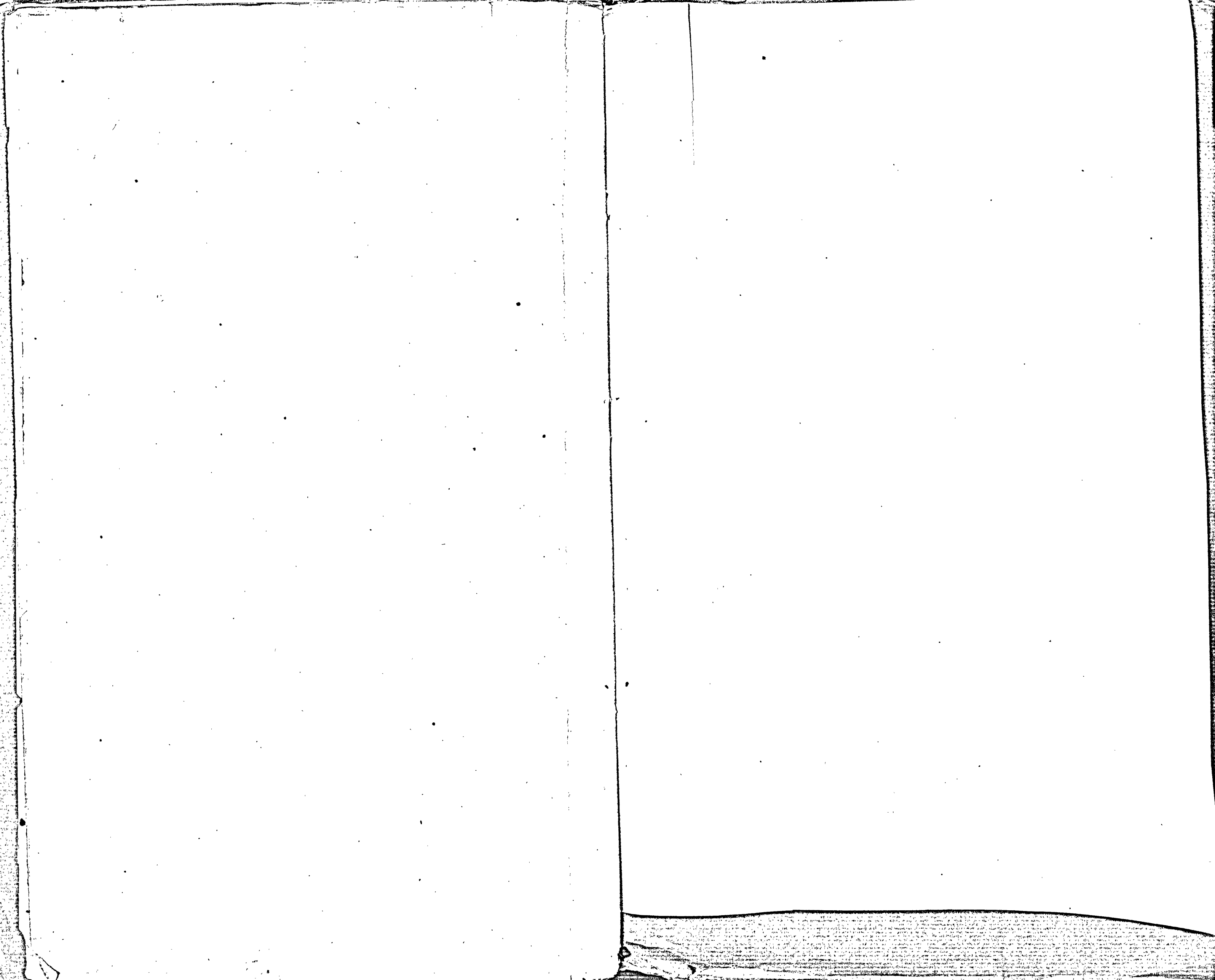
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To The Ch. Engr for Irrigation
at Agent to the Government & Co.

Desp. 11/2/73.

W. E. 14/1

W. E.



No. 234

Gobt. of 1873 Madras.
PUBLIC WORKS.

To The Chief Engineer for
Irrigation

Dated

Recd.

Encl. /

G.O. 7th Feb 1873, No. 419.

No. 168 & 169

S. H. Co. Alterations in
the positions selected
for the discharge
of flood waters from
the Company's canal
sanctioned.